

(f) The amount of a contribution, interest, or penalty may be protested in accord with § 345.124 of this part.

By Authority of the Board.  
Dated: January 10, 2002.

**Beatrice Ezerski,**

*Secretary to the Board.*

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**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 86**

[AMS-FRL-7129-2]

RIN 2060-AJ73

**Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines; Proposed Non-Conformance Penalties for 2004 and Later Model Year Emission Standards for Heavy-Duty Diesel Engines and Heavy-Duty Diesel Vehicles**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** EPA is proposing that nonconformance penalties (NCPs) be made available for the 2004 and later model year non-methane hydrocarbons and nitrogen oxides (NMHC+NO<sub>x</sub>) standard for heavy-duty diesel engines and vehicles. In general, the availability of NCPs allows a manufacturer of heavy-duty engines (HDEs) or heavy-duty

vehicles (HDVs) (which include heavy light-duty trucks) whose engines or vehicles fail to conform with certain applicable emission standards, but do not exceed a designated upper limit, to be issued a certificate of conformity upon payment of a monetary penalty. The proposed upper limit associated with the 2004 emission standard for NMHC+NO<sub>x</sub> is 4.5 grams per brake-horsepower-hour for light and medium heavy-duty engines and urban buses, and 6.0 grams per brake-horsepower-hour for heavy heavy-duty engines.

**DATES:** *Public comment:* We must receive your comments by March 18, 2002.

*Public hearing:* We will hold a public hearing regarding this proposed rule on February 15, 2002, beginning at 10:00 a.m.

**ADDRESSES:** *Comments:* We must receive your comments by the date indicated under **DATES** above. Send paper copies of written comments (in duplicate if possible) to the contact person listed below. In your correspondence, refer to Docket A-2000-30. See Section VI.B for more information on comment procedures.

*Public hearing:* We will hold a public hearing on February 15, 2002 at the Washington Dulles Airport Marriott, 45020 Aviation Drive, Dulles, Virginia 20166. Phone: (703-471-9500). If you want to testify at the hearing, notify the contact person listed below at least ten days before the date of the hearing. See Section VI.B for more information on the public-hearing procedures.

*Public docket:* EPA's Air Docket makes materials related to this rulemaking available for review in Docket No. A-2001-30 located at U.S. Environmental Protection Agency (EPA), Air Docket (6102), Room M-1500, 401 M. Street, SW, Washington, DC 20460 (on the ground floor in Waterside Mall) from 8 a.m. to 5:30 p.m., Monday through Friday, except on government holidays. You can reach the Air Docket by telephone at (202) 260-4400. We may charge a reasonable fee for copying docket materials, as provided in 40 CFR part 2.

**FOR FURTHER INFORMATION CONTACT:** Margaret Borushko, U.S. EPA, National Vehicle and Fuels Emission Laboratory, 2000 Traverwood, Ann Arbor, MI 48105; Telephone (734) 214-4334; Fax: (734) 214-4816; E-mail: borushko.margaret@epa.gov.

**SUPPLEMENTARY INFORMATION:**

**Regulated Entities**

This proposed action would affect you if you produce or import new heavy-duty diesel engines which are intended for use in highway vehicles such as trucks and buses or heavy-duty highway vehicles. The table below gives some examples of entities that may have to follow the proposed regulations. But because these are only examples, you should carefully examine the proposed and existing regulations in 40 CFR part 86. If you have questions, call the person listed in the **FOR FURTHER INFORMATION CONTACT** section above.

Category	NAICS <sup>a</sup> Codes	SIC Codes <sup>b</sup>	Examples of potentially regulated entities
Industry .....	336112 336120	3711	Engine and truck manufacturers

<sup>a</sup> North American Industry Classification System (NAICS).

<sup>b</sup> Standard Industrial Classification (SIC) system code.

**Access to Rulemaking Documents Through the Internet**

Today's proposal is available electronically on the day of publication from the Environmental Protection Agency Internet Web site listed below. Electronic copies of the preamble, regulatory language, Draft Technical Support Document, and other documents associated with today's proposal are available from the EPA Office of Transportation and Air Quality (formerly the Office of Mobile Sources) Web site listed below shortly after the rule is signed by the Administrator. This service is free of charge, except any cost that you incur for connecting to the Internet.

Environmental Protection Agency Web Site: <http://www.epa.gov/fedrgstr/> (Either select a desired date or use the Search feature.)

Office of Transportation and Air Quality (OTAQ) Web Site: <http://www.epa.gov/otaq/>

(Look in "What's New" or under the "Heavy Trucks/Buses" topic.)

Please note that due to differences between the software used to develop the document and the software into which document may be downloaded, changes in format, page length, etc. may occur.

**Table of Contents**

I. Background and Statutory Authority

- A. Background to Nonconformance Penalty Rules
- B. Statutory Authority
- C. Heavy-duty Diesel Consent Decrees
- II. Nonconformance Penalties for 2004 and Later Heavy-Duty Engines and Heavy-Duty Vehicles
  - A. NCP Eligibility: Emission Standards for Which NCPs are Proposed
    - 1. Heavy-Duty Diesel NMHC+NO<sub>x</sub> Standard
    - B. NCP Eligibility: Emission Standards for Which NCPs are Not Proposed
      - 1. Heavy-Duty Gasoline Standards
      - 2. 2004 Tier 2 Medium-duty Passenger Vehicles & Heavy Light-duty Trucks
- III. Penalty Rates
  - A. Parameters
    - 1. Upper Limit
    - 2. Parameter Values
    - 3. Penalty Curves

- B. Issues and Alternatives
  - 1. Adjustment to Reflect Differences in Performance (other than fuel economy)
  - 2. Projected Fuel Price
  - 3. Discount Rates
- IV. Economic Impact
- V. Environmental Impact
- VI. Public Participation
  - A. How Do I Submit Comments?
  - B. Will There Be a Public Hearing?
- VII. Administrative Requirements
  - A. Regulatory Planning and Review: Executive Order 12866
  - B. Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 USC 601 et. seq.
  - C. Paperwork Reduction Act
  - D. Unfunded Mandates Reform Act
  - E. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
  - F. National Technology Transfer and Advancement Act
  - G. Executive Order 13045: Children's Health Protection
  - H. Executive Order 13132: Federalism
  - I. Executive Order 13211: Energy Effects
  - J. Plain Language

## I. Background and Statutory Authority

### A. Background to Nonconformance Penalty Rules

Since the promulgation of the first NCP rule in 1985, NCP rules have generally been described as continuing "phases" of the NCP program. The first NCP rule (Phase I), sometimes referred to as the "generic" NCP rule, established three basic criteria for determining the eligibility of emission standards for nonconformance penalties in any given model year (50 FR 35374, August 30, 1985). For regulatory language, see 40 CFR 86.1103-87. First, the emission standard in question must become more difficult to meet. This can occur in two ways, either by the emission standard itself becoming more stringent, or due to its interaction with another emission standard that has become more stringent. Second, substantial work must be required in order to meet the emission standard. EPA considers "substantial work" to mean the application of technology not previously used in that vehicle or engine class/subclass, or a significant modification of existing technology, in order to bring that vehicle/engine into compliance. EPA does not consider minor modifications or calibration changes to be classified as substantial work. Third, a technological laggard must be likely to develop. Prior NCP rules have considered a technological laggard to be a manufacturer who cannot meet a particular emission standard due to technological (not economic) difficulties and who, in the absence of NCPs, might be forced from

the marketplace. EPA will make the determination that a technological laggard is likely to develop, based in large part on the above two criteria. However, these criteria are not always sufficient to determine the likelihood of the development of a technological laggard. An emission standard may become more difficult to meet and substantial work may be required for compliance, but if that work merely involves transfer of well-developed technology from another vehicle class, it is unlikely that a technological laggard would develop.

The criteria and methodologies established in the 1985 rule have since been used to determine eligibility and to establish NCPs for a number of heavy-duty emission standards. Phases II, III, IV, and V, published in the period from 1985 to 1996, established NCPs that, in combination, cover the full range of heavy-duty—from heavy light-duty trucks (6,000–8,500 pounds gross vehicle weight) to the largest diesel truck and urban bus engines. NCPs have been established for hydrocarbons (HC), carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and particulate matter (PM). The most recent NCP rule (61 FR 6949, February 23, 1996) established NCPs for the 1998 and later model year NO<sub>x</sub> standard for heavy-duty diesel engines (HDDEs), the 1996 and later model year for Light-Duty Truck 3 (LDT3) NO<sub>x</sub> standard, and the 1996 and later urban bus PM standard. A concurrent but separate final rule (61 FR 6944, February 23, 1996) established NCPs for the 1996 LDT3 PM standard. The NCP rulemaking phases are summarized in greater detail in the Draft Technical Support Document for this proposal.

### B. Statutory Authority

Section 206(g) of the Clean Air Act (the Act), 42 U.S.C. 7525(g), requires EPA to issue a certificate of conformity for HDEs or HDVs which exceed a federal emissions standard, but do not exceed an upper limit associated with that standard, if the manufacturer pays an NCP established by rulemaking. Congress adopted section 206(g) in the Clean Air Act Amendments of 1977 as a response to perceived problems with technology-forcing heavy-duty emissions standards. Following *International Harvester v. Ruckelshaus*, 478 F.2d 615 (D.C. Cir. 1973), Congress realized the dilemma that technology-forcing standards were likely to cause. If strict standards were maintained, then some manufacturers, "technological laggards," might be unable to comply initially and would be forced out of the marketplace. NCPs were intended to remedy this potential problem. The

laggards would have a temporary alternative that would permit them to sell their engines or vehicles by payment of a penalty. At the same time, conforming manufacturers would not suffer an economic disadvantage compared to nonconforming manufacturers, because the NCP would be based, in part, on money saved by the technological laggard and its customer from the nonconforming engine or vehicle.

Under section 206(g)(1), NCPs may be offered for HDVs or HDEs. The penalty may vary by pollutant and by class or category of vehicle or engine. HDVs are defined in section 202(b)(3)(C) of the CAA as vehicles in excess of 6,000 pounds gross vehicle weight rating (GVWR). The light-duty truck (LDT) classification includes trucks that have a GVWR of 8500 lbs or less. Therefore, certain LDTs may be classified as HDVs. Historically, LDTs up through 6000 lbs GVWR have been considered "light light-duty trucks" (LLDTs) and LDTs between 6,001 and 8,500 pounds GVWR have been considered "heavy light-duty trucks" (HLDTs). Based on various new requirements established by the Clean Air Act Amendments of 1990, each of these two light truck categories has been further subdivided into groups by weight. The LLDTs are classified by weight based on "loaded vehicle weight," or LVW, which maintains its current definition: curb weight plus 300 lbs. The trucks up through 3750 lbs LVW make up a subclass called light-duty-trucks-1, or LDT1. Those greater than 3750 lbs LVW but less than or equal to 6000 lbs GVWR are the subclass light-duty-trucks-2, or LDT2. The HLDTs are divided at 5750 lbs "adjusted loaded vehicle weight," or ALVW. Adjusted loaded vehicle weight is the average of the curb weight and the GVWR. The HLDTs that are up through 5750 lbs ALVW are called light-duty trucks-3, or LDT3. Those above 5750 lbs ALVW but less than or equal to 8500 lbs GVWR are light-duty-trucks-4, or LDT4. The LDT3 and LDT4 subclasses make up the HLDT vehicle class. Since NCPs can only be established for heavy duty vehicles or engines, emission standards for light-duty trucks of the LDT3 and LDT4 categories are the only light-duty truck categories eligible for NCPs.

Section 206(g)(3) requires that NCPs:

- Account for the degree of emission nonconformity;
- Increase periodically to provide incentive for nonconforming manufacturers to achieve the emission standards; and
- Remove the competitive disadvantage to conforming manufacturers.

Section 206(g) authorizes EPA to require testing of production vehicles or engines in order to determine the emission level on which the penalty is based. If the emission level of a vehicle or engine exceeds an upper limit of nonconformity established by EPA through regulation, the vehicle or engine would not qualify for an NCP under section 206(g) and no certificate of conformity could be issued to the manufacturer. If the emission level is below the upper limit but above the standard, that emission level becomes the "compliance level," which is also the benchmark for warranty and recall liability; the manufacturer who elects to pay the NCP is liable for vehicles or engines that exceed the compliance level in-use, unless, for the case of HLDTs, the compliance level is below the in-use standard. The manufacturer does not have in-use warranty or recall liability for emissions levels above the standard but below the compliance level.

### C. Heavy-duty Diesel Consent Decrees

On October 22, 1998, the Department of Justice and the Environmental Protection Agency announced settlements with seven major manufacturers of diesel engines that represent a majority of the diesel engine market. The settlements resolved claims that they installed computer software on heavy duty diesel engines that turned off the engine emission control system during highway driving in violation of the CAA's prohibition on defeat devices (42 USC 7522(a)(3)). The settlements were entered by the Court on July 1, 1999. These consent decrees with the Federal Government contained a number of provisions applying to heavy-duty on-road, and in some cases, nonroad, engines. Specific to the engines that would be addressed by the proposed 2004 NCPs, the decrees permit the continued use of non-complying engines for a period of time (although emissions are capped by limits associated with new supplemental test procedures). Other elements of these consent decrees include a program under which the consent decree manufacturers are required to invest considerable resources to evaluate instrumentation and methodologies for on-road testing. Because the Consent Decrees refer to NCPs for the 2004 model year, if published, promulgation of this rule would have an impact on the penalties determined under the Consent Decrees.

## II. Nonconformance Penalties for 2004 and Later Heavy-Duty Engines and Heavy-Duty Vehicles

### A. NCP Eligibility: Emission Standards for Which NCPs are Proposed

#### 1. Heavy-Duty Diesel NMHC+NO<sub>x</sub> Standard

As discussed in section III.A., EPA must determine that three criteria are met in order to determine an NCP should be established in any given model year. For the model year 2004 heavy-duty diesel NMHC+NO<sub>x</sub> standard, we believe these criteria have been met and it is therefore appropriate to establish NCPs for the 2004 model year NMHC+NO<sub>x</sub> standard.

The first criteria requires that the emission standard in question must become more difficult to meet. This is the case with the 2004 NMHC+NO<sub>x</sub> standard. The previous emission standards for this category are 4.0 g/bhp-hr NO<sub>x</sub> and 1.3 g/bhp-hr HC. The 2004 standard is a combined NMHC+NO<sub>x</sub> standard of 2.4 g/bhp-hr, or optionally a 2.5 g/bhp-hr NMHC+NO<sub>x</sub> with a limit of 0.5 g/bhp-hr NMHC.<sup>1</sup> When promulgated, the Agency concluded that the 2004 standard was a technology forcing standard, and therefore it is logical to conclude the standard is more difficult to meet.

The second criteria which must be met in order for EPA to determine that an NCP should be established is substantial work must be required to meet the emission standard. This criteria has also been met. As discussed in both the 1997 final rule (See 62 FR 54694, October 21, 1997) which established the 2004 standards, as well as the 2000 final rule (See 65 FR 59896, October 6, 2000) which reaffirmed those standards, EPA projected that new emission control technologies would be needed to achieve the 2004 standards. In these previous rulemakings EPA pointed to technologies such as cooled exhaust gas recirculation (EGR) and variable geometry turbochargers (VGT) as some of the technologies manufacturers could use to meet the 2004 standards. Such technologies have not previously been used in the on-highway heavy-duty diesel market, and EPA estimated substantial research and development efforts by the engine manufacturers would be undertaken to meet the 2004 standards. We continue

<sup>1</sup> NMHC stands for non-methane hydrocarbons, which is a measure of total hydrocarbons with the methane emissions subtracted out. For typical on-highway diesel fueled heavy-duty engines, methane emissions are on the order of 10 percent of the total hydrocarbon emissions.

to believe such new technologies will be used by a number of engine manufacturers, and in fact several manufacturers have indicated in recent statements they will use new emission control technologies in order to achieve the 2004 standards.<sup>2</sup>

The final criteria for EPA to determine that an NCP should be established is that a technological laggard is likely to develop. EPA has several reasons to believe a technological laggard is likely. First, during our recent discussions with a number of engine manufacturers, several manufacturers have indicated they may not be able to make the necessary technological changes to meet the 2004 emission standards for some of their high horsepower ratings by model year 2004. Manufacturers have indicated that while they are continuing to develop cooled EGR systems and associated technologies (such as advanced turbocharger technologies) and have reached no definitive conclusion, they are concerned regarding their ability to comply in 2004 with these higher horsepower engines. Engines with higher horsepower ratings typically operate at higher boost levels (higher intake manifold pressures), as well as higher fueling rates. This is the case on today's engines. With the addition of cooled EGR, boost levels must be increased even further in order to accommodate EGR while maintaining the same power ratings. This can push both peak cylinder pressures and turbocharger designs to their physical limitations. While manufacturers are exploring a number of technologies to extend the current limitations, they are concerned with their ability to do so with all of the currently available power ratings between now and 2004.

Second, during recent discussions with engine manufacturers, one manufacturer has indicated that some low volume engine families currently available may not be ready by 2004. A low volume engine family may require specific and targeted research and development efforts in order to comply with the 2004 standards, and it is reasonable to expect that manufacturers may focus their efforts on these low volume products later in the development process, and time may be too short to bring the product into compliance for the 2004 model year.

Finally, in the final rule completed in 2000 which reaffirmed the 2004 NMHC+NO<sub>x</sub> standard, three engine manufacturers as well as the Engine Manufacturers Association (EMA),

<sup>2</sup> See press releases from Caterpillar Inc., Cummins, Detroit Diesel Corp. and Mack, available in EPA Air Docket A-2001-30.

commented that EPA should establish NCPs for the 2004 standards.<sup>3</sup> EMA commented the standards “will be technology-forcing and likely will result in the inability of some engine manufacturers and/or engine families to comply with the standards.” Detroit Diesel Corp. commented “Meeting the 2004 standards will require the use of sophisticated new emission control technology and will require emission durability evaluation over a greatly extended useful life period. \* \* \* Any development setbacks or misjudgement regarding the capability or durability of the new emission control technology could, at the last minute, put an engine manufacturer into a laggard position and prevent certification of an engine family. The likelihood of a technological laggard for 2004 is at least as great and probably much greater than for other standards for which NCPs have been provided.” When we finalized the reaffirmation of the 2004 NO<sub>x</sub>+NMHC standard in 2000 we agreed that the standards were technology-forcing and that sophisticated technologies would be required, and thus, that the first two eligibility criteria were likely met. However, we concluded at the time that it was too early to determine the likelihood of a technological laggard, and further, that it was not necessary to attempt to make such a judgement at that time. Now we are a year closer to implementation of the 2004 standards, and manufacturers have not revoked their claims that the likelihood of a technological laggard is high. The fact that several engine manufacturers as well as a major trade organization have indicated they believe a technological laggard is likely to develop is an important indicator for the Agency regarding the technological laggard criteria.

Based on this information, the Agency believes it is reasonable to conclude that a technological laggard is likely to develop for the 2004 NMHC+NO<sub>x</sub> standards.

#### *B. NCP Eligibility: Emission Standards for Which NCPs are Not Proposed*

##### 1. Heavy-Duty Gasoline Standards

In a final rule published on October 6, 2000 (65 FR 59896), EPA established more stringent emission standards for all heavy-duty gasoline (or “Otto-cycle”) vehicles and engines. These standards took two forms: A chassis-based set for complete vehicles under 14,000 pounds GVWR (the chassis-based program), and

an engine-based set for all other Otto-cycle heavy-duty engines (the engine-based program). Each of the two programs has an associated averaging, banking, and trading (ABT) program. The new standards generally take effect starting with the 2005 model year, but manufacturers are provided with two additional options for early compliance, each of which provides additional flexibility relative to the 2005 model year compliance option.

We have considered the potential need for NCPs to be provided for the new standards applicable to Otto-cycle heavy-duty engines and vehicles, and have concluded at this time that NCPs are not required for any of these standards. We recognize that in general these new standards represent an increase in stringency over the prior federal standards, and thus, that the first criterion for NCP eligibility is satisfied. While some additional work is likely required to meet these new standards, the second and third eligibility criteria are not satisfied.

With respect to the chassis-based standards, manufacturers will largely be using vehicles already certified to California standards to meet the federal requirements. The new federal chassis-based standards effectively extend the current California medium-duty vehicle standards to a nationwide basis. California began requiring some vehicles to meet these standards in 1998, and the phase-in reached completion in the 2001 model year. Thus, manufacturers will be producing a fleet of vehicles for California that meets the new federal chassis-based requirements several years prior to having to introduce the vehicles on a nationwide basis. The technology required to meet the new federal standards has therefore already been successfully demonstrated on this class of vehicles, and manufacturers have up to several additional years to further develop and improve these systems prior to introducing them nationwide. Therefore, for vehicles required to meet the chassis-based standards, we do not believe that substantial work, as described above, will be necessary to meet the new standards. For similar reasons, as well as the fact that manufacturers have not raised the possibility of requiring NCPs, we do not believe that a technological laggard is likely to develop for this class of vehicles.

Vehicles meeting the new engine-based standards will generally be employing more advanced versions of technologies that are currently in use, such as advanced catalytic converters and closed loop electronic control of the

air-fuel ratio. All heavy-duty Otto-cycle engines are already equipped with three-way catalysts, and some recently introduced engines featuring precise air/fuel control and superior catalyst designs have been certified at levels below the most stringent standards included under the three optional compliance programs. In fact, the level of the engine-based standard under the optional programs that manufacturers are likely to select (1.5 grams per brake-horsepower-hour) is consistent with the recommendations of two manufacturers providing comment on the rule. Given these factors, we do not believe that a technological laggard is likely to emerge. Thus, for vehicles required to meet the engine-based standards, we do not believe that substantial work, as described above, will be necessary to meet the new standards.

In addition, the three compliance options that we included in the rule were developed through discussions with manufacturers, and based on those discussions we believe that these options are viable options that provide a range of choices and offer manufacturers flexibility to fit the program with their product planning. Due to the availability of these options and the discussions with manufacturers, we do not believe that a technological laggard is likely to develop with respect to any of the new Otto-cycle heavy-duty vehicle or engine standards. The ABT programs also offer considerable additional flexibility to meet the new standards.

In conclusion, based on the factors described above, we do not believe that there is sufficient evidence at this time that either substantial work is required to meet the new standards or that a technological laggard is likely to develop. Therefore, we are not proposing NCPs for any of the Otto-cycle heavy-duty emission standards.

##### 2. 2004 Tier 2 Medium-duty Passenger Vehicles & Heavy Light-duty Trucks

In December 1999, EPA promulgated a new set of emission control requirements for heavy-duty vehicles with a GVWR between 6,001 and 10,000 lbs. (See 65 FR 6698, February 10, 2000). These requirements were implemented as part of EPA’s Tier 2 vehicle emission control program. Beginning in 2004, heavy light-duty trucks (HLDTs) and medium-duty passenger vehicles (MDPVs) are combined in an averaging set which must meet a fleet average NO<sub>x</sub> emission standard of 0.20 g/mi. The program phases in at 25/50/75/100% of each years sales over the period 2004–2007. Those not included in this fleet average

<sup>3</sup> See EPA Air Docket A-98-32, comments from Navistar (item IV-D-29), Mack Truck (IV-D-06), Detroit Diesel Corp. (IV-D-28), and EMA (IV-D-05).

must meet the current standards. This is referred to as the interim program. Beginning in 2008, the fleet must average 50% at 0.20 g/mi NO<sub>x</sub> and the remaining 50% at 0.07 g/mi NO<sub>x</sub> on average. And, by 2009 the fleet must average 0.07 g./mi NO<sub>x</sub>. This is referred to as the Tier 2 program. This fleet average includes all covered vehicles without regard to fuel-type or combustion cycle. To be considered as part of the average, vehicle families must certify to NO<sub>x</sub>, NMOG, CO, HCHO, and PM standards in one of a number of the emission "bins." There are 11 bins available for the interim program and eight for the Tier 2 program. In order for a family to qualify for the program it need only be able to certify in the top bin of each program.

EPA believes that NCPs are not necessary for either the interim or Tier 2 programs applicable to HLDTs and MDPVs. While the standard will be more difficult to meet, it does not involve "substantial work" as defined in the regulation and discussed above, nor does EPA expect there to be a "technological laggard." The technology needed to meet these standards is well understood now, and, as discussed in the rulemaking, there are already a number of vehicle families capable of meeting the requirements. To enable this technology further, EPA has promulgated fuel quality requirements for gasoline and diesel fuel aimed at substantially reducing sulfur content and thus enabling highly efficient aftertreatment technology.

Beyond that, these programs are constructed with a phase-in, which means that there is ample opportunity for technological development with the potentially more difficult vehicle configurations deferrable until the final year of each program's phase-in. Furthermore, the programs are based on fleet average standards independent of fuel or combustion cycle and do not limit emission standards to the fleet average. In order to be certified, a vehicle family need only qualify in one of the emission bins. For the interim and Tier 2 programs there are three bins above the average. Generally, the top bin in the interim program was constructed such that current technology vehicles could qualify. The top bin of the Tier 2 program was set at the fleet average value of the interim program.

The program also includes a number of flexibilities designed to enhance compliance. These include a provision to allow the generation of credits through early banking, manufacturer-developed alternative phase-in schedules, deficit carryforward for the fleet average, and a number of

technology phase-in flexibilities such as in-use standards and alternative certification test-cycles.

In conclusion, given the significant flexibilities and options contained in the Tier 2 rule, we are not proposing NCPs for 2004 and later model year HLDTs or MDPVs.

### III. Penalty Rates

This proposed rule is the most recent in a series of NCP rulemakings. The discussion of penalty rates in the Phase IV rulemaking (58 FR 68532, December 28, 1993), Phase III rulemaking (55 FR 46622, November 5, 1990), the Phase II rulemaking (50 FR 53454, December 31, 1985) as well as the Phase I rulemaking (50 FR 35374, August 30, 1985) are incorporated by reference. This section briefly reviews the penalty rate formula and discusses how EPA arrived at the penalty rates in this proposed rule.

#### A. Parameters

As in the previous NCP rules, we are specifying the NCP formula for each standard using the following parameters: COC<sub>50</sub>, COC<sub>90</sub>, MC<sub>50</sub>, F, and UL. The NCP formula is the same as that promulgated in the Phase I rule. As was done in previous NCP rules, costs include additional manufacturer costs and additional owner costs, but do not include certification costs because both complying and noncomplying manufacturers must incur certification costs. COC<sub>50</sub> is an estimate of the industry-wide average incremental cost per engine (references to engines are intended to include vehicles as well) associated with meeting the standard for which an NCP is offered, compared with meeting the upper limit. More precisely, the values of COC<sub>50</sub> presented here are estimates of the sales weighted mean incremental cost. We request comment regarding whether it would be more appropriate to set COC<sub>50</sub> equal to the 50th percentile costs of compliance (i.e., median) instead of the mean costs. Commenters supporting the use of the median costs should address whether such an approach would reveal confidential business information.

COC<sub>90</sub> is EPA's best estimate of the 90th percentile incremental cost per engine associated with meeting the standard for which an NCP is offered, compared with meeting the associated upper limit. MC<sub>50</sub> is an estimate of the industry-wide average marginal cost of compliance per unit of reduced pollutant associated with the least cost effective emission control technology installed to meet the new standard. MC<sub>50</sub> is measured in dollars per g/bhp-hr for HDEs. F is a factor used to derive MC<sub>90</sub>, the 90th percentile marginal cost

of compliance with the NCP standard for engines in the NCP category. MC<sub>90</sub> defines the slope of the penalty rate curve near the standard and is equal to MC<sub>50</sub> multiplied by F. UL is the upper limit above which no engine may be certified. UL is specified for each of the four service classes for which NCPs are being proposed.

The derivation of the proposed cost parameters is described in a support document entitled "Draft Technical Support Document: Nonconformance Penalties for 2004 Highway Heavy-Duty Diesel Engines," which is available in the public docket for this rulemaking. All costs are presented in 2001 dollars. Because we are trying to account for cost differences at the point of sale, all costs were converted to net present value (NPV) for calendar year 2004 using a discount rate of 7.0 percent. The upper limits applicable to a pollutant emission standard are described in the following section.

We requested cost information from several of the engine manufacturers for each engine model that they plan to produce for model year 2004. We used these estimates along with all other available information to estimate the average and 90th percentile compliance costs. However, as we have in previous NCP rules, we relied heavily on the manufacturers' projections of their own costs, especially for fixed, hardware, and warranty costs. We request comment on the availability of other data to estimate these costs on a manufacturer-specific basis.

It is important to note that this analysis differs from the analyses for the model year 2004 standard-setting rulemakings in three basic ways:

(1) The goal of this analysis is to estimate manufacturer and operator costs during the first year of the new standards rather than to project the long-term costs.

(2) The baselines for calculation of compliance costs differ significantly due to issues associated with the Consent Decrees.

(3) We now have more detailed information about costs identified in the earlier analysis, as well as cost categories not previously included.

Thus, the costs estimated here are not comparable to the estimates described in the standard-setting rulemakings. These differences are discussed in detail in Chapter 3 of the Draft Technical Support Document for this rulemaking, and only a summary will be presented here.

First, it is necessary for this NCP analysis to focus solely on the compliance costs associated with the first year of production, while standard-

setting analyses require a longer term view. This is most significant with respect to the costs associated with hardware, reliability (warranty, repairs, and associated costs), and fuel consumption. Manufacturers often make significant progress in reducing these costs with additional time.

Second, as is discussed in Section III(A)(1) of this preamble, the engine designs currently produced and sold under the Consent Decrees lead us to propose an Upper Limit value of 6.0 g/bhp-hr NMHC+NO<sub>x</sub>, for the heavy-heavy duty service class, which fundamentally changes the cost analysis. The penalty rate factors are based on the compliance costs associated with lowering the emissions from model year 2001 engines to the 2004 standard. For heavy-heavy duty engines the NCPs are therefore based on the compliance costs associated with lowering the emissions from 6.0 g/bhp-hr NMHC+NO<sub>x</sub> to the 2004 standard of 2.5g/bhp-hr NMHC+NO<sub>x</sub>. This analysis was not performed in the standards-setting rules, and therefore the costs estimates in the standard-setting rule and this NCP proposal are not comparable. For the standard-setting rules, we estimated the compliance costs associated with bringing an engine which meets the current NO<sub>x</sub> standard of 4.0 g/bhp-hr into compliance with the 2.5g/bhp-hr NMHC+NO<sub>x</sub>. Even for the other service classes, where we have proposed an Upper Limit based directly on the 4.0 g/bhp-hr NO<sub>x</sub> standard, the impact on engine designs of the alleged defeat device strategies used by a number of engine manufacturers over the past decade makes comparison between the standard-setting rule cost analysis and this analysis difficult.

Finally, for this NCP proposal we have received new information since the standard-setting FRMs. This included more detailed estimates of actual manufacturer costs, plus data on a few additional cost items which were not part of the standards-setting rulemaking analysis. Specifically, we have included new cost items for vehicle manufacturer costs, post-warranty repairs, and revenue impacts (lost revenue due to the increased weight of the engine and the loss in freight capacity). We did not have this information during the standard-setting rule. As a result of the three factors summarized above, the costs estimated in this NCP proposal are not directly comparable to the estimates described in the standard-setting rulemakings.

The significance of the various cost categories varied with service class. For example, the largest costs for light-heavy duty were hardware costs, while

fuel costs were relatively low. However, for heavy-heavy duty, the fuel costs represent about half of the total cost of compliance.

#### 1. Upper Limit

The upper limit is the emission level established by regulation above which NCPs are not available and a heavy duty engine cannot be certified or introduced into commerce. CAA section 206(g)(2) refers to the upper limit as a percentage above the emission standard, set by regulation, that corresponds to an emission level EPA determines to be "practicable." The upper limit is an important aspect of the NCP regulations not only because it establishes an emission level above which no engine can be certified, but it is also a critical component of the cost analysis used to develop the NCP factors. The regulations specify that the relevant NCP costs for determining the COC<sub>50</sub> and the COC<sub>90</sub> factors are the difference between an engine at the upper limit and one that meets the new standards (see 40 CFR 86.1113-87).

The regulatory approach adopted under the NCP rules sets the Upper Limit (UL) at the prior emission standard when a prior emission standard exists and that standard is changed and becomes more stringent. EPA concluded that the UL should be reasonably achievable by all manufacturers with vehicles in the relevant class. It should be within reach of all manufacturers of HDEs or HDVs that are currently allowed so that they can, if they choose, pay NCPs and continue to sell their engines and vehicles while finishing their development of complying engines. A manufacturer of a previously certified engine or vehicle should not be forced to immediately remove an HDE or HDV from the market when an emission standard becomes more stringent. The prior emissions standard meets these goals, because manufacturers have already certified their vehicles to that standard.

EPA also concluded that the prior emission standard is the appropriate upper limit when an emission standard is tightened by operation of another standard. EPA recognized that the previous standard would not necessarily represent the level that is reasonably achievable by all manufacturers with engines in the relevant class, but in practice the prior standard should be achievable in almost all cases. EPA rejected a suggestion that the upper limit, in such cases, should be more stringent than the prior emission standard, because it would be very difficult to identify a limit that would be

within reach of, and could be met by, all manufacturers.

In this case, the new standard is a limit on the combination of NO<sub>x</sub>+NMHC, while the prior regulatory standards are separate limits, one for NO<sub>x</sub> and one for total HC. For a large portion of the industry, there are also emissions limits set under judicial Consent Decrees, many of which vary from the regulatory standards, in particular for the heavy-heavy service class as discussed latter in this section. In this situation, there is no simple way to determine the appropriate prior emission standard to use as an Upper Limit. One option would be to add the current NO<sub>x</sub> and HC standards together, resulting in a 5.3 NO<sub>x</sub>+NMHC standard. Another option would recognize that the HC standard has resulted in emissions of NMHC that are generally at 0.5 or below, producing NO<sub>x</sub>+NMHC levels consistent with a standard of 4.5 for engines meeting a 4.0 g/bhp-hr NO<sub>x</sub> standard. If there were no Consent Decree emissions limits, and the entire industry was already operating at these levels, a 4.5 standard would be more consistent with the policy and purposes of 40 CFR 86.1104-91, the general regulatory provision addressing Upper Limits. A NO<sub>x</sub>+NMHC standard of 5.3 would in effect allow for increases in NO<sub>x</sub> above the current regulatory emissions standards, because there is no reason to expect NMHC levels would increase above 0.5. The UL is designed to allow continued production of current engines, but not to allow backsliding.

EPA also considered the CD emissions limits in this analysis, as they establish legally binding requirements on the manufacturers that directly affect the way engine manufacturers design their engines. In many cases it is the CD limits, and not the regulatory standards, that are the controlling factor and dictate the level of emissions control required on engines produced during the term of the Decrees. Since the role of an NCP is to address the real world problems associated with a transition from a prior emissions requirement to a new more stringent requirement, it is appropriate to take the CD requirements into account where the levels required under the CD are in fact the controlling factor in establishing the prior level of control.

For light heavy-duty, medium heavy-duty, and urban bus engines, the CD requirements are consistent with the regulatory requirements for FTP standards and the defeat device prohibition. Manufacturers are currently certifying to the emissions levels provided under the CD. An examination

of model year 2001 certification data shows that for both CD and non-CD engine manufacturers, engines are generally being certified with HC emissions below 0.3 g/bhp-hr, and no engines in these service classes certified to the 4.0 g/bhp-hr NO<sub>x</sub> standard have a combined NO<sub>x</sub> plus HC emission level greater than 4.5 g/bhp-hr.<sup>4</sup> Hence, an UL of 4.5 NO<sub>x</sub>+NMHC on the FTP would be most consistent with the policy approach embodied in 40 CFR 86.1104–91.

For heavy heavy-duty engines, however, the CD provides a significantly different approach. For these engines, limits are set for Euro III and NTE levels that allow for significantly higher emissions off the FTP than EPA would expect to allow under the defeat device prohibition. While the FTP standard under the CD is the same as in the regulations, it is the level of off-cycle control that drives the design requirements for the engine manufacturers. They are the legal requirements that drive the level of control embodied in the engine design. Model year 2001 certification data shows that combined HC and NO<sub>x</sub> emissions for these engines are at or below 6.0 g/bhp-hr when measured using the Euro III test.<sup>5</sup>

This NCP rulemaking focuses on technological laggards, which would be those heavy-duty engines that need more lead time to comply with the 2004 NO<sub>x</sub>+NMHC standard. For heavy heavy-duty engines, the prior actual level of control that they are now achieving and

certifying to is driven by the CD levels. As such, an UL at the level of control required under the CD would set a level that is within the reach of all such manufacturers, including the technological laggards. It would be reasonably achievable by all manufacturers in this class, and would avoid forcing the technical laggards to remove an engine from the market when the 2004 emissions standards go into effect. This UL would be consistent with the policy embodied in the NCP regulations.

EPA recognizes that under the CD this group of heavy-duty engines is also required to achieve the 2004 emissions levels by October 2002. However, as discussed before, EPA has determined that there is likely to be a technological laggard for purposes of meeting this standard in 2004. The prior deadline in the CD does not change this determination, and means only that such manufacturers would also be subject to the constraints in the CD, including its compliance and enforcement provisions. EPA also recognizes that the CD calls for compliance with a 4.0 NO<sub>x</sub> standard on the FTP with a 6.0 NO<sub>x</sub> standard for the Euro III, and the UL we are proposing is for the FTP. Setting the UL at 6.0 NO<sub>x</sub>+NMHC for the FTP would be expected to allow continued production of engines with NO<sub>x</sub> at their CD levels, as the Euro III levels would not be expected to raise serious concerns about compliance with the defeat device prohibition.

EPA also considered an UL of 4.5 or 5.3 for the heavy heavy-duty engines. An UL of 4.5 NO<sub>x</sub>+NMHC would significantly reduce the level of off-cycle emissions for these engines, but would do it by requiring significant design changes at the same time design

work is underway to meet the 2.5 standard. It is questionable whether there is adequate lead time to accomplish this in time for 2004 model year, and it is not consistent with the policy underlying the NCP regulation concerning ULs. In addition, the majority of the heavy-heavy cost numbers obtained by EPA from industry involved bringing an engine to compliance from the CD levels to the 2004 levels, and not for reducing from some third level to the 2004 levels. EPA does not believe it could readily develop the cost figures for such a development phase. An UL of 5.3 NO<sub>x</sub>+NMHC would involve a hybrid of these two options—it would involve some change from the CD levels, but less of a change than going to the 4.5 level.

Of the three possible ULs for heavy heavy-duty engines, EPA believes that 6.0 NO<sub>x</sub>+NMHC is most consistent with the policy approach embodied in 40 CFR 86.1104–91. The cost calculation in this proposal are based on this as the UL. However, EPA invites comment on using an UL of either 5.3 or 4.5 NO<sub>x</sub>+NMHC, including information on the technology such an engine would use to comply with either 5.3 or 4.5, as well as the costs associated with these options.

## 2. Parameter Values

We propose that the values in Table 1 (in 2001 dollars) be used in the NCP formula for the 2004 and later model year NMHC+NO<sub>x</sub> standard of 2.5 g/bhp-hr for diesel heavy-duty engines and diesel urban bus engines at full useful life. The derivation of these parameters is described in the Draft Technical Support Document for this rulemaking. We request comment on our estimates of these parameters.

<sup>4</sup> EPA Memorandum “Summary of Model Year 2001 Heavy-duty Diesel Engine HC and NO<sub>x</sub> Certification Data”, copy available in the docket for this rulemaking.

<sup>5</sup> EPA Memorandum “Summary of Model Year 2001 Heavy-duty Diesel Engine HC and NO<sub>x</sub> Certification Data”, copy available in the docket for this rulemaking.

TABLE 1.—PROPOSED NCP CALCULATION PARAMETERS

Parameter	Light heavy-duty diesel engines	Medium heavy-duty diesel engines	Heavy-duty diesel engines	Urban bus engines
COC <sub>50</sub> .....	\$1,080	\$3,360	\$8,940	\$4,400.
COC <sub>90</sub> .....	\$2,610	\$6,870	\$14,790	\$7,120.
MC <sub>50</sub> .....	<sup>1</sup> \$2,000	<sup>1</sup> \$1,800	<sup>1</sup> \$7,200	<sup>1</sup> \$4,900
F .....	1.3	1.3	1.3	1.3
UL .....	<sup>1</sup> 4.5	<sup>1</sup> 4.5	<sup>1</sup> 6.0	<sup>1</sup> 4.5

<sup>1</sup> Per gram per brake-horsepower-hour.

### 3. Penalty Curves

The calculation parameters listed in Table 1 are used to calculate the penalty rates for each heavy-duty service class. These parameters are used in the penalty rate formulas which are defined

in the existing NCP regulations (See 40 CFR 86.1113(a)(1) and (2)). Using the parameters in Table 1, and the equations in the regulations, we have plotted penalty rates versus compliance levels for each service class in Figures 1–4

below. These penalty curves are for the first year of use of the NCPs, that is, the annual adjustment factors specified in the regulations have been set equal to one.

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Figure 1: Light-heavy Penalty Curve

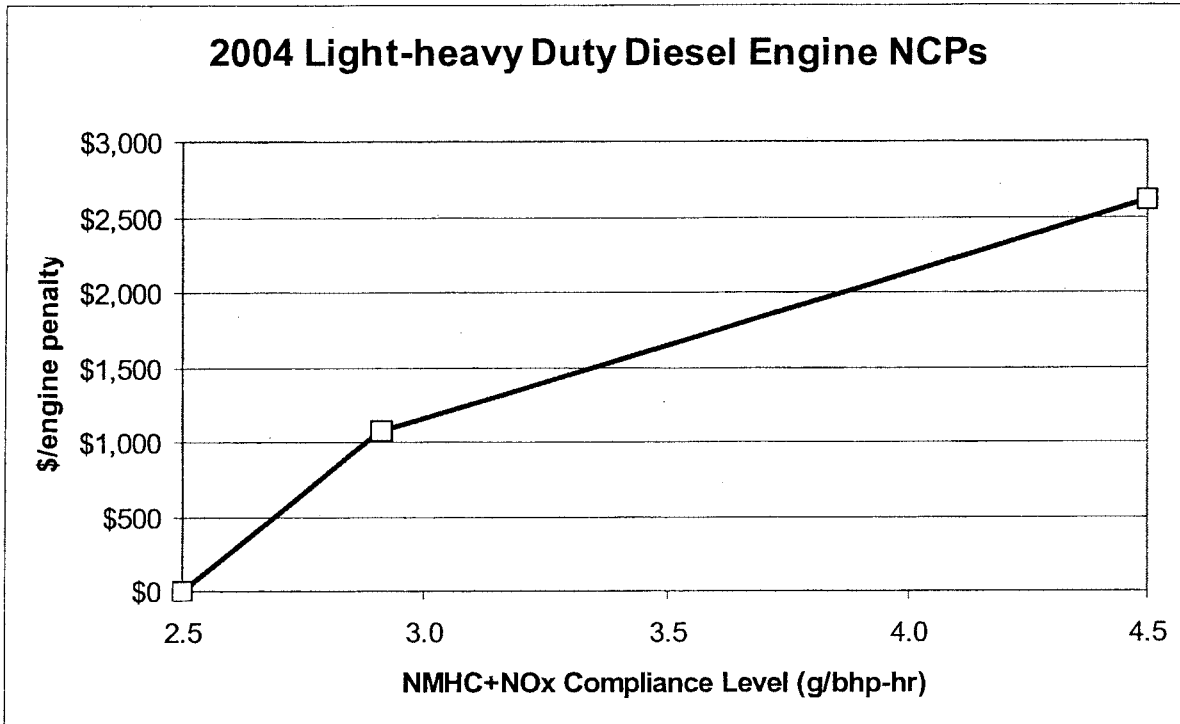


Figure 2: Medium-heavy Penalty Curve

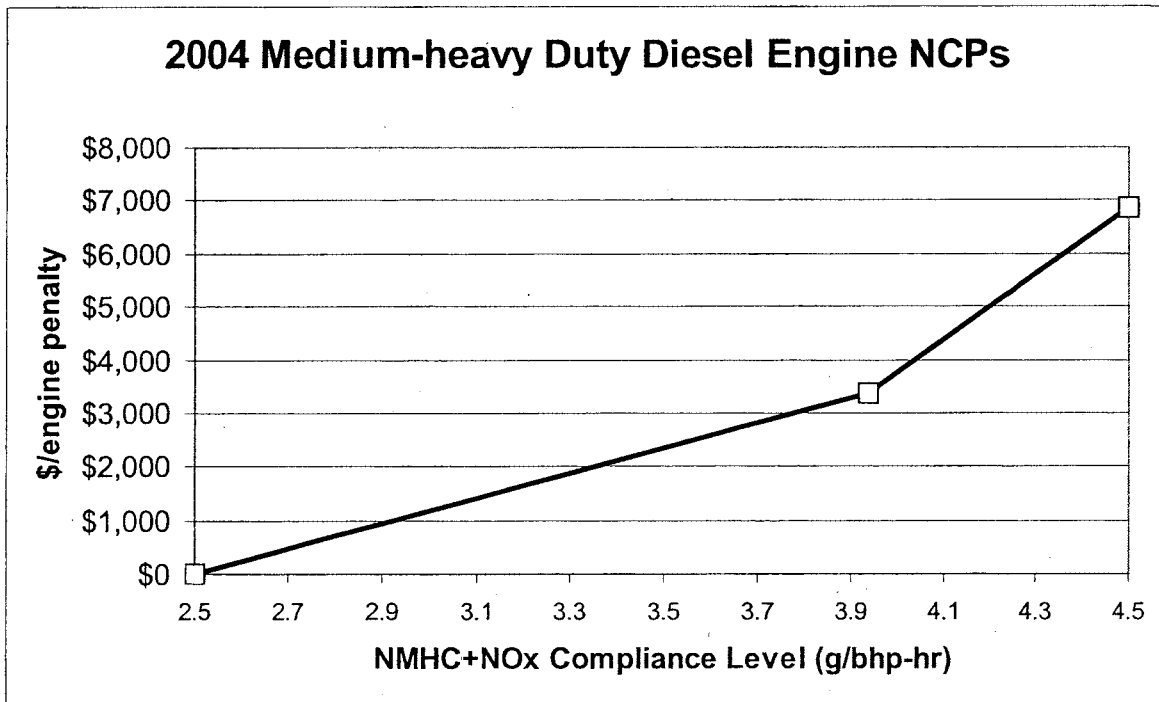


Figure 3: Heavy-heavy Penalty Curve

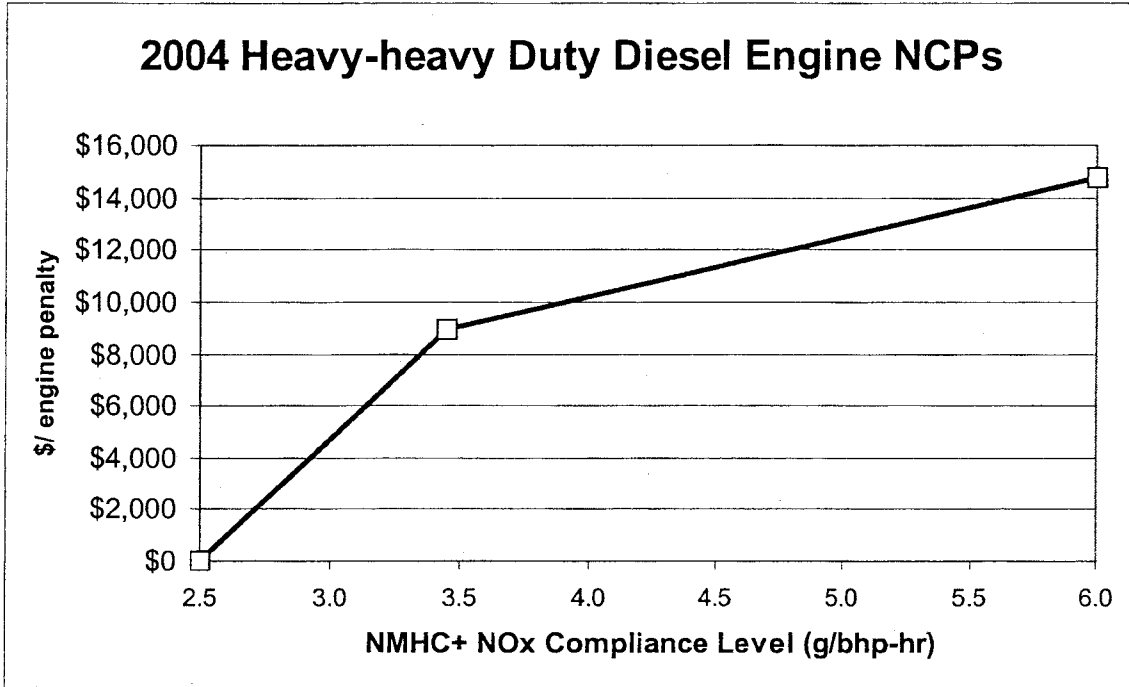
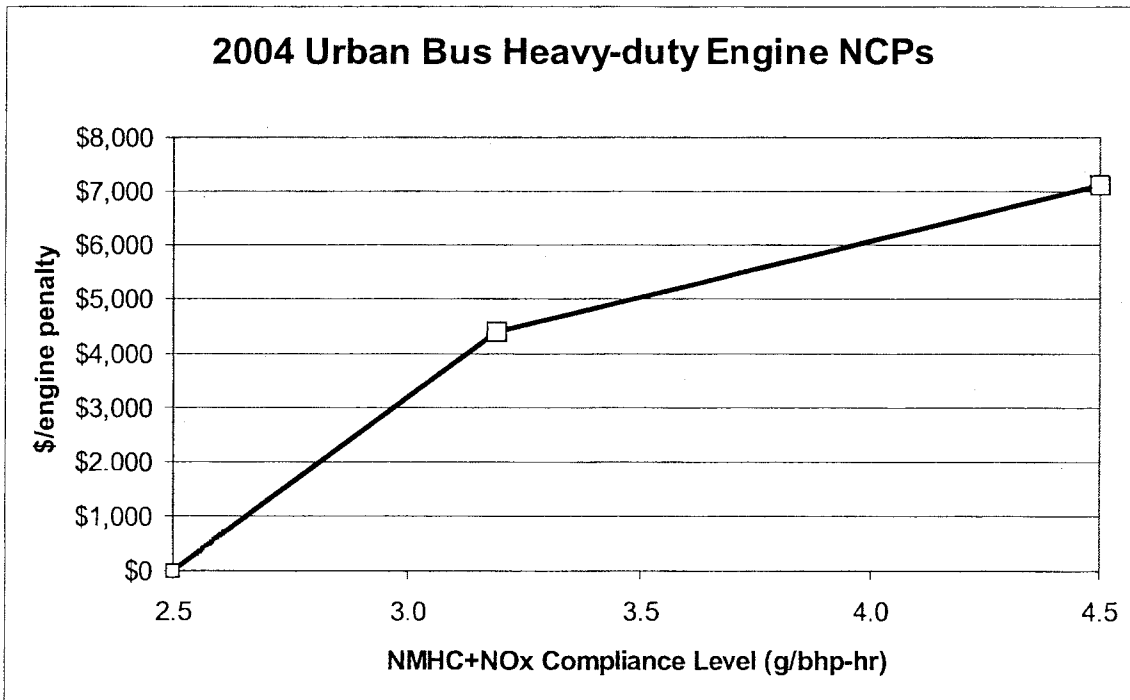


Figure 4: Urban Bus Penalty Curve



### B. Issues and Alternatives

The Clean Air Act requires EPA to set the NCPs "to remove any competitive disadvantage to manufacturers whose engines or vehicles achieve the required degree of emission reduction". The analysis presented in detail in the Draft Technical Support Document deals with an assessment of the cost of compliance, using essentially the same methodology that has historically been used to establish NCPs. We believe that our estimates of the costs are appropriate and that the methodology is sound. In establishing prior NCP rules, we have frequently made it clear that satisfying the statutory objective of protecting the complying manufacturer was paramount.

The NCP generic rule establishes an approach which attempts to remove any competitive disadvantage to complying manufacturers by assessing a cost to the manufacturer of a non-complying engine in the form of an NCP, with the expectation that this cost is at least equivalent to or exceeds the value of the competitive benefit gained by building a noncomplying engine. Imposing such a cost is a way to level the playing field without interfering in the actual marketing or pricing of the engines. The problem here is that for some factors it is hard to quantify with certainty the value of this competitive benefit, and EPA is concerned that the calculation may not remove all competitive disadvantages.

#### 1. Purchaser Perception Effects on Competition

A manufacturer of a non-complying engine generally gains a competitive advantage or benefit of two types. The first typically involves production expenses saved by not producing a complying engine, such as fixed costs, hardware costs, and the like. The second category involves, in some cases, the competitive benefits gained by producing an engine that has better performance characteristics compared to a complying engine, including reduced operating expenses for the purchasers of noncomplying engines. In addition, manufacturers may realize a reduced number of warranty claims by producing current technology noncomplying engines.

The first category is easier to quantify, as it involves considering costs directly incurred by the industry, and it is generally easier to get a fuller quantification of amounts in categories such as hardware costs. The second category is much harder to quantify with certainty. For example, as discussed below with respect to fuel

economy, the actual amount of savings to the operator will vary based on several factors. An even harder to quantify competitive advantage is the benefit in the marketplace from producing an engine that is, or may be perceived to perform better, such as being more durable or reliable, and thus less prone to malfunction or breakdown. Including the cost of warranty claims and related expenses for the new technology engines in the NCP is one way to take into consideration the expected durability of complying engines. Including this cost helps to level the playing field with respect to this increased cost experienced by manufacturers of complying engines. This cost component of the NCP is therefore like the costs in the first category—out of pocket expenses experienced by complying manufacturers that a non-complying manufacturer might otherwise avoid.

There is significant uncertainty as to whether warranty and related costs in the NCP calculation fully reflect the competitive benefit gained in the marketplace by a non-complying engine. This competitive benefit could readily be greater than the out-of-pocket warranty expenses paid by the manufacturer of a complying engine. For example, non-complying engines may be either perceived or may in fact be more reliable during the early years of the transition to the new technology engines. This difference in performance gives a competitive advantage to producers of noncomplying engines. In order to remove this advantage, the cost of an NCP needs to account for the marketplace value of this difference in performance.

However, it is hard to quantify this value with certainty. For example it is hard to quantify in dollar terms the value purchasers will attribute to a real or perceived difference in durability or reliability. There is little real world experience with the new technology engines; hence it will be hard for a purchaser to judge with certainty the actual difference in reliability and the increased costs associated with it. It is also unlikely that the dollar amount of a warranty claim would fully reflect the loss in value expected from a malfunction or breakdown. The purchaser experiences both the repair expenses as well as down time for their equipment, disruption of their business, and other potential adverse impacts, which may not be fully covered by payment of a warranty claim. Especially where there is little historical evidence to rely on regarding a new technology, there may be significant uncertainty concerning the reliability of new

technology engines when they are first introduced, and the value a purchaser places on the proven reliability of an older technology engine may therefore be magnified. While this proposal includes costs related to downtime and demurrage expenses during warranty repairs in the NCP, it is not clear how, as part of a business decision, the engine purchasers will trade-off higher purchase costs for the noncomplying engine versus the uncertainty of the reliability and durability of the new technology.

This is potentially a significant issue in this action because there is reason to believe that manufacturers may choose to make extensive use of NCPs and continue to produce pre-2004 technology engines. As has been the case in past NCP rules, where a noncomplying manufacturer does essentially nothing in terms of new technology (i.e., produces an upper limit engine), it must pay an NCP based on COC<sub>90</sub>. The noncomplying manufacturer would then raise prices on its engines to levels comparable to those for complying engines in order to be able to capture back at least part of that NCP (the portion related to first price increase). The noncomplying manufacturer may even be able to charge a premium (relative to the first price increase of the complying manufacturer) if the engine purchaser perceives its "old technology" engine to be more desirable than the relatively unproven new technology engine.

Thus, in summary, we have three related factors affecting the issue of whether the proposed NCP would remove competitive disadvantage (purchase price, operating cost, purchaser perception). Even with an NCP set at a level which addresses quantifiable cost differences between complying and non-complying engines, in the eyes of the purchaser there still may be an advantage to paying the higher first cost for an engine (including the NCP) with known performance.

It is difficult to establish the degree to which the NCP calculation discussed above will fully remove any competitive advantage for non-compliers attributable to purchaser perception. Therefore, EPA is requesting comment on whether there is an additional factor that should be included in the NCP calculation and on methods to value these potential performance advantages. If engine purchaser perception favors noncomplying engines, this affects market share and thus business viability, per engine amortized fixed costs, and overall profitability. Therefore, we are considering adding a factor to the NCP formula to address

such an advantage if it exists, and there is an appropriate way to quantify it. Conceptually, such a factor would need to be equal to the purchase price difference at which a potential purchaser would be indifferent between purchasing a complying and non-complying engine, after accounting for all of the factors that are currently included in the proposed NCP calculation (e.g., fuel costs, maintenance, warranty, demurrage, and the revenue impact of additional engine weight. These factors are discussed in more detail in the draft Technical Support Document for this proposal. EPA requests comment on whether such an additional factor is needed here and if so what is the appropriate means to implement this adjustment. Commenters who believe that such a factor is appropriately included in the NCP calculation should provide an empirical and quantitative basis for calculating the appropriate level at which to set it.

2. Projected Fuel Price

One of the most significant categories of cost is the impact of the standards on fuel consumption rates. However, this cost element is difficult to estimate because actual fuel costs will vary based on the price of the fuel and on the vehicle operation. We, therefore, are requesting comment on our estimates of the economic impact of increased fuel consumption.

Fuel price varies with time and with location. According to the Energy Information Administration (EIA), the

national average highway diesel fuel price in February of 1999 was 95 cents per gallon (with taxes), but in October of 2000 it was \$1.67 per gallon (with taxes). That represents a 76 percent increase in the fuel price within a two year period. The average price for diesel fuel over the past five years was \$1.25 per gallon. This kind of variation makes it difficult to project future prices. For our analysis, we estimated the fuel price to be \$1.50 for 2004 and 2005. This is equal to the national average highway diesel fuel price for last year. We are requesting comment on the use of the five-year average price of \$1.25 per gallon. Our analysis projects that fuel costs will be five cents per gallon higher after 2005 to account for the additional cost of the very low sulfur fuel that will be required beginning in 2006. This would also be true if we started with the five-year average price instead of the 2000 price. Given the difficulty in projecting future fuel prices, we are also requesting comments on the concept of adjusting the NCP based on price of diesel fuel. This could be done in two ways. First, we could adjust the NCP by regulation before the beginning of the 2004 model year if we determine that the fuel price used to determine the NCP inputs is no longer appropriate. Second, we could finalize in this rulemaking a regulatory provision that makes COC<sub>50</sub>, COC<sub>90</sub> and MC<sub>50</sub> functions of the national average highway diesel fuel price in the preceding year (or preceding five years). This would be similar to the use of the Consumer Price Index to adjust the

penalties for inflation (see 40 CFR 86.113–87(a)(4). The NCP could be adjusted “automatically” using the latest EIA estimate of national average highway diesel fuel price, or some other independent estimate.

In addition, at any given time, fuel prices before taxes can vary regionally by as much as ±10 percent from the national average. This is compounded by differences in state taxes, which vary from 8 to 29 cents per gallon. This regional variability is potentially significant for our 90th percentile analysis. Some trucks may operate locally in an area that has fuel prices significantly higher than the national average. However, we believe that the number of these trucks will be relatively small, and thus did not include a regional fuel price component in our 90th percentile analysis. Nevertheless, we request comment on this issue.

Another important factor in estimating fuel cost is how much fuel a model year 2004 vehicle will use over its lifetime. This is most important for heavy-heavy duty engines. Some vehicles may be scrapped after their useful life (435,000 miles) while others may be rebuilt more than once and not be scrapped until after 2 million miles. Thus, the fuel cost could vary by a factor of four from one vehicle to another. The mileage estimates that we used in our analysis are shown in the table below. You should read the Draft Technical Support Document for more information about how we used these mileage estimates.

ESTIMATES OF LIFETIME VEHICLE MILES TRAVELED (VMT) USED IN COST ANALYSIS

	VMT for average vehicle	VMT used for COC <sub>90</sub> analysis
Light Heavy .....	209,000	280,000
Medium Heavy .....	262,000	343,000
Heavy Heavy .....	767,000	1,000,000

Finally, our methodology for calculating the cost of changes in fuel consumption uses estimates of average miles driven per gallon of fuel used. These estimates are 14.0, 8.0 and 6.0 miles per gallon (MPG) for light-, medium, and heavy-heavy duty, respectively. We used these same estimates for both the COC<sub>50</sub> and COC<sub>90</sub> analyses. Using different estimates could significantly change the projected costs. For a typical light-heavy duty vehicle, where we are projecting a decrease in the brake-specific fuel consumption rate, using a higher MPG rate would increase net costs for a given number of miles traveled because the

fuel savings would be reduced. The opposite is true for medium- and heavy-heavy duty, where we project increases in brake-specific fuel consumption rates. For these larger engines, using a higher MPG rate would decrease net costs for a given number of miles traveled. We request comment on these MPG estimates.

3. Discount Rates

All of the compliance costs in this analysis are presented in terms of net present value (NPV) for calendar year 2004. This means that costs that occur before 2004 are adjusted upward, and costs that occur after 2004 are adjusted

downward to reflect the time or opportunity value of the money involved. (i.e., discounted).

In our analysis, each manufacturer’s pre-production investment costs were adjusted upward to reflect the lost opportunity cost or the cost of borrowing the capital for the investment. A manufacturer would typically seek to set its prices to recover this adjusted investment from sales within the first several years of production. We used a seven percent annual discount rate for these costs, as we have done in previous analyses for pre-production costs. EPA also used a seven percent discount rate in

Regulatory Impact Analyses for the 1997 and 2000 FRMs that established the 2004 standards. This rate is based on studies which indicate that this has been a reasonable opportunity cost of diverting private capital to support Federal regulatory objectives (See OMB Circular A-94; available at [www.whitehouse.gov/omb/circulars/a094/a094.html](http://www.whitehouse.gov/omb/circulars/a094/a094.html)). We request comment in whether this rate is appropriate for the opportunity costs for the period of 1998 through 2003, the time period when the 2004 model year investment is being made by the manufacturers.

The NPV analysis also requires that all in-use operating costs be adjusted downward to reflect the time value of money for future costs. More specifically, the stream of operating costs must be discounted to make them equivalent to costs incurred at the time of purchase. Truck purchasers would use this approach before purchase when comparing future operating costs of two or more engines before purchase. We used a seven percent discount rate for these costs as well. However, there is evidence in other contexts that users might apply a different discount rate than seven percent when considering future operating costs during a purchase decision. We request comment on whether there is evidence to support the application of such an alternative discount rate to operating costs in the various segments of the heavy duty engine market. Your comments in support of an alternative discount rate (a higher or lower value) should include a discussion of the supporting economic and business rationale for the alternative rate. We have included an example of the impact on the NCP parameters from using a smaller discount rate (three percent) in the draft Technical Support Document for this proposal.

#### IV. Economic Impact

Because the use of NCPs is optional, manufacturers have the flexibility and will likely choose whether or not to use NCPs based on their ability to comply with emissions standards. If no HDE manufacturer elects to use NCPs, these manufacturers and the users of their products will not incur any additional costs related to NCPs. NCPs remedy the potential problem of having a manufacturer forced out of the marketplace due to that manufacturer's inability to conform to new, strict emission standards in a timely manner. Without NCPs, a manufacturer which has difficulty certifying HDEs in conformance with emission standards or whose engines fail a SEA has only two alternatives: fix the nonconforming

engines, perhaps at a prohibitive cost, or prevent their introduction into commerce. The availability of NCPs provides manufacturers with a third alternative: continue production and introduce into commerce upon payment of a penalty an engine that exceeds the standard until an emission conformance technique is developed. Therefore, NCPs represent a regulatory mechanism that allows affected manufacturers to have increased flexibility. A decision to use NCPs may be a manufacturer's only way to continue to introduce HDEs into commerce.

#### V. Environmental Impact

When evaluating the environmental impact of this proposed rule, one must keep in mind that, under the Act, NCPs are a consequence of enacting new, more stringent emissions requirements for heavy duty engines. Emission standards are set at a level that most, but not necessarily all, manufacturers can achieve by the model year in which the standard becomes effective. Following *International Harvester v. Ruckelshaus*, 478 F. 2d 615 (D.C. Cir. 1973), Congress realized the dilemma that technology-forcing standards were likely to cause, and allowed manufacturers of heavy-duty engines to certify nonconforming vehicles/engines upon the payment of an NCP, under certain conditions. This mechanism would allow manufacturer(s) who cannot meet technology-forcing standards immediately to continue to manufacture these nonconforming engines while they tackle the technological problems associated with meeting new emission standard(s). Thus, as part of the statutory structure to force technological improvements without driving manufacturers out of the market, NCPs provide flexibility that fosters long-term emissions improvement through the setting of lower emission standards at an earlier date than could otherwise be possible. By design, NCPs encourage the technological laggard that is using NCPs to reduce emission levels to the more stringent standard as quickly as possible.

However, we believe that the potential exists for there to be more widespread use of the NCPs proposed in this rule in comparison to prior NCPs, thus indicating the possibility for an environmental impact somewhat greater in magnitude than we have suggested in prior NCP rules. Nevertheless, we believe that any such impacts would be short-term in nature. By including an annual adjustment factor that increases the levels of the penalties, the NCP program is structured such that the incentives to produce engines that meet

the standards increase year-by-year. The practical impact of this adjustment factor is that the NCPs will rapidly become an obsolete option for non-complying manufacturers. However, we have no way of predicting at this time how many manufacturers will make use of the proposed NCPs, or how many engine families would be subject to the NCP program. Because of these uncertainties we are unable to accurately quantify the potential impact the proposed NCPs might have on emission inventories, although, as stated above, any impacts are expected to be short-term in nature.

#### VI. Public Participation

We request comment on all aspects of this proposal. This section describes how you can participate in this process.

##### A. How Do I Submit Comments?

We are opening a formal comment period by publishing this document. We will accept comments for the period indicated under **DATES** above. If you have an interest in the program described in this document, we encourage you to comment on any aspect of this rulemaking. We request comment on various topics throughout this proposal.

Your comments will be most useful if you include appropriate and detailed supporting rationale, data, and analysis. If you disagree with parts of the proposed program, we encourage you to suggest and analyze alternate approaches to meeting the air quality goals described in this proposal. You should send all comments, except those containing proprietary information, to our Air Docket (see **ADDRESSES**) before the end of the comment period.

If you submit proprietary information for our consideration, you should clearly separate it from other comments by labeling it "Confidential Business Information." You should also send it directly to the contact person listed under **FOR FURTHER INFORMATION CONTACT** instead of the public docket. This will help ensure that no one inadvertently places proprietary information in the docket. If you want us to use your confidential information as part of the basis for the final rule, you should send a non-confidential version of the document summarizing the key data or information. We will disclose information covered by a claim of confidentiality only through the application of procedures described in 40 CFR part 2. If you don't identify information as confidential when we receive it, we may make it available to the public without notifying you.

### B. Will There Be a Public Hearing?

We will hold a public hearing in the Washington, DC area on February 15, 2002. The hearings will start at 10:00 am and continue until everyone has had a chance to speak.

If you would like to present testimony at a public hearing, we ask that you notify the contact person listed above at least ten days before the hearing. You should estimate the time you will need for your presentation and identify any needed audio/visual equipment. We suggest that you bring copies of your statement or other material for the EPA panel and the audience. It would also be helpful if you send us a copy of your statement or other materials before the hearing.

We will make a tentative schedule for the order of testimony based on the notifications we receive. This schedule will be available on the morning of each hearing. In addition, we will reserve a block of time for anyone else in the audience who wants to give testimony. We will conduct the hearing informally, and technical rules of evidence won't apply. We will arrange for a written transcript of the hearing and keep the official record of the hearing open for 30 days to allow you to submit supplementary information. You may make arrangements for copies of the transcript directly with the court reporter.

## VII. Administrative Requirements

### A. Regulatory Planning and Review: Executive Order 12866

Under Executive Order 12866 (58 FR 51735, Oct. 4, 1993), the Agency is required to determine whether this regulatory action would be "significant" and therefore subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The order defines a "significant regulatory action" as any regulatory action that is likely to result in a rule that may:

- Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or,
- Raise novel legal or policy issues arising out of legal mandates, the

President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, OMB has notified EPA that it considers this a "significant regulatory action" within the meaning of the Executive Order. EPA has submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record. This regulation is intended to assist manufacturers that are having difficulty developing and marketing vehicles which comply with the 2004 NMHC+NO<sub>x</sub> standard for diesel heavy-duty engines and heavy-duty vehicles. Without this proposed rule, a manufacturer experiencing difficulty in complying with this new emission standard (after the use of credits) has only two alternatives: fix the non-conforming engines for the associated model years or not sell them at all. NCPs provide manufacturers with additional time to bring their engines into conformity. In addition, NCPs are calculated to deprive non-conforming manufacturers of any cost savings and competitive advantages stemming from marketing a non-conforming engine. Thus, NCPs will not have significant adverse effects on competition, employment, investment, productivity, innovation or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

### B. Regulatory Flexibility Act, as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et. seq.

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business that has no more than 1,000 employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule will not impose any requirements on small entities. The non-conformance penalties that would be established by this proposed rule are for emission standards that pertain to heavy-duty diesel engines. When these emission standards were established, the final rulemaking (65 FR 59895, October 6, 2000) noted that only two small entities were known to be affected. Those entities were small businesses that certify alternative fuel engines or vehicles, either newly manufactured or modified from previously certified gasoline engines. The emission standards for heavy-duty diesel engines, for which NCPs are proposed, do not pertain to the engines manufactured by these businesses.

### C. Paperwork Reduction Act

The information collection requirements in this proposed rule will be submitted for approval to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act*, 44 U.S.C. 3501 et seq. An Information Collection Request (ICR) document will be prepared and its availability for comment will be announced in a separate **Federal Register** document when the ICR is sent to OMB.

The existing regulations in 40 CFR part 86, subpart L require that manufacturers seeking NCPs annually conduct a Production Compliance Audit (PCA) for each engine configuration. This means that they must perform additional emission testing. This testing is necessary to determine more precisely the emission levels for engine configurations that exceed an applicable emission standard. While the use of NCPs is voluntary, manufacturers choosing to use them must submit the additional testing information (40 CFR 86.1106-87). Manufacturers may assert that some or all of the information provided is entitled to confidential treatment as provided by 40 CFR part 2, subpart B.

EPA has previously estimated the annual burden associated with NCPs to 906 hours and \$51,786, based on a projection of six respondents per year. We estimated the average burden hours per response to 144 hours for reporting, and 7 hours for recordkeeping. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed

to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

#### *D. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates,

and informing, educating, and advising small governments on compliance with the regulatory requirements.

This proposed rule contains no Federal mandates (under the regulatory provisions of Title II of the UMRA) for State, local, or tribal governments or the private sector. The proposed rule would impose no enforceable duty on any State, local or tribal governments or the private sector.

EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. Because the use of NCPs is optional, manufacturers have the flexibility and will likely choose whether or not to use NCPs based on their ability to comply with emissions standards. The availability of NCPs provides manufacturers with a third alternative: continue production and introduce into commerce upon payment of a penalty an engine that exceeds the standard until an emission conformance technique is developed. Therefore, NCPs represent a regulatory mechanism that allows affected manufacturers to have increased flexibility. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA.

#### *E. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." "Policies that have tribal implications" is defined in the Executive Order to include regulations that have "substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes."

This proposed rule does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. The proposed non-conformance penalties and associated requirements for heavy-duty diesel engine manufacturers in this proposal would

have national applicability, and thus would not uniquely affect the communities of Indian Tribal Governments. Thus, Executive Order 13175 does not apply to this rule.

In the spirit of Executive Order 13175, and consistent with EPA policy to promote communications between EPA and tribal governments, EPA specifically solicits additional comment on this proposed rule from tribal officials.

#### *F. National Technology Transfer and Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Section 12(d) of Public Law 104-113, directs EPA to use voluntary consensus standards in its regulatory activities unless it would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially-applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

#### *G. Executive Order 13045: Children's Health Protection*

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required

under section 5–501 of the Order has the potential to influence the regulation. This proposed rule is not subject to Executive Order 13045 because it does not establish an environmental standard intended to mitigate health or safety risks.

#### H. Executive Order 13132: Federalism

Executive Order 13132, entitled “Federalism” (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure “meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.” “Policies that have federalism implications” is defined in the Executive Order to include regulations that have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.”

This proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This proposed rule proposes to adopt non-conformance penalties for national emission standards for certain categories of motor vehicles. The requirements of the proposed rule would be enforced by the federal government at the national level. Thus, Executive Order 13132 does not apply to this rule.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

#### I. Executive Order 13211: Energy Effects

This proposed rule is not a “significant energy action” as defined in Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use” (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. As described in the 2000 final rule in which we affirmed the 2004 standard (65 FR 59896, Oct. 6, 2000), we have concluded that there would be no net long-term change in the fuel consumption performance of heavy-duty diesel engines as a result of the 2004 model year emission standards. However, there may be the potential for

higher fuel consumption rates in the short term as diesel engine manufacturers work to balance the inherent tradeoff between control of NO<sub>x</sub> emissions and fuel consumption. The availability of NCPs for the 2004 and later model years provides manufacturers with another option for balancing this tradeoff and working towards optimizing fuel consumption and emissions—they would be able to use NCPs to emit somewhat higher NO<sub>x</sub> levels than they would otherwise be allowed, while at the same time avoiding undesirable fuel consumption impacts. Thus, we have concluded that this proposed rule is not likely to have any significant adverse energy effects.

#### J. Plain Language

This document follows the guidelines of the June 1, 1998 Executive Memorandum on Plain Language in Government Writing. To read the text of the regulations, it is also important to understand the organization of the Code of Federal Regulations (CFR). The CFR uses the following organizational names and conventions.

Title 40—Protection of the Environment  
Chapter I—Environmental Protection Agency

Subchapter C—Air Programs. This contains parts 50 to 99, where the Office of Air and Radiation has usually placed emission standards for motor vehicle and nonroad engines.

Subchapter U—Air Programs Supplement. This contains parts 1000 to 1299, where we intend to place regulations for air programs in future rulemakings.

Part 86—Control of Emissions from New and In-use Highway Vehicles and Engines. Provisions of this part apply generally to highway vehicles and engines used in highway vehicles.

Each part in the CFR has several subparts, sections, and paragraphs. The following illustration shows how these fit together.

#### Part 86

##### Subpart A

##### Section 86.1

- (a)
- (b)
- (1)
- (2)
- (i)
- (ii)
- (A)
- (B)

A cross reference to Sec. 1048.001(b) in this illustration would refer to the parent paragraph (b) and all its subordinate paragraphs. A reference to “Sec. 1048.001(b) introductory text”

would refer only to the single, parent paragraph (b).

#### List of Subjects in 40 CFR Part 86

Administrative practice and procedure, Confidential Business Information, Incorporation by reference, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements.

Dated: January 10, 2002.

**Christine Todd Whitman,**  
Administrator.

For the reasons set forth in the preamble, chapter I, title 40 of the Code of Federal Regulations is proposed to be amended as follows:

#### PART 86—CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY VEHICLES AND ENGINES

1. The authority citation for part 86 continues to read as follows:

**Authority:** 42 U.S.C. 7401–7671q.

2. Section 86.1105–87 is proposed to be amended by revising paragraph (e) and by adding paragraph (i), to read as follows:

#### § 86.1105–87 Emission standards for which nonconformance penalties are available.

\* \* \* \* \*

(e) The values of COC<sub>50</sub>, COC<sub>90</sub>, and MC<sub>50</sub> in paragraphs (a) and (b) of this section are expressed in December 1984 dollars. The values of COC<sub>50</sub>, COC<sub>90</sub>, and MC<sub>50</sub> in paragraphs (c) and (d) of this section are expressed in December 1989 dollars. The values of COC<sub>50</sub>, COC<sub>90</sub>, and MC<sub>50</sub> in paragraph (f) of this section are expressed in December 1991 dollars. The values of COC<sub>50</sub>, COC<sub>90</sub>, and MC<sub>50</sub> in paragraphs (g) and (h) of this section are expressed in December 1994 dollars. The values of COC<sub>50</sub>, COC<sub>90</sub>, and MC<sub>50</sub> in paragraph (i) of this section are expressed in December 2001 dollars. These values shall be adjusted for inflation to dollars as of January of the calendar year preceding the model year in which the NCP is first available by using the change in the overall Consumer Price Index, and rounded to the nearest whole dollar in accordance with ASTM E29–67 (reapproved 1980), Standard Recommended Practice for Indicating Which Places of Figures are to be Considered Significant in Specified Limiting Values. The method was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. This document is available from ASTM, 1916 Race Street, Philadelphia, PA 19103, and is also available for inspection as part of Docket A–91–06, located at the



Central Docket Section, EPA, 401 M Street, SW, Washington, DC or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC. This incorporation by reference was approved by the Director of the Federal Register on January 13, 1992. These materials are incorporated as they exist on the date of the approval and a notice of any change in these materials will be published in the **Federal Register**.

\* \* \* \* \*

(j) Effective in the 2004 model year, NCPs will be available for the following emission standard:

(1) Diesel heavy-duty engine non-methane hydrocarbon plus oxides of nitrogen standard of 2.4 grams per brake horsepower-hour (or alternatively, 2.5 grams per brake horsepower-hour with a limit on non-methane hydrocarbon emissions of 0.5 grams per brake horsepower-hour), in § 86.004–11(a)(1)(i).

(i) For light heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with § 86.1113–87(a):

(1) COC<sub>50</sub>: \$1080.

(2) COC<sub>90</sub>: \$2610.

(3) MC<sub>50</sub>: \$2000 per gram per brake horsepower-hour.

(4) F: 1.3.

(5) UL: 4.5 grams per brake horsepower-hour; notwithstanding § 86.1104–91.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in § 86.004–11(a)(1)(i) in accordance with § 86.1113–87(h): 0.333.

(ii) For medium heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with § 86.1113–87(a):

(1) COC<sub>50</sub>: \$3360.

(2) COC<sub>90</sub>: \$6870.

(3) MC<sub>50</sub>: \$1800 per gram per brake horsepower-hour.

(4) F: 1.3.

(5) UL: 4.5 grams per brake horsepower-hour; notwithstanding § 86.1104–91.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in § 86.004–11(a)(1)(i) in accordance with § 86.1113–87(h): 0.167.

(iii) For heavy heavy-duty diesel engines:

(A) The following values shall be used to calculate an NCP in accordance with § 86.1113–87(a):

(1) COC<sub>50</sub>: \$8940.

(2) COC<sub>90</sub>: \$14790.

(3) MC<sub>50</sub>: \$7200 per gram per brake horsepower-hour.

(4) F: 1.3.

(5) UL: 6.0 grams per brake horsepower-hour; notwithstanding § 86.1104–91.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in § 86.004–11(a)(1)(i) in accordance with § 86.1113–87(h): 0.067.

(iv) For diesel urban bus engines:

(A) The following values shall be used to calculate an NCP in accordance with § 86.1113–87(a):

(1) COC<sub>50</sub>: \$4400.

(2) COC<sub>90</sub>: \$7120.

(3) MC<sub>50</sub>: \$4895 per gram per brake horsepower-hour.

(4) F: 1.3.

(5) UL: 4.5 grams per brake horsepower-hour; notwithstanding § 86.1104–91.

(B) The following factor shall be used to calculate the engineering and development component of the NCP for the standard set forth in § 86.004–11(a)(1)(i) in accordance with § 86.1113–87(h): 0.136.

(2) [Reserved]

[FR Doc. 02–1109 Filed 1–15–02; 8:45 am]

BILLING CODE 6560–50–P

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 180

[OPP–301192; FRL–6810–3]

RIN 2070–AB78

### Nicotine; Proposed Revocation of Tolerances

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** This document proposes to revoke specific tolerances for residues of nicotine-containing compounds used as insecticides and for the insecticide nicotine because nicotine is no longer registered for those uses in the United States. The regulatory actions proposed in this document are part of the Agency's reregistration program under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and the tolerance reassessment requirements of the Federal Food, Drug, and Cosmetic Act (FFDCA) section 408(q), as amended by the Food Quality Protection Act (FQPA) of 1996. By law, EPA is required by August 2002 to reassess 66% of the

tolerances in existence on August 2, 1996, or about 6,400 tolerances. The regulatory actions in this document pertain to the proposed revocation of 66 nicotine tolerances which would be counted among tolerance/exemption reassessments made toward the August, 2002 review deadline.

**DATES:** Comments, identified by docket control number OPP–301192, must be received on or before March 18, 2002.

**ADDRESSES:** Comments may be submitted by mail, electronically, or in person. Please follow the detailed instructions for each method as provided in Unit I. of the **SUPPLEMENTARY INFORMATION**. To ensure proper receipt by EPA, it is imperative that you identify docket control number OPP–301192 in the subject line on the first page of your response.

**FOR FURTHER INFORMATION CONTACT:** By mail: Joseph Nevola, Special Review and Reregistration Division (7508C), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave, NW., Washington, DC 20460; telephone number: (703) 308–8037; e-mail address: nevola.joseph@epa.gov.

### SUPPLEMENTARY INFORMATION:

#### I. General Information

##### A. Does this Action Apply to Me?

You may be affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. Potentially affected categories and entities may include, but are not limited to:

Categories	NAICS	Examples of Potentially Affected Entities
Industry	111 112 311 32532	Crop production Animal production Food manufacturing Pesticide manufacturing

This listing is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. Other types of entities not listed in the table could also be affected. The North American Industrial Classification System (NAICS) codes have been provided to assist you and others in determining whether or not this action might apply to certain entities. If you have questions regarding the applicability of this action to a particular entity, consult the person listed under **FOR FURTHER INFORMATION CONTACT**.