

Environmental Protection Agency

40 CFR Part 86

[ AMS-FRL - \_\_\_\_\_ ]

Control of Air Pollution from New Motor  
Vehicles and New Motor Vehicle Engines;  
Interim Regulations for Cold  
Temperature Carbon Monoxide  
Emissions from 1994 and Later Model  
Year Gasoline-fueled Light-Duty  
Vehicles and Light-Duty Trucks

AGENCY: Environmental Protection Agency (EPA)

ACTION: Final Rule

SUMMARY: This final rule establishes cold temperature carbon monoxide (CO) exhaust emission standards for light-duty vehicles (LDVs) and light-duty trucks (LDTs). The emission standards at 20°F, applicable for a 50,000 mile useful life will be: 10.0 g/mi for LDVs; 10.0 g/mi for LDTs with 3,750 lbs or less loaded vehicle

weight (LVW); and 12.5 g/mi for LDTs with a LVW greater than 3,750 lbs. These standards will be phased in over a period of three years. In 1994, 40% of each manufacturer's sales volume of LDVs and LDTs will be required to meet the cold CO standards. This percentage increases to 80% and 100% in 1995 and 1996, respectively. Vehicles produced by small-volume manufacturers (less than 10,000 units/year) are exempt until 1996 when 100 percent of these vehicles must comply.

Motor vehicle CO emissions continue to contribute to unacceptable CO air quality, with many urban areas exceeding the eight hour CO national ambient air quality standard (NAAQS). In recognition of this persistent problem, the Clean Air Act Amendments of 1990 (CAAA) mandate cold temperature CO control of LDVs and LDTs. This rule will address the mandate of the CAAA and assist noncompliant areas in meeting the CO NAAQS. Mobile source CO emissions will be reduced an estimated 20-29% when measured at 20°F. Averaging over all temperatures, it is estimated that this rule will reduce annual CO emissions by 2.6 - 3.1 million tons by the year 2000 and 5.8-7.7 million tons after complete fleet turnover.

EFFECTIVE DATE: [insert date]

ADDRESSES: Materials relevant to this rulemaking are contained in Docket No. A-89-01. The docket is located at The Air Docket,

401 M Street, S.W., Washington, D.C. 20460, and may be viewed in Room M-1500 from 8:00 a.m. until noon and from 1:30 p.m. until 3:30 p.m. Monday through Friday. As provided in 40 CFR Part 2, a reasonable fee may be charged by EPA for photocopying.

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## I. Introduction

On September 17, 1990, EPA published a Notice of Proposed Rulemaking (NPRM) proposing regulations requiring motor vehicles to meet cold temperature CO emission standards for their useful life. The proposed regulations were based on levels of control that are feasible in the near term. The NPRM also stated that the final rule would include any relevant requirements resulting from then pending legislative revisions to the Clean Air Act (CAA) that did not require another notice of proposed rulemaking and specifically invited comments regarding legislative developments.

On November 1, 1990, EPA held a public hearing concerning the proposed regulations. Comments from that hearing were considered in developing this final rule and are included in the public docket.

On November 15, 1990, amendments to the CAA were enacted. These amendments added a new section to the CAA, section 202(j), that requires EPA to promulgate regulations controlling cold CO emissions.

New section 202(j) provides for the establishment of cold CO standards for LDVs and LDTs in two phases. The final rule being announced today implements the first phase of those standards, which the statute requires EPA to promulgate by November 15, 1991,

and to phase-in beginning with model year 1994. Section 202(j) also sets forth a specific standard (10.0 gpm) for LDVs and requires that EPA set standards of comparable stringency for LDTs. With respect to the second phase of cold CO standards, EPA is to undertake a study of the need for and achievability of additional CO reductions, which is to be completed by June 1, 1997. Furthermore, section 202(j)(2)(B) provides that a specified second phase of standards is to be implemented beginning with model year 2002 LDVs and LDTs if, as of June 1, 1997, six or more CO nonattainment areas have a CO design value of 9.5 or greater. Section 202(j)(3) sets the useful life period for these standards at 5 years or 50,000 miles, but authorizes EPA to establish a longer useful life period if EPA determines a longer period is feasible. Finally, section 202(j)(4) authorizes EPA to establish cold CO standards for heavy-duty vehicles and engines. While EPA's NPRM was consistent with the new section 202(j) in most respects, as suggested by the preamble of the NPRM, some changes from the NPRM, primarily concerning the timing of the implementation of the cold CO standards, were necessitated by the amendments to the CAA. Those changes will be discussed below.

## II. Background

Exceedances of the national ambient air quality standard (NAAQS) for CO primarily occur between November and February, during cool or cold ambient periods which are often accompanied by

low winds and atmospheric temperature inversions. In the past, it was thought that exceedances of the CO NAAQS were primarily due to localized conditions. However, evidence is accumulating which indicates that there is an associated area-wide component to CO nonattainment. (See Chapter 1 of the Regulatory Support Document.)

Compared to vehicles produced over twenty years ago, newer vehicles have substantially improved emission performance. However, as demonstrated by recent EPA tests, proportional improvements in emission performance under colder temperatures have not occurred in recent model year vehicles. The tests revealed that CO levels in newer vehicles were 75% lower than those of a group of 1969-74 model year vehicles when measured at around 75°F.<sup>1</sup> However, levels were only 51% lower for the same vehicles when measured at 20°F.<sup>2</sup> EPA has also determined that cold temperature emission performance varies, with some vehicles exhibiting low cold temperature CO emissions and others exhibiting high cold temperature CO emissions.

European countries also have a problem with excess CO emissions. As a result, the European Economic Community is currently considering cold temperature CO controls.

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<sup>1</sup>Robert E. Larson, "Vehicle Emission Characteristics Under Cold Ambient Conditions." SAE Paper 890021, January 9-11, 1989.

<sup>2</sup>Ibid.





### III. Requirements of the Final Rule

#### A. Vehicle Standards

EPA is promulgating CO standards of 10.0 g/mi for LDVs; 10.0 g/mi for LDTs with 3,750 lbs or less LVW; and 12.5 g/mi for LDTs with a LVW greater than 3,750 lbs. As proposed in the NPRM, these standards apply only to gasoline-fueled vehicles. These standards are based on the 10.0 g/mi LDV standard at 50,000 miles which was proposed and is also mandated by CAA section 202(j)(1) for LDVs. Further, in accordance with that section of the CAA, the standard for LDTs must be a level comparable in stringency to the standard required for LDVs. As stated in the NPRM, EPA's analysis indicates that for a given fuel system type and engine size, light trucks and passenger cars have comparable CO emissions. However, the proposed LDT standards were for a full useful life of 120,000 miles, rather than the useful life of 50,000 miles being adopted today. Therefore, the proposed standards for LDTs have been adjusted to reflect a comparable stringency to the 10 g/mi LDV standard and a useful life of 50,000 miles. The above standards will apply when the vehicle is tested at 20°F according to a revised Federal Test Procedure (FTP), also being announced today.

High-altitude standards for cold CO emissions are patterned after current FTP high-altitude provisions for LDVs. Therefore,

all LDVs and LDTs are required to comply with the cold CO standards at all altitudes.

B. Effective Dates

The standards established in this final rule for LDVs and LDTs are to be phased in over the 1994 through 1996 model years as follows:

<u>Model Year</u>	<u>LDVs and LDTs</u>
1994	40%
1995	80%
1996	100%

This phase-in schedule represents a delay of one year compared to the proposal for LDVs and light LDTs. This delay in the implementation schedule was required by section 202(j)(1) of the CAA.

In the NPRM, EPA proposed a four year lead time for heavy light-duty trucks (HLDT) unless the new CAAA removed the four-year lead time requirement for such vehicles. That would have meant that no HLDTs would have had to comply in 1993 and 1994, but 100 percent would have had to comply in 1995. Section 202(j) of the CAA specifically applies the cold CO requirement to all LDTs pursuant to the same implementation schedule. Consequently, EPA is treating the HLDTs in the same manner as other LDTs, and HLDTs must

meet the same phase-in as other LDTs: 40% in 1994, 80% in 1995, and 100% in 1996.

The cold CO standards apply to all manufacturers. However, manufacturers that meet the EPA definition of small-volume manufacturer are exempted from the phase-in percentage requirements until the final year of the phase-in, that is, 1996. In that year, small-volume manufacturers, like other manufacturers, will have to comply at a 100 percent level. Small-volume manufacturers include independent commercial importers as defined in 40 CFR part 85, subpart P. This is consistent with both the NPRM and the approach taken by EPA in the Tier 1 regulations promulgated earlier this year.<sup>3</sup>

### C. Phase-in Compliance Procedures

Phase-in compliance encompasses a number of important elements, including the use of actual sales as the basis for phase-in compliance, the legitimacy of using production data in lieu of actual sales data, credit for vehicles certified for sale in California or states adopting California emission standards, and whether certification for entire engine families are to be voided for phase-in noncompliance. These issues are only of significance where the phase-in percentages are less than full compliance; once the compliance requirement reaches 100 percent, the additional

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<sup>3</sup>56 FR 25724, June 5, 1991.

reporting requirements, and enforcement with respect to the phase-in disappear. The final rule contains some changes from the NPRM necessitated by the statutory language of the cold CO provision added to the CAA by the 1990 Amendments, as well as changes responsive to comments presented to EPA during the cold CO rulemaking. Due to the close similarity of the statutory provisions underlying the cold CO rule and the Tier 1 rule, this portion of the cold CO rule is virtually identical to the analogous portions of the Tier 1 rule in many respects.

To meet the phase-in percentage specified for each year during the phase-in period, manufacturers will be allowed to select any combination of LDV or LDT families at the time of certification. For example, in model year 1994, 40 percent of LDVs and LDTs combined must comply, not 40 percent of LDVs and 40 percent of LDTs. Only entire engine families can be included when determining the sales volume subject to cold CO standards.

During the phase-in period, compliance with the specified percentage of sales volume will be based upon actual sales of each engine family. EPA is taking this approach because the pertinent statutory language of section 202(j), concerning the cold CO standards, is the same as that contained in section 202(g) and 202(h), concerning the Tier 1 standards. The cold CO provision, like the Tier 1 provisions, describes the phase-in requirements in terms of "a percentage of each manufacturer's sales volume." As

with the Tier 1 provisions, EPA's review of the statutory language and legislative history has led it to the conclusion that Congressional intent was to base phase-in compliance on actual sales.

Also consistent with its Tier 1 regulations, EPA believes that in most cases production data will be equivalent to sales data. Therefore, while compliance with the phase-in of Cold CO standards will be determined based upon actual sales, this final rule allows a manufacturer to request permission to submit actual production data rather than actual sales data, so long as the manufacturer can demonstrate to EPA that production and sales data are expected to be functionally equivalent.

In order to use production data rather than actual sales, a manufacturer must petition the Agency by providing information demonstrating functional equivalence of production and sales data. Such petition shall be made to EPA's Manufacturers Operations Division no later than 30 days following the end of the model year. Approval of the use of production data will be presumed unless otherwise notified by the Agency within 30 days of submittal. EPA retains the authority to determine actual sales data independently to confirm that there is no significant discrepancy between actual sales and production numbers. Also in accordance with the Tier 1 regulations, EPA has defined actual sales as sales to dealers,

distributors, fleet operators, brokers, or any other entity which comprises the point of first sale.

Another phase-in compliance issue concerns the creditability of vehicles sold in California or any states that adopt California's emission standards pursuant to Section 177 of the Clean Air Act ("Section 177 states") in accordance with California's motor vehicle emission standards towards compliance with the phase-in percentages. Section 202(j) of the Act, like the provisions setting forth the Tier 1 standards, does not explicitly exclude California and section 177 vehicles from being creditable towards cold CO compliance. EPA believes, therefore, that the Act permits such vehicles (in the event they comply with the federal cold CO standard) to be counted towards compliance with the federal cold CO standard. Consequently, in the final rule, EPA is permitting manufacturers to have the choice of crediting towards phase-in compliance all vehicles that are certified to the federal cold CO standard, even if they are sold in California or section 177 states. This implies, however, that if a manufacturer elects to credit vehicles sold in California and section 177 states towards phase-in compliance, then all vehicles sold in California or section 177 states, including those not certified to the federal cold CO standards, must be included in the overall vehicle count used as the denominator for calculating compliance with the phase-in percentages. If a manufacturer does not choose this option, then vehicles sold in California and section 177 states

will be excluded from both the numerator and denominator in determining compliance with the phase-in percentages.

This method is consistent with that adopted in the Tier 1 rule, which provides manufacturers with the option of crediting towards compliance with the phase-in of the federal Tier 1 standards vehicles sold in California and section 177 states that are certified to the California equivalents of the federal Tier 1 standards. In the cold CO context, however, at the present time California has no standard equivalent to the federal cold CO standard. Consequently, EPA is requiring that, to be counted towards compliance, vehicles sold in California or section 177 states be certified to the federal cold CO standard to provide adequate assurance that they in fact meet the standard.

The preceding discussion is predicated on the assumption that California has not adopted a cold CO standard equivalent to the federal standard, but still has a waiver of federal preemption under section 209 of the CAA for its motor vehicle emission standards. That is the situation as it currently stands, as EPA has granted waiver of federal preemption to California for its most recent LDV and LDT standards for model years 1993 and later. See 53 FR 36488 (September 20, 1988); 55 FR 43028 (October 25, 1990). EPA may reconsider the issuance of those waivers in light of the changes in the federal emission standards that have occurred since the waivers were issued, e.g., the promulgation of the Tier 1

standards and the cold CO standards promulgated today. If EPA does decide to reevaluate the waivers issued to California, it will do so through a notice and comment proceeding instituted through a separate Federal Register notice.

Enforcement of the phase-in percentages will be based on a per vehicle basis. For sales percentages not meeting or exceeding the necessary phase-in percentages, the number of additional vehicles necessary to reach the minimum phase-in percentage will be considered the number of vehicles in violation of the terms in which the certificate of conformity was issued, and therefore, as a vehicle which is not covered by a certificate of conformity for purposes of the Act. This approach departs from that proposed in the NPRM, which contemplated the voiding ab initio of certificates of conformity on an engine family basis, but is the same as that adopted in the Tier 1 rule. It is also responsive to manufacturer comments critical of the NRPM's proposed approach.

EPA will apply the same enforcement policy to violations of the cold CO phase-in schedule as it announced for the Tier 1 phase-in schedule. Thus, while the existence of a violation will depend solely on whether the manufacturer achieves the applicable phase-in percentage, the Agency reserves the right to exercise enforcement discretion in the assessment of civil penalties for that violation. The EPA recognizes that a manufacturer, notwithstanding its best efforts, may fail to achieve the required



phase-in percentage due to circumstances beyond its control (e.g., a fire at a plant that produces vehicles designed to comply with the phase-in standards). Thus, in seeking civil penalties for a violation, EPA will exercise its enforcement discretion according to the circumstances surrounding a violation. In practice, EPA does not intend to bring an enforcement action against a manufacturer if both of the following circumstances exist; the shortfall in actual sales from the required percentage is less than or equal to ten percent of the required phase-in percentage, and there is no indication that the shortfall resulted from bad faith on the part of the manufacturer.

For example, when a 40 percent phase-in requirement applies, ten percent of the phase-in requirement would be four percent. Thus, the lower bound for the first criterion would be 36 percent (40 percent less four percent). In this case, EPA does not intend to bring an enforcement action against a manufacturer if the manufacturer obtained cold CO sales of 36 percent during the model year, and there was no indication that any shortfall was a result of bad faith. By a similar computation for a case where the phase-in requirement is 80 percent, EPA would not initiate enforcement action if the cold CO sales were 72 percent or greater and there was no indication that the shortfall was a result of bad faith on the part of the manufacturer. As mentioned above, application of this enforcement policy applies only to cases where

the phase-in levels are below 100 percent; in the full-compliance years, all vehicles must comply with the applicable standards.

If the Agency determines that an enforcement action is appropriate, EPA would, of course, have some discretion in choosing the appropriate penalties. Such penalties would be assessed on the basis of the deviation between the required phase-in percentage (for example, 40 or 80 percent) and the percentage of cold CO sales actually achieved.

D. Cold CO Test Procedure

The cold CO test procedure is similar to the Federal Test Procedure (FTP) in that it uses the same Urban Dynamometer Driving Schedule for the operation of the test vehicle and the same analytical technique for the determination of carbon monoxide emissions. The cold CO test procedure differs from the FTP procedure in the following areas:

1. Test fuel - A fuel which is representative of a winter grade fuel is used for testing that is conducted by EPA. The manufacturer has the option of using an FTP-type fuel, provided cold CO emissions are not decreased.
2. Temperature - A temperature of 20°F is used by EPA for preconditioning, soaking, and testing vehicles. The lower limit for cold temperature emission testing is set at 15°F (20° minus 5°F tolerance). The manufacturer has the option of using wider temperature tolerances during vehicle preconditioning and/or warmer preconditioning temperatures provided CO emissions are not decreased.
3. Dynamometer roll configuration - A 48-inch diameter single roll dynamometer is used for testing that is

conducted by EPA. The manufacturer has the option of using dynamometer configurations which it determines do not decrease Cold CO emissions.

4. Dynamometer power absorption - An electrical power absorption unit is used for simulation of road load power for testing that is conducted by EPA.
5. Dynamometer adjustment - When testing is conducted by EPA, the dynamometer is adjusted to simulate the operation of a vehicle on the road at 20°F. Such adjustment is based on a determination of the road load force profile at 20°F. Alternatively, the adjustment is based on a 10% decrease in the target coastdown time that is used for FTP testing.
6. Air conditioner load simulation - The dynamometer load setting is not increased to simulate the load that the air conditioner imposes on the engine of the test vehicle.
7. Heater and defroster usage - The vehicle heater and/or defroster may be optionally used within their adjustable ranges.

8. Measurement of other exhaust emissions - The measurement of oxides of nitrogen, particulate matter and evaporative emissions is not required.
  
9. Engine compartment cooling - An air handling system that is integral with the test cell may be used in lieu of a separate fan if comparable air movement is obtained. The manufacturer has the option of using a variable speed fan and closed hood operation if cold CO emissions are not decreased.

Manufacturers have the optional test procedures listed above for manufacturer conducted certification testing, provided cold CO emissions are not decreased. These optional test procedures do not apply to Selective Enforcement Audit testing unless, as specified at 86.608-94 and 86.1008-94, they have been approved by the Administrator prior to SEA testing.

#### E. Certification Testing

A single data vehicle from the set of emission data vehicles within each engine family must be tested at cold temperatures. The vehicle selected must be the one expected to emit the highest levels of CO at 20°F in the relevant engine family. At EPA's option, the Administrator may designate the test vehicle. The emission data vehicle selected will be tested by the manufacturer using the test procedure announced today or an alternative procedure requested by the manufacturer and approved in advance by the Administrator. However, even if an alternative test procedure for manufacturer testing is approved by the Administrator, EPA reserves the right to conduct confirmatory testing prior to certification using the test procedure announced today. Further, EPA reserves the right to require confirmatory testing of any emission-data or fuel economy data vehicle at low or high altitude.

EPA may also elect to test any fuel economy data vehicle for compliance with the cold temperature CO standard. Like emission-data vehicles, the fuel economy data vehicles must be in compliance with the cold temperature CO standards. In other words, at 20°F, with the deterioration factors (DF) applied, a fuel economy data vehicle's test results must be less than or equal to the applicable standard. Failure of a fuel economy data vehicle to comply with the cold CO standard will be a sufficient reason to reject the vehicle for fuel economy purposes and will be used by

EPA to investigate the calibration of similar vehicles for emissions noncompliance.

Cold CO confirmatory testing for certification will occur at 20°F at EPA's Motor Vehicle Emission Laboratory or another test facility designated by EPA for confirmatory testing. The emission-data vehicles tested will be those selected according to current regulations. EPA will not require additional certification vehicles specifically selected for evaluation of compliance with the cold temperature CO standard. Failure of a certification or running change vehicle to meet the cold CO standards, with DF applied, will be sufficient evidence to deny certification for that engine family.

EPA also expects that all vehicles will achieve proportional emission control at all temperatures between the standard FTP and cold CO test conditions (i.e., between 68° and 25°). EPA will regulate control of CO emissions at intermediate temperatures by using an amended defeat device policy. For intermediate temperature cold CO testing, vehicles must have either CO emissions less than the guideline levels determined by a linear interpolation of the cold CO standard applicable at 25°F and the CO standard applicable at 68°F; or demonstrate, in light of an exceedance, that reasonable CO emission control in reference to the linear guideline was engineered and achieved across the temperature range. For control of CO emissions at cold temperature driving conditions not

exactly duplicated by the FTP driving cycles, any incongruous emission control strategy which results in a reduction in effectiveness of the emission control system may be considered a defeat device.

Manufacturers may use the same or, at the manufacturers option, a higher DF for cold temperature compliance as that used for certifying a vehicle to the 68°F-86°F FTP standard. In addition, a manufacturer may also elect to test a durability data vehicle at 20°F to generate a cold temperature CO DF. In the latter case, a manufacturer may use a cold temperature CO DF which is lower than the DF used to demonstrate compliance with the 68°F-86°F CO standard.

#### F. In-Use Enforcement

The enforcement provisions of sections 206 and 207 of the CAA apply to the cold CO standards. All LDV and LDT production will be subject to 20°F selective enforcement audits (SEAs). To ensure that manufacturers have access to sufficient cold temperature testing capabilities, the cold temperature CO SEA program does not begin until model year 1996. During SEA testing, manufacturers have the same options available as described in section D above, provided that these options have been approved by the Administrator prior to SEA testing.



In addition, effective with the 1994 model year, all LDVs and LDTs certified in compliance with the cold CO standards being adopted today will be subject to a 20°F in-use compliance program for CO similar to existing programs at 68°F-86°F for HC, CO, NOx, and particulates. In-use enforcement will also apply at high-altitude. In-use compliance enforcement testing will be conducted according to the test procedures being adopted today, regardless of the optional procedures the manufacturer may have followed for its certification or SEA program tests.

#### IV. Public Participation

EPA initiated development of this rulemaking through a public workshop held on March 8 - 9, 1988. Subsequently, on March 15, 1989, the major domestic manufacturers and several foreign manufacturers, under the auspices of their trade organizations, the Motor Vehicle Manufacturers Association (MVMA) and the Association of Imported Automobile Manufacturers (AIAM) (formerly AIA), met with EPA to propose a voluntary cold CO program. That proposal was described in the NPRM, which was published on September 17, 1990. On November 1, 1990, a public hearing was then held on the proposal. The period for the submission of written comments closed on December 3, 1990, but EPA accepted comments submitted after that date. The comments were received from manufacturers and their associations, state agencies, and private consultants. The following sections briefly summarize comments on the major issues.

For the complete response to the comments, see the "Response to Comments on the Cold Temperature CO NPRM." Copies of this document and all comments are available from the public docket (see "ADDRESSES").

V. Discussion of Comments and Issues

A. Useful Life

Summary of Proposal

The NPRM provided that the applicable useful life for vehicles would be 50,000 miles for LDVs and 120,000 miles for LDTs. Those useful life periods were proposed because they were the normal useful life periods for those vehicle categories under the CAA as it stood at the time of the proposal. Subsection 202(j)(3) of the CAA, added by the amendments, states that the useful life for the cold CO standards shall be 50,000 miles for LDVs and LDTs, except that the Administrator "may extend" the useful life period "if he determines that it is feasible for vehicles and engines subject to such standards to meet such standards for a longer useful life." If the Administrator does extend the useful life period, he is authorized to make appropriate adjustments to the standards for the extended useful life. The extension may not be beyond the period provided under subsection 202(d).

Comments

EPA received several comments that asserted that section 202(j) of the CAA limited cold CO useful life for all LDVs and LDTs to 50,000 miles pending additional study. Ford Motor Company

stated that since Congress specified a useful life of 5 years/50,000 miles for cold temperature CO, Congress intended that the Agency make extensions only "pursuant to a substantial study and evidence of feasibility." In addition, Nissan and Ford argued that, presently, insufficient data exists to extend the useful life for LDVs and LDTs beyond the 5 years/50,000 miles period, and that actual experience in implementing the standard is needed before the feasibility of an extended useful life can be determined. Further, Honda maintained that with so many new requirements facing manufacturers under the 1990 Amendments, more time is needed to ensure that vehicles operate satisfactorily in the customers' hands.

The State of Alaska commented that EPA should adopt the 50,000 mile useful life period for LDTs as designated by the CAAA. However, it did not argue against the feasibility of extending the useful life.

#### EPA Response

EPA has the authority to extend the useful life if EPA determines that compliance during the longer useful life period beyond 50,000 miles is feasible. Such an extension is discretionary. As indicated in the NPRM, EPA is confident that technology exists to justify full useful life standards for LDTs. No objections were received showing any inadequacies in the EPA

rationale for extrapolating higher mileage standards from those required at 5 years/50,000 miles as stated in the NPRM. Specifically, no comments were received suggesting that a full useful life standard would be more difficult to achieve technologically than a 50,000 mile standard when adjusted for the mileage difference. However, for these interim standards EPA believes that an extension of 50,000 miles to full useful life would place an additional unnecessary compliance demonstration burden on manufacturers. Consequently, the useful life for the standards promulgated today is 5 year/50,000 miles for both LDVs and LDTs.

The Agency believes that CO emission control systems that experience problems beyond 50,000 miles will be flagged during warm temperature recall programs. The Agency's certification compliance program evaluates emission control durability under FTP conditions for the full useful life of the vehicle. EPA's in-use compliance program includes recall testing authority up thru 75,000 miles. While both programs are conducted under normal warm temperature FTP conditions, EPA expects that the types of problems which would result in high emissions under warm temperature FTP testing would be subject to subsequent recall. Therefore, a warm temperature high mileage compliance program should adequately monitor and correct problems which would cause high mileage cold CO non-compliance. It is expected that most manufacturers will not have specific cold CO deterioration problems. Therefore, EPA

believes that full useful life demonstration at 20°F should not be necessary to assure durable cold CO controls. Based on the above rationale the Agency has decided to adopt the useful life of 50,000 miles for all LDVs and LDTs. However, EPA will continue to evaluate vehicles and may extend the useful life in the future.

## B. Standards

### Summary of Proposal

The cold CO standards proposed in the NPRM were 10.0 g/mi for LDVs, 12.0 g/mi for LDTs up to 3750 lbs (LDT1) and 15.0 g/mi for LDTs greater than 3750 lbs (LDT2). The LDV standards were proposed for up to 50,000 miles useful life while both LDT standards were proposed for a useful life up to 120,000 miles. As explained in the NPRM, the proposed LDT standards were selected because they were comparable in stringency to the 10.0 g/mi LDV standard.

### Summary of Comments

Only a few comments were received on the proposed standards. One manufacturer recommended EPA adopt standards of 10.0 g/mi for LDVs, 10.0 g/mi for LDT1s, and 12.5 g/mi for LDT2s. The LDT standards resulted from an adjustment of the proposed standards to reflect a 50,000 mile useful life for all categories. Another

manufacturer recommended a 10.0 g/mi standard for light-duty vehicles and 10.0 g/mi for 0-3750 lbs LVW (LDT 1). In addition, this manufacturer also recommended 12.5 and 14.2 g/mi for LDT2s having 3751-5750 lbs test weight and >5750 lbs test weight respectively. One engine manufacturer also suggested that EPA set the LDV standard at 3.0 g/mi because this would be a feasible standard for its compressed air 2-stroke engine.

#### EPA Response

In response to the suggestion of a 3.0 g/mi standard, EPA has no data on which to support widespread feasibility of such a standard nor has EPA determined such a stringent standard is needed. EPA agrees with the recommended standards of 10.0 g/mi for LDVs, 10.0 g/mi for LDT1s, and 12.5 g/mi for LDT2s. In response to the comment regarding split test weight classes for LDT2s, the CAAA require two heavy LDT classes for Tier 1 but do not require the two classes for cold CO. As mentioned in the requirements section of this document, these new standards are a result of adjusting the proposed standards to reflect a 50,000 useful life. These standards are in accord with section 202(j), which specifies a standard of 10.0 g/mi for LDV, and standards of "comparable stringency" for LDTs.

#### C. Small Volume Manufacturer Exemption

In the NPRM, EPA proposed to allow small volume manufacturers an exemption of up to 10,000 vehicles until the last year of the phase-in schedule, which at that time was the 1995 model year.

#### Comments

A number of foreign manufacturers, under the auspices of their trade organization, the Association of Imported Automobile Manufacturers, and Rolls-Royce endorsed the proposal to allow the small volume exemption. In support of their position, they noted the small-volume manufacturers reliance on larger manufacturers for technology and, in this case, testing facilities. With the current shortage of testing facilities, small volume manufacturers also argued that they would be at a competitive disadvantage. Further, they asserted that without an exemption, most small volume manufacturers would be unable to take advantage of the phase-in period. In other words, due to the limited diversity in their product line, some small-volume manufacturers would have to be in 100% compliance in model year 1994. This would subject those manufacturers affected to an economic hardship. Finally, they indicated that a small-volume manufacturer exemption would be consistent with the CAA and Congress' prior practice of granting exemptions for small-volume manufacturers.

Conversely, Alaska opposed this exemption asserting that it was precluded by the language of the CAAA.



## EPA Response

The cold CO standards are written to apply to all manufacturers. However, the Agency recognizes that small-volume manufacturers with a limited number of families would be granted little or no flexibility by the phase-in. In addition, the reliance of these manufacturers on larger companies for vehicle components limits their vehicle design options. In a given year the small-volume manufacturer may be unable to produce their vehicles. As a result, a strict requirement that each manufacturer meet the phase-in percentage could place the small-volume manufacturers at a competitive disadvantage that the EPA believes was not intended by Congress. Alternatively, the Agency is concerned that small-volume manufacturers may experience inappropriate pressure to reach subsidiary agreements with larger manufacturers as a means to avoid a phase-in noncompliance they may face as an independent company. Again, the Agency believes this would create a non-competitive situation.

Finally, because the proportion of annual U.S. sales attributable to small-volume manufacturers is negligible (<0.1% of 1990 MY fleet), EPA considers the air quality effects of delayed applicability to be minimal. Therefore, EPA is adopting rules such that manufacturers that meet the EPA definition of small-volume manufacturer are exempted from the phase-in percentage requirements until the final year of the phase-in; that is, 1996.

Small-volume manufacturers include independent commercial importers as defined in 40 CFR part 85, Subpart P.

This exemption parallels one adopted for small-volume manufacturers in the Tier I rule. As explained there, EPA believes that it has the authority to grant such an exemption pursuant to its authority to exempt de minimis situations from statutory commands. See Alabama Power Co v. Costle, 636 F.2d 323, 360-61 (D.C. Cir. 1979).

In Alabama Power, the court indicated that EPA had the implicit authority under the CAA to exempt de minimis situations. The court stated that "(c)ategorical exemptions may also be permissible as an exercise of agency power, inherent in most statutory schemes, to overlook circumstances that in context may fairly be considered de minimis." 636 F.2d at 360. The court emphasized, however, that the ability "to exempt de minimis situations from a statutory command is not an ability to depart from the statute, but rather a tool to be used in implementing the legislative design." Id. The Agency believes that this authority provides a basis for establishing a small volume exemption from the phase-in requirements for the reasons described above.

#### D. CO Emission Control at Intermediate Temperatures

##### Summary of Proposal

EPA proposed that CO emissions be reduced at all temperatures below the standard FTP, not just 20°F. The NPRM proposed that all vehicles should be capable of achieving, at a minimum, a level of emission control meeting a linear projection between the respective standards at 25°F (the upper end of the 20°F temperature tolerance) and 68°F (the lower end of the standard FTP temperature tolerance). EPA indicated two options were being considered for regulating emissions over this intermediate temperature range. A function described by a linear interpolation between the respective standards at 25°F and 68°F was used in both options. The first option would have created a proportional standard from this function. The second option proposed amending the defeat device policy with this same intermediate temperature function used as CO emission level guidance.

#### Comments

No comments disputed the basic premise that vehicles can be designed to have CO emissions below this intermediate temperature function. Comments received from several manufacturers mainly concerned the costs and testing complexities that intermediate proportional standards would necessitate. These manufacturers stated that the cost of achieving CO emission reduction across the temperature range would be reduced under a defeat device policy regulation of CO emissions at intermediate temperatures. The

manufacturers pointed out that the same amount of CO emission reduction could be achieved by a defeat device policy.

Conversely, comments were received from the State of Alaska that supported proportional standards in conjunction with more explicit defeat device policy guidance. Alaska strongly advocated certification and confirmatory testing by EPA at all temperatures using standards, not a policy approach. It stated that "certification and in-use compliance should depend on actual test results; a failed test should not merely raise a 'presumption' that a defeat device is being employed, as suggested in EPA's second enforcement option in the NPRM." However, Alaska also supported more explicit language regarding cold CO defeat devices (or strategies). It noted that the present defeat device program does not require sufficient documentation to make an appropriate judgment of defeat device program compliance. It recommended revising the defeat device policy to explicitly address applicable parameters. Also, the State recommended that manufacturers not be allowed to simply state their compliance with the defeat device policy in the application for certification.

Comments received from MVMA specifically stated its belief that EPA does not have the statutory authority to promulgate emission standards or require testing at temperatures between temperature ranges in which standards are legislated. However, the State of Alaska provided comments supporting EPA's position

regarding the legality of emission standards at temperatures below 68°F.

#### EPA Response

EPA considered adopting the proportional standards option presented in the NPRM. EPA believes it has the authority under section 202(a) to adopt that option but EPA concluded that such a level of regulatory control should not be necessary at this time to achieve the desired emission reductions. The imposition of a proportional standard (essentially an infinite number of standards) could add unnecessary administrative and testing burdens to document strict compliance. The Agency expects that a properly designed emission control strategy will achieve emission control over the intermediate temperature range equal to or better than that represented by a line drawn between the 68°F and 25°F CO levels applicable via the FTP and 20°F CO standards. EPA believes the ability to achieve such CO control is straightforward and should not present additional testing burdens. Therefore, the only reason to exceed the line would be the incorporation of a defeat device or defeat strategy. An amended defeat device policy, appropriately implemented by EPA, should be adequate to handle this situation. If, subsequent to the implementation of this regulation, EPA determines that significant evidence is available that a substantial number of vehicles are exceeding the

intermediate temperature function, then EPA will revisit the need to adopt intermediate temperature standards.

With this rule, beginning in model year 1994, EPA will assure the proportional control of CO emissions at intermediate temperatures by using an amended defeat device policy. Under this amended policy, vehicles with properly designed CO emission control systems will be expected to attain CO emissions equal to or better than that represented by the intermediate temperature function.

This rule requires that vehicles be designed with at least linear proportional CO control at intermediate ambient temperatures. The criteria for acceptability will be based upon design evaluation as well as test data. As described in the following text, the test data will be used as an indicator of a potential defeat device design strategy and, when indicated, would be followed by further design evaluation with the potential for additional testing. This approach is similar to the current NOx defeat device investigation criteria in Advisory Circular 24-2. If on an intermediate temperature test the emission of the vehicle exceeds the linear guideline, then the vehicle will be subjected to investigation under the defeat device policy.

The defeat device policy was initiated on December 11, 1972, with the issuance of Advisory Circular 24. This advisory circular clarified the intent of a letter dated July 12, 1972. This letter

notified all manufacturers of light-duty motor vehicles that sensors and devices which may adversely affect emission control under conditions or during operations likely to occur in use would be inconsistent with the intent of the Clean Air Act. The Act's intent is that vehicles be designed, built, and equipped to reduce emissions to the extent indicated by the prescribed standards when operated during the vehicle's useful life. Even though it may not be practicable to test prototype or production vehicles to assure reductions under the many conditions which the vehicle will encounter, this does not imply that intentional elimination of these reductions outside the parameters of the test procedure is consistent with the Act.

Advisory Circular 24 addresses elements of design (Auxiliary Emission Control Devices (AECD's)) which sense any parameter related to the operation of any part of the emission control system. A defeat device is an AECD that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and use. The AECD may not be considered a defeat device if: (1) such conditions are substantially included in the Federal emission test procedure, or (2) the need for the AECD is justified in terms of protecting the vehicle against damage or accident, or (3) the AECD does not go beyond the requirements of engine starting.

This policy was further clarified in 1978, when EPA issued Advisory Circular 24-2. At that time, electronic control and module devices were rapidly being introduced into the design of vehicles. Advisory Circular 24-2 clarified EPA's policy that emission control system logic (including on-board computer software), calibrations, and hardware items are all auxiliary emission control devices and must be evaluated as potential defeat devices.

Given the complicated nature of evolving technology and the difficulty of evaluating the overall emission impact of multiple, continuously variable emission control system parameters, an optional procedure was developed. The purpose of this procedure was to assist manufacturers in receiving timely and consistent evaluation of this complex new technology. Advisory Circular 24-2 set forth objective guidelines which could be used by manufacturers to demonstrate that an AECD is not a defeat device with respect to NOx on the Highway Fuel Economy Test within FTP temperatures.

EPA intends to evaluate CO emission control at ambient temperatures between test conditions at 25°F and 68°F in a similar way to the NOx defeat device guidance in Advisory Circular 24-2. As discussed in the NPRM, the guideline for intermediate temperature CO emissions will be a line which connects the CO standard at the upper end of the 20°F test temperature tolerance (25°F) to the CO



standard at the lower end of the FTP temperature tolerance (68°F).  
This line will

be used as a defeat device investigation "trigger." Vehicles which exhibit emission levels at or below this line when tested over the FTP driving cycle will be deemed to not have a defeat device adversely impacting CO emission performance over these driving conditions. Emission control strategies or lack thereof which result in CO emissions that exceed the guideline may indicate an unacceptable emission reduction across the temperature range (i.e., not a reduction in CO emissions to the extent intended by the CAAA and these regulations). In light of this exceedence, if the manufacturer cannot demonstrate to EPA's satisfaction that reasonable CO emission control in reference to the linear guideline was engineered and achieved across the temperature range, then the system will be deemed to incorporate a defeat device. As ambient temperature decreases, any intermediate temperature cold test which results in emissions above the 20°F standard value will automatically be considered the result of a defeat device strategy without further investigation.

Test procedures at intermediate temperatures below 50°F will be the same as at 20°F. For tests conducted at intermediate temperatures of 50°F and above, FTP test procedures will be followed. EPA recognizes that there may be a discontinuity at 50°F in the emission temperature function for a particular engine family due to the change in test procedure. If the guideline is exceeded, the manufacturer may prove in the defeat device investigation any significant procedural effect for a particular engine family.

For the intermediate temperature range, the manufacturer will not be required to submit test data along with the certification application. However, the manufacturer must submit a statement of compliance which attests to the fact that they have assured themselves that the engine family complies to the intermediate temperature cold testing defeat device guidance. The manufacturer must briefly summarize the methodology for determining compliance. EPA has the authority to test or require testing at any temperature. The selection of test vehicles, temperature, and number of tests will be determined by the EPA. Also, the EPA may require manufacturers to supply vehicles to test for defeat device evaluation according to authority granted the Administrator in the Clean Air Act Section 206 (a) & (b).

Any exceedence of the linear guideline will require an explanation by the manufacturer or the vehicle will be considered to include a defeat device. Optimally, the manufacturer will provide an explanation which demonstrates that comparable CO emission control in reference to the linear guideline was engineered and achieved for this emission control system across the temperature range. However, manufacturers will have the burden of proving to EPA's satisfaction why emission levels above the guideline are reasonable, do not result in unnecessary excess emissions, and, therefore, should not be considered the result of a defeat device. EPA may require additional information and test results from the manufacturer. The following are examples of

possible criteria or information which could be utilized in such an explanation or which could be requested by the EPA. This should not in any way be viewed as an all inclusive listing of areas of concern.

- \* Demonstration of how the emission control system was designed to provide CO control throughout the temperature range. This may require a review of computer control logic as it responds to ambient starting temperature.
- \* An explanation of the fuel scheduling strategy across the temperature range.
- \* An explanation of any timers or switches and the resultant effect upon CO emissions.
- \* A description of any open loop strategy.
- \* A review of parameters sensed and parameters controlled and how they should interact.
- \* An explanation of any timing of air injection delay.
- \* Submission of test data to support defeat device justification for safety or catalyst protection strategies.

With the promulgation of these cold CO regulations, an objective guideline is created to compare the significance of the reduction in effectiveness of emission control outside the FTP temperature range. A significant reduction in effectiveness occurs when the guideline is exceeded on an intermediate temperature cold

test. If this exceedance is caused by an AECD strategy which operates in a manner which is incongruous with the operation of the strategy on the standard FTP and 20°F modes, the AECD may be considered a defeat device.

For example:

- \* The delay of closed loop initiation for an incongruous time period at a temperature just outside of FTP temperatures.
- \* Incongruous delay of air injection at temperatures different than FTP conditions.

An incongruous strategy means a strategy whose operation does not correspond to what is right, proper, or reasonable with regard to its operation under test conditions and driving cycles used to comply with standards. To illustrate the point, if the time of delay of closed loop operation is longer at 20 °F operating mode than at the standard FTP operating mode, EPA would consider the operation congruous at intermediate temperatures if the time increased gradually as temperature decreased. The time of delay of closed loop operation would be incongruous if the time increased suddenly just below standard FTP temperatures to the level at 20°F. Alternatively, EPA would consider the operation incongruous if the time of air injection delay at intermediate temperatures exceeded

the time during 20°F FTP testing. These examples should not be viewed as an inclusive list of incongruous strategies.

Likewise, an AECD strategy whose operation during other driving cycles is incongruous with operation on FTP driving cycles may be considered a defeat device. Because the linear emission guideline described above applies to vehicle operation on intermediate temperature cold FTP tests, satisfying this guideline criteria does not necessarily indicate that the vehicle has no defeat devices on non-FTP driving cycles and conditions. Examples of operating conditions not found on the FTP driving cycles are long idles and cruises, speeds higher than 62 mph, maintaining high speeds for long periods of time, variations in loads placed on the vehicle, or other changes in operating conditions such as an increase in the amount of fuel in the fuel tank. Any incongruous strategy which is triggered by sensing a change in such conditions may be a defeat device.

In addition, manufacturers should utilize current technology which provides emission benefits without the use of defeat devices rather than employing outdated technology which necessitates the use of defeat devices. An example of such outdated technology is poor control of the air-fuel ratio through the use of old non-feedback carburetor technology. In this strategy the secondary air injection is substantially delayed for protection of the catalyst from overheating during cold start. In years past, this

was allowed under the justification of protection of the catalyst. Currently, this justification would be mitigated by the fact that better air-fuel ratio control can be achieved with the current feedback technology. The use of non-feedback technology is inappropriate. Therefore, systems which, for example, necessitate excessive delay of secondary air injection, could be considered as a whole a defeat device.

E. Emission Averaging Program

In the NPRM, EPA solicited comments regarding an emission averaging program, although it did not propose such a program. EPA also indicated that it would issue an additional proposal regarding an averaging program before adopting final rules for such a program. Comments were received both in support and in opposition to averaging.

The averaging concept allows some engine families to emit at levels above that of the standard, as long as other engine families produced by the manufacturer within a specified averaging set can offset these higher emission levels by emitting at levels below that of the standard. Each engine family must comply, of course, with the family's individual emission standards. This averaging concept, then, allows manufacturers to optimize their emission control systems between different engine families. This reduces control costs while achieving the same overall emission reduction required by the non-averaged standards.

EPA has had substantial experience applying the emission averaging concept to emissions from heavy duty engines. Based in part on this experience, application of the averaging concept to the cold ambient temperature CO standards could yield important cost savings while achieving the emission reductions required under the standards in today's final rule. Based upon EPA's analysis of



the comments to date, EPA will publish a proposal regarding an averaging program within the next few weeks.

F. Selective Enforcement Audit Program

Summary of Proposal

In the NPRM, EPA proposed a full enforcement program including a cold temperature Selective Enforcement Audit (SEA) testing program which applies at both the cold temperature and current FTP temperature ranges. This program was to begin within two years after the cold temperature CO standards first came into effect to allow manufacturers adequate time to secure sufficient cold temperature testing capability.

Comments

Comments submitted by manufacturers and their associations opposed the adoption of SEA testing with the exception of comments submitted by Ford Motor Company. Ford supports SEA testing provided EPA adopts interim in-use cold CO emission standards. Commenters emphasized the high cost and labor burdens in establishing cold temperature testing facilities due to the lack of present test capability. Manufacturers also argued the high cost and short time period to construct a test facility for SEA which

would have a relatively low usage rate, would represent an inefficient use of scarce resources.

#### EPA Response

EPA acknowledges the concerns regarding costs associated with the construction of cold temperature test facilities for SEA. However, most manufacturers will have to construct and/or contract for a cold temperature test facility to handle development and certification of their 1994 model year engine families. Since the Cold CO SEA program will not begin for two years after the first model year that this rule becomes effective, manufacturers will have completed their third certification cycle before an SEA could occur. A significant portion of the initial development testing should already have been completed. Subsequently, manufacturers should have adequate testing capacity and capability to perform SEAs. In addition if a manufacturer has not or is unable to construct adequate testing facilities, independent test facilities will be available.

EPA believes that assembly line testing is an integral part of the overall enforcement program, especially with the implementation of new standards. The SEA testing program provides an incentive for manufacturers to focus on assuring adequate cold temperature CO performance across the range of vehicle designs produced.

As a result, all LDV and LDT production will be subject to potential 20°F SEAs, but the cold temperature CO SEA program will not start until the 1996 model year to allow manufacturers adequate time to secure sufficient cold temperature testing capability. As proposed, vehicles will be exempt from SEA testing at high-altitude locations.

#### G. In-use Compliance

##### Summary of Proposal

EPA proposed implementation of an enforcement program including in-use compliance testing to begin with the 1993 model year.

##### Comments

Several manufacturers are opposed to the proposed in-use enforcement of cold CO emission standards and requested alternative, higher standards applicable in use and delayed

compliance with high altitude standards. Manufacturers are concerned that they have not been given enough time to collect cold temperature CO test data to assure themselves of adequate control in-use.

#### EPA Response

The Agency believes that delayed in-use compliance is not necessary. The cold temperature CO standards are not technology forcing. The standards represent CO emission reductions achievable in the very near future. Prior to the NPRM EPA collected in-use data from several EPA testing programs. These data indicated that the standards could be met using currently available technology.

Therefore, EPA will implement the in-use testing program as proposed in the NPRM. In-use testing for this program will begin with the 1994 model year because of the change in the phase-in schedule mandated by the CAAA. As proposed, LDVs and LDTs will be expected to comply at both low and high-altitude.

## H. Test Procedures

Comments were received on several test procedure issues. These specific comments are discussed in detail in the Response to Comments document included in the docket. Of all test procedure issues, the issue of dynamometer specifications caused the most concern and generated the most significant comments. The following presents a discussion of the dynamometer issue.

### Dynamometer Specifications

#### Summary of Proposal

The NPRM specified the use of a dynamometer which utilizes twin-rollers that are 20.0 inches in diameter, spaced 24 inches apart, and synchronized by a mechanical coupling device.

#### Comments

In their written comments, most manufacturers objected to the NPRM proposal and requested that EPA specify the small diameter, uncoupled twin-roll type of dynamometer which is currently used for FTP testing. Manufacturers objections to the change to the larger coupled rolls concerned increased costs, insufficient lead time, and correlation problems. However, several manufacturers agreed

that the use of an electrical power absorption unit is preferable to use of the hydrokinetic unit.

#### EPA Response

Subsequent to the publication of the NPRM, the CAA was revised to require EPA review of testing procedures to assure vehicle testing reflected in-use conditions. In response to this revision, member companies of the MVMA and the Association of International Automobile Manufacturers (AIAM) recommended in a December 21, 1990, letter that EPA install a single roll dynamometer in its new cold facility test. Subsequently, in a letter dated January 31, 1991, the MVMA and AIAM recommended the use of a 48-inch roll diameter which would optimize the function and cost of the dynamometer and which appeared to be the "best compromise to simulate actual vehicle road load conditions." After careful review of the issue, EPA decided to equip its new cold temperature test facility with a 48-inch diameter single-roll dynamometer rather than the coupled 20-inch twin-roll dynamometer specified in the NPRM.

As a result, today's rule specifies the use of a 48-inch diameter, single roll dynamometer for cold temperature testing that is performed by EPA. This specification is consistent with the NPRM as the 48-inch single roll and 20-inch coupled twin-roll can

be operated to yield comparable results.<sup>4</sup> Today's rule also allows cold CO testing at the manufacturer facility with other types of dynamometers which the manufacturer determines will yield comparable results. As always, EPA reserves the right to confirmatory test at its emission laboratory.

#### VI. Economic/Environmental Impact

No comments were received on the economic or environmental impacts as presented in the NPRM. As stated in the NPRM, consumers can expect a fuel economy benefit from this rule. The overall estimated average total cost increases per vehicle of this rule to consumers, including fuel economy benefits, are:

- a) \$.93 for Scenario I (air pump strategies)
- b) -\$12.27 (MPI strategies)

The complete analysis, including the methodology used in the calculations, is contained in Chapter V of the Regulatory Support Document.

The emission reduction benefits of this rule are estimated to be a 20-29 percent reduction in mobile source CO emissions at 20°F.

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<sup>4</sup>It is also consistent with the FTP test procedure which allows the optional use of a 48 inch single roll dynamometer.

Averaging over all temperatures the rule is estimated to reduce annual CO emissions by 2.6-3.1 million tons by the year 2000 and 5.8-7.7 million tons after complete fleet turnover.

## VII. Administrative Requirements

### A. Administrative Designation

Under Executive Order 12291, EPA must judge whether a regulation is "major" and, therefore, subject to the requirement that a Regulatory Impact Analysis (RIA) be prepared. Since EPA has determined that this regulation is not major, an RIA has not been prepared. However, a regulatory support document indicating the environmental impact, economic impact, and cost-effectiveness study was prepared.

This regulation was submitted to the Office of Management and Budget (OMB) for review as required by Executive Order 12291. Any written comments from OMB and any EPA response to those comments are in the public docket for this rulemaking.

### B. Paperwork Reduction Act

The information collection requirements in this rule have been approved by the Office of Management and Budget (OMB) under the



Paperwork Reduction Act, 44 U.S.C. 3501 et seq and have been assigned control number 2060 - 0104.

Public reporting burden for this collection of information is estimated to be an average of 29 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information including suggestions for reducing this burden to Chief, Information Policy Branch; EPA; 401 M Street., S.W. (PM-223Y), Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

#### C. Impact on Small Entities

The Regulatory Flexibility Act of 1980 requires federal agencies to identify potentially adverse impacts of federal regulations upon small entities. In instances where significant impacts are possible on a substantial number of these entities, agencies are required to perform a Regulatory Flexibility Analysis (RFA). EPA has determined that today's regulations will not have a significant impact on a substantial number of small entities.

This regulation will affect only manufacturers of motor vehicles and motor vehicle engines, a group which does not contain a substantial number of small entities.

Therefore, as required under section 605 of the Regulatory Flexibility Act, 5 U.S.C. 601 et seq., I certify that this regulation does not have a significant impact on a substantial number of small entities.

VII. Authority

A. Legal Authority

EPA proposed the cold CO standards pursuant to its discretionary standard-setting authority under section 202(a) of the CAA. As discussed above, however, Congress added a new section 202(j) to the CAA in November of 1990 specifically requiring EPA to issue the cold CO standards contained in this final rule for LDVs and LDTs. As explained above, new section 202(j) provides the basis for the standards, their phase-in, and the useful life period.

List of Subjects in 40 CFR Part 86

Administrative practice and procedure, Air pollution control, Gasoline, Motor vehicles, Motor vehicle pollution, Reporting and recordkeeping requirements.

Dated: \_\_\_\_\_

\_\_\_\_\_  
William K. Reilly, Administrator