State of California
AIR RESOURCES BOARD

Resolution 80-6

March 26, 1980

WHEREAS, Section 39601 of the Health and Safety Code authorizes the Air Resources Board to adopt standards, rules and regulations necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, Section 43210 of the Health and Safety Code requires that the Board adopt regulations which provide for the testing of new motor vehicles on factory assembly lines or in such manner as the Board determines best suited to carry out the purpose of Part 5 (commencing with Section 43000), Division 26, of the Health and Safety Code;

WHEREAS, Section 43000(e) of the Health and Safety Code states that emission standards applied to new motor vehicles are standards with which all new motor vehicles shall comply; and

WHEREAS, the California Environmental Quality Act and Air Resources Board regulations require that an activity not be adopted as originally proposed where significant environmental impacts have been identified and where there are feasible alternatives or mitigation measures which would significantly reduce such impacts;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of the Administrative Procedure Act (Government Code, Title 2, Division 3, Part 1, Chapter 4.5);

WHEREAS, the Board finds:

That on July 20, 1979, the United States Court of Appeals for the District of Columbia Circuit vacated the decision of the Administrator of the Environmental Protection Agency that permitted California to enforce a NOx standard of 1.0 grams per mile for 1980 passenger cars. The Court stated in its opinion that EPA could not permit California to "deny to a small manufacturer the lead time that Congress has found to be necessary" to meet a NOx emissions standard of 1.0 gram per mile under Section 202(b)(1)(B) of the Clean Air Act. This decision obviated California's authority to enforce a 1.0 gram per mile NOx standard for passenger cars made by qualifying small manufacturers.

That some manufacturers contend that the Court's decision applies to light-duty trucks and medium-duty vehicles as well as passenger cars but the ARB does not concede this;

That the staff has encouraged the good faith efforts of those who obtain and apply the most promising emissions control technology;

That during negotiations with the ARB, American Motors Corporation agreed to comply with the regulation proposed by the staff;

That further attempts to narrow the scope of the Court decision could only be pursued through litigation because no other potential mitigation measures are available to the staff;

That environmental impacts will be minor, and that no mitigation measures or alternatives are feasible within the scope of the decision of the Circuit Court of Appeals;

That the proposed regulation 1960.3 provides for:

(1) A reduction in vehicle NOx emissions by establishing for certification of 1981 and 1982 engine families less than 4,000 pounds equivalent inertia weight:

(a) A NOx standard, 25% lower than 1980 model families of four-wheel drive light-duty trucks, and

(b) A NOx standard, 35% lower than 1980 model families of medium-duty vehicles, and

(2) A further reduction of NOx emissions by establishing for 1981 and 1982 production vehicles:

(a) A NOx assembly-line test level, 50% lower than 1980 model four-wheel drive light-duty trucks, and

(b) A NOx assembly-line test level, 57% lower than 1980 model medium-duty vehicles, and

(3) Making relief available to the vehicle manufacturer if unanticipated technical problems prevent production vehicles from meeting the 1.0 gm/mi NOx average emission level.

NOW, THEREFORE BE IT RESOLVED, that the Board hereby amends its regulations in Article 2, Subchapter 1, Chapter 3, Title 13, California Administrative Code, by adding the following section 1960.3 to read as follows:

1960.3 Special Standards for 1981 and 1982 Model Light-Duty Trucks and Medium-Duty Vehicles, 0-3999 Pound Equivalent Inertia Weight

(a) Notwithstanding any other provision of this Chapter, for any vehicle manufacturer who is subject to "in lieu" standards pursuant to Section 202(b)(1)(B) of the Clean Air Act as amended in 1977, the oxides of nitrogen emissions from 1981 and 1982 model Light-Duty Trucks and Medium-Duty Vehicles, 0-3999 Pound Equivalent Inertia Weight, shall not exceed an assembly-line test level of 1.0 gram per vehicle mile as determined on a production average basis as measured by calendar quarter and evaluated on a cumulative basis.

(b) The oxides of nitrogen emissions from each 1981 and 1982 model Light-Duty Truck and Medium-Duty Vehicle engine family and subgroup produced by a manufacturer pursuant to this section shall not exceed a standard of 1.5 grams per vehicle mile.

(c) Joint ARB-manufacturer evaluations of production average data will be made each six months, starting with production test data accumulated through December 31, 1980; and appropriate relief will be made available to such manufacturer should unanticipated technical problems yield an inability to meet the production average level required by this section.

(d) All definitions, standards, test procedures and other requirements of this Chapter not inconsistent with this section shall apply to all vehicles produced by such manufacturer for sale in California.

BE IT FURTHER RESOLVED, that the Board hereby amends: (1) the "California Assembly-Line Test Procedures for 1981 Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles," and (2) "California Exhaust Emission Standards and Test Procedures for 1981 and Subsequent Model Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles," and (3) Section 2059, Title 13 California Administrative Code as set forth in Attachments 1, 2, and 3 respectively.

BE IT FURTHER RESOLVED, that the Board hereby finds that its regulations in Sections 1960.3 and 2059, Title 13, California Administrative Code, the 1981 assembly-line test procedures and related 1981 and 1982 model year exhaust emission standards and test procedures are individually for each vehicle category, and, in the aggregate, at least as protective of public health and welfare as applicable federal regulations.

I certify ~~that~~ the above is a true and correct copy of Resolution 80-6, as adopted by the Air Resources Board.

Sally Rump

Sally Rump
Board Secretary

5/8/80

Date

ATTACHMENT 1

Proposed

State of California

AIR RESOURCES BOARD

California Assembly-Line Test Procedures for ~~1980~~ 1981 Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

Adopted: December 19, 1979
Amended: March 5, 1980
Amended: March 26, 1980

Note: These procedures are printed in a style to emphasize the differences from the 1980 Assembly-Line Test Procedures as amended May 9, 1979. Additions are indicated by underlining and deletions are lined out with dashes. March 5, 1980 and March 26, 1980 changes are listed in Part 5.

(c) All 1980 and 1981 model cars tested to date by the end of each calendar quarter.

(d) All 1980 and 1981 model cars and, separately, 1981 model LDTs plus MDVs tested to date by December 31, 1980, by June 30, 1981 and by December 31, 1981.

(2) Subgroups

The NOx emission results shall be averaged and reported by engine family subgroup in each regular quarterly assembly-line report.

b. Semi-Annual Evaluations

Joint ARB - manufacturer evaluations will be made each six months to determine compliance with the 1.0 gm/mi NOx production level based on accumulated test results from all 1980 and 1981 cars as well as 1981 LDTs plus MDVs tested. The first evaluation will be made based on averaged NOx test data accumulated through December 31, 1980. Subsequent evaluations will be made for data accumulated through June 30, 1981 and also for data accumulated through the end of the 1981 model year production respectively.

If the NOx value exceeds the 1.0 gm/mi level, but the manufacturer shows that unanticipated technical problems caused the 1.0 gm/mi NOx production average to be

(c) All 1980 and 1981 model cars tested to date by the end of each calendar quarter.

(d) All 1980 and 1981 model cars and, separately, 1981 model LDTs plus MDVs tested to date by December 31, 1980, by June 30, 1981 and by December 31, 1981.

(2) Subgroups

The NOx emission results shall be averaged and reported by engine family subgroup in each regular quarterly assembly-line report.

b. Semi-Annual Evaluations

Joint ARB - manufacturer evaluations will be made each six months to determine compliance with the 1.0 gm/mi NOx production level based on accumulated test results from all 1980 and 1981 cars as well as 1981 LDTs plus MDVs tested. The first evaluation will be made based on averaged NOx test data accumulated through December 31, 1980. Subsequent evaluations will be made for data accumulated through June 30, 1981 and also for data accumulated through the end of the 1981 model year production respectively.

If the NOx value exceeds the 1.0 gm/mi level, but the manufacturer shows that unanticipated technical problems caused the 1.0 gm/mi NOx production average to be

5. Special Requirements for Low Production Vehicle Manufacturers.

The following requirements apply only to those vehicle manufacturers who were granted relief, by the Executive Officer, under Title 13, California Administrative Code (C.A.C.) Section 1960.2 Special Standards for 1980 and 1981 Model Passenger Cars, or Section 1960.3 Special Standards for 1981 and 1982 Model Light-Duty Trucks and Medium-Duty Vehicles, 0-3999 Pound Equivalent Inertia Weight.

The requirements listed below are to be followed as supplemental to and when contrary to other requirements specified in part "C. Quality Audit Test Procedures," Section "3. Evaluation" and "4. Reports." These requirements are listed to implement, define and clarify the Board requirements of C.A.C. Section 1960.2 as well as Section 1960.3.

a. Additional Reporting Requirements

(1) NOx Emissions

The cumulative average of oxides of nitrogen (NOx) emissions from the entire quality audit passenger car line and, separately, from the entire quality audit light-duty truck (LDT) plus medium-duty vehicle (MDV) lines shall be reported both before and after applying deterioration factors for:

(a) All 1981 model cars and, separately, LDTs plus MDVs testing during each calendar quarter.

(b) All 1981 model cars and, separately, LDTs plus MDVs tested to date by the end of each calendar quarter.

State of California
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Note: These procedures are printed in a style to indicate the adopted changes. New text is underlined and deleted portions are noted.

CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 1981 AND SUBSEQUENT MODEL PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES

Adopted: November 23, 1976
Adopted: December 14, 1976
Amended: May 26, 1977
Amended: June 8, 1977
Amended: June 22, 1977
Amended: September 20, 1977
Amended: January 15, 1978
Amended: March 1, 1978
Amended: April 10, 1978
Amended: May 24, 1978
Amended: February 9, 1979
Amended: May 22, 1979
Amended: March 5, 1980
Amended: March 26, 1980

State of California
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g. Amend subparagraph 86.078-39(a) (Submission of maintenance instructions) to read:

(a) The manufacturer shall provide to the Administrator, no later than the time of the submission required by paragraph 86.078-23 a copy of the maintenance instructions which the manufacturer proposes to supply to the ultimate purchaser in accordance with subparagraph 86.078-38(a). The Administrator will review such instructions to determine whether they are consistent with federal requirements, and to determine whether the instructions for required maintenance are consistent with the restrictions imposed under subparagraph 86.078-25(a)(1). The Administrator will notify the manufacturer of his determinations.

4. Standards

The following standards represent the maximum projected exhaust emissions for the useful life of the vehicle.

Model Year	Vehicle Type (a)	Equivalent Inertia Weight (lbs.)(b)	Exhaust Emission Standards (grams per vehicle miles) Non-Methane Hydrocarbons(c)	Carbon Monoxide	Oxides of Nitrogen (NO_2)(e)
1981	PC	All	(0.41)	3.4	1.0
	PC(d)	All	0.39 (0.41)	7.0	0.7
	PC(g)	All	0.39 (0.41)	7.0	1.5
	LDT, MDV	0-3999	0.39 (0.41)	9.0	1.0
	LDT,MDV(h)	0-3999	0.39 (0.41)	9.0	1.5
	LDT, MDV	4000-5999	0.50 (0.50)	9.0	1.5
	MDV	6000&larger	0.60 (0.60)	9.0	2.0
1982	PC	All	0.39 (0.41)	7.0	0.4
	PC(d)	All	0.39 (0.41)	7.0	0.7
	LDT, MDV	0-3999	0.39 (0.41)	9.0	1.0
	LDT, MDV	4000-5999	0.50 (0.50)	9.0	1.5
	LDT,MDV(h)	0-3999	0.39 (0.41)	9.0	1.5
	MDV	6000&larger	0.60 (0.60)	9.0	2.0
1983 & Subsequent	PC	All	0.39 (0.41)	7.0	0.4
	LDT, MDV	0-3999	0.39 (0.41)	9.0	0.4
	LDT, MDV	4000-5999	0.50 (0.50)	9.0	1.0
	MDV	6000&larger	0.60 (0.60)	9.0	1.5

(d) The second set of passenger car standards is optional. A manufacturer must select either the primary or optional sets of standards for its full product line for the entire two-year period.

(e) The maximum projected emissions of oxides of nitrogen measured on the federal Highway Fuel Economy Test (HWFET; 40 CFR Part 600, Subparagraph B) shall be no greater than 1.33 times the applicable passenger car standards and 2.0 times the applicable light-duty truck and medium-duty vehicle standards shown in the table. Both the projected emissions and the HWFET standard shall be rounded to the nearest 0.1 gm/mi before being compared.

(f) For vehicles from evaporative emissions families with projected 50,000 mile evaporative emissions values below 1.0 gm/test, an adjustment to the hydrocarbon exhaust emission standard may be granted by the Executive Officer. The adjusted standard will be calculated using the following formula:

$$HC_{ex} = .75\ (.185 - \frac{Di+3.3\ Hs}{29.4}) + HC_o$$

Where:

HC_{ex} = adjusted exhaust hydrocarbon standard

HC_o = unadjusted exhaust hydrocarbon standard

Di = diurnal evaporative emissions
Hs = hot soak evaporative emissions.

(g) For vehicles certified to special standards authorized by Section 1960.2, Article 2, subchapter 1, Chapter 3, Title 13, California Administrative Code.

(h) For vehicles certified to special standards authorized by Section 1960.3, Article 2, subchapter 1, Chapter 3, Title 13, California Administrative Code.

5. Additional Requirement

a. A statement must be supplied that the production vehicles shall be in all material respcts the same as those for which certification is granted.

b. If a gasoline-fueled vehicle manufacturer requires the use of unleaded fuel, a statement will be required that the engine and transmission combinations for which certification is requested are designed to operate satisfactorily on a gasoline having a research octane number not greater than 91.

(d) The second set of passenger car standards is optional. A manufacturer must select either the primary or optional sets of standards for its full product line for the entire two-year period.

(e) The maximum projected emissions of oxides of nitrogen measured on the federal Highway Fuel Economy Test (HWFET; 40 CFR Part 600, Subparagraph B) shall be no greater than 1.33 times the applicable passenger car standards and 2.0 times the applicable light-duty truck and medium-duty vehicle standards shown in the table. Both the projected emissions and the HWFET standard shall be rounded to the nearest 0.1 gm/mi before being compared.

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b. If a gasoline-fueled vehicle manufacturer requires the use of unleaded fuel, a statement will be required that the engine and transmission combinations for which certification is requested are designed to operate satisfactorily on a gasoline having a research octane number not greater than 91.

Attachment 3

Amend Section 2059, Title 13, California Admininistrative Code, as follows:

2059 Assembly-Line Test Procedures - 1981 Model Year.

New 1981 model year passenger cars, light-duty trucks, and medium-duty vehicles subject to certification and manufactured for sale in California shall be tested in accordance with the "California Assembly-Line Test Procedures for 1981 Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles," adopted December 19, 1979, as amended March 26, 1980.

Add Section 1960.3, Title 13, California Administrative Code to read as follows:

1960.3 Special Standards for 1981 and 1982 Model Light-Duty Trucks and Medium-Duty Vehicles, 0-3999 Pound Equivalent Inertia Weight

(a) Notwithstanding any other provision of this Chapter, for any vehicle manufacturer who is subject to "in lieu" standards pursuant to Section 202(b)(1)(B) of the Clean Air Act as amended in 1977, the oxides of nitrogen emissions from 1981 and 1982 model Light-Duty Trucks and Medium-Duty Vehicles, 0-3999 Pound Equivalent Inertia Weight, shall not exceed an assembly line test level of 1.0 grams per vehicle mile as determined on a production average basis as measured by calendar quarter and evaluated on a cumulative basis.

(b) The oxides of nitrogen emissions from each 1981 and 1982 model Light-Duty Truck and Medium-Duty Vehicle engine family and subgroup produced by a manufacturer pursuant to this section shall not exceed a standard of 1.5 grams per vehicle mile.

(c) Joint ARB-manufacturer evaluations of production average data will be made each six months, starting with production test data accumulated through December 31, 1980, and appropriate relief will be made available to such manufacturer should unanticipated technical problems yield an inability to meet the production average level required by this section.

(d) All definitions, standards, test procedures and other requirements of this Chapter not inconsistent with this section shall apply to all vehicles produced by such manufacturer for sale in California.

Add Section 1960.3, Title 13, California Administrative Code to read as follows:

1960.3 Special Standards for 1981 and 1982 Model Light-Duty Trucks and Medium-Duty Vehicles, 0-3999 Pound Equivalent Inertia Weight

(a) Notwithstanding any other provision of this Chapter, for any vehicle manufacturer who is subject to "in lieu" standards pursuant to Section 202(b)(1)(B) of the Clean Air Act as amended in 1977, the oxides of nitrogen emissions from 1981 and 1982 model Light-Duty Trucks and Medium-Duty Vehicles, 0-3999 Pound Equivalent Inertia Weight, shall not exceed an assembly line test level of 1.0 grams per vehicle mile as determined on a production average basis as measured by calendar quarter and evaluated on a cumulative basis.

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2059 Assembly-Line Test Procedures - 1981 Model Year.

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State of California

Memorandum

To : Huey D. Johnson
Secretary
Resources Agency

Date : May 8, 1980

Subject : Filing of Notice of Decision of the Air Resources Board

From : Air Resources Board

Pursuant to Title 17, Section 60007(b), and in compliance with Air Resources Board certification under section 21080.5 of the Public Resources Code, the Air Resources Board hereby forwards for posting the attached notice of decision and response to environmental comments raised during the comment period.

Sally Rump
BOARD SECRETARY

attachments
[redacted]
Resolution 80-8
Resolution 80-10
Resolution 80-25

State of California
AIR RESOURCES BOARD

Response to Significant Environmental Issues

Item: Public Hearing to Consider Adoption of Amendments to Title 13, California Administrative Code, Regarding Exhaust Emission Standards for 1981 and 1982 Model Light-Duty Trucks and Medium-Duty Vehicles, 0-3999 Pound Equivalent Inertia Weight and to Consider Conforming Amendments to Assembly-Line Test Procedures.

Public Hearing Date: March 26, 1980

Response Date: March 26, 1980

Issuing Authority: Air Resources Board

Comment: None

Response: N/A

Certified: Sally Rump
Board Secretary

Date: May 8, 1980