this part for 1995 model year light-duty trucks and be subject to the standards described in § 86.090–9(b).

TABLE A96–16—IMPLEMENTATION SCHEDULE FOR LIGHT-DUTY TRUCKS FOR EVAPORATIVE EMISSION TESTING

Model year	Sales percentage
1996	20
1997	40
1998	90
1999 and following	100

(ii) Optionally, a minimum of the percentage shown in table A96–16 of a manufacturer's combined sales of the applicable model year's gasoline- and methanol-fueled light-duty vehicles, light-duty trucks, and heavy-duty vehicles shall not exceed the applicable standards.

(iii) Small volume manufacturers, as defined in § 86.092–14(b)(1) and (2), are exempt from the implementation schedule of table A96–16 of this section for model years 1996, 1997, and 1998. For small volume manufacturers, the standards of § 86.090–9(b), and the associated test procedures, continue to apply until model year 1999, when 100 percent compliance with the standards of this section is required. This exemption does not apply to small volume engine families as defined in § 86.092–14(b)(5).

(iv) For the 1996 model year, manufacturers may satisfy the testing requirements for federal certification to the evaporative standards of paragraph (b) of this section, except the fuel dispensing spitback test, by presenting test results from the certification procedures defined by the California Regulatory Requirements Applicable to the Evaporative Emissions Program (January 4, 1995). These requirements have been incorporated by reference (see § 86.1).

(c) [Reserved]. For guidance see § 86.094–9.

(d)–(f) [Reserved]

(g)–(k) [Reserved]. For guidance see § 86.094–9.

[58 FR 16021, Mar. 24, 1993, as amended at 58 FR 58417, Nov. 1, 1993; 59 FR 48500, Sept. 21, 1994; 60 FR 43887, Aug. 23, 1995]

§ 86.096–10 Emission standards for 1996 and later model year Otto-cycle heavy-duty engines and vehicles.

Section 86.096–10 includes text that specifies requirements that differ from § 86.091–10. Where a paragraph in § 86.091–10 is identical and applicable to § 86.096–10, this may be indicated by specifying the corresponding paragraph and the statement "[Reserved]. For guidance see § 86.091–10."

(a) [Reserved]. For guidance see § 86.091–10.

(b) Evaporative emissions from heavy-duty vehicles shall not exceed the following standards. The standards apply equally to certification and in-use vehicles. The spitback standard also applies to newly assembled vehicles. For certification vehicles only, manufacturers may conduct testing to quantify a level of nonfuel background emissions for an individual test vehicle. Such a demonstration must include a description of the source(s) of emissions and an estimated decay rate. The demonstrated level of nonfuel background emissions may be subtracted from emission test results from certification vehicles if approved in advance by the Administrator.

(1) *Hydrocarbons (for vehicles equipped with gasoline-fueled, natural gas-fueled or liquefied petroleum gas-fueled engines).* (i) For vehicles with a Gross Vehicle Weight Rating of up to 14,000 lbs:

(A)(*1*) For the full three-diurnal test sequence described in § 86.1230–96, diurnal plus hot soak measurements: 3.0 grams per test.

(*2*) For the supplemental two-diurnal test sequence described in § 86.1230–96, diurnal plus hot soak measurements (gasoline-fueled vehicles only): 3.5 grams per test.

(B) Running loss test (gasoline-fueled vehicles only): 0.05 grams per mile.

(C) Fuel dispensing spitback test (gasoline-fueled vehicles only): 1.0 gram per test.

(ii) For vehicles with a Gross Vehicle Weight Rating of greater than 14,000 lbs:

(A)(*1*) For the full three-diurnal test sequence described in § 86.1230–96, diurnal plus hot soak measurements: 4.0 grams per test.

(*2*) For the supplemental two-diurnal test sequence described in §86.1230–96, diurnal plus hot soak measurements (gasoline-fueled vehicles only): 4.5 grams per test.

(B) Running loss test (gasoline-fueled vehicles only): 0.05 grams per mile.

(2) Total Hydrocarbon Equivalent (for vehicles equipped with methanol-fueled engines). (i) For vehicles with a Gross Vehicle Weight Rating of up to 14,000 lbs:

(A)(*1*) For the full three-diurnal test sequence described in §86.1230–96, diurnal plus hot soak measurements: 3.0 grams carbon per test.

(*2*) For the supplemental two-diurnal test sequence described in §86.1230–96, diurnal plus hot soak measurements: 3.5 grams carbon per test.

(B) Running loss test: 0.05 grams carbon per mile.

(C) Fuel dispensing spitback test: 1.0 gram carbon per test.

(ii) For vehicles with a Gross Vehicle Weight Rating of greater than 14,000 lbs:

(A)(*1*) For the full three-diurnal test sequence described in §86.1230–96, diurnal plus hot soak measurements: 4.0 grams carbon per test.

(*2*) For the supplemental two-diurnal test sequence described in §86.1230–96, diurnal plus hot soak measurements: 4.5 grams carbon per test.

(B) Running loss test: 0.05 grams carbon per mile.

(3)(i) For vehicles with a Gross Vehicle Weight Rating of up to 26,000 lbs, the standards set forth in paragraphs (b)(1) and (b)(2) of this section refer to a composite sample of evaporative emissions collected under the conditions and measured in accordance with the procedures set forth in subpart M of this part.

(ii) For vehicles with a Gross Vehicle Weight Rating of greater than 26,000 lbs., the standards set forth in paragraphs (b)(1)(ii) and (b)(2)(ii) of this section refer to the manufacturer's engineering design evaluation using good engineering practice (a statement of which is required in §86.091–23(b)(4)(ii)).

(4) All fuel vapor generated in a gasoline- or methanol-fueled heavyduty vehicle during in-use operations shall be routed exclusively to the evaporative control system (e.g., either canister or engine purge). The only exception to this requirement shall be for emergencies.

(5)(i) A minimum of the percentage shown in table A96–17 of a manufacturer's sales of the applicable model year's gasoline- and methanol-fueled heavy-duty vehicles shall not exceed the standards described in paragraph (b) of this section, except that methanol-fueled heavy-duty vehicles are exempt for the 1996 and 1997 model years. The remaining vehicles shall be subject to the standards described in §86.091–10(b).

TABLE A96–17—IMPLEMENTATION SCHEDULE FOR HEAVY-DUTY VEHICLES FOR EVAPORATIVE EMISSION TESTING

Model year	Sales percentage
1996	20
1997	40
1998	90
1999 and following	100

(ii) Optionally, a minimum of the percentage shown in table A96–17 of a manufacturer's combined sales of the applicable model year's gasoline- and methanol-fueled light-duty vehicles, light-duty trucks, and heavy-duty vehicles shall not exceed the applicable standards.

(iii) Small volume manufacturers, as defined in §86.092–14(b)(1) and (2), are exempt from the implementation schedule of table A96–17 of this section for model years 1996, 1997, and 1998. For small volume manufacturers, the standards of §86.091–10(b), and the associated test procedures, continue to apply until model year 1999, when 100 percent compliance with the standards of this section is required. This exemption does not apply to small volume engine families as defined in §86.092–14(b)(5).

(iv) For the 1996 model year, manufacturers may satisfy the testing requirements for federal certification to the evaporative standards of paragraph (b) of this section, except the fuel dispensing spitback test, by presenting test results from the certification procedures defined by the California Regulatory Requirements Applicable to the Evaporative Emissions Program (January 4, 1995). These requirements have

been incorporated by reference (see § 86.1).

(c)–(d) [Reserved]. For guidance see § 86.091–10.

[58 FR 16022, Mar. 24, 1993, as amended at 59 FR 48500, Sept. 21, 1994; 60 FR 43887, Aug. 23, 1995]

§ 86.096–11 Emission standards for 1996 and later model year diesel heavy-duty engines and vehicles.

(a) Exhaust emissions from new 1996 and later model year diesel heavy-duty engines shall not exceed the following (optional for 1996 model year gaseous-fueled diesel heavy-duty engines):

(1)(i) *Hydrocarbons (for diesel engines fueled with either petroleum-fuel or liquefied petroleum gas).* 1.3 grams per brake horsepower-hour (0.48 gram per megajoule), as measured under transient operating conditions.

(ii) *Total Hydrocarbon Equivalent (for methanol-fueled diesel engines).* 1.3 grams per brake horsepower-hour (0.48 gram per megajoule), as measured under transient operating conditions.

(iii) *Nonmethane hydrocarbons (for natural gas-fueled diesel engines).* 1.2 grams per brake horsepower-hour (0.45 gram per megajoule), as measured under transient operating conditions.

(2) *Carbon monoxide.* (i) 15.5 grams per brake horsepower-hour (5.77 grams per megajoule), as measured under transient operating conditions.

(ii) 0.50 percent of exhaust gas flow at curb idle (methanol-, natural gas-, and liquefied petroleum gas-fueled diesel only).

(3) *Oxides of Nitrogen.* (i) 5.0 grams per brake horsepower-hour (1.9 grams per megajoule), as measured under transient operating conditions.

(ii) A manufacturer may elect to include any or all of its diesel heavy-duty engine families in any or all of the NO_X averaging, trading, or banking programs for heavy-duty engines, within the restrictions described in § 86.094–15. If the manufacturer elects to include engine families in any of these programs, the NO_X FELs may not exceed 6.0 grams per brake horsepower-hour (2.2 grams per megajoule). This ceiling value applies whether credits for the family are derived from averaging, trading or banking programs.

(4) *Particulate.* (i) For diesel engines to be used in urban buses, 0.05 gram per brake horsepower-hour (0.019 gram per megajoule) for certification testing and selective enforcement audit testing, and 0.07 gram per brake horsepower-hour (0.026 gram per megajoule) for in-use testing, as measured under transient operating conditions.

(ii) For all other diesel engines only, 0.10 gram per brake horsepower-hour (0.037 gram per megajoule), as measured under transient operating conditions.

(iii) A manufacturer may elect to include any or all of its diesel heavy-duty engine families in any or all of the particulate averaging, trading, or banking programs for heavy-duty engines, within the restrictions described in § 86.094–15. If the manufacturer elects to include engine families in any of these programs, the particulate FEL may not exceed:

(A) For engine families intended for use in urban buses, 0.25 gram per brake horsepower-hour (0.093 gram per megajoule).

(B) For engine families not intended for use in urban buses, 0.60 gram per brake horsepower-hour (0.22 gram per megajoule).

(C) The ceiling values in paragraphs (a)(4)(iii) (A) and (B) of this section apply whether credits for the family are derived from averaging, trading or banking programs.

(b)(1) The opacity of smoke emission from new 1996 and later model year diesel heavy-duty engine shall not exceed:

(i) 20 percent during the engine acceleration mode.

(ii) 15 percent during the engine lugging mode.

(iii) 50 percent during the peaks in either mode.

(2) The standards set forth in paragraph (b)(1) of this section refer to exhaust smoke emissions generated under the conditions set forth in subpart I of this part and measured and calculated in accordance with these procedures.

(3) *Evaporative emissions* (total of non-oxygenated hydrocarbons plus methanol) from 1996 and later model year heavy-duty vehicles equipped with methanol-fueled diesel engines shall not exceed: