

modified after November 15, 1990, in any manner unless the modification insures equivalent or greater emission reductions of such air pollutant.

(July 14, 1955, ch. 360, title I, § 193, as added Pub. L. 101-549, title I, § 108(l), Nov. 15, 1990, 104 Stat. 2469.)

SUBCHAPTER II—EMISSION STANDARDS
FOR MOVING SOURCES

PART A—MOTOR VEHICLE EMISSION AND FUEL
STANDARDS

§ 7521. Emission standards for new motor vehicles or new motor vehicle engines

(a) Authority of Administrator to prescribe by regulation

Except as otherwise provided in subsection (b) of this section—

(1) The Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare. Such standards shall be applicable to such vehicles and engines for their useful life (as determined under subsection (d) of this section, relating to useful life of vehicles for purposes of certification), whether such vehicles and engines are designed as complete systems or incorporate devices to prevent or control such pollution.

(2) Any regulation prescribed under paragraph (1) of this subsection (and any revision thereof) shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period.

(3)(A) IN GENERAL.—(i) Unless the standard is changed as provided in subparagraph (B), regulations under paragraph (1) of this subsection applicable to emissions of hydrocarbons, carbon monoxide, oxides of nitrogen, and particulate matter from classes or categories of heavy-duty vehicles or engines manufactured during or after model year 1983 shall contain standards which reflect the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the model year to which such standards apply, giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology.

(ii) In establishing classes or categories of vehicles or engines for purposes of regulations under this paragraph, the Administrator may base such classes or categories on gross vehicle weight, horsepower, type of fuel used, or other appropriate factors.

(B) REVISED STANDARDS FOR HEAVY DUTY TRUCKS.—(i) On the basis of information available to the Administrator concerning the effects of air pollutants emitted from heavy-duty vehicles or engines and from other sources of mobile source related pollutants on the public health

and welfare, and taking costs into account, the Administrator may promulgate regulations under paragraph (1) of this subsection revising any standard promulgated under, or before the date of, the enactment of the Clean Air Act Amendments of 1990 (or previously revised under this subparagraph) and applicable to classes or categories of heavy-duty vehicles or engines.

(ii) Effective for the model year 1998 and thereafter, the regulations under paragraph (1) of this subsection applicable to emissions of oxides of nitrogen (NO_x) from gasoline and diesel-fueled heavy duty trucks shall contain standards which provide that such emissions may not exceed 4.0 grams per brake horsepower hour (gbh).

(C) LEAD TIME AND STABILITY.—Any standard promulgated or revised under this paragraph and applicable to classes or categories of heavy-duty vehicles or engines shall apply for a period of no less than 3 model years beginning no earlier than the model year commencing 4 years after such revised standard is promulgated.

(D) REBUILDING PRACTICES.—The Administrator shall study the practice of rebuilding heavy-duty engines and the impact rebuilding has on engine emissions. On the basis of that study and other information available to the Administrator, the Administrator may prescribe requirements to control rebuilding practices, including standards applicable to emissions from any rebuilt heavy-duty engines (whether or not the engine is past its statutory useful life), which in the Administrator's judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare taking costs into account. Any regulation shall take effect after a period the Administrator finds necessary to permit the development and application of the requisite control measures, giving appropriate consideration to the cost of compliance within the period and energy and safety factors.

(E) MOTORCYCLES.—For purposes of this paragraph, motorcycles and motorcycle engines shall be treated in the same manner as heavy-duty vehicles and engines (except as otherwise permitted under section 7525(f)(1)¹ of this title) unless the Administrator promulgates a rule reclassifying motorcycles as light-duty vehicles within the meaning of this section or unless the Administrator promulgates regulations under subsection (a) of this section applying standards applicable to the emission of air pollutants from motorcycles as a separate class or category. In any case in which such standards are promulgated for such emissions from motorcycles as a separate class or category, the Administrator, in promulgating such standards, shall consider the need to achieve equivalency of emission reductions between motorcycles and other motor vehicles to the maximum extent practicable.

(4)(A) Effective with respect to vehicles and engines manufactured after model year 1978, no emission control device, system, or element of design shall be used in a new motor vehicle or new motor vehicle engine for purposes of complying with requirements prescribed under this subchapter if such device, system, or element of design will cause or contribute to an unreason-

¹ See References in Text note below.

able risk to public health, welfare, or safety in its operation or function.

(B) In determining whether an unreasonable risk exists under subparagraph (A), the Administrator shall consider, among other factors, (i) whether and to what extent the use of any device, system, or element of design causes, increases, reduces, or eliminates emissions of any unregulated pollutants; (ii) available methods for reducing or eliminating any risk to public health, welfare, or safety which may be associated with the use of such device, system, or element of design, and (iii) the availability of other devices, systems, or elements of design which may be used to conform to requirements prescribed under this subchapter without causing or contributing to such unreasonable risk. The Administrator shall include in the consideration required by this paragraph all relevant information developed pursuant to section 7548 of this title.

(5)(A) If the Administrator promulgates final regulations which define the degree of control required and the test procedures by which compliance could be determined for gasoline vapor recovery of uncontrolled emissions from the fueling of motor vehicles, the Administrator shall, after consultation with the Secretary of Transportation with respect to motor vehicle safety, prescribe, by regulation, fill pipe standards for new motor vehicles in order to insure effective connection between such fill pipe and any vapor recovery system which the Administrator determines may be required to comply with such vapor recovery regulations. In promulgating such standards the Administrator shall take into consideration limits on fill pipe diameter, minimum design criteria for nozzle retainer lips, limits on the location of the unleaded fuel restrictors, a minimum access zone surrounding a fill pipe, a minimum pipe or nozzle insertion angle, and such other factors as he deems pertinent.

(B) Regulations prescribing standards under subparagraph (A) shall not become effective until the introduction of the model year for which it would be feasible to implement such standards, taking into consideration the restraints of an adequate leadtime for design and production.

(C) Nothing in subparagraph (A) shall (i) prevent the Administrator from specifying different nozzle and fill neck sizes for gasoline with additives and gasoline without additives or (ii) permit the Administrator to require a specific location, configuration, modeling, or styling of the motor vehicle body with respect to the fuel tank fill neck or fill nozzle clearance envelope.

(D) For the purpose of this paragraph, the term "fill pipe" shall include the fuel tank fill pipe, fill neck, fill inlet, and closure.

(6) ONBOARD VAPOR RECOVERY.—Within 1 year after November 15, 1990, the Administrator shall, after consultation with the Secretary of Transportation regarding the safety of vehicle-based ("onboard") systems for the control of vehicle refueling emissions, promulgate standards under this section requiring that new light-duty vehicles manufactured beginning in the fourth model year after the model year in which the standards are promulgated and thereafter shall

be equipped with such systems. The standards required under this paragraph shall apply to a percentage of each manufacturer's fleet of new light-duty vehicles beginning with the fourth model year after the model year in which the standards are promulgated. The percentage shall be as specified in the following table:

IMPLEMENTATION SCHEDULE FOR ONBOARD VAPOR RECOVERY REQUIREMENTS

Model year commencing after standards promulgated	Percentage*
Fourth	40
Fifth	80
After Fifth	100

*Percentages in the table refer to a percentage of the manufacturer's sales volume.

The standards shall require that such systems provide a minimum evaporative emission capture efficiency of 95 percent. The requirements of section 7511a(b)(3) of this title (relating to stage II gasoline vapor recovery) for areas classified under section 7511 of this title as moderate for ozone shall not apply after promulgation of such standards and the Administrator may, by rule, revise or waive the application of the requirements of such section 7511a(b)(3) of this title for areas classified under section 7511 of this title as Serious, Severe, or Extreme for ozone, as appropriate, after such time as the Administrator determines that onboard emissions control systems required under this paragraph are in widespread use throughout the motor vehicle fleet.

(b) Emissions of carbon monoxide, hydrocarbons, and oxides of nitrogen; annual report to Congress; waiver of emission standards; research objectives

(1)(A) The regulations under subsection (a) of this section applicable to emissions of carbon monoxide and hydrocarbons from light-duty vehicles and engines manufactured during model years 1977 through 1979 shall contain standards which provide that such emissions from such vehicles and engines may not exceed 1.5 grams per vehicle mile of hydrocarbons and 15.0 grams per vehicle mile of carbon monoxide. The regulations under subsection (a) of this section applicable to emissions of carbon monoxide from light-duty vehicles and engines manufactured during the model year 1980 shall contain standards which provide that such emissions may not exceed 7.0 grams per vehicle mile. The regulations under subsection (a) of this section applicable to emissions of hydrocarbons from light-duty vehicles and engines manufactured during or after model year 1980 shall contain standards which require a reduction of at least 90 percent from emissions of such pollutant allowable under the standards under this section applicable to light-duty vehicles and engines manufactured in model year 1970. Unless waived as provided in paragraph (5),¹ regulations under subsection (a) of this section applicable to emissions of carbon monoxide from light-duty vehicles and engines manufactured during or after the model year 1981 shall contain standards which require a reduction of at least 90 percent from emissions of such pollutant allowable

under the standards under this section applicable to light-duty vehicles and engines manufactured in model year 1970.

(B) The regulations under subsection (a) of this section applicable to emissions of oxides of nitrogen from light-duty vehicles and engines manufactured during model years 1977 through 1980 shall contain standards which provide that such emissions from such vehicles and engines may not exceed 2.0 grams per vehicle mile. The regulations under subsection (a) of this section applicable to emissions of oxides of nitrogen from light-duty vehicles and engines manufactured during the model year 1981 and thereafter shall contain standards which provide that such emissions from such vehicles and engines may not exceed 1.0 gram per vehicle mile. The Administrator shall prescribe standards in lieu of those required by the preceding sentence, which provide that emissions of oxides of nitrogen may not exceed 2.0 grams per vehicle mile for any light-duty vehicle manufactured during model years 1981 and 1982 by any manufacturer whose production, by corporate identity, for calendar year 1976 was less than three hundred thousand light-duty motor vehicles worldwide if the Administrator determines that—

(i) the ability of such manufacturer to meet emission standards in the 1975 and subsequent model years was, and is, primarily dependent upon technology developed by other manufacturers and purchased from such manufacturers; and

(ii) such manufacturer lacks the financial resources and technological ability to develop such technology.

(C) The Administrator may promulgate regulations under subsection (a)(1) of this section revising any standard prescribed or previously revised under this subsection, as needed to protect public health or welfare, taking costs, energy, and safety into account. Any revised standard shall require a reduction of emissions from the standard that was previously applicable. Any such revision under this subchapter may provide for a phase-in of the standard. It is the intent of Congress that the numerical emission standards specified in subsections (a)(3)(B)(ii), (g), (h), and (i) of this section shall not be modified by the Administrator after November 15, 1990, for any model year before the model year 2004.

(2) Emission standards under paragraph (1), and measurement techniques on which such standards are based (if not promulgated prior to November 15, 1990), shall be promulgated by regulation within 180 days after November 15, 1990.

(3) For purposes of this part—

(A)(i) The term “model year” with reference to any specific calendar year means the manufacturer’s annual production period (as determined by the Administrator) which includes January 1 of such calendar year. If the manufacturer has no annual production period, the term “model year” shall mean the calendar year.

(ii) For the purpose of assuring that vehicles and engines manufactured before the beginning of a model year were not manufactured for purposes of circumventing the effective date of a standard required to be prescribed by subsection (b) of this section, the Adminis-

trator may prescribe regulations defining “model year” otherwise than as provided in clause (i).

(B) Repealed. Pub. L. 101-549, title II, §230(1), Nov. 15, 1990, 104 Stat. 2529.

(C) The term “heavy duty vehicle” means a truck, bus, or other vehicle manufactured primarily for use on the public streets, roads, and highways (not including any vehicle operated exclusively on a rail or rails) which has a gross vehicle weight (as determined under regulations promulgated by the Administrator) in excess of six thousand pounds. Such term includes any such vehicle which has special features enabling off-street or off-highway operation and use.

(3)² Upon the petition of any manufacturer, the Administrator, after notice and opportunity for public hearing, may waive the standard required under subparagraph (B) of paragraph (1) to not exceed 1.5 grams of oxides of nitrogen per vehicle mile for any class or category of light-duty vehicles or engines manufactured by such manufacturer during any period of up to four model years beginning after the model year 1980 if the manufacturer demonstrates that such waiver is necessary to permit the use of an innovative power train technology, or innovative emission control device or system, in such class or category of vehicles or engines and that such technology or system was not utilized by more than 1 percent of the light-duty vehicles sold in the United States in the 1975 model year. Such waiver may be granted only if the Administrator determines—

(A) that such waiver would not endanger public health,

(B) that there is a substantial likelihood that the vehicles or engines will be able to comply with the applicable standard under this section at the expiration of the waiver, and

(C) that the technology or system has a potential for long-term air quality benefit and has the potential to meet or exceed the average fuel economy standard applicable under the Energy Policy and Conservation Act [42 U.S.C. 6201 et seq.] upon the expiration of the waiver.

No waiver under this subparagraph³ granted to any manufacturer shall apply to more than 5 percent of such manufacturer’s production or more than fifty thousand vehicles or engines, whichever is greater.

(c) Feasibility study and investigation by National Academy of Sciences; reports to Administrator and Congress; availability of information

(1) The Administrator shall undertake to enter into appropriate arrangements with the National Academy of Sciences to conduct a comprehensive study and investigation of the technological feasibility of meeting the emissions standards required to be prescribed by the Administrator by subsection (b) of this section.

(2) Of the funds authorized to be appropriated to the Administrator by this chapter, such

² So in original. Probably should be “(4)”.

³ So in original. Probably should be “paragraph”.

amounts as are required shall be available to carry out the study and investigation authorized by paragraph (1) of this subsection.

(3) In entering into any arrangement with the National Academy of Sciences for conducting the study and investigation authorized by paragraph (1) of this subsection, the Administrator shall request the National Academy of Sciences to submit semiannual reports on the progress of its study and investigation to the Administrator and the Congress, beginning not later than July 1, 1971, and continuing until such study and investigation is completed.

(4) The Administrator shall furnish to such Academy at its request any information which the Academy deems necessary for the purpose of conducting the investigation and study authorized by paragraph (1) of this subsection. For the purpose of furnishing such information, the Administrator may use any authority he has under this chapter (A) to obtain information from any person, and (B) to require such person to conduct such tests, keep such records, and make such reports respecting research or other activities conducted by such person as may be reasonably necessary to carry out this subsection.

(d) Useful life of vehicles

The Administrator shall prescribe regulations under which the useful life of vehicles and engines shall be determined for purposes of subsection (a)(1) of this section and section 7541 of this title. Such regulations shall provide that except where a different useful life period is specified in this subchapter useful life shall—

(1) in the case of light duty vehicles and light duty vehicle engines and light-duty trucks up to 3,750 lbs. LVW and up to 6,000 lbs. GVWR, be a period of use of five years or fifty thousand miles (or the equivalent), whichever first occurs, except that in the case of any requirement of this section which first becomes applicable after November 15, 1990, where the useful life period is not otherwise specified for such vehicles and engines, the period shall be 10 years or 100,000 miles (or the equivalent), whichever first occurs, with testing for purposes of in-use compliance under section 7541 of this title up to (but not beyond) 7 years or 75,000 miles (or the equivalent), whichever first occurs;

(2) in the case of any other motor vehicle or motor vehicle engine (other than motorcycles or motorcycle engines), be a period of use set forth in paragraph (1) unless the Administrator determines that a period of use of greater duration or mileage is appropriate; and

(3) in the case of any motorcycle or motorcycle engine, be a period of use the Administrator shall determine.

(e) New power sources or propulsion systems

In the event of a new power source or propulsion system for new motor vehicles or new motor vehicle engines is submitted for certification pursuant to section 7525(a) of this title, the Administrator may postpone certification until he has prescribed standards for any air pollutants emitted by such vehicle or engine which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to

endanger the public health or welfare but for which standards have not been prescribed under subsection (a) of this section.

(f) ⁴ High altitude regulations

(1) The high altitude regulation in effect with respect to model year 1977 motor vehicles shall not apply to the manufacture, distribution, or sale of 1978 and later model year motor vehicles. Any future regulation affecting the sale or distribution of motor vehicles or engines manufactured before the model year 1984 in high altitude areas of the country shall take effect no earlier than model year 1981.

(2) Any such future regulation applicable to high altitude vehicles or engines shall not require a percentage of reduction in the emissions of such vehicles which is greater than the required percentage of reduction in emissions from motor vehicles as set forth in subsection (b) of this section. This percentage reduction shall be determined by comparing any proposed high altitude emission standards to high altitude emissions from vehicles manufactured during model year 1970. In no event shall regulations applicable to high altitude vehicles manufactured before the model year 1984 establish a numerical standard which is more stringent than that applicable to vehicles certified under non-high altitude conditions.

(3) Section 7607(d) of this title shall apply to any high altitude regulation referred to in paragraph (2) and before promulgating any such regulation, the Administrator shall consider and make a finding with respect to—

(A) the economic impact upon consumers, individual high altitude dealers, and the automobile industry of any such regulation, including the economic impact which was experienced as a result of the regulation imposed during model year 1977 with respect to high altitude certification requirements;

(B) the present and future availability of emission control technology capable of meeting the applicable vehicle and engine emission requirements without reducing model availability; and

(C) the likelihood that the adoption of such a high altitude regulation will result in any significant improvement in air quality in any area to which it shall apply.

(g) Light-duty trucks up to 6,000 lbs. GVWR and light-duty vehicles; standards for model years after 1993

(1) NMHC, CO, and NO_x

Effective with respect to the model year 1994 and thereafter, the regulations under subsection (a) of this section applicable to emissions of nonmethane hydrocarbons (NMHC), carbon monoxide (CO), and oxides of nitrogen (NO_x) from light-duty trucks (LDTs) of up to 6,000 lbs. gross vehicle weight rating (GVWR) and light-duty vehicles (LDVs) shall contain standards which provide that emissions from a percentage of each manufacturer's sales volume of such vehicles and trucks shall comply with the levels specified in table G. The percentage shall be as specified in the implementation schedule below:

⁴ Another subsec. (f) is set out after subsec. (m).

TABLE G—EMISSION STANDARDS FOR NMHC, CO, AND NO_x FROM LIGHT-DUTY TRUCKS OF UP TO 6,000 LBS. GVWR AND LIGHT-DUTY VEHICLES

Vehicle type	Column A			Column B		
	(5 yrs/50,000 mi)			(10 yrs/100,000 mi)		
	NMHC	CO	NO _x	NMHC	CO	NO _x
LDTs (0-3,750 lbs. LVW) and light-duty vehicles	0.25	3.4	0.4*	0.31	4.2	0.6*
LDTs (3,751-5,750 lbs. LVW)	0.32	4.4	0.7**	0.40	5.5	0.97

Standards are expressed in grams per mile (gpm).
 For standards under column A, for purposes of certification under section 7525 of this title, the applicable useful life shall be 5 years or 50,000 miles (or the equivalent), whichever first occurs.
 For standards under column B, for purposes of certification under section 7525 of this title, the applicable useful life shall be 10 years or 100,000 miles (or the equivalent), whichever first occurs.
 *In the case of diesel-fueled LDTs (0-3,750 lvw) and light-duty vehicles, before the model year 2004, in lieu of the 0.4 and 0.6 standards for NO_x, the applicable standards for NO_x shall be 1.0 gpm for a useful life of 5 years or 50,000 miles (or the equivalent), whichever first occurs, and 1.25 gpm for a useful life of 10 years or 100,000 miles (or the equivalent) whichever first occurs.
 **This standard does not apply to diesel-fueled LDTs (3,751-5,750 lbs. LVW).

IMPLEMENTATION SCHEDULE FOR TABLE G STANDARDS

Model year	Percentage*
1994	40
1995	80
after 1995	100

*Percentages in the table refer to a percentage of each manufacturer's sales volume.

(2) PM Standard

Effective with respect to model year 1994 and thereafter in the case of light-duty vehicles, and effective with respect to the model year 1995 and thereafter in the case of light-duty trucks (LDTs) of up to 6,000 lbs. gross vehicle weight rating (GVWR), the regulations under subsection (a) of this section applicable to emissions of particulate matter (PM) from such vehicles and trucks shall contain standards which provide that such emissions from a percentage of each manufacturer's sales volume of such vehicles and trucks shall not exceed the levels specified in the table below. The percentage shall be as specified in the Implementation Schedule below.

PM STANDARD FOR LDTs OF UP TO 6,000 LBS. GVWR

Useful life period	Standard
5/50,000	0.08 gpm
10/100,000	0.10 gpm

The applicable useful life, for purposes of certification under section 7525 of this title and for purposes of in-use compliance under section 7541 of this title, shall be 5 years or 50,000 miles (or the equivalent), whichever first occurs, in the case of the 5/50,000 standard.

TABLE H—EMISSION STANDARDS FOR NMHC AND CO FROM GASOLINE AND DIESEL FUELED LIGHT-DUTY TRUCKS OF MORE THAN 6,000 LBS. GVWR

LDT Test weight	Column A			Column B			
	(5 yrs/50,000 mi)			(11 yrs/120,000 mi)			
	NMHC	CO	NO _x	NMHC	CO	NO _x	PM
3,751-5,750 lbs. TW	0.32	4.4	0.7*	0.46	6.4	0.98	0.10
Over 5,750 lbs. TW	0.39	5.0	1.1*	0.56	7.3	1.53	0.12

Standards are expressed in grams per mile (GPM).
 For standards under column A, for purposes of certification under section 7525 of this title, the applicable useful life shall be 5 years or 50,000 miles (or the equivalent) whichever first occurs.

The applicable useful life, for purposes of certification under section 7525 of this title and for purposes of in-use compliance under section 7541 of this title, shall be 10 years or 100,000 miles (or the equivalent), whichever first occurs in the case of the 10/100,000 standard.

IMPLEMENTATION SCHEDULE FOR PM STANDARDS

Model year	Light-duty vehicles	LDTs
1994	40%*	
1995	80%*	40%*
1996	100%*	80%*
after 1996	100%*	100%*

*Percentages in the table refer to a percentage of each manufacturer's sales volume.

(h) Light-duty trucks of more than 6,000 lbs. GVWR; standards for model years after 1995

Effective with respect to the model year 1996 and thereafter, the regulations under subsection (a) of this section applicable to emissions of nonmethane hydrocarbons (NMHC), carbon monoxide (CO), oxides of nitrogen (NO_x), and particulate matter (PM) from light-duty trucks (LDTs) of more than 6,000 lbs. gross vehicle weight rating (GVWR) shall contain standards which provide that emissions from a specified percentage of each manufacturer's sales volume of such trucks shall comply with the levels specified in table H. The specified percentage shall be 50 percent in model year 1996 and 100 percent thereafter.

For standards under column B, for purposes of certification under section 7525 of this title, the applicable useful life shall be 11 years or 120,000 miles (or the equivalent), whichever first occurs.

*Not applicable to diesel-fueled LDTs.

(i) Phase II study for certain light-duty vehicles and light-duty trucks

(1) The Administrator, with the participation of the Office of Technology Assessment, shall study whether or not further reductions in emissions from light-duty vehicles and light-duty trucks should be required pursuant to this subchapter. The study shall consider whether to establish with respect to model years commencing after January 1, 2003, the standards and useful life period for gasoline and diesel-fueled light-duty vehicles and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs. or less specified in the following table:

TABLE 3—PENDING EMISSION STANDARDS FOR GASOLINE AND DIESEL FUELED LIGHT-DUTY VEHICLES AND LIGHT-DUTY TRUCKS 3,750 LBS. LVW OR LESS

Pollutant	Emission level*
NMHC	0.125 GPM
NO _x	0.2 GPM
CO	1.7 GPM

*Emission levels are expressed in grams per mile (GPM). For vehicles and engines subject to this subsection for purposes of subsection (d) of this section and any reference thereto, the useful life of such vehicles and engines shall be a period of 10 years or 100,000 miles (or the equivalent), whichever first occurs.

Such study shall also consider other standards and useful life periods which are more stringent or less stringent than those set forth in table 3 (but more stringent than those referred to in subsections (g) and (h) of this section).

(2)(A) As part of the study under paragraph (1), the Administrator shall examine the need for further reductions in emissions in order to attain or maintain the national ambient air quality standards, taking into consideration the waiver provisions of section 7543(b) of this title. As part of such study, the Administrator shall also examine—

- (i) the availability of technology (including the costs thereof), in the case of light-duty vehicles and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs. or less, for meeting more stringent emission standards than those provided in subsections (g) and (h) of this section for model years commencing not earlier than after January 1, 2003, and not later than model year 2006, including the lead time and safety and energy impacts of meeting more stringent emission standards; and
- (ii) the need for, and cost effectiveness of, obtaining further reductions in emissions from such light-duty vehicles and light-duty trucks, taking into consideration alternative means of attaining or maintaining the national primary ambient air quality standards pursuant to State implementation plans and other requirements of this chapter, including their feasibility and cost effectiveness.

(B) The Administrator shall submit a report to Congress no later than June 1, 1997, containing the results of the study under this subsection, including the results of the examination conducted under subparagraph (A). Before submit-

tal of such report the Administrator shall provide a reasonable opportunity for public comment and shall include a summary of such comments in the report to Congress.

(3)(A) Based on the study under paragraph (1) the Administrator shall determine, by rule, within 3 calendar years after the report is submitted to Congress, but not later than December 31, 1999, whether—

- (i) there is a need for further reductions in emissions as provided in paragraph (2)(A);
- (ii) the technology for meeting more stringent emission standards will be available, as provided in paragraph (2)(A)(i), in the case of light-duty vehicles and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs. or less, for model years commencing not earlier than January 1, 2003, and not later than model year 2006, considering the factors listed in paragraph (2)(A)(i); and
- (iii) obtaining further reductions in emissions from such vehicles will be needed and cost effective, taking into consideration alternatives as provided in paragraph (2)(A)(ii).

The rulemaking under this paragraph shall commence within 3 months after submission of the report to Congress under paragraph (2)(B).

(B) If the Administrator determines under subparagraph (A) that—

- (i) there is no need for further reductions in emissions as provided in paragraph (2)(A);
- (ii) the technology for meeting more stringent emission standards will not be available as provided in paragraph (2)(A)(i), in the case of light-duty vehicles and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs. or less, for model years commencing not earlier than January 1, 2003, and not later than model year 2006, considering the factors listed in paragraph (2)(A)(i); or
- (iii) obtaining further reductions in emissions from such vehicles will not be needed or cost effective, taking into consideration alternatives as provided in paragraph (2)(A)(ii),

the Administrator shall not promulgate more stringent standards than those in effect pursuant to subsections (g) and (h) of this section. Nothing in this paragraph shall prohibit the Administrator from exercising the Administrator's authority under subsection (a) of this section to promulgate more stringent standards for light-duty vehicles and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs. or less at any other time thereafter in accordance with subsection (a) of this section.

(C) If the Administrator determines under subparagraph (A) that—

- (i) there is a need for further reductions in emissions as provided in paragraph (2)(A);
- (ii) the technology for meeting more stringent emission standards will be available, as provided in paragraph (2)(A)(i), in the case of light-duty vehicles and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 lbs. or less, for model years commencing not earlier than January 1, 2003, and not later than model year 2006, considering the factors listed in paragraph (2)(A)(i); and

(iii) obtaining further reductions in emissions from such vehicles will be needed and cost effective, taking into consideration alternatives as provided in paragraph (2)(A)(ii),

the Administrator shall either promulgate the standards (and useful life periods) set forth in Table 3 in paragraph (1) or promulgate alternative standards (and useful life periods) which are more stringent than those referred to in subsections (g) and (h) of this section. Any such standards (or useful life periods) promulgated by the Administrator shall take effect with respect to any such vehicles or engines no earlier than the model year 2003 but not later than model year 2006, as determined by the Administrator in the rule.

(D) Nothing in this paragraph shall be construed by the Administrator or by a court as a presumption that any standards (or useful life period) set forth in Table 3 shall be promulgated in the rulemaking required under this paragraph. The action required of the Administrator in accordance with this paragraph shall be treated as a nondiscretionary duty for purposes of section 7604(a)(2) of this title (relating to citizen suits).

(E) Unless the Administrator determines not to promulgate more stringent standards as provided in subparagraph (B) or to postpone the effective date of standards referred to in Table 3 in paragraph (1) or to establish alternative standards as provided in subparagraph (C), effective with respect to model years commencing after January 1, 2003, the regulations under subsection (a) of this section applicable to emissions of nonmethane hydrocarbons (NMHC), oxides of nitrogen (NO_x), and carbon monoxide (CO) from motor vehicles and motor vehicle engines in the classes specified in Table 3 in paragraph (1) above shall contain standards which provide that emissions may not exceed the pending emission levels specified in Table 3 in paragraph (1).

(j) Cold CO standard

(1) Phase I

Not later than 12 months after November 15, 1990, the Administrator shall promulgate regulations under subsection (a) of this section applicable to emissions of carbon monoxide from 1994 and later model year light-duty vehicles and light-duty trucks when operated at 20 degrees Fahrenheit. The regulations shall contain standards which provide that emissions of carbon monoxide from a manufacturer's vehicles when operated at 20 degrees Fahrenheit may not exceed, in the case of light-duty vehicles, 10.0 grams per mile, and in the case of light-duty trucks, a level comparable in stringency to the standard applicable to light-duty vehicles. The standards shall take effect after model year 1993 according to a phase-in schedule which requires a percentage of each manufacturer's sales volume of light-duty vehicles and light-duty trucks to comply with applicable standards after model year 1993. The percentage shall be as specified in the following table:

PHASE-IN SCHEDULE FOR COLD START STANDARDS

Model Year	Percentage
1994	40
1995	80
1996 and after	100

(2) Phase II

(A) Not later than June 1, 1997, the Administrator shall complete a study assessing the need for further reductions in emissions of carbon monoxide and the maximum reductions in such emissions achievable from model year 2001 and later model year light-duty vehicles and light-duty trucks when operated at 20 degrees Fahrenheit.

(B)(i) If as of June 1, 1997, 6 or more non-attainment areas have a carbon monoxide design value of 9.5 ppm or greater, the regulations under subsection (a)(1) of this section applicable to emissions of carbon monoxide from model year 2002 and later model year light-duty vehicles and light-duty trucks shall contain standards which provide that emissions of carbon monoxide from such vehicles and trucks when operated at 20 degrees Fahrenheit may not exceed 3.4 grams per mile (gpm) in the case of light-duty vehicles and 4.4 grams per mile (gpm) in the case of light-duty trucks up to 6,000 GVWR and a level comparable in stringency in the case of light-duty trucks 6,000 GVWR and above.

(ii) In determining for purposes of this subparagraph whether 6 or more nonattainment areas have a carbon monoxide design value of 9.5 ppm or greater, the Administrator shall exclude the areas of Steubenville, Ohio, and Oshkosh, Wisconsin.

(3) Useful-life for phase I and phase II standards

In the case of the standards referred to in paragraphs (1) and (2), for purposes of certification under section 7525 of this title and in-use compliance under section 7541 of this title, the applicable useful life period shall be 5 years or 50,000 miles, whichever first occurs, except that the Administrator may extend such useful life period (for purposes of section 7525 of this title, or section 7541 of this title, or both) 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 extends such useful life period, the Administrator may make an appropriate adjustment of applicable standards for such extended useful life. No such extended useful life shall extend beyond the useful life period provided in regulations under subsection (d) of this section.

(4) Heavy-duty vehicles and engines

The Administrator may also promulgate regulations under subsection (a)(1) of this section applicable to emissions of carbon monoxide from heavy-duty vehicles and engines when operated at cold temperatures.

(k) Control of evaporative emissions

The Administrator shall promulgate (and from time to time revise) regulations applicable to

evaporative emissions of hydrocarbons from all gasoline-fueled motor vehicles—

- (1) during operation; and
- (2) over 2 or more days of nonuse;

under ozone-prone summertime conditions (as determined by regulations of the Administrator). The regulations shall take effect as expeditiously as possible and shall require the greatest degree of emission reduction achievable by means reasonably expected to be available for production during any model year to which the regulations apply, giving appropriate consideration to fuel volatility, and to cost, energy, and safety factors associated with the application of the appropriate technology. The Administrator shall commence a rulemaking under this subsection within 12 months after November 15, 1990. If final regulations are not promulgated under this subsection within 18 months after November 15, 1990, the Administrator shall submit a statement to the Congress containing an explanation of the reasons for the delay and a date certain for promulgation of such final regulations in accordance with this chapter. Such date certain shall not be later than 15 months after the expiration of such 18 month deadline.

(l) Mobile source-related air toxics

(1) Study

Not later than 18 months after November 15, 1990, the Administrator shall complete a study of the need for, and feasibility of, controlling emissions of toxic air pollutants which are unregulated under this chapter and associated with motor vehicles and motor vehicle fuels, and the need for, and feasibility of, controlling such emissions and the means and measures for such controls. The study shall focus on those categories of emissions that pose the greatest risk to human health or about which significant uncertainties remain, including emissions of benzene, formaldehyde, and 1,3 butadiene. The proposed report shall be available for public review and comment and shall include a summary of all comments.

(2) Standards

Within 54 months after November 15, 1990, the Administrator shall, based on the study under paragraph (1), promulgate (and from time to time revise) regulations under subsection (a)(1) of this section or section 7545(c)(1) of this title containing reasonable requirements to control hazardous air pollutants from motor vehicles and motor vehicle fuels. The regulations shall contain standards for such fuels or vehicles, or both, which the Administrator determines reflect the greatest degree of emission reduction achievable through the application of technology which will be available, taking into consideration the standards established under subsection (a) of this section, the availability and costs of the technology, and noise, energy, and safety factors, and lead time. Such regulations shall not be inconsistent with standards under subsection (a) of this section. The regulations shall, at a minimum, apply to emissions of benzene and formaldehyde.

(m) Emissions control diagnostics

(1) Regulations

Within 18 months after November 15, 1990, the Administrator shall promulgate regulations under subsection (a) of this section requiring manufacturers to install on all new light duty vehicles and light duty trucks diagnostics systems capable of—

- (A) accurately identifying for the vehicle's useful life as established under this section, emission-related systems deterioration or malfunction, including, at a minimum, the catalytic converter and oxygen sensor, which could cause or result in failure of the vehicles to comply with emission standards established under this section,
- (B) alerting the vehicle's owner or operator to the likely need for emission-related components or systems maintenance or repair,
- (C) storing and retrieving fault codes specified by the Administrator, and
- (D) providing access to stored information in a manner specified by the Administrator.

The Administrator may, in the Administrator's discretion, promulgate regulations requiring manufacturers to install such onboard diagnostic systems on heavy-duty vehicles and engines.

(2) Effective date

The regulations required under paragraph (1) of this subsection shall take effect in model year 1994, except that the Administrator may waive the application of such regulations for model year 1994 or 1995 (or both) with respect to any class or category of motor vehicles if the Administrator determines that it would be infeasible to apply the regulations to that class or category in such model year or years, consistent with corresponding regulations or policies adopted by the California Air Resources Board for such systems.

(3) State inspection

The Administrator shall by regulation require States that have implementation plans containing motor vehicle inspection and maintenance programs to amend their plans within 2 years after promulgation of such regulations to provide for inspection of onboard diagnostics systems (as prescribed by regulations under paragraph (1) of this subsection) and for the maintenance or repair of malfunctions or system deterioration identified by or affecting such diagnostics systems. Such regulations shall not be inconsistent with the provisions for warranties promulgated under section 7541(a) and (b) of this title.

(4) Specific requirements

In promulgating regulations under this subsection, the Administrator shall require—

- (A) that any connectors through which the emission control diagnostics system is accessed for inspection, diagnosis, service, or repair shall be standard and uniform on all motor vehicles and motor vehicle engines;
- (B) that access to the emission control diagnostics system through such connectors shall be unrestricted and shall not require

any access code or any device which is only available from a vehicle manufacturer; and

(C) that the output of the data from the emission control diagnostics system through such connectors shall be usable without the need for any unique decoding information or device.

(5) Information availability

The Administrator, by regulation, shall require (subject to the provisions of section 7542(c) of this title regarding the protection of methods or processes entitled to protection as trade secrets) manufacturers to provide promptly to any person engaged in the repairing or servicing of motor vehicles or motor vehicle engines, and the Administrator for use by any such persons, with any and all information needed to make use of the emission control diagnostics system prescribed under this subsection and such other information including instructions for making emission related diagnosis and repairs. No such information may be withheld under section 7542(c) of this title if that information is provided (directly or indirectly) by the manufacturer to franchised dealers or other persons engaged in the repair, diagnosing, or servicing of motor vehicles or motor vehicle engines. Such information shall also be available to the Administrator, subject to section 7542(c) of this title, in carrying out the Administrator's responsibilities under this section.

(f) ⁵ Model years after 1990

For model years prior to model year 1994, the regulations under subsection (a) of this section applicable to buses other than those subject to standards under section 7554 of this title shall contain a standard which provides that emissions of particulate matter (PM) from such buses may not exceed the standards set forth in the following table:

PM STANDARD FOR BUSES	
Model year	Standard*
1991	0.25
1992	0.25
1993 and thereafter	0.10

*Standards are expressed in grams per brake horsepower hour (g/bhp/hr).

(July 14, 1955, ch. 360, title II, § 202, as added Pub. L. 89-272, title I, § 101(8), Oct. 20, 1965, 79 Stat. 992; amended Pub. L. 90-148, § 2, Nov. 21, 1967, 81 Stat. 499; Pub. L. 91-604, § 6(a), Dec. 31, 1970, 84 Stat. 1690; Pub. L. 93-319, § 5, June 22, 1974, 88 Stat. 258; Pub. L. 95-95, title II, §§ 201, 202(b), 213(b), 214(a), 215-217, 224(a), (b), (g), title IV, § 401(d), Aug. 7, 1977, 91 Stat. 751-753, 758-761, 765, 767, 769, 791; Pub. L. 95-190, § 14(a)(60)-(65), (b)(5), Nov. 16, 1977, 91 Stat. 1403, 1405; Pub. L. 101-549, title II, §§ 201-207, 227(b), 230(1)-(5), Nov. 15, 1990, 104 Stat. 2472-2481, 2507, 2529.)

REFERENCES IN TEXT

The enactment of the Clean Air Act Amendments of 1990, referred to in subsec. (a)(3)(B), probably means the enactment of Pub. L. 101-549, Nov. 15, 1990, 104 Stat.

⁵ So in original. Probably should be "(n)".

2399, which was approved Nov. 15, 1990. For complete classification of this Act to the Code, see Short Title note set out under section 7401 of this title and Tables.

Section 7525(f)(1) of this title, referred to in subsec. (a)(3)(E), was redesignated section 7525(f) of this title by Pub. L. 101-549, title II, § 230(8), Nov. 15, 1990, 104 Stat. 2529.

Paragraph (5) of subsec. (b), referred to in subsec. (b)(1)(A), related to waivers for model years 1981 and 1982, and was repealed by Pub. L. 101-549, title II, § 230(3), Nov. 15, 1990, 104 Stat. 2529. See 1990 Amendment note below.

The Energy Policy and Conservation Act, referred to in subsec. (b)(3)(C), is Pub. L. 94-163, Dec. 22, 1975, 89 Stat. 871, as amended, which is classified principally to chapter 77 (§ 6201 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 6201 of this title and Tables.

CODIFICATION

Section was formerly classified to section 1857f-1 of this title.

AMENDMENTS

1990—Subsec. (a)(3)(A). Pub. L. 101-549, § 201(1), added subpar. (A) and struck out former subpar. (A) which related to promulgation of regulations applicable to reduction of emissions from heavy-duty vehicles or engines manufactured during and after model year 1979 in the case of carbon monoxide, hydrocarbons, and oxides of nitrogen, and from vehicles manufactured during and after model year 1981 in the case of particulate matter.

Subsec. (a)(3)(B). Pub. L. 101-549, § 201(1), added subpar. (B) and struck out former subpar. (B) which read as follows: "During the period of June 1 through December 31, 1978, in the case of hydrocarbons and carbon monoxide, or during the period of June 1 through December 31, 1980, in the case of oxides of nitrogen, and during each period of June 1 through December 31 of each third year thereafter, the Administrator may, after notice and opportunity for a public hearing promulgate regulations revising any standard prescribed as provided in subparagraph (A)(ii) for any class or category of heavy-duty vehicles or engines. Such standard shall apply only for the period of three model years beginning four model years after the model year in which such revised standard is promulgated. In revising any standard under this subparagraph for any such three model year period, the Administrator shall determine the maximum degree of emission reduction which can be achieved by means reasonably expected to be available for production of such period and shall prescribe a revised emission standard in accordance with such determination. Such revised standard shall require a reduction of emissions from any standard which applies in the previous model year."

Subsec. (a)(3)(C). Pub. L. 101-549, § 201(1), added subpar. (C) and struck out former subpar. (C) which read as follows: "Action revising any standard for any period may be taken by the Administrator under subparagraph (B) only if he finds—

"(i) that compliance with the emission standards otherwise applicable for such model year cannot be achieved by technology, processes, operating methods, or other alternatives reasonably expected to be available for production for such model year without increasing cost or decreasing fuel economy to an excessive and unreasonable degree; and

"(ii) the National Academy of Sciences has not, pursuant to its study and investigation under subsection (c) of this section, issued a report substantially contrary to the findings of the Administrator under clause (i)."

Subsec. (a)(3)(D). Pub. L. 101-549, § 201(1), added subpar. (D) and struck out former subpar. (D) which read as follows: "A report shall be made to the Congress with respect to any standard revised under subparagraph (B) which shall contain—

"(i) a summary of the health effects found, or believed to be associated with, the pollutant covered by such standard,

“(ii) an analysis of the cost-effectiveness of other strategies for attaining and maintaining national ambient air quality standards and carrying out regulations under part C of subchapter I (relating to significant deterioration) in relation to the cost-effectiveness for such purposes of standards which, but for such revision, would apply.

“(iii) a summary of the research and development efforts and progress being made by each manufacturer for purposes of meeting the standards promulgated as provided in subparagraph (A)(ii) or, if applicable, subparagraph (E), and

“(iv) specific findings as to the relative costs of compliance, and relative fuel economy, which may be expected to result from the application for any model year of such revised standard and the application for such model year of the standard, which, but for such revision, would apply.”

Subsec. (a)(3)(E), (F). Pub. L. 101-549, §201, redesignated subpar. (F) as (E), inserted heading, and struck out former subpar. (E) which read as follows:

“(i) The Administrator shall conduct a continuing pollutant-specific study concerning the effects of each air pollutant emitted from heavy-duty vehicles or engines and from other sources of mobile source related pollutants on the public health and welfare. The results of such study shall be published in the Federal Register and reported to the Congress not later than June 1, 1978, in the case of hydrocarbons and carbon monoxide, and June 1, 1980, in the case of oxides of nitrogen, and before June 1 of each third year thereafter.

“(ii) On the basis of such study and such other information as is available to him (including the studies under section 7548 of this title), the Administrator may, after notice and opportunity for a public hearing, promulgate regulations under paragraph (1) of this subsection changing any standard prescribed in subparagraph (A)(ii) (or revised under subparagraph (B) or previously changed under this subparagraph). No such changed standard shall apply for any model year before the model year four years after the model year during which regulations containing such changed standard are promulgated.”

Subsec. (a)(4)(A), (B). Pub. L. 101-549, §227(b), substituted “requirements prescribed under this subchapter” for “standards prescribed under this subsection”.

Subsec. (a)(6). Pub. L. 101-549, §202, amended par. (6) generally. Prior to amendment, par. (6) read as follows: “The Administrator shall determine the feasibility and desirability of requiring new motor vehicles to utilize onboard hydrocarbon control technology which would avoid the necessity of gasoline vapor recovery of uncontrolled emissions emanating from the fueling of motor vehicles. The Administrator shall compare the costs and effectiveness of such technology to that of implementing and maintaining vapor recovery systems (taking into consideration such factors as fuel economy, economic costs of such technology, administrative burdens, and equitable distribution of costs). If the Administrator finds that it is feasible and desirable to employ such technology, he shall, after consultation with the Secretary of Transportation with respect to motor vehicle safety, prescribe, by regulation, standards requiring the use of onboard hydrocarbon technology which shall not become effective until the introduction to the model year for which it would be feasible to implement such standards, taking into consideration compliance costs and the restraints of an adequate lead time for design and production.”

Subsec. (b)(1)(C). Pub. L. 101-549, §203(c), amended subpar. (C) generally. Prior to amendment, subpar. (C) read as follows: “Effective with respect to vehicles and engines manufactured after model year 1978 (or in the case of heavy-duty vehicles or engines, such later model year as the Administrator determines is the earliest feasible model year), the test procedure promulgated under paragraph (2) for measurement of evaporative emissions of hydrocarbons shall require that such emissions be measured from the vehicle or engine

as a whole. Regulations to carry out this subparagraph shall be promulgated not later than two hundred and seventy days after August 7, 1977.”

Subsec. (b)(2). Pub. L. 101-549, §203(d), amended par. (2) generally. Prior to amendment, par. (2) read as follows: “Emission standards under paragraph (1), and measurement techniques on which such standards are based (if not promulgated prior to December 31, 1970), shall be prescribed by regulation within 180 days after such date.”

Subsec. (b)(3). Pub. L. 101-549, §230(4), redesignated par. (6) relating to waiver of standards for oxides of nitrogen as par. (3), struck out subpar. (A) designation before “Upon the petition”, redesignated former cls. (i) to (iii) as subpars. (A) to (C), respectively, and struck out former subpar. (B) which authorized the Administrator to waive the standard under subsec. (b)(1)(B) of this section for emissions of oxides of nitrogen from light-duty vehicles and engines beginning in model year 1981 after providing notice and opportunity for a public hearing, and set forth conditions under which a waiver could be granted.

Subsec. (b)(3)(B). Pub. L. 101-549, §230(1), in the par. (3) defining terms for purposes of this part struck out subpar. (B) which defined “light duty vehicles and engines”.

Subsec. (b)(4). Pub. L. 101-549, §230(2), struck out par. (4) which read as follows: “On July 1 of 1971, and of each year thereafter, the Administrator shall report to the Congress with respect to the development of systems necessary to implement the emission standards established pursuant to this section. Such reports shall include information regarding the continuing effects of such air pollutants subject to standards under this section on the public health and welfare, the extent and progress of efforts being made to develop the necessary systems, the costs associated with development and application of such systems, and following such hearings as he may deem advisable, any recommendations for additional congressional action necessary to achieve the purposes of this chapter. In gathering information for the purposes of this paragraph and in connection with any hearing, the provisions of section 7607(a) of this title (relating to subpoenas) shall apply.”

Subsec. (b)(5). Pub. L. 101-549, §230(3), struck out par. (5) which related to waivers for model years 1981 and 1982 of the effective date of the emissions standard required under par. (1)(A) for carbon monoxide applicable to light-duty vehicles and engines manufactured in those model years.

Subsec. (b)(6). Pub. L. 101-549, §230(4), redesignated par. (6) as (3).

Subsec. (b)(7). Pub. L. 101-549, §230(5), struck out par. (7) which read as follows: “The Congress hereby declares and establishes as a research objective, the development of propulsion systems and emission control technology to achieve standards which represent a reduction of at least 90 per centum from the average emissions of oxides of nitrogen actually measured from light duty motor vehicles manufactured in model year 1971 not subject to any Federal or State emission standard for oxides of nitrogen. The Administrator shall, by regulations promulgated within one hundred and eighty days after August 7, 1977, require each manufacturer whose sales represent at least 0.5 per centum of light duty motor vehicle sales in the United States, to build and, on a regular basis, demonstrate the operation of light duty motor vehicles that meet this research objective, in addition to any other applicable standards or requirements for other pollutants under this chapter. Such demonstration vehicles shall be submitted to the Administrator no later than model year 1979 and in each model year thereafter. Such demonstration shall, in accordance with applicable regulations, to the greatest extent possible, (A) be designed to encourage the development of new powerplant and emission control technologies that are fuel efficient, (B) assure that the demonstration vehicles are or could reasonably be expected to be within the productive capability of the manufacturers, and (C) assure the utili-

zation of optimum engine, fuel, and emission control systems.”

Subsec. (d). Pub. L. 101-549, §203(b)(1), substituted “provide that except where a different useful life period is specified in this subchapter” for “provide that”.

Subsec. (d)(1). Pub. L. 101-549, §203(b)(2), (3), inserted “and light-duty trucks up to 3,750 lbs. LVW and up to 6,000 lbs. GVWR” after “engines” and substituted for semicolon at end “, except that in the case of any requirement of this section which first becomes applicable after November 15, 1990, where the useful life period is not otherwise specified for such vehicles and engines, the period shall be 10 years or 100,000 miles (or the equivalent), whichever first occurs, with testing for purposes of in-use compliance under section 7541 of this title up to (but not beyond) 7 years or 75,000 miles (or the equivalent), whichever first occurs;”.

Subsec. (f). Pub. L. 101-549, §207(b), added (after subsec. (m) at end) subsec. (f) relating to regulations applicable to buses for model years after 1990.

Subsecs. (g) to (i). Pub. L. 101-549, §203(a), added subsecs. (g) to (i).

Subsecs. (j) to (m). Pub. L. 101-549, §§204-207(a), added subsecs. (j) to (m).

1977—Subsec. (a)(1). Pub. L. 95-190, §14(a)(60), restructured subsec. (a) by providing for designation of par. (1) to precede “The Administrator” in place of “Except as”.

Pub. L. 95-95, §401(d)(1), substituted “Except as otherwise provided in subsection (b) of this section the Administrator” for “The Administrator”, “cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare” for “causes or contributes to, or is likely to cause or contribute to, air pollution which endangers the public health or welfare”, and “useful life (as determined under subsection (d) of this section, relating to useful life of vehicles for purposes of certification), whether such vehicles and engines are designed as complete systems or incorporate devices” for “useful life (as determined under subsection (d) of this section) whether such vehicles and engines are designed as complete systems or incorporated devices”.

Subsec. (a)(2). Pub. L. 95-95, §214(a), substituted “prescribed under paragraph (1) of this subsection” for “prescribed under this subsection”.

Subsec. (a)(3). Pub. L. 95-95, §224(a), added par. (3).

Subsec. (a)(3)(B). Pub. L. 95-190, §14(a)(61), (62), substituted provisions setting forth applicable periods of from June 1 through Dec. 31, 1978, June 1 through Dec. 31, 1980, and during each period of June 1 through Dec. 31 of each third year thereafter, for provisions setting forth applicable periods of from June 1 through Dec. 31, 1979, and during each period of June 1 through Dec. 31 of each third year after 1979, and substituted “from any” for “of from any”.

Subsec. (a)(3)(E). Pub. L. 95-190, §14(a)(63), substituted “1978, in the case of hydrocarbons and carbon monoxide, and June 1, 1980, in the case of oxides of nitrogen” for “1979.”

Subsec. (a)(4). Pub. L. 95-95, §214(a), added par. (4).

Subsec. (a)(5). Pub. L. 95-95, §215, added par. (5).

Subsec. (a)(6). Pub. L. 95-95, §216, added par. (6).

Subsec. (b)(1)(A). Pub. L. 95-95, §201(a), substituted provisions setting the standards for emissions from light-duty vehicles and engines manufactured during the model years 1977 through 1980 for provisions which had set the standards for emissions from light-duty vehicles and engines manufactured during the model years 1975 and 1976, substituted “model year 1980” for “model year 1977” in provisions requiring a reduction of at least 90 per centum from the emissions allowable under standards for model year 1970, and inserted provisions that, unless waived as provided in par. (5), the standards for vehicles and engines manufactured during or after the model year 1981 represent a reduction of at least 90 per centum from the emissions allowable under standards for model year 1970.

Subsec. (b)(1)(B). Pub. L. 95-190, §14(a)(64), (65), substituted “calendar year 1976” for “model year 1976” and in cl. (i) substituted “other” for “United States”.

Pub. L. 95-95, §201(b), substituted provisions setting the standards for emissions from light-duty vehicles and engines manufactured during the model years 1977 through 1980 for provisions which had set the standards for emissions from light-duty vehicles and engines manufactured during the model years 1975 through 1977, substituted provisions that the standards for model years 1981 and after allow emissions of no more than 1.0 gram per vehicle mile for provisions that the standards for model year 1978 and after require a reduction of at least 90 per centum from the average of emissions actually measured from light-duty vehicles manufactured during model year 1971 which were not subject to any Federal or State emission standards for oxides of nitrogen, and inserted provisions directing the Administrator to prescribe separate standards for model years 1981 and 1982 for manufacturers whose production, by corporate identity, for model year 1976 was less than three hundred thousand light-duty motor vehicles worldwide if the manufacturer’s capability to meet emission standards depends upon United States technology and if the manufacturer cannot develop one.

Subsec. (b)(1)(C). Pub. L. 95-95, §217, added subpar. (C).

Subsec. (b)(3)(C). Pub. L. 95-95, §224(b), added subpar. (C).

Subsec. (b)(5). Pub. L. 95-95, §201(c), substituted provisions setting up a procedure under which a manufacturer may apply for a waiver for model years 1981 and 1982 of the effective date of the emission standards for carbon monoxide required by par. (1)(A) for provisions which had set up a procedure under which a manufacturer, after Jan. 1, 1975, could apply for a one-year suspension of the effective date of any emission standard required by par. (1)(A) for model year 1977.

Subsec. (b)(6). Pub. L. 95-95, §201(c), added par. (6).

Subsec. (b)(7). Pub. L. 95-95, §202(b), added par. (7).

Subsec. (d)(2). Pub. L. 95-95, §224(g), as amended by Pub. L. 95-190, §14(b)(5), to correct typographical error in directory language, inserted “(other than motorcycles or motorcycle engines)” after “motor vehicle or motor vehicle engine”.

Subsec. (d)(3). Pub. L. 95-95, §224(g), added par. (3).

Subsec. (e). Pub. L. 95-95, §401(d)(2), substituted “which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger” for “which cause or contribute to, or are likely to cause or contribute to, air pollution which endangers”.

Subsec. (f). Pub. L. 95-95, §213(b), added subsec. (f).

1974—Subsec. (b)(1)(A). Pub. L. 93-319, §5(a), substituted “model year 1977” for “model year 1975” in provisions requiring a reduction of at least 90 per centum from the emissions allowable under standards for model year 1970 and inserted provisions covering regulations for model years 1975 and 1976.

Subsec. (b)(1)(B). Pub. L. 93-319, §5(b), substituted “model year 1978” for “model year 1976” in provisions requiring a reduction of at least 90 per centum from the average of emissions actually measured from vehicles manufactured during model year 1971 and inserted provisions covering regulations for model years 1975, 1976, and 1977.

Subsec. (b)(5). Pub. L. 93-319, §5(c), (d), substituted in subpar. (A), “At any time after January 1, 1975” for “At any time after January 1, 1972”, “with respect to such manufacturer for light-duty vehicles and engines manufactured in model year 1977” for “with respect to such manufacturer”, “sixty days” for “60 days”, “paragraph (1)(A) of this subsection” for “paragraph (1)(A)”, and “vehicles and engines manufactured during model year 1977” for “vehicles and engines manufactured during model year 1975”, redesignated subpars. (C) to (E) as (B) to (D), respectively, and struck out former subpar. (B) which had allowed manufacturers, at any time after Jan. 1, 1973, to file with the Administrator an application requesting a 1-year suspension of the effective date of any emission standard required by subsec. (b)(1)(B) with respect to such manufacturer.

1970—Subsec. (a). Pub. L. 91-604 redesignated existing provisions as par. (1), substituted Administrator for

Secretary as the issuing authority for standards, inserted references to the useful life of engines, and substituted the emission of any air pollutant for the emission of any kind of substance as the subject to be regulated, and added par. (2).

Subsec. (b), Pub. L. 91-604 added subsec. (b). Former subsec. (b) redesignated as par. (2) of subsec. (a).

Subsecs. (c) to (e), Pub. L. 91-604 added subsecs. (c) to (e).

1967—Pub. L. 90-148 reenacted section without change.

EFFECTIVE DATE OF 1977 AMENDMENT

Amendment by Pub. L. 95-95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95-95, set out as a note under section 7401 of this title.

MODIFICATION OR RESCISSION OF RULES, REGULATIONS, ORDERS, DETERMINATIONS, CONTRACTS, CERTIFICATIONS, AUTHORIZATIONS, DELEGATIONS, AND OTHER ACTIONS

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub. L. 95-95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with act July 14, 1955, as amended by Pub. L. 95-95 [this chapter], see section 406(b) of Pub. L. 95-95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

STUDY ON OXIDES OF NITROGEN FROM LIGHT-DUTY VEHICLES

Section 202(a) of Pub. L. 95-95 provided that the Administrator of the Environmental Protection Agency conduct a study of the public health implications of attaining an emission standard on oxides of nitrogen from light-duty vehicles of 0.4 gram per vehicle mile, the cost and technological capability of attaining such standard, and the need for such a standard to protect public health or welfare and that the Administrator submit a report of such study to the Congress, together with recommendations not later than July 1, 1980.

STUDY OF CARBON MONOXIDE INTRUSION INTO SUSTAINED-USE VEHICLES

Section 226 of Pub. L. 95-95 provided that the Administrator, in conjunction with the Secretary of Transportation, study the problem of carbon monoxide intrusion into the passenger area of sustained-use motor vehicles and that within one year the Administrator report to the Congress respecting the results of such study.

CONTINUING COMPREHENSIVE STUDIES AND INVESTIGATIONS BY NATIONAL ACADEMY OF SCIENCES

Section 403(f) of Pub. L. 95-95 provided that: "The Administrator of the Environmental Protection Agency shall undertake to enter into appropriate arrangements with the National Academy of Sciences to conduct continuing comprehensive studies and investigations of the effects on public health and welfare of emissions subject to section 202(a) of the Clean Air Act [subsec. (a) of this section] (including sulfur compounds) and the technological feasibility of meeting emission standards required to be prescribed by the Administrator by section 202(b) of such Act [subsec. (b) of this section]. The Administrator shall report to the Congress within six months of the date of enactment of this section [Aug. 7, 1977] and each year thereafter regarding the status of the contractual arrangements and conditions necessary to implement this paragraph."

[For termination, effective May 15, 2000, of provisions relating to annual report to Congress in section 403(f) of Pub. L. 95-95, set out above, see section 3003 of Pub. L. 104-66, as amended, set out as a note under section

1113 of Title 31, Money and Finance, and the 2nd item on page 165 of House Document No. 103-7.]

STUDY ON EMISSION OF SULFUR-BEARING COMPOUNDS FROM MOTOR VEHICLES AND MOTOR VEHICLE AND AIRCRAFT ENGINES

Section 403(g) of Pub. L. 95-95 provided that the Administrator of the Environmental Protection Agency conduct a study and report to the Congress by the date one year after Aug. 7, 1977, on the emission of sulfur-bearing compounds from motor vehicles and motor vehicle engines and aircraft engines.

EX. ORD. NO. 13432. COOPERATION AMONG AGENCIES IN PROTECTING THE ENVIRONMENT WITH RESPECT TO GREENHOUSE GAS EMISSIONS FROM MOTOR VEHICLES, NONROAD VEHICLES, AND NONROAD ENGINES

Ex. Ord. No. 13432, May 14, 2007, 72 F.R. 27717, provided:

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

SECTION 1. *Policy.* It is the policy of the United States to ensure the coordinated and effective exercise of the authorities of the President and the heads of the Department of Transportation, the Department of Energy, and the Environmental Protection Agency to protect the environment with respect to greenhouse gas emissions from motor vehicles, nonroad vehicles, and nonroad engines, in a manner consistent with sound science, analysis of benefits and costs, public safety, and economic growth.

SEC. 2. *Definitions.* As used in this order:

(a) "agencies" refers to the Department of Transportation, the Department of Energy, and the Environmental Protection Agency, and all units thereof, and "agency" refers to any of them;

(b) "alternative fuels" has the meaning specified for that term in section 301(2) of the Energy Policy Act of 1992 (42 U.S.C. 13211(2));

(c) "authorities" include the Clean Air Act (42 U.S.C. 7401-7671q), the Energy Policy Act of 1992 (Public Law 102-486), the Energy Policy Act of 2005 (Public Law 109-58), the Energy Policy and Conservation Act (Public Law 94-163), and any other current or future laws or regulations that may authorize or require any of the agencies to take regulatory action that directly or indirectly affects emissions of greenhouse gases from motor vehicles;

(d) "greenhouse gases" has the meaning specified for that term in Executive Order 13423 of January 24, 2007;

(e) "motor vehicle" has the meaning specified for that term in section 216(2) of the Clean Air Act (42 U.S.C. 7550(2));

(f) "nonroad engine" has the meaning specified for that term in section 216(10) of the Clean Air Act (42 U.S.C. 7550(10));

(g) "nonroad vehicle" has the meaning specified for that term in section 216(11) of the Clean Air Act (42 U.S.C. 7550(11));

(h) "regulation" has the meaning specified for that term in section 3(d) of Executive Order 12866 of September 30, 1993, as amended (Executive Order 12866); and

(i) "regulatory action" has the meaning specified for that term in section 3(e) of Executive Order 12866.

SEC. 3. *Coordination Among the Agencies.* In carrying out the policy set forth in section 1 of this order, the head of an agency undertaking a regulatory action that can reasonably be expected to directly regulate emissions, or to substantially and predictably affect emissions, of greenhouse gases from motor vehicles, nonroad vehicles, nonroad engines, or the use of motor vehicle fuels, including alternative fuels, shall:

(a) undertake such a regulatory action, to the maximum extent permitted by law and determined by the head of the agency to be practicable, jointly with the other agencies;

(b) in undertaking such a regulatory action, consider, in accordance with applicable law, information and recommendations provided by the other agencies;

(c) in undertaking such a regulatory action, exercise authority vested by law in the head of such agency effectively, in a manner consistent with the effective exercise by the heads of the other agencies of the authority vested in them by law; and

(d) obtain, to the extent permitted by law, concurrence or other views from the heads of the other agencies during the development and preparation of the regulatory action and prior to any key decision points during that development and preparation process, and in no event later than 30 days prior to publication of such action.

SEC. 4. *Duties of the Heads of Agencies.* (a) To implement this order, the head of each agency shall:

(1) designate appropriate personnel within the agency to (i) direct the agency's implementation of this order, (ii) ensure that the agency keeps the other agencies and the Office of Management and Budget informed of the agency regulatory actions to which section 3 refers, and (iii) coordinate such actions with the agencies;

(2) in coordination as appropriate with the Committee on Climate Change Science and Technology, continue to conduct and share research designed to advance technologies to further the policy set forth in section 1 of this order;

(3) facilitate the sharing of personnel and the sharing of information among the agencies to further the policy set forth in section 1 of this order;

(4) coordinate with the other agencies to avoid duplication of requests to the public for information from the public in the course of undertaking such regulatory action, consistent with the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*); and

(5) consult with the Secretary of Agriculture whenever a regulatory action will have a significant effect on agriculture related to the production or use of ethanol, biodiesel, or other renewable fuels, including actions undertaken in whole or in part based on authority or requirements in title XV of the Energy Policy Act of 2005, or the amendments made by such title, or when otherwise appropriate or required by law.

(b) To implement this order, the heads of the agencies acting jointly may allocate as appropriate among the agencies administrative responsibilities relating to regulatory actions to which section 3 refers, such as publication of notices in the Federal Register and receipt of comments in response to notices.

SEC. 5. *Duties of the Director of the Office of Management and Budget and the Chairman of the Council on Environmental Quality.* (a) The Director of the Office of Management and Budget, with such assistance from the Chairman of the Council on Environmental Quality as the Director may require, shall monitor the implementation of this order by the heads of the agencies and shall report thereon to the President from time to time, and not less often than semiannually, with any recommendations of the Director for strengthening the implementation of this order.

(b) To implement this order and further the policy set forth in section 1, the Director of the Office of Management and Budget may require the heads of the agencies to submit reports to, and coordinate with, such Office on matters related to this order.

SEC. 6. *General Provisions.* (a) This order shall be implemented in accordance with applicable law and subject to the availability of appropriations.

(b) This order shall not be construed to impair or otherwise affect the functions of the Director of the Office of Management and Budget relating to budget, administrative, and legislative proposals.

(c) This order is not intended to, and does not, create any right, benefit or privilege, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, instrumentalities, or entities, its officers or employees, or any other person.

GEORGE W. BUSH.

§ 7522. Prohibited acts

(a) Enumerated prohibitions

The following acts and the causing thereof are prohibited—

(1) in the case of a manufacturer of new motor vehicles or new motor vehicle engines for distribution in commerce, the sale, or the offering for sale, or the introduction, or delivery for introduction, into commerce, or (in the case of any person, except as provided by regulation of the Administrator), the importation into the United States, of any new motor vehicle or new motor vehicle engine, manufactured after the effective date of regulations under this part which are applicable to such vehicle or engine unless such vehicle or engine is covered by a certificate of conformity issued (and in effect) under regulations prescribed under this part or part C in the case of clean-fuel vehicles (except as provided in subsection (b) of this section);

(2)(A) for any person to fail or refuse to permit access to or copying of records or to fail to make reports or provide information required under section 7542 of this title;

(B) for any person to fail or refuse to permit entry, testing or inspection authorized under section 7525(c) of this title or section 7542 of this title;

(C) for any person to fail or refuse to perform tests, or have tests performed as required under section 7542 of this title;

(D) for any manufacturer to fail to make information available as provided by regulation under section 7521(m)(5) of this title;

(3)(A) for any person to remove or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter prior to its sale and delivery to the ultimate purchaser, or for any person knowingly to remove or render inoperative any such device or element of design after such sale and delivery to the ultimate purchaser; or

(B) for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use; or

(4) for any manufacturer of a new motor vehicle or new motor vehicle engine subject to standards prescribed under section 7521 of this title or part C of this subchapter—

(A) to sell or lease any such vehicle or engine unless such manufacturer has complied with (i) the requirements of section 7541(a) and (b) of this title with respect to such vehicle or engine, and unless a label or tag is affixed to such vehicle or engine in accordance with section 7541(c)(3) of this title, or (ii) the corresponding requirements of part C