UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D. C. 20460

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PUBLIC HEARING

ON

CALIFORNIA WAIVER REQUESTS

Room 13450
Federal Building
450 Golden Gate Avenue
San Francisco, California 94102

October 13, 1977
9:06 a. m.

Reported by:

JERRY R. SMYTHE, CSR
(CSR No. 2393)

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2 HEARING PANEL

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8 Legislation Department

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1 THURSDAY, OCTOBER 13, 1977 9:06 O'CLOCK A.M.

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3 CHAIRMAN JACKSON: Good morning, this is the
4 United States Environmental Protection Agency public
5 hearing to reconsider a number of California waiver
6 requests in light of the Clean Air Act Amendments of 1977.
7 We will also consider California's waiver
8 request for 1978 and subsequent model year motorcycle
9 carbon monoxide exhaust emission standards and changes
10 to the California 1981 and subsequent model year passenger
11 car, light duty truck and medium duty vehicle exhause
12 emission standards and test procedures.
13 I am Ben Jackson, Director of the Mobile
14 Source Enforcement Division of the Environmental
15 Protection Agency. I have been designed as Presiding
16 Officer for the hearing. My colleagues who will assist
17 me at various times in conducting this hearing are Mr.
18 Charles Gray and Mr. Bob Wagner of the Office of Mobile
19 Source Air Pollution Control.
20 The panel will also be assisted by Mr. Daniel
21 Steinway and Mr. James McNab III, who are attorney-
22 advisors with the Mobile Source Enforcement Division,
23 and Ms. Joan Urbine, who is responsible for maintaining
24 the record and scheduling witnesses.
25 The EPA has previously determined that the

1 Clean Air Act Amendments of 1977 apply to all waiver
2 requests not acted upon by the Administrator prior to
3 enactment of the amendments. The amended section 209(b)
4 of the Act now requires a determination by California
5 that its standards will be, in the aggregate, at least
6 as protective of public health and welfare as applicable
7 Federal standards, and section 209(b)(1)(A) now prohibits
8 the Administrator from granting a California waiver
9 request if he finds that California's determination is
10 arbitrary and capricious. We will review at this hearing
11 the following pending waiver requests in light of the
12 amended Act:
13 (i) Compliance and inspection testing of
14 1977 and subsequent model year motor vehicles except
15 1977 and 1978 model year gasoline-powered passenger
16 cars and light duty trucks under section 2100 et seq.,
17 Title 13, California Administrative Code,
18 (ii) Assembly line test procedures for 1978
19 model year diesel-powered light duty trucks, and medium
20 duty vehicles,
21 (iii) Exhaust emission standards and
22 certification procedures for 1979 and subsequent model
23 year passenger cars, light duty trucks and medium duty
24 vehicles, including requirements covering high altitude
25 testing, allowable maintenance and idle mixture

1 adjustments,

2 (iv) Evaporative emission standard and

3 test procedures (SHED test) for 1980 and subsequent

4 model year gasoline-powered motor vehicles except

5 motorcycles, and

6 (v) Motorcycle standards and compliance

7 testing and inspection of 1978 and subsequent model

8 year motorcycles.

9 We also will accept further comments from

10 interested parties pertaining to these waiver requests

11 on whether California needs such standards to meet

12 compelling and extraordinary conditions or whether

13 California's standards are consistent with section 202(a)

14 of the Clean Air Act. However, interested parties

15 should limit these comments to any information which has

16 become available to them after the initial public hearings

17 on these waiver requests.

18 During the course of this hearing, we also

19 will consider the following exhaust emission standards

20 and test procedures adopted by the California Air

21 Resources Board on September 29 and 30, 1977;

22 (i) Carbon monoxide standards for 1978

23 and subsequent model year motorcycles, and

24 (ii) Revised exhaust emission standards

25 and test procedures for 1981 and subsequent model year

1 passenger cars, light duty trucks and medium duty
2 vehicles.
3 For the record, this hearing is convened
4 in Room 13450 of the Federal Building and U.S. Court
5 House, 450 Golden Gate Avenue, San Francisco, California.
6 To complete the opening of the record and
7 at the same time to expedite the proceedings, I would
8 like to insert into the record, as if read, the following
9 documents:
10 (1) A mailgram dated October 5, 1977, from
11 Kingsley Macomber, Chief Counsel, on behalf of the
12 California Air Resources Board, to Douglas Costle,
13 Administrator, EPA, notifying the EPA that California
14 had made the determinations now required by section
15 209(b)(1) of the Clean Air Act for all pending waiver
16 requests and that California had taken several actions
17 to revise its motor vehicle emissions control program.
18 The mailgram requested a waiver of Federal preemption
19 for the latter actions and asked the EPA to consider
20 all of these actions at its October 13, 1977, public
21 hearing, and
22 (2) The September 13, 1977, Federal Register
23 notice of this hearing.
24 In addition, the following will be made
25 part of the record:

1 (i) Sections 2100 et seq., Title 13,
2 California Administrative Code and "California New
3 Vehicle Compliance Test Procedures," adopted on June 24,
4 1976.
5 (ii) Sections 1955.1 and 1955.5, Title 13,
6 California Administrative Code and "California Exhaust
7 Emission Standards and Test Procedures for 1975 Through
8 1978 Model Passenger Cars, Light-Duty Trucks, and
9 Medium-Duty Vehicles," adopted February 19, 1975, last
10 amended June 8, 1977,
11 (iii) Section 1959.5, Title 13, California
12 Administrative Code, and "California Exhaust Emission
13 Standards and Test Procedures for 1979 Model Passenger
14 Cars, Light-Duty Trucks and Medium-Duty Vehicles,"
15 adopted June 8, 1977,
16 (iv) Section 1960, Title 13, California
17 Administrative Code, and "California Exhaust Emission
18 Standards and Test Procedures for 1978 and Subsequent
19 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty
20 Vehicles," adopted November 23, 1976, last amended
21 September 29, 1977,
22 (v) Section 1976(b), Title 13, California
23 Administrative Code, and "California Evaporative Emission
24 Standards and Test Procedures for 1978 and Subsequent
25 Model Gasoline-Powered Motor Vehicles except Motorcycles,"

1 adopted April 16, 1975, last amended June 8, 1977, and
2 (vii) Section 1958, Title 13, California
3 Administrative Code, and "California Exhaust Emission
4 Standards and Test Procedures for 1978 and Subsequent
5 Production Motorcycles," adopted July 15, 1975, last
6 amended September 29, 1977.
7 This hearing is intended to provide an
8 opportunity for interested persons to state their views
9 or arguments and present pertinent information relating
10 to the aforementioned waiver requests. However, the
11 findings of the Administrator regarding the matters
12 under consideration are not required to be made solely
13 on the record of the public hearing.
14 Since the notice was inserted into the record
15 and not read, I will now summarize the procedures and
16 ground rules for the hearing.
17 The hearing is being held pursuant to
18 Section 209(b) of the Clean Air Act. It will be conducted
19 in accordance with the rules which have been in effect
20 at prior hearings on California waiver applications.
21 Generally, the procedures will be informal.
22 Formal rules of evidence will not be in effect. The
23 Presiding Officer is authorized, however, to strike from
24 the record statements which he deems irrelevant or
25 needlessly repetitious, and to impose reasonable limits

1 on the duration of the statement of any witness. No
2 cross-examination will be permitted. However, to the
3 extent that time allows, the Presiding Officer may permit
4 brief questions of clarification from any participant
5 to any other participant. Questions of a more exploratory
6 nature may be submitted in writing to the Presiding
7 Officer through Ms. Urbine, and such questions at the
8 discretion of the Presiding Officer may be posed to any
9 witness by a member of the panel.
10 A verbatim record of the hearing is being
11 made and the transcript will constitute the sole official
12 record of this hearing. A copy of the record will be
13 on file for public inspection by any interested persons
14 at the EPA Public Information Reference Unit, Room 2922,
15 in Washington, D. C., and at the regional office in
16 San Francisco. Persons desiring copies of the transcript
17 should make arrangements with the Reporter.
18 We have an order of appearance for those
19 who have indicated that they wish to appear. Copies of
20 the witness list are available from Ms Urbine. There
21 may have been additions to or deletions from the list
22 since it was printed. If it appears that the order is
23 going to cause one or more of you a hardship, please
24 contact Ms. Urbine, and she will relay this to me. We
25 will attempt to accommodate any time problems anyone

1 has. We would also appreciate it if all witnesses
2 would confirm their positions on the schedule with Ms.
3 Urbine.
4 The record will remain open until Monday,
5 October 31, 1977, for the submission of any further
6 information by any interested persons.
7 The first witness of the day will be the
8 representatives of the California Air Resources Board.
9 Mr. Macomber?
10 MR. MACOMBER: Mr. Jackson, members of the
11 panel: My name is Kingsley Macomber. I am General
12 Counsel and Chief of the Legal Affairs and Enforcement
13 Division of the California Air Resources Board. With
14 me today is Gary Rubenstein, a staff engineer from the
15 Vehicle Emissions Control Division in El Monte. We
16 are here to request waivers of federal preemption so
17 that California may implement standards and test proce-
18 dures designed to provide the air pollution control
19 necessary for California.
20 Since the 1977 Clean Air Act Amendments were
21 signed into law, the issues proper for consideration
22 at a waiver hearing have changed considerably, and the
23 Administrator's authority to deny a waiver for California
24 vehicle pollution control programs has been severely
25 limited. Congress' intent in passing the amendments was

1 clearly to give greater deference to CARB's discretionary
2 determinations regarding what degree and type of controls
3 California requires to achieve the Ambient Air Quality
4 Standards.
5 This intent is specifically set forth in
6 The House Report at Pages 301 to 302. This is Report
7 No. 95-924, 95th Congress, First Session.
8 I will not read the quote. It's rather
9 lengthy, and it's in our prepared statement which has
10 been supplied for the record and I would ask that it
11 be entered into the record.
12 CHAIRMAN JACKSON: It will be entered.
13 "The Committee amendment is intended to
14 ratify and strengthen the California waiver
15 provision and to affirm the underlying intent of
16 that provision, i.e., to afford California the
17 broadest possible discretion in selecting the best
18 means to protect the health of its citizens and the
19 public welfare. The committee is aware of
20 California's longstanding belief that stringent
21 control of oxides of nitrogen emission from motor
22 vehicles may be more essential to public health
23 protection than stringent control of carbon
24 monoxide. This belief arises from the role of
25 oxides of nitrogen in producing photochemical

1 oxidants, including ozone, as well as in the
2 formation of NO_2 and its derivatives, nitrates,
3 nitrous and nitric acid, and nitrosamines.
4 "Thus, the Committee anticipated the
5 possibility that California's 1978 and later model
6 year standards might be more stringent than the
7 Federal standard for NOx, but less stringent than
8 the Federal standards for CO. In such a case,
9 while the entire set of California standards might
10 be technologically feasible and the entire set of
11 Federal standards might also be technologically
12 feasible, the Committee envisioned the theoretical
13 possibility that the most stringent set of
14 standards (Federal, CO; California, NOx; etc.)
15 might not be feasible.
16 "To deal with such a situation, the Committee
17 amendment requires the Administrator of EPA to
18 grant a waiver for the entire set of California
19 standards, unless he finds that California acted
20 arbitrarily or capriciously in concluding that its
21 set of standards are at least as protective of
22 the public health and welfare as the Federal
23 standards.
24 "The Administrator, thus, is not to overturn
25 California's judgment lightly. Nor is he to

1 substitute his judgment for that of the State.
2 There must be clear and compelling evidence that
3 the State acted unreasonably in evaluating the
4 relative risks of various pollutants in light of
5 the air quality, topography, photochemistry, and
6 climate in that State, before EPA may deny a waiver.
7 "Moreover, once a waiver is granted to
8 California, compliance with the State's standards
9 is deemed to satisfy the Federal requirements in
10 California." (Also see page 23 of the same report
11 for a similar statement.)
12 In Conference, the Senate concurred in the
13 House amendments, so we take the House Report and the
14 quotation which is continued in our written statement
15 as a statement of the whole Congress.
16 In recognition of these substantial changes
17 by Congress in the California waiver provision, I will
18 take a few moments to summarize what we believe these
19 changes mean to California and to the issues before us
20 today.
21 The primary change to Section 209(b) is that
22 the Administrator must now grant California a waiver if
23 California determines that its standards will be, "in
24 the aggregate, at least as protective of public health
25 and welfare" as applicable Federal standards. This

1 determination can be overturned by EPA only if the
2 Administrator finds that it was arbitrary and capricious.
3 This waiver requirement replaces language
4 which required EPA to determine whether California's
5 standards would be more stringent than applicable
6 Federal standards.
7 In addition, new language was added which
8 states that if each California standard is numerically
9 at least as stringent as the comparable applicable
10 Federal standard, such California standards will be deemed
11 to satisfy the "at least as protective" requirement.
12 These changes mean that California can now
13 obtain a waiver to implement and enforce Federal standards,
14 without having to show that California standards are
15 more stringent or that they will provide some additional
16 benefit. Furthermore, the "in the aggregate" language
17 allows California to obrain a waiver even if one or more
18 of the California standards is less stringent than the
19 comparable Federal standards, based on an analysis of
20 the aggregate effect of all standards under consideration
21 for a particular model year and vehicle category.
22 This last point is especially important,
23 since it allows California to implement carbon monoxide
24 and oxides of nitrogen standards which are more
25 specifically suited to California's air pollution needs.

1 The new waiver language would allow California to adopt
2 a NOx standard more stringent than the Federal standard,
3 and a CO standard less stringent than the Federal
4 standard, and still obtain a waiver. The House Report
5 quoted above specifically sets forth Congress' intent
6 that CARB should retain the right to make this choice,
7 based on CARB's assessment of California's needs.
8 Another major amendment to the Clean Air
9 Act dealing with the California waiver is the addition
10 of a new section which indicates that once a waiver
11 has been granted for a particular California standard,
12 compliance with the California standards must be
13 treated by EPA as compliance with applicable Federal
14 standards for purposes of the Clean Air Act. This
15 language assures manufacturers who, for example, build
16 a vehicle to meet a less stringent CO standard, that
17 they will not be in violation of the more stringent
18 Federal CO standard in California, and will not be
19 required to perform duplicate testing.
20 In summary, the conditions which must now
21 be satisfied by California to obtain a waiver from EPA
22 are:
23 1. There must be compelling and extraordinary
24 conditions in California which require the
25 state standards and/or test procedures.

1 2. California must find that its standards
2 will be, in the aggregate, at least as
3 protective of public health and welfare as
4 applicable Federal standards. Such finding
5 cannot be arbitrary and capricious.
6 3. California's standards and test and
7 enforcement procedures must be technologically
8 feasible within the available lead time,
9 giving consideration to the cost of compliance.
10 As under the previous Clean Air Act language,
11 the Administrator of EPA has the burden to show that
12 California does not meet one or more of these conditions
13 in order to deny a waiver.
14 We have made all the necessary arguments on
15 condition (1) at the August 3-4 wiaver hearing, so we
16 will not burden the record by repeating them here.
17 As for condition (2), CARB must make findings
18 that its emission standards and test and enforcement
19 procedures are, in the aggregate, at least as protective
20 of public health and welfare as applicable Federal
21 standards. EPA must then determine that these findings
22 are not arbitrary and capricious. To fulfill condition
23 (2) above, at its September 30, 1977 meeting, CARB made
24 findings to the effect that the following elements of
25 its standards, test procedures, and/or enforcement

1 procedures (as amended September 30, 1977) are,
2 individually, and in the aggregate, at least as protective
3 of public health and welfare as applicable Federal
4 standards:
5 1. Exhaust emission standards and test
6 procedures for 1978 and subsequent model
7 year motorcycles, individually for each model
8 year, as specified in Section 1958, Title 13,
9 California Administrative Code.
10 2. Compliance testing and inspection
11 regulations for 1978 and subsequent model
12 year motorcycles, as specified in Sections
13 2100 and 2101, Title 13, California Admini-
14 strative Code.
15 3. Exhaust emission standards and test
16 procedures for 1979 and subsequent model year
17 passenger cars, light-duty trucks, and
18 medium-duty vehicles, individually for each
19 vehicle type and model year, as specified
20 in Sections 1959.5 and 1960, Title 13,
21 California Administrative Code.
22 4. The "California Exhaust Emission Standards
23 and Test Procedures for 1979 Model Passenger
24 Cars, Light-Duty Trucks, and Medium-Duty
25 Vehicles," as last amended June 8, 1977,

1 individually for each vehicle type.
2 5. The "California Exhaust Emission Standards
3 and Test Procedures for 1980 and Subsequent
4 Model Passenger Cars, Light-Duty Trucks,
5 and Medium-Duty Vehicles," as last amended
6 September 29, 1977, individually for each
7 vehicle type and model year, and specifically
8 including those sections regarding allowable
9 maintenance, idle mixture adjustability,
10 high altitude test requirements, and the
11 100,000 mile certification option.
12 6. Compliance testing and inspection
13 regulations for 1978 and subsequent medium-
14 duty vehicles and for 1978 and subsequent
15 Diesel-powered light-duty trucks individually
16 for each vehicle type, as specified in
17 Sections 2100 and 2101, Title 13, California
18 Administrative Code.
19 7. Inspection regulations applicable to
20 1978 and subsequent model year heavy-duty
21 vehicles, as specified in Sections 2100
22 and 2101, Title 13, California Administrative
23 Code.
24 8. The "California Assembly-Line Test
25 Procedures for 1978 Model-Year Passenger

1 Cars, Light-Duty Trucks, and Medium-Duty
2 Vehicles," adopted January 25, 1977,
3 individually for each vehicle type, and the
4 associated assembly-line test regulations
5 in Subchapter 2, Title 13, California
6 Administrative Code.
7 9. Evaporative emissions standards for 1980
8 and subsequent model year gasoline-powered
9 motor vehicles, except motorcycles, indivi-
10 dually for each model year and vehicle type,
11 as specified in Section 1976, Title 13,
12 California Administrative Code.
13 10. The "California Evaporative Emission
14 Standards and Test Procedures for 1978 and
15 Subsequent Model Gasoline-Powered Motor
16 Vehicles, Except Motorcycles," as last
17 amended June 8, 1977, individually for each
18 vehicle type and for each model year.
19 Copies of Staff Report 77-20-3, a supplemental
20 Staff Report, and Resolution 77-48 in which the Board
21 made these findings have been sent to the Administrator,
22 and we ask that they be included in this hearing record.
23 Several changes were also made to the
24 California motorcycle and passenger car standards in
25 these documents in order to ensure that all of the Board's

1 standards were, without question, at least as protective
2 of public health and welfare as applicable federal
3 standards. These changes are discussed in detail below.
4 We feel that we have made most of the
5 appropriate arguments at previous EPA waiver hearings,
6 so all that remains is for CARB to show that our "more
7 protective" determination on these issues is not arbitrary
8 and capricious. Only three issues warrant discussion
9 in any detail:
10 These are compliance and inspection testing
11 of 1978 and subsequent model year motorcycles, exhaust
12 emission standards for 1978 through 1981 model year
13 motorcycles, and exhaust emission standards and test
14 procedures for 1979 and subsequent model year passenger
15 cars, light-duty trucks, and medium-duty vehicles,
16 including the issue of lower NOx standards. CARB's
17 findings that its high altitude test requirements, idle
18 mixture adjustability regulations, evaporative emission
19 standards and test procedures, allowable maintenance
20 regulations, and assembly-line test procedures for
21 1978 model-year passenger cars, light-duty trucks, and
22 medium-duty vehicles are at least as protective of
23 public health and welfare as comparable federal
24 regulations and are obviously not arbitrary and
25 capricious, since no comparable federal regulations exist.

1 Turning now to the motorcycle issue, at its
2 September 30, 1977 meeting, the Board adopted the
3 federal motorcycle standards for CO. Therefore, the
4 Board's motorcycle standards and certification procedures
5 are now identical to EPA's, and no difficulty exists
6 with making the "at least as protective of public health
7 and welfare" finding. Since the standards are identical
8 through 1981, the Administrator must find that they are
9 "at least as protective" under Section 209(b)(2) of the
10 Clean Air Act Amendments. For 1982, the Board has a
11 1.0 gram per kilometer standard for which a waiver has
12 previously been granted.
13 Some motorcycle manufacturers may argue
14 that the Board's position for several years has been
15 that California does not need additional carbon monoxide
16 control, and that the Board is not justified in adopting
17 motorcycle CO standards. However, the staff projects
18 that the Ambient Air Quality Standard for carbon monoxide,
19 which has exceeded approximately 125 days during 1975
20 in the South Coast Air Basin, will not be achieved
21 until 1985-1990.
22 A more accurate assessment of the Board's
23 position is that carbon monoxide controls which improve
24 air quality, and therefore move up the date when we can
25 expect compliance with the ambient CO standard, are not

1 as cost/effective as other control measures for other
2 pollutants.
3 Most importantly, without CO controls at
4 least as protective of public health and welfare as
5 federal standards, California might lose its ability
6 to enforce compliance testing and inspection of motor-
7 cycles. As explained in the June 30, 1977 staff report,
8 already entered into the record of this hearing, that
9 program is expected to assure good quality control of
10 motorcycle emission control systems, with an associated
11 air quality benefit. Moreover, it should be emphasized
12 that there are no additional costs associated with the
13 proposed carbon monoxide standards, since they are the
14 same as the Federal standards.
15 The staff believes that the "at least as
16 protective" finding need only apply to the actual
17 standards, and that the Board need not make such a
18 finding regarding the test or enforcement procedures.
19 I might point out that the legal memorandum
20 submitted also as part of our testimony today addresses
21 this further.
22 However, discussions with EPA indicate that
23 it may take the position that CARB must make a "at least
24 as protective of public health" finding separately
25 for all test and enforcement procedures as well as for

1 the standards themselves. Therefore, the Board has made
2 the "at least as protective" finding for the motorcycle
3 test and enforcement procedures, individually and in
4 the aggregate, based on the fact that the CARB
5 motorcycle test procedures are identical to Federal
6 test procedures, and hence are at least as stringent
7 as those procedures, and because the motorcycle
8 enforcement procedures add a degree of stringency to
9 the emission standards over the comparable, nonexistent,
10 applicable Federal regulations.
11 No argument regarding technological
12 feasibility within the remaining lead time can be made
13 since these standards are identical to Federal standards.
14 If California were denied a waiver, EPA would promulgate
15 these same standards nationwide. As far as compliance
16 and inspection testing of motorcycles is concerned,
17 since most motorcycle manufacturers claim that their
18 bikes meet the standards in production, no problem
19 should exist for them. The Administrator therefore
20 cannot deny California a waiver for either the standards
21 or the compliance and inspection testing.
22 Turning now to the Exhaust Emission Standards
23 and Test Procedures for 1979 and Subsequent Model
24 Passenger Cars, Light-Duty Trucks, and Medium-Duty
25 Vehicles.

1 At its September 30, 1977 meeting, CARB made
2 several changes to its standards for 1980 and subsequent
3 model passenger cars, light-duty trucks, and medium-duty
4 vehicles, as shown in Table I. Table I is set forth
5 on Page 12 of our written statement. By letter dated
6 September 30, 1977, we were informed that these changes
7 would be considered by EPA for the purposes of the
8 current waiver decisions.
9 These changes will reduce the manufacturers'
10 cost of compliance for most 1981 and 1982 model vehicles,
11 and will also improve driveability and fuel economy
12 for those years without adversely affecting air quality.
13 CARB has pointed out at previous waiver
14 hearings that a 9.0 gram CO standard should be adequate
15 to achieve compliance with the Ambient Air Quality
16 Standards for carbon monoxide. More stringent standards
17 than 9.0 grams would, however, provide more timely
18 compliance. The revised standards eliminate the need
19 for vehicle manufacturers to meet a 3.4 gram per mile
20 CO standard for only one year in California. The
21 systems used to meet the 1981 Federal standards will
22 probably include "clean-up" oxidation catalysts in
23 addition to the basic three-way catalyst systems. These
24 oxidation catalysts would not be necessary for most
25 vehicles to meet California's 0.39/7.0/0.4 standards

1 in 1982 and later years; "Option B" may eliminate the
2 need for manufacturers to use oxidation catalysts in
3 1981 as well. In addition, manufacturers have indicated
4 that in order to achieve the 3.4 gram per mile CO
5 standard, they may have to compromise some cold operation
6 driveability by minimizing the length of time the choke
7 is used. The staff is concerned about this possibility
8 because experience has shown that poor driveability
9 encourages tampering on the part of mechanics and
10 vehicle owners. Thus, a tightened CO standard could
11 conceivably result in a net adverse effect on air
12 quality, if the benefits of lower cold start CO emissions
13 are offset by increases in HC, CO, and NOx emmissions
14 under all driving conditions caused by tampering. The
15 7.0 gram per mile standard proposed by the staff is
16 considered the best compromise.
17 CARB's HC standards continue to allow
18 vehicle manufacturers the option of certifying to
19 either a non-methane hydrocarbon standard or to a total
20 hydrocarbon standard. Our major concern in this area
21 had been that if EPA did not adopt a non-methane
22 hydrocarbon standard, most manufacturers would continue
23 to use the methane content correction factor instead
24 of non-methane analytical systems. This concern was
25 eliminated by requiring manufacturers who choose to

1 certify to the non-methane hydrocarbon standard after
2 1980 to use non-methane instrumentation, with no
3 correction factor. This allows manufacturers the
4 flexibility to make their own cost trade-offs. We do
5 not consider the marginal increase in hydrocarbon
6 emission control which may be achieved by requiring
7 compliance with a total hydrocarbon standard of 0.41
8 grams per mile to be justified, considering the increased
9 certification risks and fuel economy penalties which
10 may be associated with enforcement of such a standard
11 as early as 1981. CARB's feasibility analysis of the
12 "current" California standards for 1981 was based on
13 the industry's capability to meet a 0.39 non-methane
14 standard, and we are not comfortable with a standard
15 which may require additional control without a thorough
16 re-evaluation of the state of the art in emission control
17 technology.
18 I will ask Mr. Rubenstein to read the
19 remainder of our statement. My voice is starting to
20 give on me.
21 MR. RUBENSTEIN: Regarding the NOx standards,
22 our revised standards require that manufacturers commit
23 their entire product lines to either Option A or B for
24 both 1981 and 1982 models. The 0.7 gram per mile NOx
25 standard does not present any additional lead time

1 problems since it is an optional standard. However,
2 it allows manufacturers who are able to optimize their
3 1.0 gram per mile NOx systems to the 0.7 gram per mile
4 level more time to achieve the 0.4 gram per mile
5 standard, while at the same time providing an air
6 quality benefit. After one year at a 1.0 gram per mile
7 standard, some manufacturers, especially those using
8 three-way catalyst systems should be able to reoptimize
9 those systems to 0.7 gram per mile with little or no
10 cost. Granting a one-year delay in compliance with
11 the 0.4 gram per mile NOx standard required by 1982
12 allows any recertification costs to be spread over a
13 two-year period.
14 CARB believes that our revised set of
15 standards, including the 1981 and 1982 option, is, in
16 the aggregate, at least as protective of public health
17 as applicable Federal standards. For 1981, the revised
18 standards provide up to 0.3 gram per mile more NOx control
19 than the Federal standards while retaining hydrocarbon
20 levels which are nearly identical. While less CO
21 control is provided with the alternative standards,
22 it is still adequate to provide for achievement of the
23 Ambient Air Quality Standards in California. For light-
24 duty trucks and medium-duty vehicles, no change in
25 standards is proposed, except for the deletion of the

1 methane content correction factor beginning in 1981.
2 These truck standards are obviously much more stringent
3 than comparable Federal standards. Furthermore, at
4 the Board's September 30, 1977 meeting when these changes
5 were adopted, no vehicle manufacturer expressed serious
6 problems with these changes, and most manufacturers
7 expressed the belief that the optional standards would
8 provide them with additional flexibility which could
9 improve their ability to meet California's standards
10 at a minimum cost.
11 As explained in ARB staff reports 7-13-22
12 and 77-22-2(a), already entered into the record of
13 this hearing, the Board has concluded that a 0.4 gram
14 per mile vehicle NOx standard is necessary for attainment
15 and maintenance of the Ambient Air Quality standard
16 for NO_2. Industry analyses, with assumptions which
17 we believe result in significantly understated estimates
18 of vehicle NOx control required, indicate that the
19 average lifetime in-use performance of the passenger
20 car fleet must be about 1.0 gram per mile if the Ambient
21 Air Quality Standard is to be attained. Based on the
22 current ratio of in-use vehicle performance to certifi-
23 cation standards for catalyst equipped vehicles, it is
24 likely that a 0.4 gram per mile standard will be
25 required if vehicles are to average 1.0 gram per mile

1 for their lifetime. Based on projections from EPA's
2 "Mobile Source Emission Factors - Interim Document,"
3 dated June, 1977, we would estimate that the average
4 lifetime NOx emissions for vehicles certified to meet
5 a 0.4 gram per mile NOx standard would be 0.77 grams per
6 mile. EPA's own projections, therefore, combined with
7 the manufacturers' assessments of air quality needs,
8 would alone lead us to conclude that at least a 0.5
9 gram per mile NOx standard would be necessary to achieve
10 the Ambient Air Quality Standard for NO_2. It should
11 be restated at this point, however, that we do not
12 accept the assumptions used in the auto industry's
13 analysis of emission standards necessary to achieve the
14 NO_2 air quality standard. As discussed in the report
15 of our January 6-7, 1977 workshop, which has been
16 incorporated into the record of this hearing, stationary
17 sources of NOx emissions contribute to violations of
18 the NO_2 air quality standard in such a way that in-use
19 vehicle performance at even the 0.4 gram per mile level
20 may be inadequate to achieve and maintain the NO_2 Ambient
21 Air Quality Standard.
22 We recognize the fact that in establishing
23 the need for additional NOx control, ARB has focused
24 on attainment of the California state standard of 0.25
25 ppm (hourly average) rather than the less stringent

1 Federal standard of 0.05 ppm (annual average). The need
2 for a short-term standard for NO_2 was recognized by
3 Congress in the Clean Air Act Amendments of 1977, and
4 has been recognized by such eminent health scientists
5 as Dr. John Goldsmith of the California Department of
6 Health and Dr. Carl Shy, formerly of EPA. It was,
7 therefore, clearly appropriate for ARB to concentrate
8 on the achievement of the state's short-term NO_2 standard.
9 In additiona to the ARB's desire to obtain
10 further NOx control for compliance with the Ambient
11 Air Quality Standard for NO_2, further NOx control will
12 also improve visibility and reduce atmospheric
13 concentrations of other nitrogenous compounds, such
14 as nitrates. These conclusions are based, in part,
15 on testimony which the ARB staff received at the
16 previously referenced January, 1977 workshop from
17 researchers in the atmospheric process field. This
18 information was supplemented by ARB's technical staff
19 with further analysis of ARB research projects in the
20 atmospheric chemistry area, and presented to the Board
21 at its meeting on January 25, 1977. A transcript of
22 that January 25 hearing is being provided to EPA for
23 inclusion in this record. It was reasonable and prudent
24 for the Board to consider visibility and other nitrogenous
25 compounds in the establishment of vehicle NOx emission

1 standards, even though this consideration was secondary
2 to the Board's two principle reasons for controlling
3 NOx: reduced ambient NO_2 levels and reduced peak oxidant
4 concentrations.
5 The question of how further NOx control
6 is likely to affect oxidant is covered in detail in
7 the report of the January workshop. ARB concluded
8 that the eastern portion of the South Coast Air Basin
9 would realize additional reductions in oxidant while
10 the wester position of the basin would realize somewhat
11 less of a reduction than would be expected from
12 California's hydrocarbon control program alone. This
13 was considered a reasonable trade-off in view of the
14 fact that eastern basin oxidant levels have historically
15 been the highest in the nation, and are substantially
16 higher than those in the central Los Angeles area.
17 The ARB believes that there is clearly a
18 non-linear relationship between ambient oxidant
19 concentrations and oxidant's effect on public health.
20 This position has not been seriously disputed during
21 ARB's numerous hearings on this matter. Because of this
22 non-linear relationship, greater reductions in peak
23 oxidant concentrations in exchange for lesser reductions
24 in lower oxidant concentrations may result in a net
25 health benefit, depending on the population distribution

1 involved.

2 At the January workshop, and at Board meetings
3 during which the 0.4 gram per mile NOx standard was
4 considered, there was substantial criticism of the staff's
5 recommendation that the vehicle NOx standard be lowered.
6 Parties criticizing the staff's recommendation expressed
7 opinions that any oxidant benefit would occur so far to
8 the east in the South Coast Air Basin that no significant
9 fraction of the population would benefit. The ARB
10 staff has concluded that such opinions are based on
11 outdated and outmoded smog chamber data that inaccurately
12 project when NOx reductions will cause oxidant reductions.

13 In any event, there is clearly a health
14 benefit associated with reduced exposures to NO_2 and
15 related compounds, and the Board's principle purpose in
16 reducing the NOx standard to 0.4 gram per mile was to
17 reduce ambient NO_2 levels. The Board is continuing to
18 develop and implement hydrocarbon control strategies
19 which will eventually achieve and maintain the Ambient
20 Air Quality Standard for oxidant. The House Report
21 referenced above clearly indicated the congressional
22 intent that California be free to conduct is program
23 for the achievement and maintenance of <u>all</u> Ambient Air
24 Quality Standards in the manner it best sees fit. The
25 Board's action in adopting the 0.4 gram per mile NOx

1 standard is fully consistent with the approach Congress
2 intended to allow California to pursue.
3 The staff of the ARB and ARB's research
4 contractors conduct what we believe to be the most
5 sophisticated atmospheric process research program in
6 existence. The record of ARB's hearings and of this
7 proceeding clearly indicate that the Board relied on
8 the recommendation of the staff that conducted and
9 managed these research programs and, therefore, did not
10 arbitrarily or capriciously decide that vehicle NOx
11 standards should be lowered. Unless EPA can demonstrate
12 that the Board did act arbitrarily, it cannot substitute
13 the judgment of organizations with vested interests in
14 opposing stricter NOx control or even the Agency's own
15 judgment for that of the ARB.
16 In conclusion, we believe that ARB's exhaust
17 emission standards and test and enforcement procedures
18 for passenger cars, light-duty trucks and medium-duty
19 vehicles are at least as protective of public health
20 and welfare as comparable Federal standards, that this
21 finding is not arbitrary and capricious, and that these
22 standards and test procedures are technologically
23 feasible within the lead time remaining.
24 MR. MACOMBER: Mr. Jackson, before we turn
25 ourselves over for questioning, I would like to enter

1 into the record the Air Resources Board's memorandum
2 of legal points dated October 13, 1977. Copies have
3 been provided and are available for the audience. I
4 will not summarize those legal arguments. I think they
5 are fairly clearly stated in the document.
6 However, I would like to point out that we
7 have prepared within the limited time available and
8 evidentiary guide indicating, at least preliminarily,
9 the items which we think consist of the record of these
10 proceedings and on which the ARB relied in making the
11 determinations and decisions which are the subject of
12 these proceedings today. If there are additional
13 items which are identified before the close of the
14 hearing, we will supplement this evidentiary guide.
15 I might point out this was also provided
16 for the benefit of the interested parties and the Agency
17 so that you can hopefully see what we've done in
18 connection with each item over what is a fairly long
19 period of time.
20 We are available for any questions now.
21 CHAIRMAN JACKSON: We will include in the
22 record the memorandum of legal points, also the Staff
23 Report 77-20-3, a Supplemental Staff Report and
24 Resolution of 77-48, and your statement in its entirety
25 in which you left out certain parts.

1 MR. RUBENSTEIN: As a point of clarification,
2 Staff Reports 77-20-2 and -3 referenced are the same
3 report. The number was changed from the time of
4 publication to the date of the Board meeting. There
5 was only one report for the Board's September Board
6 meeting.
7 CHAIRMAN JACKSON: I must assume that all
8 of these documents which you wished included in the
9 record are provided to us.
10 UNIDENTIFIED SPEAKER: Can't hear you.
11 CHAIRMAN JACKSON: I must assume that all
12 of the documents which was indicated will be included
13 in the record will be provided by the CARB.
14 MR. RUBENSTEIN: All the documents we have
15 indicated that we wish specifically be included in the
16 record, yes, I believe all but the one transcript have
17 already been provided to EPA.
18 MR. MACOMBER: Let me indicate that the
19 evidentiary guide attached to the memorandum of legal
20 points attempted to indicate the documents which have
21 already been supplied to EPA in the course of our regular
22 correspondence. Essentially, that would consist of
23 all Staff Reports and all regulatory changes made by
24 the Board to date. EPA may or may not be in possession
25 of certain transcripts related to the Board's proceedings.

1 We will be attempting to provide copies of those for the
2 EPA's review. And any other documents, of course, that
3 we think are relevant and important in these proceedings
4 we will also provide.
5 MR. GRAY: This question relates to the
6 technological feasibility of the California standards
7 in relationship to some of the changes in the Clean Air
8 Act Amendment of 1977 that allow other states to adopt
9 the California regulations.
10 In particular, your Staff Report 77-20-3
11 discussing that provision of the Clean Air Act amendments
12 says that "This language assures manufacturers who, for
13 example, build a vehicle to meet a less stringent CO
14 standard, that they: 1) will not be in violation of
15 the more stringent Federal CO standard; 2) can lawfully
16 sell such a vehicle in the other 49 states."
17 It's Item 2 that I am confused about. In
18 your testimony this morning, you did not seem to
19 convey that same message. You seemed to have more of
20 an implication, I think, that the waiver for these,
21 let's say, less stringent CO standards for California
22 would apply only to California vehicles. I would just
23 like to request that you resolve that issue of perhaps
24 a discrepancy.
25 MR. MACOMBER: We have had considerable

1 thought about this question since that statement was
2 written, and I think that statement is certainly valid
3 for used vehicles, that there would be no question
4 about that.
5 As to new vehicles, I think that at least
6 speaking personally I would perhaps disagree with that
7 statement as set forth in the staff report of September
8 12. It's my consideration now that a new vehicle sold
9 in the other 49 states would have to meet a more stringent
10 Federal CO standard.
11 In other words, the lower CO standard for
12 California would be limited to the sale of vehicles in
13 California.
14 MR. GRAY: We seem to have a rather complex
15 situation with respect to the various changes before
16 us, with regard to the ARB's changes of September 30.
17 As I understand those changes, you, for
18 light-duty vehicles, light-duty trucks, medium-duty
19 vehicles, eliminated the non-methane HC standard and
20 replaced it with a total HC standard; is that correct?
21 MR. RUBENSTEIN: No.
22 MR. GRAY: Would you explain what you did
23 in that regard?
24 MR. RUBENSTEIN: The changes that were made
25 in the September Board meeting compared to what we last

1 discussed at the August waiver hearing were the
2 following:
3 First, for 1981 and later model passenger
4 cars, light-duty trucks, and medium-duty vehicles, the
5 methane content correction factor was deleted as being
6 a method of demonstrated compliance with the hydrocarbon
7 standard.
8 However, for those years, with an exception
9 I'll get to in a minute, manufacturers retain the
10 optional demonstrated compliance with either a non-methane
11 or total hydrocarbon standard -- The only thing deleted
12 was the correction factors and option -- We now require,
13 starting in 1981 if a manufacturer wants to get credit
14 for methane factor in their exhaust, they must use
15 non-methane sensitive instrumentation in order to
16 demonstrate compliance.
17 The second change that was made by the Board
18 was the 1981 passenger car standards, which were
19 originally wither .39 or .41 grams per mile hydrocarbons,
20 depending on whether it was non-methane or total, 9.0
21 CO and 1.0 NOx was changed to a pair of optional
22 standards.
23 The first option, or Option A, as we have
24 been referring to it, is identical to the 1981 Federal
25 standards, 4.1 total hydrocarbon standard, 3.4 CO

1 standard, 1.0 NOx.

2 The second standard, or Option B, is either

3 .39 or .41 for hydrocarbons, 7.0 for CO, and 0.7 for

4 NOx.

5 For 1982, the change that was made is that

6 the original 1982 standards that EPA considered previously

7 were made part of Option A, which is a two-year option

8 now, and a second set of standards, or Option B, was

9 adopted for 1982, which were identical to the Option

10 B standards for 1981.

11 This option business is adopted by the Board

12 as a two-year package. That is, if a manufacturer

13 chooses to certify production in 1981 according to

14 Option A for passenger cars, he must also certify to

15 Option A in 1982. And this decision must be made for

16 a manufacturer's entire product line for the entire

17 two-year period.

18 MR. GRAY: Okay.

19 MR. RUBENSTEIN: The third change, and the

20 final change that was made -- Sorry, I caught another

21 one -- was that the carbon monoxide standard for 1983

22 and later model passenger cars was dropped from 9.0

23 to 7.0.

24 And that's it.

25 MR. GRAY: If I can understand the events,

1 while the staff recommended adoption for 1981 of only
2 total hydrocarbon standards in the Staff Report 77-20-3,
3 that was not accepted by the Board. They retained the
4 current California standards, as referenced in Table I
5 of that Staff Report, with an option of a total hydro-
6 carbon standard for all categories of vehicles.
7 MR. RUBENSTEIN: It wasn't that the Board
8 rejected the staff's proposal. The staff issued a
9 supplemental Staff Report the week before the hearing,
10 which we have already submitted to EPA. It was in that
11 supplemental staff report that the ARB staff revised
12 its proposal to the Board to retain non-methane,
13 provided instrumentation was used. And there is a
14 revised Table II in that staff report, Supplemental
15 Staff Report, which is more accurate and reflects what
16 the Board did, rather than the table that's in the
17 original Staff Report.
18 MR. GRAY: Are you aware of any of these
19 changes that might increase the stringency as related
20 to the older California standards that are referenced
21 in Table I of that staff report as finally adopted
22 September 30 by the Board?
23 MR. RUBENSTEIN: In a strictly literal sense,
24 I would say that the increases in stringency may or may
25 not exist in 1981, depending on a manufacturer's

1 particular position. I would say it's probably
2 debateable whether the Board's original 1981 standard,
3 which was .39 non-methane, 9.0 CO, and 1.0 NOx, is
4 more or less stringent than the pair of options that
5 the staff now has in 1981.
6 For 1982, certainly, the standards are not --
7 UNIDENTIFIED SPEAKER: Excuse me. Could
8 you all speak up? Pull the mike closer to you, or
9 something. We can't hear.
10 MR. RUBENSTEIN: For 1982, I think fairly
11 clearly the standards that the Board adopted are not
12 more stringent than those that were previously considered
13 by EPA.
14 For 1983 -- I'm sorry. In 1982 and 1983,
15 they are certainly more stringent because of the change
16 in the carbon monoxide standard from 9.0 to 7.0. But
17 that, again, is in a numerical sense, and testimony
18 received at the Board's hearing in September indicated
19 that manufacturers did not find any additional degree
20 of stringency or lead time problems associated with
21 that change in the CO standard.
22 MR. GRAY: It is correct to say, then, the
23 only change in the September 30th Board actions was to
24 go from a 9.0 CO standard in 1983 for light-duty
25 vehicles to a 7 grams per mile standard?

1 MR. RUBENSTEIN: The only change, you mean?
2 MR. GRAY: The only change that would relate
3 to increasing the stringency that might relate to
4 technological feasibility.
5 MR. RUBENSTEIN: I believe that's true.
6 MR. GRAY: We are trying to sort out whether
7 or not we have today an issue of increased stringency
8 due to the Board's actions of September the 30th, and
9 to do that, we must first understand the changes.
10 MR. RUBENSTEIN: Right. The change in CO
11 from 9.0 to 7.0 affects 1982 and later models, not 1983
12 and later.
13 As I mentioned, from a numerical sense,
14 obviously 7.0 is lower than 9.0 and, therefore, it's
15 more stringent. But as I also mentioned, vehicle manu-
16 facturers have testified before the Board --
17 MR. WAGNER: Mr. Chairman, I'd like to
18 request that the sound system volume be increased. We
19 cannot hear back here, particularly when you fellows
20 are talking to each other.
21 MR. SCHWENTKER: You are six feet from the
22 mike. Sit up to the table, Chuck, and we can hear you.
23 MR. GRAY: To share our understanding with
24 the audience, it is our understanding that the changes
25 made by the Board of September the 30th that might

1 relate to increased technological difficulty of achieving
2 the current ARB standards as they exist now would relate
3 only to the passenger car CO standard change of 9.0
4 grams per mile to 7.0 grams per mile.
5 MR. MACOMBER: We'd like to emphasize the
6 word "might," because the testimony that I think we
7 received was the same technology will be used, that
8 further oxidation catalysts will not be necessary and,
9 therefore, that there should in fact be no additional
10 technological burden or cost.
11 MR. GRAY: Fair enough. But the point being
12 made here is that there are others that disagree with
13 that point, and they can certainly comment upon it
14 today.
15 What basis do you have -- Maybe I should
16 back up and ask this: In your maze of changes from year
17 to year and your options -- Maybe we should wait until
18 later and call you again if we need to clarify points
19 related to increased stringency. I'm sure the manufac-
20 turers will offer comments if there is a problem here.
21 MR. RUBENSTEIN: I am not sure your brief
22 summary of what I said still holds true. It is
23 complicated. Maybe we should wait for the manufacturers
24 to make their points, and we can rebut them at that
25 time.

1 MR. GRAY: I think that might be easier for
2 us, too.
3 A more specific question relates to your
4 statements regarding marginal increase in hydrocarbon
5 emission control which may be achieved by requiring
6 compliance with a total hydrocarbon standard. What do
7 you mean by "marginal increase"?
8 MR. RUBENSTEIN: The increase in hydrocarbon
9 control associated with the .41 total hydrocarbon
10 standard as contrasted with the .39 non-methane standard
11 is very substantially a function of the kind of technology
12 that's used. The kind of three-way catalyst technology
13 that was used by Volvo would find those two standards
14 to be of equivalent stringency. The kind of technology
15 used by Ford in 1978 consisting of a three-way catalyst
16 plus a back-up oxidation catalyst would find the .39
17 non-methane standard being effectively less stringent
18 in the sense that the total hydrocarbons associated
19 with that standard might be as high as .5, or even
20 larger. It becomes a very hypothetical question,
21 however, because depending on which standard is adopted
22 by which agency, will dictate which technology is used.
23 So, it would be very hard to presume that simply
24 because technology exists that makes the .39 non-methane
25 standard less stringent in terms of total hydrocarbon

1 than the .41 that will be the case, because if the .41
2 total hydrocarbon standard is used that kind of technology
3 -- meaning technology that generates methane fractions
4 as high as 30 or 40 per cent -- won't necessarily be
5 used. There would be no incentive for it.
6 That's what I mean by "marginal." It's an
7 iffy kind of thing, depending on the time frame, depending
8 on the technology that's used.
9 MR. GRAY: Stated a different way, if the
10 California Air Resources Board had a standard of .41
11 total hydrocarbons, what level of non-methane hydrocarbons
12 do you think that vehicles that could comply with that
13 standard would achieve?
14 MR. RUBENSTEIN: If it was a three-way
15 catalyst system, the type that Volvo used, and there
16 were no changes, probably about .39 or .38 grams per
17 mile non-methane hydrocarbons.
18 MR. GRAY: Do you expect that system to be
19 used on all vehicles?
20 MR. RUBENSTEIN: I would expect that if the
21 Board adopted a .41 total hydrocarbon standard with no
22 methane allowance or credit, the manufacturers would not
23 have any incentive to go to a system that generates
24 substantial amounts of methane.
25 MR. GRAY: I don't believe you really mean

1 "generates." I guess you really would mean "allows to
2 remain," or something of that sort.
3 MR. RUBENSTEIN: Right.
4 MR. GRAY: What about the Ford system that
5 you mentioned; what level of non-methane hydrocarbon
6 control would it achieve if it could achieve the .41
7 total hydrocarbon level?
8 MR. RUBENSTEIN: You might be better off
9 asking Ford that. I can from memory cite some certifi-
10 cation data from 1978, but my memory might be faulty.
11 I believe that their system had non-methane
12 hydrocarbon numbers in the range of .25 to .3, but that
13 was based on a methane content correction factor,
14 rather than direct instrumentation.
15 They might be able to give you a better
16 answer than I could.
17 MR. GRAY: Okay. One last question.
18 What is the current adjustment that is
19 provided the various manufacturers, based upon actually
20 measuring methane and subtracting that? What per cent
21 of the total hydrocarbon is methane as being approved
22 now by the ARB?
23 MR. RUBENSTEIN: Are you referring to the
24 methane correction factor?
25 MR. GRAY: No. I am referring to, as I

1 understand it, the procedure that is in existence now
2 which would allow a manufacturer to measure methane and
3 to actually use the measured non-methane hydrocarbon
4 value. And what per cent of the total hydrocarbon is
5 the methane or the non-methane fraction of the total
6 hydrocarbon exhaust.
7 MR. RUBENSTEIN: That depends on the kind
8 of system. I am not quite sure I am following your
9 question.
10 MR. GRAY: I guess what's troubling me is
11 I am concerned about the treating of this question from
12 a marginal standpoint, potentially contending that
13 there is no real difference in non-methane hydrocarbon
14 levels associated with the .39 non-methane standard
15 and the .41 total hydrocarbon standard, and I am just
16 trying to probe to get a better resolution of the
17 information or the basis upon which you made the
18 statement that there is only a marginal difference.
19 Is marginal really the difference between .38 and .39,
20 as compared to .41, or could it very well be the
21 difference between .2 and .41? What are you trying to
22 say here?
23 MR. RUBENSTEIN: I think what we are trying
24 to say is that if we adopted a .41 total hydrocarbon
25 standard, we don't believe that, for hydrocarbon reasons

1 at any rate, a company such as Ford would have an
2 incentive to continue using the kind of system that
3 has a methane fraction as high as 30 per cent if there
4 is a less expensive system that was available. And
5 that, consequently, if you compare the relative
6 stringency of the hydrocarbon standards, and for our
7 purposes we are talking about relative stringency in
8 terms of non-methane hydrocarbons, which is what we
9 are concerned about, we believe that the difference
10 when you take into account the incentives built in for
11 the manufacturer between .39 non-methane standard and
12 .41 total hydrocarbon standard are marginal.
13 MR. GRAY: Well, I guess the bottom line
14 word is "marginal" again.
15 I think the Volvo system is based upon fuel
16 injection. If three-way systems that use more conven-
17 tional carburetion systems are introduced to meet the
18 California standards, are you contending that it's
19 reasonable to expect that the methane per cent would
20 remain at around 5 per cent of the total HC when those
21 systems would probably be operating around stoichiometry?
22 MR. RUBENSTEINSTEIN: You could probably
23 direct that queston to General Motors, since they are
24 only company that has a three-way catalyst without
25 oxidation catalyst system, combined with a carburetor

1 in production right now. I believe that factor is
2 somewhere between 5 and 10 per cent. Again, I'm not
3 sure. You better ask them.
4 MR. GRAY: So, it's really a function of
5 your technical judgment that you base the statement on,
6 rather than any specific data that you can offer to the
7 record of these hearings?
8 MR. RUBENSTEIN: As to whether it's marginal
9 or not?
10 MR. GRAY: As to what marginal means.
11 MR. RUBENSTEIN: Yes, it's based on our
12 technical judgment, but it's also based on data that's
13 equally available to EPA as well as us. In terms of
14 certification data, technology assessment reports and
15 such, the data is the same. We are both looking at the
16 same sets of data. The conclusion that it's marginal
17 is our judgment, yes.
18 MR. GRAY: We may want to come back to this
19 issue again after the manufacturers comment.
20 You also made a statement in your testimony
21 this morning that the ARB staff has concluded that
22 such opinions are based upon outmoded smog chamber
23 data that inaccurately project when NOx reductions will
24 cause oxidant reductions, referring to challenges made
25 by the manufacturers, relative to the CARB judgment in

1 the area of the wisdom of additional NOx control.
2 Is there additional documentation of the
3 basis for this staff judgment?
4 MR. RUBENSTEIN: That would be contained in
5 the transcript, I believe, of the January 25th ARB
6 hearing, as well as in the report that the staff prepared,
7 based on its earlier workshop.
8 MR. GRAY: So, this is not referring to a
9 new judgment based upon additional information?
10 MR. RUBENSTEIN: No. We stated those
11 opinions at that hearing.
12 CHAIRMAN JACKSON: Thank you very much,
13 gentlemen.
14 MR. WALSH: Thank you. Good morning. My
15 name is John Walsh, and I am Senior Staff Engineer in
16 the Safety and Legislation Department of U.S. Suzuki
17 Motor Corporation. I am here today representing Suzuki
18 Motor Company.
19 Suzuki Motor Company appreciates this
20 opportunity to comment on the California waiver decisions
21 currently pending before the Administrator. It is
22 Suzuki's opinion that the following are among the items
23 subject to discussion today with regard to pending
24 motorcycle waiver decisions:
25 1. The California hydrocarbon standards and

1 test procedures adopted 15 July 1975 (test
2 procedures amended 20 February 1976);
3 2. The California hydrocarbon standards and
4 test procedures adopted 24 March 1977;
5 3. The California carbon monoxide standards and
6 test procedures adopted 30 September 1977;
7 4. The combination of items 2 and 3;
8 5. The California compliance testing and inspec-
9 tion procedures adopted 30 June 1977; and
10 6. The combination of items 4 and 5.
11 Although there are more combinations of items
12 which could be discussed, we will limit our comments to
13 the items above. Some of these items can be dealt with
14 quickly.
15 Regarding items 1, 2 and 3, the State of
16 California has not made the necessary determination of
17 public health and welfare benefit for these items. EPA,
18 therefore, must revoke the 1 October 1976 waiver currently
19 in effect for item 1, and EPA cannot waive Federal
20 preemption of California's item 2 or 3 standards and
21 test procedures.
22 Turning to item 4, the State of California,
23 through the California Air Resources Board, has
24 determined that the California hydrocarbon and carbon
25 monoxide standards and test procedures are, in the

1 aggregate, at least as protective of the public health
2 and welfare as applicable federal standards (which are
3 identical through the 1981 model year).
4 We turn, then, to the questions of the need
5 for these standards to meet compelling and extraordinary
6 conditions, and the consistency of the standards and
7 test procedures with Section 202(a) of the Clean Air
8 Act, as amended.
9 First, California does not need the standards
10 to meet compelling and extraordinary conditions. The
11 standrads and test procedures are identifical to
12 applicable federal standards and test procedures, so
13 no additional control of emissions is gained by the
14 California standards. The standards are not needed,
15 since they are merely duplicative.
16 Additionally, ARB Staff Report 77-20-3, a
17 copy of which I have submitted to Ms. Urbine, shows
18 that California does not need a CO standard for motor-
19 cycles. Proof of this is ARB's amendment of their CO
20 standards for 1982 model year passenger cars which is
21 less stringent than the 1981 model year CO standard.
22 California does not have compelling and
23 extraordinary CO conditions, as shown by this recent
24 action, does not need any CO standard for motorcycles,
25 and certainly does not need a merely duplicative standard.

1 ARB's reason for adopting its motorcycle
2 CO standard was not to reduce CO emissions, or to meet
3 compelling and extraordinary conditions, but from fear
4 that "(i)f the proposed CO standards are not adopted,
5 however, California may lose its ability to enforce
6 compliance testing and inspection of motorcycles," from
7 Staff Report 77-20-2. California does not need its
8 motorcycle standards and test procedures to meet
9 compelling and extraordinary conditions.
10 Second, as we testified in May, the 1 gram
11 per kilometer hydrocarbon standard for 1982 and subsequent
12 model year motorcycles is inconsistent with Section 202(a)
13 of the Act. This is still true, and the consistency
14 problem may be aggravated by the adoption of a 12 gram
15 per kilometer carbon monoxide standard for these
16 motorcycles.
17 Regarding item 5, California's compliance
18 testing and inspection procedures for new motorcycles,
19 California has determined that their program is at
20 least as protective as the applicable Federal program.
21 Based on testimony we submitted to EPA in August, which
22 showed an increase in hydrocarbon emissions in the South
23 Coast Air Basin as a result of ARB's compliance testing
24 program, we submit that ARB's determination that their
25 program is at least as protective of the public health

1 and welfare as the Federal program is arbitrary and
2 capricious. ARB did not amend its compliance test
3 procedures to provide for compliance testing of CO
4 emissions from motorcycles. No CO control will result,
5 further showing that the ARB program is less protective
6 of the public health and welfare than EPA's program,
7 and that ARB's determination of public health and
8 welfare protection was arbitrary and capricious.
9 Because an increase in hydrocarbon emissions
10 would result, it is clear that California does not need
11 this program to meet compelling and extraordinary
12 conditions since those conditions would be aggravated
13 by the compliance testing program. Further, consistency
14 with Section 202(a) of the Act would require that EPA
15 give Suzuki three years of lead time, as we testified
16 in August.
17 Finally, regarding item 6, it is Suzuki's
18 opinion that compliance testing cannot be considered as
19 part of the ARB program in the determining the public
20 health and welfare benefit. The determination is
21 limited to standards and test procedures and pre-sale,
22 mandatory enforcement procedures. Post-sale, discre-
23 tionary programs cannot be considered to affect the
24 determination because the programs are only discretionary.
25 This has been EPA's position in previous waiver decisions.

1 Even if we do consider the programs
2 together, for purposes of discussion, we see that the
3 ARB determination must be arbitrary and capricious,
4 that the programs are not needed to meet compelling
5 and extraordinary conditions, and that the programs are
6 not consistent with Section 202(a) of the Act, for the
7 reasons outlined above and in our previous testimony.
8 In conclusion, Suzuki believes that the
9 existing waiver of Federal preemption of California's
10 emissions standards and test procedures for 1978 and
11 subsequent production year motorcycles must be withdrawn,
12 and that Federal preemption of all or any part of
13 California's emissions program cannot be waived for
14 a multitude of reasons, until at least the 1983 model
15 year.
16 Thank you, and I'd be happy to try and
17 answer any questions.
18 MR. GRAY: I am referring to Page 3 of your
19 statement, the end of the middle paragraph on that page
20 where you say, "No CO control will result," referring
21 to the ARB compliance test procedures, "further showing
22 that the ARB program is less protective of the public
23 health and welfare than EPA's program, and that ARB's
24 determination of public health and welfare protection
25 was arbitrary and capricious."

1 How can it be less protective of the public
2 health and welfare program if they did nothing more than
3 insure that the EPA standards are met? What's your
4 rationale there?
5 MR. WALSH: The ARB compliance testing
6 program does not involve any criteria for enforcement
7 of the CO standards. The ARB compliance testing program
8 is limited to hydrocarbon standards enforcement.
9 MR. GRAY: Wouldn't it probably be a little
10 more appropriate to say that it is not more protective
11 with respect to CO control? It certainly couldn't be
12 less protective simply because they do not enforce the
13 CO standards; could it?
14 In other words, the absence of CARB's specific
15 action with their compliance test program shouldn't
16 result in CO emissions going up, at least as I can tell,
17 or is that what you are claiming?
18 MR. WALSH: No.
19 MR. GRAY: So, perhaps it is more appropri-
20 ately the point that their program will not achieve
21 any additional control of CO simply because they do not
22 plan to enforce that provision of their compliance
23 test procedures?
24 MR. WALSH: That's correct.
25 MR. GRAY: Do you see any possibility that

1 the EPA might, based upon the ARB data, be concerned
2 about noncompliance with respect to CO standards?
3 MR. WALSH: That's certainly a possibility
4 if there are motorcycles which are found in noncompliance
5 of the CO standards.
6 CHAIRMAN JACKSON: That's an absolute
7 certainty.
8 MR. GRAY: So, this is a technicality, in
9 effect, that is not a major point in your testimony?
10 The main point is that you seem to agree upon is that
11 the ARB program will at least directly result in some
12 additional attention and reduction in HC and through
13 EPA action, may as well result in the additional reduction
14 of CO, over what would have been achieved had there not
15 been such a program? Or, are you claiming that that's
16 not the case?
17 MR. WALSH: Could you repeat that for me?
18 MR. GRAY: I guess what I am getting at
19 here is: Are you making a point that the California
20 compliance program will not result in reductions of HC
21 and CO emissions?
22 MR. WALSH: Not together as a direct result
23 of ARB enforcement action only. It would take EPA
24 enforcement action on the CO emissions to result in
25 further reductions in CO.

1 MR. GRAY: But indirectly, because that
2 information is available, you are not claiming that
3 there would not be a reduction; is that true?
4 MR. WALSH: That's true, although it may
5 be somewhat inappropriate to give California benefit
6 for making that information available to EPA.
7 MR. GRAY: I believe in your statement at
8 one point you mention that the amendments to Section
9 202(a) that EPA give three years lead time for a change
10 in the motorcycle standards. Perhaps I didn't understand
11 that part of your testimony. Could you elaborate a bit?
12 MR. WALSH: Okay. As we provided in
13 supplemental comments to the August hearing, Suzuki
14 has certain lead time problems associated with
15 California's hydrocarbon compliance testing program,
16 and those lead time requirements would prevent waiver
17 preemption for three years.
18 MR. GRAY: So, consistency meaning that
19 Suzuki needs three years for adequate lead time to
20 develop the technology as it relates to the criteria
21 of Section 202?
22 MR. WALSH: Yes.
23 MR. GRAY: Okay.
24 CHAIRMAN JACKSON: Thank you, sir.
25 MR. WALSH: Thank you.

1 MR. DAVID: Good morning. My name is Dennis
2 David. I am the Manager, Legislative Section of Kawasaki
3 Motors Corporation, U.S.A. With me today is Mr. Darrell
4 Johnson, our counsel.
5 Kawasaki opposed the granting of a waiver
6 to California to enforce motorcycle emission regulations
7 because the California regulatory plan does not meet
8 the statutory requirements for the granting of a waiver
9 of Federal preemption.
10 Under the Clean Air Act Amendments of 1977,
11 the USEPA must deny a state's request for waiver if
12 any of these three conditions are present:
13 1. The state's determination that their
14 standards will be, in the aggregate, at least
15 as protective of public health and welfare
16 as applicable Federal standards is arbitrary
17 and capricious.
18 2. The state does not need the standards to
19 meet compelling and extraordinary conditions.
20 3. The state's standards and accompanying
21 enforcement procedures are not consistent
22 with Section 202a of the Act.
23 Applying these standards to California's
24 regulatory plan leads to the undeniable conclusion that
25 granting a waiver would violate the second of the three

1 conditions, which requires a need to meet compelling
2 and extraordinary conditions with independent state
3 standards. Also, the intent of Congress in amending
4 the waiver provisions of the Act was not to permit
5 California to adopt and enforce the Federal standards.
6 California is seeking a waiver for motorcycle
7 emission regulations which are identical to those
8 already promulgated by the United States Environmental
9 Protection Agency for the years 1978-1981. While the
10 legislative history of the 1977 Amendment of Section
11 209 of the Clean Air Act indicates an intent to grant
12 California ". . . the broadest possible discretion in
13 selecting the best means to protect the health of its
14 citizens and the public welfare," this discretion is
15 wisely and intentionally limited by the simple and
16 obvious requirement that a need for independent state
17 regulation exists. This requirement serves the intended
18 purpose of allowing California to take additional steps
19 to protect its citizens while insuring that unnecessary
20 and burdensome state regulation is preempted by Federal
21 authority.
22 California, by its deference to Federal
23 standards, has admitted that there is no need for
24 independent standards and that the health and welfare
25 of its citizens are adequately safeguarded by Federal

1 regulation. Without this need, the statutory prerequisite
2 for waiver of Federal preemption is not satisfied.
3 Further, it was not the intent of Congress
4 to permit California to adopt and enforce a control
5 program identical to that of the Federal government,
6 but rather it was Congress' intent to give latitude to
7 California in designing a control program that best
8 served the needs of the State while at the same time
9 avoiding technological feasibility conflicts with the
10 Federal program. More specifically, Congress anticipated
11 that in view of California's belief that stringent
12 control of NOx emissions may be more essential to
13 public health portection in California than stringent
14 control of CO, the possibility existed that California's
15 1978 and subsequent standards might be more stringent
16 than the Federal NOx standard, but less stringent than
17 the Federal CO standard. To deal with the situation
18 where the entire set of California standards might be
19 technologically feasible and the entire set of Federal
20 standards might also be technologically feasible, but
21 the most stringent set of standards (Federal CO;
22 California, NOx, etc.) might not be feasible, Congress
23 amended the waiver provisions of the Act so that EPA
24 could grant a waiver based on the "in the aggregate"
25 test rather than requiring that each individual California

1 standard be more stringent than the comparable Federal
2 standard. Nothing in the legislative history of the
3 1977 amendments indicates Congress' intent to permit
4 California to obtain a waiver to enforce a Federal
5 control program.
6 Regarding California's statement that its
7 motorcycle enforcement procedures . . . "add a degree
8 of stringency to the emission standards over the
9 comparable, nonexistent, applicable Federal regulations,"
10 we strenuously disagree. As we have mentioned at
11 previous waiver hearings, EPA does have the authority
12 in Section 86.415-78 of its motorcycle regulations to
13 test production motorcycles. California's enforcement
14 program, therefore, does not provide any further
15 regulation of motorcycle emissions than would be true
16 under the Federal program. Moreover, California's
17 attempt to institute separate enforcement procedures is
18 neither foreseen nor permitted under the Clean Air Act.
19 To allow this duplication of regulatory enforcement
20 unsupported by a showing of need for a separate California
21 control program is not only contrary to the literal
22 language of the Act but subverts the essential purpose
23 behind Section 209's preemption and waiver provisions -
24 the barring of multiple and duplicative regulation in
25 the absence of compelling and extraordinary conditions

1 justifying state regulation of motor vehicle emissions.
2 The plaint language of Section 209a recognizes the
3 distinction between adoption of a standard, inspection
4 and enforcement. That Section states:
5 "No State or any political subdivision thereof
6 shall adopt or attempt to enforce any standard
7 relating to the control of emissions from new
8 motor vehicles or new motor vehicle engines subject
9 to this part. No State shall require certification,
10 inspection, or any other approval relating to the
11 control of emissions from any new motor vehicle
12 or new motor vehicle engine as condition precedent
13 to the initial retail sale, titling (if any), or
14 registration or such motor vehicle, motor vehicle
15 engine, or equipment."
16 It is therefore incongruous to maintain that
17 inspection and enforcement may be separately conducted
18 when the preemptive provisions of Section 209a specifi-
19 cally prohibit such state actions.
20 It is clear that only the waiver for which
21 California might qualify under the Act's new waiver
22 provisions is for its 1982 1 gram per kilometer hydro-
23 carbon standard which does not have a Federal counterpart.
24 We have previously testified that this standard is not
25 consistent with Section 202a of the Act. We have no

1 new information that would change our conclusion
2 regarding this matter. We respectfully urge EPA to
3 study this matter carefully, including a review of EPA's
4 ongoing research as to technologically feasible motor-
5 cycle emissions reductions. It was and is premature
6 for EPA to conclude that California's 1 gram per kilometer
7 standard is consistent with Section 202a of the Act when
8 its own technological investigation is incomplete.
9 Thank you. I would be happy to answer any
10 questions or clarify any points.
11 CHAIRMAN JACKSON: You recognize, of course,
12 that EPA has granted a waiver for the one-gram standard?
13 MR. DAVID: Yes, we recognize that.
14 CHAIRMAN JACKSON: You are just continuing
15 to make the points that you made during that waiver
16 proceeding, that it's not technologically feasible
17 within the lead time; is that correct?
18 MR. DAVID: Yes. We think it was premature
19 for EPA to grant the waiver at that time/
20 CHAIRMAN JACKSON: In making your points
21 about the California program up until '82, because it's
22 identical to the Federal program they have no business
23 being in the field; but after '82, because they do have
24 a more stringent standard, they do have a prerogative
25 in the field?

1 MR. DAVID: They have adopted a more stringent
2 standard for that time period, and they do have a
3 waiver, and we considered at that time that the waiver
4 was premature. It's not consistent.
5 CHAIRMAN JACKSON: I'm trying to separate
6 your arguments here. One is a petition for reconsidera-
7 tion on the latter point, and the former is an argument
8 about the way the amendments apply to the attempts by
9 California to run its program between now and '82.
10 MR. DAVID: That's true.
11 CHAIRMAN JACKSON: I guess, one, I think I
12 would request a more formal approach to a petition to
13 review the previous waiver decision. I don't consider
14 this an appropriate petition.
15 MR. DAVID: We don't consider this a petition
16 to review that waiver decision, either.
17 CHAIRMAN JACKSON: As far as your other
18 argument is concerned, we will weigh the merits of that
19 in our deliberations on the waivers before us.
20 Thank you, sir.
21 MR. DAVID: All right. Thanks.
22 MR. JENSEN: Mr. Chairman, I am D. A. Jensen,
23 Director, Automotive Emissions and Fuel Economy Office,
24 Ford Motor Company.
25 Today my testimony on behalf of Ford Motor

1 Company will relate primarily to California's exhaust
2 emission standards for 1981 and subsequent model years.
3 With me, however, are John Eppel and Helen Petrauskas,
4 who as attorneys will be prepared to discuss legal
5 issues; and Marlin Stroven, who is Executive Engineer
6 of our Advanced Product Engineering group, who can
7 answer questions or offer testimony on technical points.
8 1981-1982 Passenger Car Standards.
9 On September 29, 1977 California adopted
10 two sets of passenger car standards which, at the
11 manufacturer's option, must be complied with during
12 1981 and 1982. As we understand it, a manufacturer may
13 choose to certify to either .41 total hydrocarbon
14 standard, 3.4 CO and 1.0 NOx in 1981 and .39 non-methane
15 hydrocarbon standard, 7.0 CO and .4 NOx in 1982. That
16 would be Option A. Option B, which was referred to
17 earlier, would be .39 non-methane hydrocarbon, 7.0 CO
18 and .7 NOx in both 1981 and 1982. CARB's attempt to
19 introduce some flexibility in the certification process
20 as represented by these options is commendable. Even
21 more commendable, however, is CARB's effort to retain
22 its exceedingly appropriate non-methane hydrocarbon
23 standard. We must vigorously oppose the first of the
24 options, however, which is no more than an exact
25 duplication of EPA's anticipated action for the 1981

1 model year.

2 The 1981 .41 total hydrocarbon standard,
3 as compared to California's previously adopted standards
4 of .39 non-methane hydrocarbons, is particularly
5 objectionable.

6 We are extremely concerned that EPA
7 apparently is now proposing to establish a total hydro-
8 carbon standard of .41 grams per mile. In document
9 after document, submitted by EPA to various congressional
10 committees, including the progress report which EPA is
11 required to prepare by statute and submit to the
12 Congress, EPA assumed that the statutory hydrocarbon
13 standard would be a non-methane standard. Indeed, there
14 can be no dispute -- methane is not reactive and does
15 not adversely affect the public health. It is a non-
16 pollutant. EPA's own air quality standard is, of course,
17 in terms of non-methane hydrocarbons. As EPA is well
18 aware, all of Ford's development programs, both for
19 California and 49 states, have been targeted at a non-
20 methane hydrocarbon standard. Moreover, these programs
21 have also had as an equally important objective the
22 elimination of any substantial fuel economy penalty as
23 a result of efforts to meet standards of .41 HC/3.4 CO
24 and 1.0 NOx.

25 It was on this basis that we testified before

1 Congress that, given time, standards of .41 non-methane
2 HC, 3.4 CO, and 1.0 NOx were feasible and could be met
3 with little penalty in fuel economy. Our testimony
4 incidentally, was cited by EPA in connection with the
5 recent congressional deliberations on the Clean Air Act.
6 We are convinced that Congress heard and
7 believed EPA's testimony and it heard and believed
8 CARB's testimony, which was, of course, based on
9 California's experience with a non-methane hydrocarbon
10 standard, and therefore Congress assumed and intended
11 that when the statutory hydrocarbon standard became
12 effective it would be a non-methane standard. Details
13 of our analysis of the Clean Air Amendments of 1977
14 with respect to this issue will be presented by Mr.
15 Eppel following my testimony.
16 At this point, every bit of data we have on
17 advanced control systems indicates that Ford cannot meet,
18 across our product line, a total hydrocarbon standard
19 of .41 grams per mile for 50,000 miles in the 1981 model
20 year. That standard when coupled with 3.4 grams per
21 mile CO and 1 gram per mile NOx is not feasible for
22 Ford in 1981. Mr. Stroven has with him a summary of our
23 test data, as well as details on the advanced development
24 cars we have been running, and we can discuss and answer
25 any questions you may have in this regard.

1 We are not claiming that there is no
2 technology that could conceivably allow us to achieve
3 these standards. What we are saying is that we have
4 worked to a non-methane standard and sufficient lead
5 time does not exist to allow us to turn around at this
6 date.
7 We also oppose the 3.4 grams per mile CO
8 standard for California on the grounds that the records
9 of CARB hearings and EPA waiver hearings demonstrate
10 that a 3.4 grams per mile standard is not necessary to
11 meet compelling and extraordinary air quality problems
12 in California. The fact that a 3.4 grams per mile
13 standard, compared to California's previous 9 grams per
14 mile standard, can be projected to achieve the desired
15 air quality a few months earlier does not qualify as
16 extraordinary or compelling and most certainly is not
17 worth the added expense to the consumer nor the trade-
18 offs in depreciated control of oxides of nitrogen.
19 Moreover, even when viewed by itself, EPA
20 cannot find that a 1981 California 7.0 grams per mile
21 CO standard is less protective of public health than
22 the corresponding Federal standard. The 1981 Federal
23 standard may also be 7.0 grams per mile, and EPA cannot
24 prejudge and prejudice the case of future waiver
25 applicants by concluding at this time that the Federal

1 standard will in any case be 3.4 grams per mile.

2 With regard to California's proposed

3 alternate option of .39 NMHC??.7, we are in a dilemma.

4 As we said at the outset, we endorse the flexibility

5 permitted in this option. It is certainly in the right

6 direction, because it recognizes the principle of a

7 non-methane hydrocarbon standard and the higher CO level.

8 We do not question that it is equal to or more protective

9 of public health. Our problem is actually a lack of

10 test data at the .7 NOx level. Certainly that option

11 would be improved if, due to the differences in various

12 engines that are inherent in the manufacture of a

13 total spectrum of products, the option could be made

14 available by engine family. This would enable an auto-

15 driveability, and control system cost based on the

16 characteristics of a particular engine. Our basic

17 position, however, is that these are new standards to

18 us; we cannot yet indicate whether they are feasible,

19 we can only take a "save" on technical feasibility.

20 By the same token, we do not believe that anyone else,

21 CARB or EPA included, has any basis on which to make a

22 valid finding as tolead time or technological feasibility.

23 Further, with respect to 1982, we have

24 consistently opposed a 0.4 grams per mile NOx standard

25 because of legitimate and unaswered questions about its

1 desirability as well as the lack of demonstrated
2 technological feasibility. We ask that our testimony
3 before the EPA waiver hearing of August 4, 1977 in this
4 respect be incorporated as part of the record of this
5 hearing.
6 As to California's second option for 1982,
7 and in particular the .7 NOx standard, our position is
8 the same as expressed for 1981. We agree directionally
9 with its intent, and support the flexibility -- with the
10 request that the option be available by engine family
11 to provide further flexibility. Certainly, given the
12 added time to work on the problem, .7 NOx may be more
13 feasible for 1982 than 1981.
14 In summary then, Ford believes that EPA
15 must examine each of the standards adopted by California
16 and that under new Section 209(b), a waiver can and
17 should be granted for only the following standards:

1981			1982		
HC	CO	NOx	HC	CO	NOx
.39	7.0	1.0	.39	7.0	1.0

18
19
20

21 The hydrocarbon standard must be non-methane, the CO
22 standard is more than adequate and cannot be found to
23 be less protective and the NOx standard is the only
24 one the record will support.
25 On 1980-1982 Light Duty Truck/Medium Duty

1 Vehicle Standards, we are concerned that California's
2 standards for these vehicles, in particular the standards
3 applicable to vehicles of 6,000 pounds inertia weight
4 and below present, in some cases, a high risk of certifi-
5 cation failure even with the best control systems we
6 have available. To some degree, this is due to the
7 fact that, as we have testified before, the truck
8 standards are actually more stringent than those
9 applicable to passenger cars because of increased
10 dnyamometer loading during the CVS test. More important,
11 however, is the fact that tighter standards are inappro-
12 priately applied to vehicles between 3,000 pounds inertia
13 weight and 4,000 pounds inertia weight. As we testified
14 in August and before the CARB in September, this is
15 first of all an unwise policy because it discourages
16 manufacturers from downsizing utility or recreational
17 type vehicles into that inertia weight range, because
18 the standards are tighter. Second, since our August
19 testimony, DOT has established fuel economy standards
20 for light trucks and Ford has begun to investigate our
21 ability to meet the CARB standards on truck type
22 vehicles in that range. Our concern in this regard has
23 been confirmed.
24 Although included in our testimony, these
25 issues were not inquired into by CARB at its September

1 hearing, and we are concerned at the lack of either
2 testimony or an appropriate finding as to feasibility.
3 Attachment A is the material we presented to CARB at
4 their earlier hearing on this subject on November 23,
5 1976. Similarly, there was no public discussion by the
6 Board of our submission at that time.
7 As Mr. Stroven can explain, our best systems
8 give us little confidence that we could successfully
9 certify a manual transmission vehicle of this size for
10 the California market, and we have data set forth in
11 Attachment B to this effect. We can also discuss the
12 market for fuel-efficient vehicles and manual transmission
13 vehicles in the higher weight classes that would go
14 unserved as a result of these standards. Ford believes
15 that the low confidence of certification with our best
16 technology and the real need of California for manual
17 transmission truck type vehicles requires that EPA
18 condition any grant of a waiver upon a modification
19 of thecertification break points from 4,000 pounds
20 inertia weight down to a 3,000 pounc inertia weight.
21 In addition to the standards, there are
22 other issues which are not new at an EPA waiver hearing.
23 We would like to submit for the record our comments
24 previously provided on August 4, 1977 in respect to:
25 1. 1980 Light Duty Vehicle, Light Duty Truck,

1 and Medium Duty Truck 2 gram SHED EVAP
2 standard;
3 2. Restrictions on Maintenance; and
4 3. Tamper Resistant Regulations.
5 The Clean Air Act Amendments of 1977 do
6 require additional considerations to be made by EPA in
7 conjunction with this waiver hearing.
8 Later on, I'll Ms. Petrauskas to discuss
9 that particular point. At this point, Mr. Chairman,
10 with your permission, I'd like to have Mr. Eppel discuss
11 the first point I made back on -- I think it was Page 2
12 or 3, about the non-methane standard.
13 At the top of Page 3, I said, "Details of
14 our analysis of the Clean Air Amendments of 1977 with
15 respect to this issue will be presented by Mr. Eppel. . ."
16 In order to segregate that particular issue
17 from the other issues, I'd like to ask Mr. Eppel to
18 proceed at this time.
19 MR. EPPEL: Mr. Jackson, we have provided
20 to the members of the panel and also to the Reporter a
21 full copy of a statement that we have prepared discussing
22 the role of methane in the Federal statutory standard.
23 It's relevant, of course, only because California in
24 an effort apparently to preserve their waiver, saw fit
25 to adopt as one of its options a .41 total hydrocarbon

1 standard. I would like, however, to summarize that
2 statement as follows:
3 A review of the legislative history of the
4 Clean Air Act Amendments of 1977 indicates that Congress
5 relied almost exclusively on experience with California's
6 non-methane hydrocarbon standard to evaluate the
7 feasibility, fuel economy, cost and model availability
8 implications of the Federal statutory hydrocarbon
9 standard. Congress relied upon the proposition that
10 the Federal statutory hydrocarbon standard would in
11 every way be equivalent to the 1977 California standard.
12 Neither can EPA walk away from the fact that Congress
13 expressly relied upon a technology assessment report
14 published by the Environmental Protection Agency in
15 1977, which analyzed feasibility only in terms of a
16 non-methane hydrocarbon standard.
17 In summary, in establishing the statutory
18 hydrocarbon standard for 1980 and subsequent model year
19 vehicles, Congress assumed that EPA would promulgate
20 a non-methane hydrocarbon standard, which represented
21 a 90 per cent reduction from non-methane hydrocarbon
22 emissions allowable from 1970 model year vehicles.
23 I go on to discuss it a bit, and I will
24 summarize where I can.
25 Section 202(a) of the Clean Air Act, as

1 amended, provides in pertinent part that -- and let me
2 quote this:
3 "The Administrator shall by regulation
4 prescribe. . .standards applicable to the emission
5 of any air pollutant from. . .new motor vehicles
6 . . .which in his judgment causes or contributes
7 to air pollution which may reasonably be anticipated
8 to endanger public health or welfare."
9 As I mentioned earlier and as Mr. Jensen
10 mentioned, all available data would indicate that there
11 is no basis for believing that methane emissions do
12 or could endanger the public health and welfare. I've
13 got some citations in the printed material. Accordingly,
14 a standard requiring control of methane would be
15 unauthorized under Section 202(a).
16 Section 202 goes on to provide in Subsection
17 (b), and that is the 90 per cent reduction -- Let me
18 just mention that that section refers to reductions
19 allowable under the standards set for 202(a) for the
20 1970 model year. Except for the change in the effective
21 date of the requirement, this provision is unchanged
22 from the Act as it was amended in 1970.
23 Under Section 202(b), a statutory hydrocarbon
24 standard was designed to achieve a 90 per cent reduction
25 in harmful emissions allowable from 1970 models. For

1 that proposition, you will see some citations back to
2 Senator Muskie and others.
3 Because the 1970 standard was established
4 under Section 202(a), and because Section 202(a) does
5 not authorize control of methane, the methane portion
6 of emissions under the 1970 standard should neither
7 have been allowed or disallowed; it simply should not
8 have been regulated at all. Thus, if "allowable" is
9 meant to refer to the level of a lawful standard
10 applicable to 1970 light-duty vehicles, one must
11 conclude that what was intended was a 90 per cent
12 reduction from a non-methane hydrocarbon emissions, as
13 determined by a non-methane hydrocarbon test procedure.
14 CHAIRMAN JACKSON: Mr. Eppel, I haven't
15 read your statement, but I presume that someplace
16 along the line you are going to relate this to a
17 California waiver.
18 MR. EPPEL: They have asked for a waiver,
19 among other things, for a .41 total hydrocarbon standard.
20 I think that relates it. What we are going --
21 CHAIRMAN JACKSON: As an optional --
22 MR. EPPEL: What we are going to suggest,
23 Mr. Jackson, is that they have done that only to secure
24 their waiver against action by EPA in the same regard,
25 and I think it's important for the panel to understand

1 that action by the EPA in that regard would not be
2 authorized.
3 May I go on?
4 CHAIRMAN JACKSON: I'm certainly not endorsing
5 the nexus, but you may proceed.
6 MR. EPPEL: Thank you.
7 In any case, Subsection (b) does nothing
8 more but place certain additional limitations on the
9 Administrator's discretion to establish standards
10 under Section 202, and any standard must meet the
11 requirements of both Subsections (a) and (b). In the
12 case of the statutory hydrocarbon standard, this
13 standard must be a non-methane standard in order to
14 satisfy the requirements of 202(a), and represent at
15 least a 90 per cent reduction in order to satisfy 202(b).
16 We do not assert that this reading of the
17 language of Section 202(b) is free from ambiguity. The
18 legislative history, however, clearly resolves that
19 ambiguity and confirms Congress' intent to control
20 only harmful hydrocarbon and thereby establish a hydro-
21 carbon standard exclusive of methane.
22 A full and fair understanding of the 1977
23 congressional deliberations requires an awareness of
24 certain background information. I think we are all
25 aware of it. First of all, the fact is that California,

1 of course, had a 1977 hydrocarbon standard which allowed
2 the exclusion of methane.
3 A review of the reports and colloquy which
4 accompanied the amendments unequivocally demonstrates
5 that in the mind of Congress this California non-methane
6 hydrocarbon standard was, in fact, the statutory hydro-
7 carbon standard they were talking about. This view
8 was held by both sides of the debate. It was used
9 in efforts to demonstrate feasibility of the Federal
10 statutory hydrocarbon standard by those Congressmen
11 who urged earlier effective dates. Indeed, the report
12 referred to earlier by Mr. Macomber, which accompanied
13 the very stringent Rogers bill which was, of course,
14 rejected -- that bill was rejected; not the portion
15 referred to by Mr. Macomber, I might add -- relied
16 heavily and cited test data from 1978 model year
17 California certification vehicles, all of which were,
18 of course, subject to the non-methane correction. That
19 same report cited, as I mentioned earlier, the EPA
20 document submitted to Congress, which was based only
21 on non-methane hydrocarbon standards.
22 There is also a citation for the proposition
23 that that report was before the Senate as well as the
24 House.
25 The equivalency of California's non-methane

1 hydrocarbon standard, and the statutory hydrocarbon
2 standard, was likewise assumed by proponents of less
3 stringent schedules. There are citations here to
4 Congressman Dingell, Congressman Brown, Senator Riegel,
5 all of whom predicated their assertions as to fuel
6 economy costs, etc., against the California non-methane
7 standard.
8 I'll skip forward to Page 6, in the middle.
9 Even if the statutory language and legislative
10 history were not conclusive, any contrary interpretation
11 would subscribe an irrational intent to Congress and
12 would therefore be in error. It is very clear that
13 Congress in passing the 1977 Amendments had an overriding
14 desire to strike an appropriate balance between health
15 needs and the economic and energy costs of controlling
16 emissions. While members of Congress differed as to
17 where this balance should be struck, again proponents
18 of all the proposals sought to minimize any adverse
19 impact. To suggest that Congress intended EPA to
20 control a harmless exhaust constitutent at the cost of
21 fuel economy and model availability is simply irrespon-
22 sible.
23 I'd like to switch over now to Page 7. I'll
24 make one comment with respect to the so-called Eckhardt
25 Amendment, which Ms. Petrauskas will cover later, and

1 that is that the Eckhardt Amendment and the rationale
2 cited by its proponents would make little sense, of
3 course, if a California non-methane hydrocarbon standard
4 were viewed as inappropriate, less stringent, or harmful
5 to health by EPA.
6 That summarizes my remarks.
7 MR. JENSEN: Mr. Chairman, at this point,
8 I'll leave it up to you as to how you want to proceed.
9 Ms. Petrauskas, on the last page of my statement, can
10 talk about really different subjects here, or we can go
11 back and try to clear up what we've talked about so
12 far, which are essentially '81 and '82 standards and
13 answer questions there, because the other piece of
14 this is sort of separate; or would you rather have her
15 conclude the whole bit?
16 CHAIRMAN JACKSON: Whatever you think is
17 most effective in presenting your arguments.
18 MR. JENSEN: I think at this point we ought
19 to answer questions and try to clear up any questions
20 you and your panel members may have on the '81 and '82
21 emission standards and the waiver that California has
22 requested for that.
23 CHAIRMAN JACKSON: Let me put into perspective
24 the argument here I think Mr. Eppel has made.
25 As I see it, it's predominately a petition

1 of the Federal hydrocarbon standard as a total hydrocarbon
2 standard. And if it is, I don't want Ford to believe
3 that it's being received as such by this forum.
4 MR. EPPEL: We filed a petition for recon-
5 sideration on that standard back in June of 1973, Mr.
6 Jackson. I assume that petition is still open. There
7 were several notices in the Federal Register with
8 respect to it.
9 We don't view this as a petition to anybody.
10 We view this as a statement of what Congress intended
11 and we view as a statement of the inappropriateness of
12 .41 total hydrocarbon standard, first of all for the
13 Federal Government and collaterally for California.
14 CHAIRMAN JACKSON: Even as an optional
15 standard? I mean in the case where .41 is specified,
16 there is an optional non-methane standard.
17 MR. JENSEN: Well, it's coupled with
18 different levels, though.
19 CHAIRMAN JACKSON: It's coupled with a
20 different level of NOx control.
21 MR. JENSEN: And CO.
22 CHAIRMAN JACKSON: And CO. It seems to
23 me that your argument should be about the stringency of
24 those two, and I am not denying that you did make some
25 arguments in that regard.

1 MR. JENSEN: My statement did talk about
2 the CO at the hydrocarbon standard.
3 CHAIRMAN JACKSON: It seemed like you have
4 weighted your argument about the non-methane issue -- or,
5 indeed, it's not an issue. Where you have an option to
6 go with a non-methane standard.
7 MR. EPPEL: Anything that's noticed for the
8 hearing is in issue, as far as we are concerned, and it
9 does impact on us. As Mr. Jensen's statement points
10 out, the other alternative presents us with a .7 NOx
11 standard that we don't really know how to comment on
12 at this point. We felt it extremely important we make
13 our views known on the .41 hydrocarbon standard.
14 MR. GRAY: Do you feel that a .39 non-methane
15 standard in conjunction with a 3.4 CO and a 1.0 NOx
16 standard is easier to achieve than California's option
17 would be?
18 MR. JENSEN: It depends, as Mr. Rubenstein
19 indicated, upon the control system. Our assumption
20 right along has been a non-methane standard, so our
21 catalyst system that we are utilizing does have a larger
22 percentage of methane coming out the tailpipe. About
23 30 per cent, that we measured.
24 If you have a different system -- We haven't
25 got a whole lot of data on this, Mr. Chairman. We did

1 measure one diesel that's in production and for sale
2 in a passenger car. We measured a Honda Civic CVCC
3 engine, and they had less than 5 per cent methane;
4 whereas our system had a 30 per cent methane coming
5 out the tailpipe. So, there is a difference, depending
6 on the system.
7 That's why I say in here -- I don't indicate
8 that there is a complete lack of technology. I indicate
9 that what we have being going with for '81, based on
10 that assumption has been that that would be the standard,
11 and the standard would be to the effect of .39 non-methane
12 hydrocarbon standard, 3.4, and 1. And we have told EPA
13 and Congress that that was our assumption.
14 MR. GRAY: This is really an argument,
15 then, to the EPA, because California's Option A is the
16 existing EPA interpretation of 1980 passenger car
17 standards. So, in that context, since it is a California
18 option, certainly it's a comment here. But, I just want
19 to be sure that there was an understanding that that's
20 really directed at EPA as much as the California hearing
21 by definition.
22 The ARB made some statements relative to
23 stringency and in terms of their standards, and we
24 deferred following up on that in discussion with them
25 until later in the hearings, if necessary, based upon

1 discussions with the manufacturers.

2 It appears that the California Option B

3 is numerically more stringent than their previous

4 standards with respect to both CO and oxides of nitrogen,

5 and I believe they at least commented that there was

6 a chance that at these slightly lower levels that

7 the technology would not be substantially different

8 and, therefore, that these lower levels would not be

9 more difficult to achieve. Do you agree with that?

10 MR. JENSEN: Well, it depends what year we

11 are talking about.

12 MR. GRAY: 1981, still.

13 MR. JENSEN: '81.

14 MR. GRAY: The 1980 Option B has changed

15 from California's previous standards, previous to

16 September 29, in that the CO level has decreased from

17 9.0 to 7.0 and that the NOx level has decreased from

18 1 to .7, and I think they made the argument earlier --

19 at least it was my understanding of the argument --

20 that those slight reductions, if you will, do not

21 impose additional technological constraints. And I

22 am essentially asking you to respond to that statement.

23 MR. JENSEN: On Page 5 of our statement,

24 we indicate and recommend the waiver be granted for

25 .39, 7.0, and 1.0 gram of NOx. So, the only difference

1 we've got here is the .7 and 1.0 gram of NOx.

2 On that particular issue, as I indicated,

3 we just don't have the data.

4 Mr. Stroven, you may want to comment with

5 respect to the stringency.

6 MR. GRAY: Your comment was directed toward

7 risk, uncertainty. What is the possibility of achieving

8 these levels in this time frame? If you could address

9 your comments toward that question, I think it would be

10 most instructive.

11 MR. STROVEN: I think our comments had been

12 that from a hardware standpoint, we didn't see much

13 changes to meet the California proposed Option B

14 standards versus what we've already programmed. The

15 stringency of those programs is obviously more severe.

16 To meet a .7 NOx standard, as we have stated in the

17 statement here, we have no technical feasibility across

18 our entire product line that we can meet that standard.

19 We weren't working to a .7, since that hadn't been

20 in the cards in the previous past, and we were working

21 to 1.0 gram.

22 I think I stated at the hearings that we

23 have reasonably good confidence that our small four-

24 cylinder engines could meet the standard. My assessment,

25 and it was an engineering assessment only, that the

1 mid-size and larger engines was from the 50 per cent
2 or less confidence level. But we really have no data
3 to back this up.
4 We are planning to investigate this, but
5 to date, I have no data on which to make a technical
6 feasibility statement.
7 CHAIRMAN JACKSON: None at all --
8 MR. STROVEN: Not on --
9 MR. JENSEN: -- to stress compliance with
10 the Option B '81 standards?
11 MR. STROVEN: The systems that would probably
12 be used under that option, and that was brought out
13 by Mr. Rubenstein, were probably three-way systems
14 without the cleanup catalyst, along with the feedback
15 fuel metering system. We have worked with this with
16 our smaller engines. Therefore, I have data and I
17 have an idea whether or not we can meet that standard.
18 We have not worked with these type of
19 systems, since we were assuming that the standard for
20 CO was 3.4 and our initial attempts at meeting 3.4 CO
21 with any of the intermediate and larger engines were
22 totally unsuccessful. So, therefore, that's why Ford
23 went with the primary assumption of a cleanup catalyst
24 behind the three-way, and that's the way all of our
25 work has been done.

1 CHAIRMAN JACKSON: I seem to be getting a
2 different answer. It is expected that regardless of
3 what system you are using and what your target was,
4 your statement is that with regard to what you intended
5 to do that you have no data to demonstrate compliance
6 with the Option B standards for 1981.
7 MR. STROVEN: On our intermediate and larger
8 size engines, I have no data to make a technical
9 feasibility statement on.
10 We have lots of data at the hydrocarbon
11 levels of .41, and we have many, many comparisons --
12 and that's one of the things I am prepared to discuss
13 today -- of our ability to meet a total hydrocarbon
14 standard versus a non-methane hydrocarbon standard.
15 But the issue of 1.0 gram of NOx versus .7 grams of
16 NOx, I do not have the data there to make a technical
17 feasibility statement on.
18 CHAIRMAN JACKSON: Does Ford have any data?
19 MR. STROVEN: Does Ford?
20 CHAIRMAN JACKSON: Yes.
21 MR. STROVEN: That's who I am.
22 CHAIRMAN JACKSON: Just wanted to make sure.
23 MR. GRAY: Do you have a judgment --
24 MR. JENSEN: Let me make --
25 CHAIRMAN JACKSON: The reason I ask that --

1 just as a point of clarification -- is that it may not
2 be availble to you and that may be an accurate statement,
3 but I wanted to make sure that the question reflected
4 data available to Ford Motor Company.
5 MR. JENSEN: I want to make it clear and
6 repeat, really, what Mr. Stroven said.
7 On the smaller engines, he did say we do
8 have data, because we've tried experimental vehicles
9 with three-way catalyst only in the smaller engines.
10 But we've always felt, because our assumptions were
11 3.4 gram CO, that we had to have a follow-on oxidation
12 catalyst. And, so, we don't have data on the inter-
13 mediate and larger engines. I think that's what you
14 said.
15 So, the statement we have no data is not
16 accurate. There is data for the smaller engines.
17 MR. EPPEL: Mr. Jackson, on the other point,
18 obviously Mr. Stroven is made available today. He is
19 the Exec. Engineer in the Advanced Product area, and
20 he is the person in the company who is reasonably and
21 probably as well familiar with these issues as anybody
22 in the company. But I don't really think you can expect
23 a witness to come here and say -- I'm not trying to
24 raise a red herring or anything. I certainly don't
25 know of any. I don't think anybody else does. But I

1 don't think you can get a witness out here and have him
2 say does Ford Motor Company have anywhere in the entire
3 engineering research area, one piece of data on an issue.
4 He is in charge of developing these systems. As such,
5 I think you can expect him to be familiar with the
6 material and the work that's going into developing them.
7 On that basis, I think he can answer that
8 he does or doesn't have data.
9 MR. GRAY: What types of systems would you
10 look at for these larger engines that would be different
11 than the systems that you would consider for those
12 engines, comparing the 1.0 gram NOx to the .7 gram NOx?
13 MR. STROVEN: That would be the same system
14 that we mentioned we looked at on our smaller engines,
15 and that would be a three-way catalyst without a
16 cleanup oxidation system, along with closed-loop fuel
17 metering system.
18 MR. GRAY: But that's the same system you'd
19 use with the 1.0 gram NOx, right, for those engines?
20 MR. STROVEN: At the 1.0 gram of NOx, again,
21 we have been assuming that our standard for CO was 3.4
22 and, therefore, we have worked with oxidation cleanup
23 catalysts because the larger engines were -- our initial
24 attempts were so far away that that's why Ford switched
25 their prime hardware program to a three-way, plus

1 cleanup. Really, the work that has been done in the
2 last year and a half, two years, has been on those
3 systems.
4 MR. GRAY: But to meet the previous California
5 standards, which are .39 non-methane, 9.0 CO, and 1.0
6 NOx, what systems would you have used? Certainly, you
7 had time and, I assume, were looking into that issue.
8 In other words, I am trying to get an
9 idea. Are you talking hardware changes in going from
10 the previous situation to today's situation, or are you
11 talking about -- What are you talking about in order to
12 get from 1.0 gram NOx to .7?
13 MR. STROVEN: The difference between 1.0
14 gram and .7 grams of NOx, again, if we had a high CO
15 standard to work to, if that was the assumption, we
16 would not use the cleanup catalyst and take the
17 advantage of the additional cleanup, where we don't
18 re-oxidize ammonia back to NO with the cleanup catalyst.
19 So, we would take advantage of the three-way, stand-alone
20 improved efficiency.
21 Judgmentally, you would be at about the
22 same feedgas. The emissions out of the engine for NOx
23 would be approximately the same for the two systems,
24 but you would achieve a lower tailpipe number.
25 MR. GRAY: Okay. I guess that's what I was

1 wanting to drive at.

2 With the higher CO standard with the Option
3 B, as compared to California's Option A, the 7.0 grams
4 of CO and the .7 NOx, would you need a cleanup catalyst
5 at the 7.0 gram CO? In other words, Option A is 3.4
6 and 1, and Option B is 7.0 and .7. Is that an inappro-
7 priate trade-off? It sounds like that Option B would
8 allow you to not use the cleanup catalyst and as a
9 result not oxidize ammonia to NO and, therefore, give
10 you a lower tailpipe emission level. Is that incorrect?

11 MR. STROVEN: No, that's correct. As I
12 said before, we have data to substantiate that we have
13 reasonably good confidence in doing that with our
14 small engines. I have no data to say whether or not
15 I could meet the .7 or the 7.0 gram CO with our inter-
16 mediate or larger engines.

17 CHAIRMAN JACKSON: But absent data, what's
18 your judgment?

19 MR. STROVEN: That was the judgment I
20 gave previously, and I said my confidence level would
21 be 50 per cent or a little bit less.

22 CHAIRMAN JACKSON: What would you do in
23 near term to improve that?

24 MR. STROVEN: Today, for 1981, my hardware
25 plans are locked in, our vendor commitments are pretty

1 well signed up, and I'd have to go with the systems
2 I described before. It's a situation of either we
3 could or could not.
4 As I stated, my engineering confidence of
5 being able to do that is 50-50 or less.
6 CHAIRMAN JACKSON: But there is absolutely
7 nothing you could or would do to improve that confidence
8 between now and the time you have to produce cars in
9 1981 for California?
10 MR. STROVEN: Not in the way of hardware, no.
11 CHAIRMAN JACKSON: Well, anything.
12 MR. STROVEN: The attempts would be made
13 as taking the hardware I described and determining
14 whether or not, with calibrations and various strategies
15 that we have available to us with our electronic controls,
16 to see whether we could achieve these levels.
17 CHAIRMAN JACKSON: What would you do?
18 MR. STROVEN: First of all, I would start
19 out with the hardware. I would tackle the problem of
20 the feedback system on three-way stand-alone and attempt
21 to determine within -- Starting out, let's say, back
22 even further with mapping data. Ford does a lot of
23 mapping of our engines, and that would establish my
24 initial calibration. I would go to an actual vehicle
25 engine-type test, and on chassis rolls with that base

1 calibration, start out with and attempt to refine it
2 and determine if or not, the hardware that I have in
3 place that's committed for '81 had the ability on
4 that particular vehicle and engine to meet those
5 standards. That's not a quick process. It takes time.
6 CHAIRMAN JACKSON: How long?
7 MR. STROVEN: To find out on feasibility,
8 I would say nine months away to establishing with
9 confidence of whether I could meet those standards.
10 CHAIRMAN JACKSON: That would be chipping
11 away at that 50 per cent confidence?
12 MR. STROVEN: Right.
13 CHAIRMAN JACKSON: In other words, it would
14 be improving? It wouldn't make it any worse?
15 MR. STROVEN: It could be. I could come
16 out and find out that my confidence level -- as I said,
17 it's an engineering judgment. When I get done, I may
18 say, "Hey, on this engine my confidence level has moved
19 to 70 per cent and on this engine vehicle package, my
20 confidence has moved to zero or 20 per cent."
21 CHAIRMAN JACKSON: What's your normal
22 confidence at this time away from the production year?
23 MR. STROVEN: When we work with hardware,
24 we attempt to work to 80 per cent confidence level
25 objectives. In some cases, we have to lower those.

1 In some of the work that we have been doing recently,
2 we have had to lower our confidence levels because we
3 could not achieve our 80 per cent confidence level
4 objectives.
5 CHAIRMAN JACKSON: What was acceptable to
6 you? What was the lowest confidence level that was
7 acceptable to you?
8 MR. STROVEN: Up until this time, 80 per
9 cent is what we worked with. That was the 1978 model
10 year.
11 CHAIRMAN JACKSON: What is it that you were
12 referring to that you would lower it to?
13 MR. STROVEN: In looking at the material
14 that I have here for the confidence level of meeting
15 both a total hydrocarbon or a non-methane hydrocarbon
16 standard, we have been working to an objective of 65
17 per cent confidence of being able to certify. We could
18 not achieve our 80 per cent confidence level objectives.
19 We had to move those objectives down.
20 CHAIRMAN JACKSON: So, really in a practical
21 sense, all you are talking about is improving your
22 confidence by 15 per cent to be in a position to be
23 acceptable to the corporation in terms of production of
24 '81 model year cars?
25 MR. STROVEN: We don't consider 65 per cent

1 acceptable, but we have had to live with it recently.
2 CHAIRMAN JACKSON: If you have to live with
3 it, it's acceptable. It's viable.
4 MR. EPPEL: Mr. Jackson, viable for what?
5 For an engineer to work with, with three years to go, or
6 us to put cars on the road in '81?
7 CHAIRMAN JACKSON: The presumption was with
8 regard to putting cars on the road, because that's
9 where I am ending up in my comments, is being able to
10 produce cars for the 1981 model year to these standards.
11 MR. JENSEN: Let me talk a little bit about
12 the confidence levels, and I'm not as close to it as
13 Mr. Stroven.
14 But from where I sit in running the
15 certification program, if you've got an 80 per cent
16 confidence package, you can run a minimum number of
17 50,000-mile cars because you are pretty sure you are
18 going to be home. If you've got 65 per cent, you run
19 more 50,000-mile cars. You throw a lot more at it
20 because, as everybody knows in this room, the statistical
21 validity of one car running 50,000 miles is not there.
22 So, you throw a lot of 50,000-mile cars at it, and
23 it's more expensive, you start earlier, you run
24 different waves. There's a lot of things you have to
25 do if you haven't got an 80 per cent confidence level.

1 So, what I am saying here -- from a certifi-
2 cation standpoint, now, and Mr. Stroven may disagree
3 from his piece of this because I am responsible for
4 certification and he is responsible for engineering
5 the product -- It involves a lot more time, a lot more
6 cost, and a lot more effort as you drop that down.
7 But it's still the ultimate goal to get cars on the
8 road, and that's why you do it that way?
9 CHAIRMAN JACKSON: Okay. Taking your
10 comments in connection with his judgment, if he came to
11 you with a package for which he deemed there was only
12 50 per cent confidence, it's just a matter of increasing
13 the number of cars you run, increasing the amount of
14 money you have to spend to get the cars certified to
15 assure some level of availability for the dealerships?
16 MR. JENSEN: It's a changing ballgame, too,
17 as you know. In the past, what you said would be true.
18 You throw ten cars and hope one would pass with an
19 acceptable DF, deterioration factor.
20 In the future, as you get into more and
21 more end-of-line production and enforcement procedures,
22 such as exist in California, and which the Federal
23 Government is looking at, this could change. So, we
24 are really talking at a point of time. I would accept
25 what you said based on today's rules and regulations

1 and so forth, but it could change by '81, as you know.
2 CHAIRMAN JACKSON: What are you suggesting
3 would change?
4 MR. JENSEN: There's a number of things in
5 the Clean Air Act Amendments of 1977 that will be
6 coming down the -- being put into effect by 1981, such
7 as -- Well, Mr. Eppel, you can list them. They are
8 looking at in-use tests, they are looking at different
9 kinds of -- EPA apparently, or at least Congress told
10 EPA, to look at different kinds of production line
11 tests. So, these things by '81 could be there.
12 California is considering revision of
13 their assembly-line test procedures. I don't know
14 what's going to be in effect in 1981 that we'd have to
15 meet, but there is more and more emphasis of controlling
16 the levels that we see in production, in the field,
17 as opposed to the certification prototype emission
18 levels.
19 CHAIRMAN JACKSON: What you are saying is
20 that being certified doesn't mean you can meet standards?
21 MR. JENSEN: That's correct. Could mean
22 that in 1981. You and I don't know yet. But it's a
23 pretty good assumption we'll have a lot of different
24 requirements in that respect.
25 MR. GRAY: Perhaps following this up from

1 a little different path, in the early part of your
2 comments, you expressed concern that EPA is apparently
3 now communicating that they may retain the total
4 hydrocarbon standard instead of moving toward a non-
5 methane standard.
6 In that discussion, you make the statement,
7 "It was on this basis," the assumption of a non-methane
8 standard, I assume, "that we testified before Congress
9 that given time," and I assume that meant 1980 because
10 that's what was adopted, I think, with strong reference
11 to Ford testimony in Congress, "standards of .41 non-
12 methane HC, 3.4 CO, and 1.0 NOx were feasible and
13 could be met with little penalty and fuel economy."
14 The problem at least I am having in identi-
15 fying the transition here is, especially as related to
16 California's option a year later in 1981, which allows
17 hydrocarbon being the same as what you testified was
18 feasible, but allows higher CO levels by a factor of
19 over two times and yet reduces NOx by 30 per cent.
20 And there seems to be some opportunity at least, because
21 to achieve a 3.4 CO, I think Ford has amply testified
22 and stated that in their judgment right now, it would
23 require a cleanup oxidation catalyst, which also
24 oxidizes some ammonia to NO, and I'm still having a
25 hard time getting back to if you can meet .41 non-methane,

1 3.4 CO, and 1.0 NOx, why, when you are allowed to take
2 off the cleanup catalyst which oxidizes ammonia, you
3 couldn't get lower NOx. And I guess the issue is: How
4 much NOx is formed with the cleanup oxidation catalyst?
5 Are we talking about three-tenths of a gram, or are we
6 talking about one-tenth? Is that additional two-tenths,
7 one-tenth, whatever, attainable through adjustments?
8 We still have other possibilities to control NOx, and
9 how does this fit back to what you testified is feasible,
10 I guess, is the heart of it, in relation to the cleanup
11 catalyst oxidation among the first, and then we will
12 go from there.
13 MR. JENSEN: Mr. Stroven should answer this.
14 Let me talk first about the testimony, because I was
15 there and Mr. Stroven wasn't.
16 The Senate hearings in March -- Was it March
17 or May? -- at any rate, this spring, the Senate
18 Committee asked each manufacturer what they could meet
19 and at what fuel economy penalty. Mr. Misch was our
20 witness and said that, in effect, if we hit all home runs,
21 if our development proceeded satisfactorily, we could
22 achieve .41, 3.4, and 1.0 gram of NOx in 1981 with a
23 minimum fuel economy loss. And the .41 he was referring
24 to was a non-methane hydrocarbon standard. That is
25 why we had the prime system Mr. Stroven is talking

1 about, which is the follow-on catalyst.

2 Now, your question is a technical one that

3 Mr. Stroven could answer and I couldn't.

4 MR. GRAY: I think I mentioned 1980 before,

5 and I was in error. 1981 is correct.

6 MR. STROVEN: The problem is that what you

7 were assuming, if we just remove the cleanup catalyst

8 and we will get the extra benefit of NOx conversion

9 with a three-way only, the issue is then can I meet

10 the CO standard. And that's where I don't know. If

11 I can't meet the CO standard and I require that oxidation

12 catalyst, then you have substantially increased my

13 task from an engine out standpoint because right now

14 I know about how far I can go down with an engine before

15 the engine will not be acceptable for a customer to

16 drive.

17 You are asking from a conversion efficiency

18 standpoint a substantial improvement that we do not

19 believe is currently there as far as the technical

20 feasibility of -- our catalyst technology, I should say,

21 I don't think is there right now.

22 MR. GRAY: Is that a CO control problem

23 instead of a NOx problem without the catalyst? If you

24 didn't have a cleanup catalyst on the tailpipe of these

25 heavier vehicles, larger engines, what levels of NOx

1 and CO would come out?

2 MR. STROVEN: I'm not sure. Again, as I

3 said, I don't have the data. I'm not sure what my NOx

4 will come out. I think I will be a lot closer to the

5 seven-tenths than I would be with the cleanup on,

6 definitely, because I am going to get that improvement.

7 But my issue is: I don't know whether I can meet a

8 7.0 gram of CO standard.

9 CHAIRMAN JACKSON: In your engine mapping,

10 which you indicated you did -- I don't understand it

11 all -- but what was your assumption with regard to the

12 cleanup catalyst in terms of the amount of CO it would

13 take out and the amount of NO it would create? You

14 must have had some judgment about that when you added

15 that for the purpose of getting to 3.4.

16 MR. STROVEN: We've worked with an actual --

17 what's final. You know, the net effect, not rather

18 than what's happening in between, in the intermediate

19 steps.

20 Our assumptions have been that our catalyst

21 technology is such that we think that over 50,000 miles

22 we can maintain 80 per cent efficiency on hydrocarbons,

23 80 per cent on CO, and 40 per cent on NOx. But to tell

24 you how much that reconverts if I start with a given --

25 As you said, my mapping data tells me what I start

1 with, and with the two catalysts in place, that's
2 what I get in the final tailpipe number. The bulk of
3 the CO percentage is with the cleanup catalyst. It's
4 less on the hydrocarbons and, of course, the cleanup
5 catalyst is actually hurting you. It's a negative
6 efficiency on NOx.
7 CHAIRMAN JACKSON: I understand. That's
8 what I am getting at. Nowhere is there available at
9 Ford information which would permit them to determine
10 for these bigger engines how much CO you got from the
11 cleanup catalyst, how much CO cleanup you got, and how
12 much NOx detriment you got.
13 MR. STROVEN: Given time, as I said before,
14 I think I could answer that question. And I could
15 probably make a better judgment in less than the time
16 it takes me to develop a complete car that is actually
17 demonstrating these levels.
18 CHAIRMAN JACKSON: But you haven't done that?
19 MR. STROVEN: I have not done that.
20 CHAIRMAN JACKSON: What you are telling us
21 is you really don't know. It may be that you are
22 getting less CO cleanup and more NOx production on this
23 cleanup catalyst than what you hypothesized when you
24 get to this 50 per cent judgment.
25 MR. GRAY: I'm not sure, when you restated

1 my answer, what you meant.

2 MR. JENSEN: Let me interrupt here just a

3 minute. We do engine mapping in a lot of places in

4 the company and not all under Mr. Stroven. I don't

5 know if there is data. You keep saying if we've got

6 data like that around. I don't know.

7 With your permission, Mr. Chairman, let me

8 go back and see whether we've got that data that would

9 answer this question. I think it's a reasonable

10 question, and we may have some engine mapping data that

11 would answer it. If we have, we will furnish it for

12 the record.

13 CHAIRMAN JACKSON: Let me explain to you

14 where I am coming from. I think Mr. Gray has raised an

15 entirely relevant point here, and it gets to this judgment

16 that you have to make with regard to your ability to meet

17 these standards. We have learned that engine mapping

18 or some sort of judgment about the kind of control you

19 are going to get from various different pieces of hardware

20 is something that is very sophisticated and Ford goes

21 to a lot of trouble to determine; yet we are asking

22 the question: When you take off this cleanup catalyst,

23 how much does that hurt you in terms of CC control, and

24 how much does it help you in terms of NOx control? And

25 that would allow us to take existing data, apply those

1 factors, and make some judgment of our own about your
2 capability to meet these Option B standards in 1981.
3 And it just seems to me that if that information is
4 available in some form that it would be relevant to
5 your case here.
6 MR. EPPEL: Mr. Jackson, we will try to get
7 it for you in ther terms that you asked for it. I
8 think you asked for it in terms of grams per mile or
9 tenths of grams per mile if we have it. I don't have
10 any idea if we have it or not. If we have it in that
11 form, we will give it to you.
12 I just feel called upon again to caution
13 you about International Harvester and other technical
14 judgments. It's one thing to take it off one kind of an
15 engine and apply it to a similar engine, and some other
16 thing, I am sure, to take it off of a four-cylinder and
17 apply it to an eight.
18 CHAIRMAN JACKSON: That's not what we are
19 asking you. The smaller engines we are not talking about
20 because you've got high confidence there. What we're
21 talking about is the bigger engines.
22 MR. EPPEL: I understand that. But I am
23 suggesting to you -- you said we can take that data and
24 apply it to data that we might have. All I am saying
25 is I caution you again about applying, for example, in

1 the case we might have it on the four-cylinders and
2 putting it on the eight cylinders and adding and
3 subtracting grams per mile.
4 CHAIRMAN JACKSON: No, no. I am proceeding
5 to develop our capacity to go through the same kind of
6 judgment that this gentleman did.
7 MR. EPPEL: I understand that.
8 CHAIRMAN JACKSON: And I was just looking
9 at the information somewhat differently and not trying
10 to go from one car line to another car line necessarily,
11 but looking at the same car line.
12 MR. EPPEL: Fine.
13 MR. GRAY: What system did you anticipate
14 using in the event that your suggestions or recommenda-
15 tions were adopted by California; just the three-way
16 system with no cleanup catalyst?
17 MR. STROVEN: My assumption now would be
18 I'd stick with the system that is a Ford prime system
19 with a cleanup.
20 I assume, Mr. Gray, you are referring to
21 the .39, 7.0, and 1.0 suggested in Mr. Jensen's
22 statement.
23 MR. GRAY: I think in regard to the trade-off,
24 as to the use of additional cost and fuel economy
25 penalty or what have you, this cleanup catalyst and how

1 it relates to NOx, it is very critical to your case
2 here and certainly the data that you do have would be
3 quite beneficial.
4 Looking at the light-duty trucks -- unless
5 there's more questions on light-duty passenger cars,
6 which I guess there's not -- it appears that you are
7 making the judgment that for one group, the lighter
8 group of light-duty trucks, that because of higher test
9 loads that the standards may be more difficult to achieve
10 for that group of trucks; is that right? What is your
11 argument that you are presenting to us as to why those
12 lighter light-duty trucks could not meet the California
13 standards?
14 MR. EPPEL: Mr. Gray, before we get to that,
15 Mr. Stroven has with him, and we are prepared to discuss,
16 and we'd like to at least offer it for the record, some
17 data that we have that speaks to our ability in the
18 1981 time frame to reach a .41 total hydrocarbon standard.
19 MR. GRAY: We will come back to that. I just
20 felt that this was a technical feasibility issue in a
21 general sense, especially as it relates to CO and NOx,
22 and then we can come back to HC. That's why I intention-
23 ally wasn't asking anything about that.
24 MR. EPPEL: Okay.
25 MR. JENSEN: Do you want to answer it, Mr.

1 Stroven?

2 MR. STROVEN: Yes. The standards, as proposed,

3 are -- When we make a break point at 4,000 pounds -- In

4 other words, a 3500-pound light truck would be subjected

5 to standards that are quite a bit more severe than would

6 be a 4,000-pound vehicle. With the switch from GVW-type

7 of classification to inertia weight, it's moved a lot

8 of our vehicles right down to the 4,000, 4500-pound

9 point. With fuel economy standards to be met, there is

10 incentive, for the manufacturers at least, to reduce

11 weight. But there is a counter-incentive from an

12 emission standard --

13 MR. GRAY: May I interrupt you just for a

14 second to be sure I understood a point that you made.

15 That was that Ford anticipates being able to

16 drop its light-duty truck weights from 4500 pounds to

17 below 4,000?

18 MR. STROVEN: A lot of our trucks classified

19 on inertia weight fall into the full-size light trucks

20 as we would term our F100, E100 series vehicles will

21 fall into the 4,000-pound inertia weight class.

22 As I was saying, there's additional incentive

23 with fuel economy standards to want to even further

24 reduce weight in this light-duty recreation vehicle

25 class, or where the vehicles are used for light hauling,

1 down even further.

2 But there is a counter-argument to once you

3 drop the weight of that vehicle, now you are subjected

4 to having to meet a substantially more severe emission

5 standard, which tends to negate the fuel economy gain

6 made by reducing the weight.

7 MR. GRAY: I understand your concern.

8 MR. STROVEN: Therefore, you've kind of taken

9 away the incentive. We want to get good fuel economy,

10 but if we lower the weight and go through the cost of

11 redesigning and taking weight out and then find out

12 that the net effect is we didn't get anything for it. . .

13 MR. GRAY: Okay. I just wanted to be sure

14 your comment was understood.

15 You are saying that there is a serious

16 effort in Ford to down-size its prime half-ton pickup,

17 which is the F100, so that it would fall into the 3500-

18 pound inertia weight category?

19 MR. STROVEN: There would be incentive to

20 do that if we could get the fuel economy advantage,

21 with the emission standards as they are right now, and

22 if it is feasible within our cycle plan to do that.

23 MR. JENSEN: Let me interrupt just a minute,

24 because fuel economy standards for trucks is an issue

25 here.

1 Under the Energy Act, the Department of
2 Transportation, Secretary of Transportation, has to
3 adopt fuel economy standards for 6,000-pound trucks
4 and under, and he has an option between six and ten
5 thousand pounds. Unfortunately, from our standpoint,
6 his time period for doing this, as spelled out in the
7 Energy Act, is like a year before the trucks hit the
8 marketplace. So, all we've got now is a '79 model
9 year fuel economy standard. We don't know what he is
10 going to specify for '80, '81, and so on down the line.
11 We've talked to the Department of Transportation and
12 have sent them communications asking for advance notice
13 on where they are headed.
14 We've got an advantage on passenger cars
15 because we know what we've got to meet in 1985 and what
16 we've got to meet each year to get there. We don't know
17 what we've got to meet on trucks. We don't know how
18 high he will go.
19 Mr. Carter in his March energy message did
20 say that they were going to put standards in for all
21 the trucks up to 10,000 pounds. We don't know how they
22 are going to categorize them. Until we know this --
23 and we've told this to the Secretary of Transportation --
24 we can hardly make these kind of judgments about how
25 we are going to meet the standards; take the weight out

1 like we are doing on passenger cars, or different
2 engines, or whatever. So, we really are in a kind of
3 state of uncertainty until we know where DOT's going
4 on this, because we only right now have one year
5 specified by them, and that's the '79 model year for fuel
6 economy for under 6,000 pounds.
7 CHAIRMAN JACKSON: This seems kind of against
8 your argument about your incentive. The one thing you
9 do know is what the fuel economy requirements are going
10 to be and emission standards are going to be for under
11 6,000 pounds.
12 MR. JENSEN: No. Just for 1979. One year.
13 CHAIRMAN JACKSON: Just for one year?
14 MR. JENSEN: That's our problem.
15 MR. GRAY: But how can we take your argument
16 on that hand, and from the perspective of emissions, be
17 obliged to consider it, because you made the argument
18 that this more stringent standard will be such to
19 increase fuel economy, perhaps -- fuel consumption, that
20 is -- for the small trucks because of higher emission
21 standards. So, what we are simply asking is: Are you
22 saying that it's feasible to down-size a pickup truck?
23 We want to get at the heart of the basis for this
24 statement. I mean, is it a reality that you may be
25 down-sizing these trucks, and is it a reality that they

1 will indeed be subjected to more stringent standards,
2 or is it --
3 MR. JENSEN: We've got to go through our
4 thought processes at Ford. We read what the Secretary
5 of Transportation did in passenger cars. Everything
6 that's ever come out by the Secretary of Transportation
7 has been to make fuel economy standards much tougher
8 than anybody ever recommended from the automobile
9 industry. He adds two miles per gallon year by year.
10 We don't expect him to give away the store to the
11 automobile industry and trucks. We've got a lot of
12 people back at home looking at what we have to do if
13 the Secretary of Transportation does it to us in trucks
14 like he did it to us in passenger cars. And one of the
15 things we are looking at as a potential is the down-sizing
16 of trucks.
17 But I can't really answer your question.
18 Are we going to do it, or are we not going to do it?
19 There's a lot of people saying maybe he will take into
20 account that trucks move goods and, therefore, they
21 shouldn't give them such a tough fuel economy standard.
22 There's about half the company that doesn't believe that.
23 I'm in the half that doesn't believe that.
24 MR. GRAY: I understand your point there.
25 All I am getting at is: Are you making the argument

1 here today that it's feasible that you can take an
2 F100 which has a payload of, say, 2,000 pounds and take
3 weight out of that vehicle such that you don't compromise
4 payload, and make it fall into a smaller inertia weight
5 category? If so, then you've a legitimate concern
6 relative to the emission standards. If not, you don't,
7 because it will be a different kind of truck.
8 MR. JENSEN: On technical feasibility, I'll
9 have to ask you, Mr. Stroven.
10 MR. STROVEN: We think it is possible to
11 get that class of a truck down to that weight. Otherwise,
12 we wouldn't be making this argument.
13 MR. GRAY: Okay. Then, relative to the
14 stringency with respect to this -- I think your other
15 point was that you had a heavier load on the trucks
16 as compared to passenger cars because we are comparing,
17 really --
18 MR. STROVEN: The road load horsepowers are
19 higher, correct.
20 MR. GRAY: But California -- if I can find
21 the right table.
22 MR. JENSEN: Page 12.
23 MR. GRAY: Right. For light-duty trucks in
24 this particular category that you are concerned about,
25 the light category does have the same level of hydrocarbon

1 control, the same level of carbon monoxide control, but
2 appears to have recognized the concern, the problem,
3 over the higher duty cycle for light trucks in that they
4 did allow a substantially higher oxides of nitrogen
5 standard for that category. So, are we somehow missing
6 your point, because the data that we have at least
7 indicates that this road load effect is primarily an
8 effect on oxides of oxygen?
9 MR. JENSEN: You are talking about 1980.
10 If you look down at 1983 and subsequent to the bottom
11 part of that table, look at the oxides of nitrogen
12 there.
13 MR. GRAY: Is your comment, then, just
14 directed toward '83 and subsequent, since that's the
15 year that it appears there's not a proportionally higher
16 standard?
17 MR. STROVEN: That also applies in '81. You
18 are looking at 1.0 gram of NOx also in that light-duty
19 truck.
20 MR. GRAY: Right. It depends on which option
21 you assume a manufacturer is going with, I guess. Of
22 course, you have recommended 1.0 gram for passenger
23 cars. I'll grant you that.
24 MR. STROVEN: You have to compare that to
25 the standard for the 4,000-pound inertia weight class

1 vehicle, which is the one just below it, which is .5
2 on hydrocarbon non-methane, and 1.5 on NOx.
3 MR. GRAY: I agree totally with your
4 concern. I mean, you have made the point that there is
5 a more stringent standard for lighter trucks and that
6 that would have certain technology implications for
7 any manufacturer. I mean, there is a step function
8 change in the standards. I think we have heard your
9 argument there and have tried to clarify your testimony
10 in that regard.
11 But separating that and then just looking
12 at that particular group that you are concerned about,
13 your concern really comes to play depending on how things
14 fall out in '81 and then '83 because in '82, it reverts
15 back to a more stringent level for the passenger cars?
16 MR. STROVEN: Yes. The issue is more
17 between the two truck standards, I believe, than the
18 passenger car-truck issue so much as it is between --
19 There is the incentive, if you want at 4,000 pounds to
20 spend money to down-size, to take weight out, etc., to
21 get down to 3500 pounds to meet a substantially more
22 severe emission standard, it's generally resulted in
23 lower fuel economy. The net effect may be that you
24 get nothing for the money spent to down size the vehicle
25 and take weight out, besides having to use higher

1 technology hardware. The bottom line is you went through
2 the exercise and didn't get anything for it.
3 MR. GRAY: I only asked the other question
4 because you had mentioned it as a concern in comparison
5 to that smaller category to the passenger car standards.
6 That seemed to be the one key technical problem that you
7 commented on with respect to the small truck category
8 in terms of technical feasibility. That group of trucks
9 has a higher, more stringent test situation, higher
10 road load, more specifically, than do passenger cars;
11 therefore, it would be more difficult to meet a given
12 level of control.
13 First of all, I was trying to find out if
14 you were arguing that it would be more difficult with
15 respect to HC and CO, and I assume it's not. If you
16 do, let me give you this opportunity to say that you
17 think it would be more difficult with respect to those
18 two pollutants.
19 MR. STROVEN: Well, hydrocarbons, if we
20 include the zero- to 4,000-pound vehicle, I have the
21 same issues there as I do with passenger cars, as far
22 as manual transmissions go.
23 MR. GRAY: Right. But comparing one to
24 the other, you are not arguing that higher road load
25 has a substantially higher --

1 MR. STROVEN: Oh, the higher road load, okay.
2 MR. GRAY: The effect is on NOx?
3 MR. STROVEN: The effect is on NOx, that's
4 right.
5 MR. GRAY: Okay. I wanted to clarify that
6 point.
7 Then, once we have clarified that, I was
8 simply trying to address the remaining more specific
9 issue of the fact that California at least initially did
10 give some recognition to the differences in NOx control
11 potential, if you will, between these categories. I
12 guess it really boils down as to whether or not in 1981,
13 which is where the discrepancy stands now as to the
14 feasibility of one gram for light-duty trucks -- Is that
15 correct?
16 MR. STROVEN: That and compared to -- I
17 think our other argument we covered here was the issue
18 on the 4,000 pounds. It's the break point as to where
19 it's properly placed.
20 MR. GRAY: I fully understand your argument
21 there.
22 I guess going, then, back to the issue of the
23 hydrocarbon standard, perhaps a way to introduce this
24 discussion would be to ask Ford if there is agreement
25 with CARB that there is only a marginal difference in

1 terms of the difficulty of meeting a non-methane standard
2 at .39, and a total hydrocarbon standard at .41.
3 MR. STROVEN: With the systems that we have
4 planned -- and I'll be covering that -- there is a
5 significant difference in our ability to meet one versus
6 the other.
7 MR. GRAY: Would you quantify "significant"?
8 MR. STROVEN: It takes me from a confidence
9 level in some cases of low or moderate, to a case of
10 either a very high cert risk, or the ability not to
11 certify at all. I'll cover that here in this material
12 that I just gave you.
13 MR. GRAY: Okay. Do you want to present
14 this before we have more questions?
15 MR. STROVEN: Yes.
16 As Mr. Jensen mentioned earlier, all of
17 Ford's emission control plans and development efforts
18 for low hydrocarbon and NOx standards had been done
19 under the assumption of a non-methane hydrocarbon
20 standard.
21 As I mentioned earlier in speaking to CARB's
22 proposed Option B, I really have insufficient data to
23 speak to that at this time.
24 What we would like to address today is our
25 ability to meet the Option A standards, more specifically,

1 the total hydrocarbon standard called out in Option B.
2 In doing this, several methodologies were
3 employed by Ford to project the capability of meeting
4 certification durability requirements.
5 The first methodology we used was to take
6 our best effort development levels, which I have in this
7 package and we will cover, modified by a systems'
8 maturity task, which is -- We've made assessments of
9 those things that we still have to incorporate, and so,
10 what that will be worth to us before '81. These were
11 compared to Monte Carlo methodology development objectives.
12 A 65 per cent confidence level of success was employed,
13 consistent with a multiple 50K car certification
14 strategy. As I mentioned earlier, this was a deviation
15 from our past practices where we have always assumed
16 80 per cent confidence levels.
17 The second methodology I used was to project
18 a 50K tailpipe levels. These were compared to the 50K
19 standard. Development emission levels, modified again
20 by a systems' maturity task, were projected to 50K using
21 DF's obtained from actual fleet experience. These were
22 primarily fleets that ran with the systems or systems
23 very similar to what we are programming for 1981.
24 The third methodology used was: projected
25 50K tailpipe levels were compared to the 50K standard.

1 These were based on feedgas development emission levels
2 projected to 50K utilizing DF's obtained from fleet
3 experience; projected nominal catalyst efficiencies
4 were applied of 80/80/40; then a systems' maturity
5 task was applied; and then, finally, these were compared
6 to the 50K standard.
7 We feel this is probably a very bullish
8 position, because what we have assumed here is that we
9 will have the ability to just meet the standard at 50K.
10 That I have termed as being a low cert risk, and that
11 does not take into mind things like end-of-line, selective
12 enforcement audit, etc.
13 I want to flip to our second page. I have
14 the three methodologies outlined.
15 Under the first one where we use the Monte
16 Carlo methodology -- and I think, Mr. Gray, you are
17 familiar with that methodology that Ford has used in
18 the past. I have included on Page 5 the Monte Carlo
19 simulation of the certification durability process
20 and what we went through and what the objectives were
21 that were established from this.
22 Using this methodology and taking into
23 mind our development task, we've assessed our ability
24 to meet a non-methane hydrocarbon standard versus a
25 total hydrocarbon standard for a complete array of engines

1 that we plan to have for the 1981 time period.

2 In the first case, I did not have any data,

3 so I did not make an assessment.

4 In the second case, I had data for the

5 manual, and our confidence level of meeting both is --

6 our cert risk, I should say, is low in both cases. If

7 you look at the best effort data, you will see that this

8 is in the lower inertia weight class, the smaller engine.

9 In the second case, for both manual and

10 auto, we had data, and our risk assessment for the

11 manual was low. Excepting under total hydrocarbon, my

12 manual assessment was moderate. The automatic was

13 low cert risk in both cases. Again, these are in lower

14 inertia weight vehicles.

15 Now, as I start to move up in inertia weight

16 class, the vehicle, or engine D, the automatic is

17 assessed as being a low cert risk with non-methane, but

18 high under total hydrocarbon.

19 In the next class, I had data for both

20 manual and auto. Again, this is a mid-range on inertia

21 weight. Our confidence level of being able to certify

22 manual transmissions for this particular engine control

23 system was we had no confidence of being able to certify

24 either under non-methane, or total hydrocarbon standard.

25 For my automatic, my risk assessment was low to moderate

1 under total hydrocarbon, and the risk assessment was
2 high for total hydrocarbon (sic).
3 The next engine I did not have data for.
4 Moving down to the next one, Engine G, I
5 have data for both the manual and the auto again. At
6 this point in time, we have no confidence of being able
7 to certify a manual at either standard of non-methane
8 or total. My risk assessment on the auto was moderate
9 risk for non-methane hydrocarbon standard, but a high
10 cert risk for a total.
11 CHAIRMAN JACKSON: I think we pick up --
12 MR. STROVEN: Pardon?
13 CHAIRMAN JACKSON: I think we pick up your
14 line of thinking on this.
15 MR. STROVEN: The second methodology, as
16 you can see, that was the one where we took actual DF's
17 and projected them -- or multiplied best effort data
18 to date -- and, by the way, this best effort data was
19 based -- What I have shown you on Pages 3 and 4, we
20 selected out of approximately 400 vehicles and 20,000
21 tests, our best efforts which here represents around
22 44 vehicles and 155 tests. I have listed these for
23 feedgas, for tailpipe, shown efficiencies, and this
24 data is all based on vehicles that have roughly three
25 to eight thousand miles on them with catalyst systems

1 that are aged for 4,000 miles. This is the basis for
2 comparing these numbers, No. 1, to the Monte Carlo
3 objectives for our Prognosis No. 1.
4 Prognosis No. 2, I took best efforts and
5 multiplied them times a DF that we established from
6 fleets, from actual experience, and again, the risk
7 assessments you can see down there run from low to
8 not being able to certify the manuals again. In the
9 larger, heavier vehicles, the risk is low to moderate.
10 Under total hydrocarbon, several situations of not being
11 able to certify.
12 In the final case, we used feedgas levels
13 only, and we made the assumption of what the catalyst
14 technology will be for 1981, assuming some task of
15 beyond what we have been able to demonstrate today, and
16 use those catalyst efficiencies and apply them to the
17 feedgas level and project out to 50K. And, again, I
18 got a risk assessment for non-methane hydrocarbon and
19 total.
20 And then the next-to-last column was a
21 consensus of what we felt that risk would be from the
22 three methodologies that our prognosis is made. That's
23 kind of a composite of the three.
24 And then the last column I've shown what
25 the fuel economy loss would be. As we see it from

1 mapping data right now, if we had to take the hydrocarbon
2 levels that we are getting to meet a non-methane hydro-
3 carbon standard, and bring those down to a level we
4 would have to meet for a total, that shakes out to
5 anywhere from no loss in fuel economy to as high as
6 about 25 per cent loss in fuel economy.
7 I'd like to make one correction that you
8 have in your sheets there. In Footnote 2 and Footnote
9 3, there is reference to -- In the middle of Footnote
10 2, the reference says, "Tailpipe best effort shown in
11 Exhibit III." That should be "Pages 3 and 4." Pages
12 3 and 4 were an exhibit I had in another document. I
13 renumbered them and didn't pick it up here. We will
14 send you a corrected copy for the record.
15 Under Footnote 3 below, the second line says,
16 "Feedgas best effort shown. . ." Again, it should be
17 ". . . on Pages 3 and 4," not "Exhibit II."
18 MR. GRAY: Okay. Isn't this detail really
19 more appropriately directed just to EPA, since I think
20 the ARB has made little doubt, in that their actions
21 clearly, at least to me, appear to demonstrate that
22 they only adopted a total hydrocarbon standard for
23 1981 so they could enforce their program because the
24 Federal Government had not yet adopted a non-methane
25 standard. Looking before and after, the California

1 program is non-methane, and even in '81, there is a
2 non-methane option. So, rather than EPA to respond at
3 the CARB waiver hearings in terms of a technical dialogue
4 relative to details, I am sure Ford expects pretty
5 extensive follow-up from EPA on this issue. Is there
6 any point in us going into that, since it is an EPA-Ford
7 or EPA-industry problem instead of an ARB problem,
8 since the ARB only wants to enforce their programs and
9 actually stands on record saying that they favor a
10 non-methane standard? They had some pretty strong
11 language in their own statement that could be interpreted
12 as against the EPA position. So, what more can Ford
13 ask for?
14 MR. EPPEL: I think you are correct if your
15 suggestion is that our fight's with you and not with the
16 ARB on this one. I don't quarrel with that.
17 But the fact remains that you are going to
18 have to reach a decision fairly soon on a set of
19 standards that ARB has requested a waiver for. And they
20 have requested a waiver for, among other things, .41
21 total hydrocarbon. We think those standards are
22 unauthorized, they are unwise, and they are damaging
23 to Ford Motor Company. And we are not going to just
24 sit here and not make that known on the record of
25 this hearing, and we are not going to suggest that

1 there shouldn't be a decision out of the EPA waiver
2 proceeding on the .41 hydrocarbon.
3 Now, if you are telling me you are going to
4 just withhold a decision at this waiver proceeding on
5 .41 total hydrocarbon, I guess I'll have to scratch
6 my head and think whether I think that's good or bad.
7 MR. GRAY: I guess the only point here is
8 that certainly you have made your case, and I think
9 very strongly, in each of the areas that seem appropriate
10 relative to the non-methane issue. But still, that
11 is the Federal problem, that is the Federal standard,
12 and that is the current Federal interpretation of how
13 that standard will be implemented. So, without the
14 Federal position changing, it would be very difficult
15 for the agency -- I mean inherently if the agency
16 denied its waiver request on the grounds that you have
17 put forth as being logical, then inherently they have
18 changed their position. So, the agency has to first
19 resolve the Federal position, and I think you are
20 very much aware of the current position.
21 I guess all I am saying is there's not much
22 more that can be done, other than to receive your
23 comments on this issue, because it is a Ford-EPA issue,
24 unless I am missing something in this.
25 MR. EPPEL: Other than the fact you have to

1 reach a decision on it, and you have to make it with
2 respect to this waiver request.
3 MR. GRAY: We have to meet an obligation
4 relative to the waiver decision, there is no doubt.
5 But before that can be done, the agency has to establish,
6 first, what position it will take with respect to this
7 issue before it can act on this issue. That's all I
8 am saying.
9 MR. EPPEL: We are not quarreling with that
10 proposition at all.
11 MR. GRAY: Okay. Looking if we might, then,
12 more specifically to Option B for 1981, which does
13 allow a non-methane standard, then I think -- if I
14 may summarize and be corrected if I am inappropriate
15 in my statement -- that Ford has not problem with
16 the CARB standards up until the 1981 model year; is
17 that correct?
18 MR. JENSEN: Yes.
19 MR. STROVEN: Yes.
20 MR. GRAY: Okay. In 1981 model year, the
21 problem is with respect to the non-methane issue with
22 Option A. I assume, since if it was a non-methane
23 standard and since it would be the same as the Federal
24 standard, that Ford would have no problem with Option
25 A in 1981 under those provisions. That's what you are

1 saying, too?

2 MR. JENSEN: Yes, sir.

3 MR. GRAY: I am just trying to understand

4 what you are saying in a more concise manner.

5 Under Option B, which allows a non-methane

6 factor, you say at this point there is some degree of

7 risk associated with meeting the lower CO and NOx

8 standards together, and you will provide us some data

9 relative to the trade-off between CO and NOx with

10 respect to the cleanup catalyst, what data you do have --

11 MR. JENSEN: Yes, sir.

12 MR. GRAY: -- to help us better assess that

13 issue. And also in '81, there's concern about the

14 feasibility of the NOx standard for light trucks?

15 MR. JENSEN: Yes, sir.

16 MR. GRAY: Or is it more of a concern of

17 the transition to counter --

18 MR. JENSEN: It's where the cutoff points

19 are.

20 MR. GRAY: You don't have a technical

21 feasibility argument, then, with the small truck class?

22 In other words, in 1981 --

23 MR. JENSEN: We object to the .4, as you

24 know, in '83.

25 MR. GRAY: I agree. I mean I understand.

1 MR. JENSEN: Our main issue here is we'd like
2 to see the segments go from 3,000 pounds inertia weight
3 to 6,000 pounds.
4 MR. GRAY: I think that's understood. But
5 I want to be sure that we understand you were saying
6 that it wasn't technically feasible. You said that it
7 suffered a fuel economy penalty if you had to meet the
8 more stringent standard?
9 MR. STROVEN: The technical feasibility
10 issue would remain for manuals with the under 4,000
11 pounds. I think automatics, we have not taken exception
12 to it.
13 MR. GRAY: I guess there is one other problem
14 that we really haven't heard too much Ford comment on,
15 and that's this take-it-as-a-package approach that
16 California has offered here. In the event that Option
17 A became feasible for Ford, namely that -- Let's just
18 say for the purposes of these hearings that ARB had a
19 non-methane standard as they do in 1982. Could you
20 meet the 1982 standards under Option A? I mean, I
21 haven't heard any comment on that today.
22 In other words, if I understand the CARB
23 proposal or regulation, if you go with Option A in
24 1981, you've got Option A in 1982.
25 MR. JENSEN: We did, at the top of Page 5,

1 object to the 1982 standards. But since we have been
2 through all that at the August 4th waiver hearing, we
3 just went back to that. Rather than repeat all that,
4 we just referenced it.
5 MR. GRAY: Fair enough.
6 Then, from a very practical standpoint,
7 Option A is not a viable option for Ford?
8 MR. JENSEN: The way it stands now, that's
9 correct.
10 MR. GRAY: And Option A is the only one
11 that speaks of a total hydrocarbon standard?
12 MR. JENSEN: In '81.
13 MR. GRAY: And it's only in 1981?
14 MR. JENSEN: Yes, sir.
15 MR. GRAY: So, in effect, the non-methane
16 issue is really not pertinent to Ford's position with
17 respect to these hearings, since Option A is not a
18 viable option for Ford anyway in 1981 because that's
19 the only year there is a non-methane issue.
20 MR. STROVEN: I'd like to make one comment.
21 If we found that we could not meet Option
22 B with certain packages, we could A. I might elect
23 to build cars for one more year with Option A, rather
24 than taking them out one year before.
25 MR. GRAY: It's practical only in the

1 context that Ford can make cars one more year? I mean,
2 Option A is a package for '81 and '82, and it means
3 that Ford can only build cars if you elected Option A
4 in 1981 if you are saying that in '82 it's infeasible.
5 MR. JENSEN: We talked about a total product
6 line. Right along the line, we've said on smaller
7 cars -- Mr. Stroven has said we have a higher confidence
8 level, and his charts all showed that. What you say
9 is accurate, if you are talking about Ford being in
10 business on a total product line as we are now.
11 MR. GRAY: We have covered a lot of ground,
12 and this is a complex maze of options and changes.
13 I just wanted to try to focus upon some more specific
14 issues that EPA can try to get into that would relate
15 more to the guts of the issues as Ford has raised
16 them. It appears that Option B with respect to feasibi-
17 lity and CO and NOx is a very real technial objection
18 that Ford has raised and will have to analyze that
19 with consideration to additional data, and it's only
20 in the context you are trying to establish what
21 specifically EPA has to establish here, or to evaluate
22 that I am trying to get some sort of summary of our
23 rather lengthy discussion.
24 MR. EPPEL: Mr. Gray, just a second. Are
25 you suggesting that EPA doesn't have the power to

1 conditionally grant waivers so that you could break up
2 that package?
3 MR. GRAY: No.
4 MR. EPPEL: Okay.
5 MR. GRAY: I'm just trying to establish
6 what Ford's position is as clearly as I can so that
7 I'll know what we've got to deal with.
8 MR. EPPEL: That's all we want.
9 MR. GRAY: I think, as you said before,
10 that your comments to the August 3rd and 4th hearing
11 still apply relative to 1982 Option A, or 1983 total
12 package, and we need not go back into that today, as far
13 as Ford is concerned.
14 MR. JENSEN: Yes.
15 Mr. Chairman, we never did let Ms. Petrauskas
16 say anything.
17 CHAIRMAN JACKSON: We are going to. I know
18 what she's got to say, too.
19 Just for my own edification, Ford can meet
20 1981 .39 non-methane, 3.4 CO, 1.0 NOx?
21 MR. JENSEN: Yes, sir.
22 MR. EPPEL: Yes, sir.
23 CHAIRMAN JACKSON: Before we go to Ms.
24 Petrauskas, I wanted to clarify something that may have
25 been misleading in terms of a statement made by Mr. Gray

1 as to what the EPA must do before they can grant a waiver
2 to California.
3 It is unresolved as to whether the USEPA
4 must make a definitive determination with regard to the
5 HC standard before a waiver can be granted to the CARB
6 for its HC emission standard.
7 MR. EPPEL: Mr. Jackson, I guess I am kind
8 of slow. I didn't understand that. Could you read
9 that again.
10 CHAIRMAN JACKSON: It is unresolved as to
11 whether the USEPA must make a definitive determination
12 with regard to the Federal HC standard of .41 before
13 a waiver can be granted to the CARB for its 1981 hydro-
14 carbon standard.
15 MR. EPPEL: Let me see if I can state that
16 so I understand it. Are you suggesting that there
17 need not be a final firm Federal standard prior to the
18 granting of California, a waiver for their standards?
19 CHAIRMAN JACKSON: I didn't say that. I
20 said it's unresolved.
21 MR. EPPEL: It's unresolved?
22 CHAIRMAN JACKSON: That's why I used the
23 word "unresolved."
24 MR. EPPEL: Okay. I hope somebody resolves
25 it quickly.

1 CHAIRMAN JACKSON: Before we leave your
2 statement, Mr. Jensen, I want to make another point
3 for clarifying the record.
4 On Page 5 and I believe again on Page 7,
5 you asked that "Our testimony before the EPA waiver
6 hearing on August 4, 1977, in this respect be incorporated
7 as part of the record of this hearing."
8 As we pointed out in the notice of the
9 hearing, we are willing to receive any new or additional
10 information with regard to these matters, but as far as
11 the physical incorporation of that testimony into this
12 record, I don't believe it's necessary because this
13 record is indeed a part of that proceeding.
14 MR. EPPEL: That's fine.
15 MR. JENSEN: Okay.
16 CHAIRMAN JACKSON: It's a continuum that's
17 flowed from the amendments to the Clean Air Act.
18 MR. JENSEN: Yes, sir.
19 MS. PETRAUSKAS: I'd like to discuss briefly
20 a document that's entitled "Statement of Ford Motor
21 Company Clean Air Amendments of 1977 -- Limitations on
22 Maintenance Adopted by California," a copy of which
23 you received.
24 At the August waiver hearing, Ford testified
25 that with regard to the maintenance restrictions

1 adopted by California, it was very important to view
2 separately the restrictions that apply during
3 certification and the restrictions that apply to in-use
4 vehicles. That is, limitations on what the manufacturer
5 may tell purchasers.
6 We took the position that no waiver could
7 be granted because the California provisions would
8 conflict with Federal requirements and that indeed the
9 regulations weren't even eligible to be considered for
10 a waiver because they were not a standard or an
11 accompanying enforcement procedure.
12 Let me take the last of those first, because
13 it's a reoccurring statement that the ARB has made.
14 Section 209(a) provides that first, no
15 state shall adopt standards relating to new motor
16 vehicles; secondly, it says that no state shall adopt
17 any condition precedent to the sale of title or
18 registration that's related to control of emissions.
19 It then goes on, and for one state -- Let's
20 put the Eckhardt Amendment aside for the moment. For
21 one state, carves out a mechanism by which they may
22 receive waiver for standards. The Act has not been
23 amended to broaden the class of requirements, or if
24 you want to view them in terms of what Section 209(a)
25 says in terms of conditions precedent.

1 Let me get back to the first point, and that
2 is that the point we made was that the waiver could not
3 be granted in any case because there would be a conflict
4 of Federal requirements.
5 As you recall, at that time, we were
6 addressing the requirement of the then Clean Air Act
7 that the manufacturers provide reasonable and necessary
8 maintenance instructions. There was a great deal of
9 discussion at that time having to do with, first, who
10 decides what's reasonable and necessary in the first
11 instance; and, secondly, how is it that EPA goes about
12 enforcing that provision.
13 The concerns that you raised, and I think
14 you raised most of them, Mr. Jackson, aren't concerns
15 anymore, because the Congress has now acted and has
16 now given the agency substantial rule-making authority,
17 affirmative rule-making authority, not just enforcement
18 authority in this area.
19 I'd like to pick up on Page 5 of that
20 document and say by way of introduction we feel somewhat
21 vindicated in our view of what the Clean Air Act
22 provides. That is to say that the 1977 Amendments
23 reaffirm the obligation of purchasers to properly use
24 and maintain their vehicles. Indeed, what was implied
25 before in connection with the warranty provisions is

1 now expressly stated in the Act. The owner is responsible
2 for performing the maintenance included in the instruc-
3 tions furnished by the manufacturer.
4 Under the 1977 amendments, however, the
5 manufacturer must not only furnish instructions to the
6 ultimate purchaser for the proper maintenance and use
7 of vehicles, but such instructions must now, for the
8 first time, conform with regulations promulgated by
9 EPA. Congress has now directed EPA to actively enter
10 and clearly, beyond any argument, preempt the field
11 of rule making with respect to emission control-related
12 in-use maintenance. At the same time, while Congress
13 amended other provisions relating to Federal preemption
14 of new mobile source pollution controls, Congress did
15 not amend Section 209 to carve out an exception for
16 California in the preempted field of regulation of
17 in-use maintenance.
18 Unless there are any questions on that, I'd
19 like to go on and discuss briefly our document regarding
20 Section 177 of the Clean Air Act as amended, which is
21 the so-called Eckhardt Amendment.
22 CHAIRMAN JACKSON: As in the past, our
23 silence should not be interpreted to be an endorsement.
24 MS. PETRAUSKAS: I'm not surprised.
25 I am referring now to a document that's

1 entitled "Statement of Ford Motor Company Effect of
2 Section 177 of the Clean Air Act, as amended, on
3 proceedings conducted pursuant to Section 209(b) of the
4 Act."
5 The 1977 Clean Air Act Amendments contain
6 a provision which for the first time enables certain
7 states to impose emission control requirements on new
8 motor vehicles. This departure from the broad, general
9 principle of Federal preemption is of necessity very
10 narrowly drawn.
11 First, eligible states are given no discretion
12 as to the level of standards. They may only adopt
13 standards which have been previously adopted by California
14 and which have been found by EPA to be entitled to a
15 waiver or preemption.
16 Second, eligible states may adopt only the
17 standards. They may not implement their own certification
18 and mandatory testing procedures. This is one aspect
19 of the legislation that's very, very clear, based on
20 the legislative history.
21 If you look at Page 3 of the document,
22 there are some excerpts there that I think are worth
23 reading from the report which accompanied the bill that
24 the Congress Committee reported. That bill, of course,
25 was substantially amended on the floor of the House,

1 although not with respect to this particular section.
2 That report states that states are not
3 authorized to adopt or enforce standards other than the
4 California standards. States are not authorized to
5 establish different test procedures.
6 The provision is not intended to allow
7 states, other than California, to require additional
8 new vehicle certification testing, or enforcement
9 procedures since such testing and enforcement will be
10 conducted under Federal and California laws.
11 Turning back to the first page. Rather,
12 the sole enforcement authority available to these
13 states is that the sale of new motor vehicles for use
14 and registration in such state may be prohibited unless
15 the vehicles are covered by a certificate of conformity
16 issued by California. There can be no doubt that
17 Section 177 provides a mechanism for bringing California
18 cars into states other than California. It does nothing
19 more.
20 Further, it is clear -- What I've done here
21 is try to describe the scope of state authority under
22 the Eckhardt amendment, but the next section deals
23 with what is it that EPA must do.
24 This morning, counsel for ARB told you
25 that you should draw certain inferences from the fact

1 that Congress didn't establish a specific -- or didn't
2 impose on EPA a specific procedure for evaluating a
3 potential state action. If they are correct on that
4 inference and if you agree with that inference, then
5 I think it represents a very major, both legal decision
6 -- very profound, both legal decision and policy decision
7 on the part of EPA.
8 If it turns out, as has been speculated by
9 some within EPA for that matter, that the number of
10 states that may be eligible to adopt standards under
11 the Eckhardt Amendment is very, very high, if you accept
12 what California is saying, you are accepting almost
13 total abbrogation of the new mobile source control
14 area to the states. And it is a substantial departure
15 from the general policy that the Congress established
16 since the act was first amended; and to suggest that
17 that's something that Congress would do, not expressly,
18 not by stating it, but merely that that's an inference
19 that should be drawn I think is improper as a matter
20 of statutory construction.
21 On the contrary, if you look at some of
22 the provisions that accompany the Eckhardt Amendment,
23 I think you find that a different reading is much more
24 compatible with the notion of Federal supremacy in
25 the mobile source area. For example, the same report

1 that I cited earlier says that it was intended that the
2 Eckhardt Amendment place no burden on manufacturers.
3 The provision itself expressly states that a state may
4 not endorse standards unless it is a standard that has
5 been adopted by California and one for which a waiver
6 has been granted.
7 In fact, EPA is expressly directed to engage
8 in rule making as to the timeliness of actions by the
9 states.
10 So, I think the only way you can rationalize
11 a remaining overall general broad policy by the Congress
12 in favor of Federal preemption and new mobile sources,
13 and to protect that notion, and at the same time to
14 be consistent with what that House report, which I
15 cited and Mr. Macomber also cited this morning, that no
16 burden be imposed on manufacturers as a result of the
17 Eckhardt Amendment. The only way you can do that is
18 for EPA to take into consideration the impact of that
19 requirement were it to be adopted by other states.
20 In the case of the regulations that are
21 before you, we are making these points with respect to
22 the assembly-line test provisions and the inspection
23 provisions. This time around, there is a very easy
24 answer, and that is to say that the states do not have
25 authority to have any testing. Other than California,

1 of course, they have no authority to impose certification
2 testing. They have no authority to do any assembly-line
3 testing.
4 If you grant the waiver with the express
5 condition that that's EPA's assumption and that's EPA's
6 understanding of the Act, the impact of the Eckhardt
7 Amendment, based on our analysis today with regard to
8 the provisions of the Act, goes away. Your only other
9 alternative is to, in effect, hold California's waiver
10 request in abeyance until you can make determinations
11 as to lead time necessary to meet their assembly-line
12 test requirements were other eligible states to adopt
13 them.
14 CHAIRMAN JACKSON: I didn't follow that
15 last point.
16 MS. PETRAUSKAS: Your only other alternative
17 is to indeed determine which states are eligible, what
18 actions those states are going to take, and how much
19 time it's going to take to meet those requirements.
20 Assembly-line testing means you have to have facilities
21 in which to do the testing. Somebody has to put those
22 facilities up. As our statement says in some detail,
23 it's not simply a matter of additional volumen of
24 testing. There's also the question of geographical
25 distribution. So that even though the increase in

1 number of the vehicles tested may not be so great, but
2 now you find you have to put test facilities into plants
3 that don't have them today.
4 And, finally, if you have all manufacturers
5 -- presumably you would -- proceeding to put in these
6 facilities at the same time, within a short period of
7 time it's very likely that the lead time for obtaining
8 the instrumentation and putting up the facility is
9 going to be considerably longer.
10 CHAIRMAN JACKSON: I think I understand
11 your point, and I think I agree with your conclusion.
12 However, the plain language of 177 leaves me with a
13 problem: ". . .and take such other actions as are
14 referred to in 209(a)."
15 MS. PETRAUSKAS: They are given the authority
16 to adopt and enforce certain very narrowly described
17 standards. I think their enforcement in that regard
18 is limited to a requirement that any car that's
19 intended for sale and registration in that state is
20 a car that's covered by a California certificate.
21 There is simply no other way to read that provision
22 and reconcile it with what the committee that reported
23 the bill says.
24 CHAIRMAN JACKSON: I understand that, but
25 you would grant me that there is a legitimate problem

1 there in that some state desiring to proceed with more
2 aggressiveness than just adopting the standards could
3 have a basis for arguing that they have authority to do --
4 MS. PETRAUSKAS: I don't think -- Well, you
5 are asking a subjective question. I don't think they
6 would prevail in that. They can't prevail in that
7 view because it would cause chaos.
8 CHAIRMAN JACKSON: I understand that. I
9 mean, that's a result, but --
10 MS. PETRAUSKAS: But then one is forced to
11 conclude that Congress deliberately saddled, not just
12 the manufacturers, but EPA, with a chaotic situation.
13 CHAIRMAN JACKSON: Your thrust is they
14 really didn't mean to do anything other than make
15 available to the other 49 states, lower emission
16 standards?
17 MS. PETRAUSKAS: The right to demand
18 California cars in lieu of Federal cars.
19 CHAIRMAN JACKSON: With the understanding
20 that the Federal Government would enforce compliance
21 with those standards in those states in a manner
22 similar to which they enforce Federal compliance
23 everywhere else?
24 MS. PETRAUSKAS: No. That's a big jump
25 from the first statement you made to the second statement

1 you made. When the report says, states you shouldn't
2 get into the enforcement business with respect to these
3 standards because these will be done under California
4 and Federal law, I think what the meant there was that
5 if a manufacturer is unable to get a vehicle certified
6 in California and, therefore, has no certificate, then
7 it would be unlawful for him to sell that vehicle in
8 one of the states that active under the Eckhardt
9 Amendment.
10 Or, for example, if a manufacturer has had
11 a certificate revoked for reasons relating to the
12 performance of those vehicles -- emission performance,
13 now -- then other states which act under the Eckhardt
14 Amendment could likewise prohibit sales of those
15 vehicles because they are no longer covered by a
16 California. I think it's important to be very careful
17 in looking at the enforcement provisions.
18 For example, California at one time proposed,
19 although never enacted, regulations which would permit
20 California to revoke certificates for just a variety
21 of misdeeds having nothing to do with the emission
22 performance of vehicles.
23 Let me give you one example. They have a
24 statute in California which requires that you submit
25 a progress report similar to the report that EPA has,

1 an annual progress report. Failure to submit that
2 report theoretically allows ARB to revoke the certificate.
3 If you lost a certificate for a reason like that, I
4 think the proper reading of the Eckhardt Amendment and
5 legislative history is the other states would then
6 have to make some sort of mechanism whereby you could
7 demonstrate but for this other ancillary, unrelated
8 requirement you would have been eligible for a certificate
9 in California and, therefore, you should be eligible
10 to sell vehicles in that particular state.
11 CHAIRMAN JACKSON: You could read it, though,
12 that it means that the Federal Government can certify
13 and do whatever else it does with regard to new cars
14 to the California numbers as described by the Federal
15 test procedures.
16 MS. PETRAUSKAS: I don't know how to come
17 to that conclusion, because everything else -- all of
18 EPA's authority, its authority to establish certification
19 procedures, only relates to standards established under
20 Secton 202(a) of the Act. Its authority to do assembly-
21 line testing, SEA, is limited to sections established
22 under 202(a). Its authority to compel recall is
23 related to the failure of a class or category of
24 vehicles, a substantial number of them to fail to meet
25 standards established under 202.

1 So, I see no basis for EPA enforcing a
2 state standard. It's conceivable that -- Well, let me
3 back up a little bit.
4 I think the Federal enforcement or the Federal
5 oversight is going to happen as a result of exactly
6 proceedings like this one; namely, that one of the
7 things you are going to look at is see whether the
8 requirements can be met and whether they are consistent
9 with Federal requirements under Section 202(a). So, I
10 think enforcement in that section means something in
11 the way of oversight responsibility on the part of EPA.
12 There is one aspect of enforcement that I
13 think the Federal Government could get involved in,
14 and that is Section 209 has been amended to provide
15 that vehicles that meet the California standards are
16 deemed to meet Federal standards; therefore -- Let's
17 put aside any in-use compliance testing, but just the
18 basis of certification of a vehicle that's eligible
19 for sale in California and, therefore, is eligible for
20 sale in the other states, absent any other Federal
21 action, would be eligible for Federal certification.
22 I imagine what would happen is that California will
23 issue a certificate and simply that fact will enable
24 a manufacturer to obtain a Federal certificate for the
25 vehicles in question.

1 CHAIRMAN JACKSON: Following through this,
2 if in the course of certifying the Federal standards,
3 you submit a car, an engine family, and by whatever
4 draw of the straw it meets the California standards.
5 Okay?
6 MS. PETRAUSKAS: We are talking about a car --
7 CHAIRMAN JACKSON: An engine family.
8 MS. PETRAUSKAS: -- that is being tested in
9 order to obtain a Federal certificate?
10 CHAIRMAN JACKSON: A Federal certificate,
11 right. So, no implication to California. You've got
12 an entire engine family. The State of Illinois has
13 adopted legally the California standards, according to
14 the Eckhardt Amendment. Could you sell that engine
15 family in Illinois?
16 MS. PETRAUSKAS: Let me see if I understand.
17 I think the answer has got to be no.
18 CHAIRMAN JACKSON: I don't think the answer
19 has got to be no.
20 MS. PETRAUSKAS: If the State of Illinois
21 has adopted regulations where they have a statute
22 which prohibits sale of vehicles that are not covered
23 by a certificate granted by the State of California,
24 sale of that vehicle is unlawful.
25 CHAIRMAN JACKSON: That's not what the

1 Eckhardt Amendment says. Can adopt standards.
2 MS. PETRAUSKAS: Adopt and enforce standards.
3 CHAIRMAN JACKSON: It doesn't say anything
4 about California certification. It doesn't say anything
5 about this report you were talking about.
6 MS. PETRAUSKAS: Mr. Jackson, given the
7 chaos that would result if you give any other reading
8 to the Act, it just strikes me incredible that anyone
9 would ignore -- I am not suggesting that you are ignoring.
10 I am just saying you have no choice. Congress has
11 adopted a very, very difficult provision. To the extent
12 that there is some guidance in the reports, we have
13 no choice but to look at those reports.
14 CHAIRMAN JACKSON: I think you are making
15 it more difficult. I can't understand why you can't
16 live with the reading that says, in my scenario, that
17 if that happends, it would be perfectly legal for you
18 to sell that car in the state of Illinois. What's the
19 problem with that? Is it burdensome, or is it illegal?
20 MS. PETRAUSKAS: You are saying rather than
21 have certification testing be conducted by ARB, I
22 would come into EPA and deliberately target my car
23 to meet the California standards. The dilemma you get
24 into is when you have standards, as we've had in the
25 past at these hearings, standards that meet California

1 regulations that don't meet Federal regulations, and
2 that's the box you get in and that's one of the problems
3 with saying you -- you can't meet both sets of standards
4 under some circumstances. And it was that amendment
5 to Section 209 that said if you meet California standards,
6 you are deemed to meet Federal standards. It was
7 expressly --
8 CHAIRMAN JACKSON: It says standards. It
9 doesn't say certification.
10 MS. PETRAUSKAS: It was expressly designed
11 to take care of the situation where California opts
12 for a lower NOx standard and a higher CO standard.
13 MR. EPPEL: Mr. Jackson, are you suggesting
14 that EPA might give a Federal certificate to a vehicle
15 that meets a .39 non-methane, 7.0 CO standard, as Mr.
16 Gray pointed out almost double the Federal standard,
17 that EPA would certify that vehicle?
18 CHAIRMAN JACKSON: If it were a waived
19 standard, you mean?
20 MR. EPPEL: I could get a United States
21 Environmental Protection Agency standard for a 6.8 CO
22 car?
23 CHAIRMAN JACKSON: It's entirely conceivable
24 in the scenario of my own engine family.
25 MR. EPPEL: It's conceivable under the

1 scenario, but I don't know about under the Clean Air
2 Act.
3 MS. PETRAUSKAS: The problem you have with
4 granting the certificate is you are only authorized to
5 certification with regard to standards established under
6 Section 202.
7 MR. EPPEL: That vehicle doesn't meet
8 standards established under Section 202. How can you
9 give somebody a certificate for it?
10 CHAIRMAN JACKSON: (Indicating).
11 We will break for lunch and return at 1:30,
12 and we will ask Ford to come back.
13 (Luncheon recess.)
14 MR. GRAY: I had a question related to
15 a document that Ford Motor Company provided to us. I
16 don't know what you really would refer to it as. It's
17 a document --
18 MR. EPPEL: Post hearing memo?
19 MR. GRAY: Yes. I guess a legal document
20 of sorts.
21 In that document, there's a discussion --
22 MR. EPPEL: What page are you on, Charles?
23 MR. GRAY: Page 8. This is before EPA
24 hearing to consider California's request for waivers of
25 Federal preemption pursuant to the Clean Air Act, as

1 amended. The discussion is dealing with the question
2 of in the aggregate more protective of the public health
3 and welfare than the Federal standards, and what it
4 really means.
5 In the middle of that paragraph on that
6 page, the top part of it actually beginning, "Indeed,
7 in the proceedings held by CARB prior to its adoption
8 of a 0.4 and related truck NOx standards, substantial
9 questions were raised with respect to the air quality
10 impact of a further reduction of NOx emissions. The
11 record developed by the CARB was inconclusive."
12 And I guess the question I had is that is
13 Ford contending that this provision that relates to
14 EPA's review of the arbitrary and capricious nature of
15 CARB's actions is met if the record was inconclusive,
16 or is that sufficient to require EPA to deny a waiver
17 if in Ford's opinion it's inconclusive? Is that the
18 message you are trying to get across there? What are
19 you trying to say there?
20 MR. EPPEL: I don't think that's grounds
21 for EPA to do anything. I think it's a question of
22 what the record is. It's not a statement of opinion,
23 and it's a statement of EPA review of the record and
24 a lack of definitive finding one way or the other.
25 Normally, when the arbitrary and capricous

1 view is applied, and certainly consistent with the
2 definition of those terms as used in 307 of the Act,
3 there's required a finding that is sufficiently definite
4 to allow the reviewing party, whether it be a court,
5 or in this case EPA, to make some conclusions with
6 respect to the evidence behind that finding.
7 All we are saying here is that as far as
8 we were concerned, it wasn't really our argument of
9 going back and reviewing the record. It seems to us
10 that a fair review of the record was there was issues
11 decided not one way or the other, and I don't know how
12 you review that.
13 MR. GRAY: But you are not arguing that
14 EPA should have to be faced with the obligation of
15 having to agree that the CARB decision was appropriate;
16 rather, that CARB listen to all comment -- I mean --
17 MR. EPPEL: No, we are not suggesting under
18 the arbitrary and capricious standard of review -- I
19 think California covered it earlier. There is no
20 question that the reviewing agencies need not substitute
21 its own judgment. However, it must make an independent
22 judgment as to the facts underlying the findings. If
23 there are no facts, or if there are substantial facts
24 on the other side, unexplained on the record, then
25 there is no way you can affirm that finding as being

1 not arbitrary or capricious.

2 And I think the memorandum goes on to discuss

3 what arbitrary and capricious means in the Clean Air

4 Act now as a result of 307. It cites the Associated

5 Industries case, which the report cited is a type of

6 definition of arbitrary and capricious. It's not a

7 hard and fast thing. Anybody that has read any of

8 the cases in this area knows that there is some degree

9 of review that is required, and in order to exercise

10 that review, there is some nature of a record that

11 must be before the reviewing agency.

12 MR. GRAY: I asked the question just for

13 clarification what Ford intended by this particular

14 section of the document. Certainly there is dispute

15 over what is necessary here, and that's why I refer to

16 it as Ford's opinion. I just wanted a clarification

17 back to what you were driving at when you said, "Because

18 the CARB record was inconclusive, then it must be denied."

19 I mean, you can have a lot of evidence on

20 two sides, and then reasonable people can review the

21 evidence and make a judgment, and someone else may

22 decide the data were inconclusive. But if the CARB

23 looked at the data and gave appropriate consideration

24 to all information and then made a judgment and it was

25 as good a judgment as anyone else could have made, are

1 you implying here that that would be arbitrary?

2 MR. EPPEL: No. If that were the case, I

3 don't think we'd disagree with that. I think what

4 we are suggesting is there wasn't enough evidence on

5 either side for somebody to come up with an answer.

6 The reason reasonable men disagree is because the

7 questions that were raised on the one side were never

8 answered. There were never dealt with.

9 We don't have an air quality expert up

10 here with us today, Mr. Gray. I am not in a position

11 to rehash all of the issues.

12 MR. GRAY: CARB stated this morning that

13 they felt that the proceedings that surrounded this

14 determination were quite extensive and referred to

15 several Staff Reports and that they would commit to

16 providing the record of those, I think, January hearings.

17 And it appears at least that in their viewpoint they

18 have considered all appropriate information.

19 But I just didn't quite understand what you

20 meant and how far-reaching that statement should be

21 applied.

22 MR. EPPEL: Okay.

23 CHAIRMAN JACKSON: Thank you very much

24 for coming back, Mr. Jensen.

25 MR. NUTSON: Thank you, gentlemen. My name

1 is L. Lawrence Nutson, Senior Engineer, Emissions
2 Certification, Volkswagen of America, Inc. On behalf
3 of Volkswagenwerk AG and Audi NSU Auto Union AG, we
4 appreciate the opportunity to make the following comment.
5 Volkswagen and Audi understand the basis
6 for the CARB standards that have been adopted up to
7 now as being active measures which deal with the
8 compelling and extraordinary conditions that exist in
9 the state of California. However, we have concern with
10 the recently adopted CARB passenger car standards for
11 the 1981, 1982, and 1983 model years, and we have our
12 continued concern over the need for and technical
13 feasibility of a NOx standard of 0.4 grams per mile.
14 With the Clean Air Act of 1977, the Congress
15 recognized the necessity to actually first make a
16 determination of the need for such a NOx standard to
17 protect public health and welfare. Beyond the need,
18 since the cost and technological capability of attaining
19 such a standard have yet to be determined, as Congress
20 also recognized, we believe the granting of a waiver
21 for a NOx standard more stringent than 1.0 gram per
22 mile should not be acted upon at this time.
23 Furthermore, we want to emphasize again
24 the NOx limitations of the diesel engine and the recog-
25 nition of this fact by Congress in allowing the waiver

1 to a level of 1.5 grams per mile for 1981 through 1984
2 model years. Volkswagen would have to seriously
3 reconsider its development and availability of diesel-
4 engined vehicles in the California market with the
5 waiving of an applicable NOx standard below 1.5 grams
6 per mile.
7 In this same concern, it appears that the
8 recently adopted CARB 1981 and 1982 model year standards
9 for passenger cars have arbitrarily included a NOx
10 standard of 0.7 grams per mile. This is with no
11 allowance for any optional NOx limit for 100,000 mile
12 certification. Although Volkswagen does not agree with
13 the 100,000 mile certification option, in this circum-
14 stance, we could only elect the primary set of CARB
15 standards for our entire product line, so as to exercise
16 theNOx option for diesels. To choose the optional set
17 of standards would eliminate the diesel from the California
18 market. We would encourage EPA to consider the desire
19 to maintain fuel-efficient vehicles throughout the
20 entire U.S. energy demand.
21 Volkswagen has developed the three-way
22 catalyst concept with closed loop system and we are
23 confident to attain the 0.41/9.0/1.0 set of standards
24 in 1980 with a pilot program in California, in preparation
25 for the 1981 Federal standards. At the moment, however,

1 we cannot make any firm determination if we will be
2 ready in 1981 to minimize our safety margin with the
3 three-way catalyst system to comply with the 0.7 grams
4 per mile NOx standard. Therefore, we again emphasize
5 that granting a waiver for a NOx standard below 1.0
6 gram per mile should not be acted upon at this time.
7 We would like the record to reflect that
8 previous comments submitted at CARB meetings and EPA
9 Waiver Hearings remain as accurate statements of
10 our position in regard to allowable maintenance and
11 evaporative emission standards and test procedures.
12 To that last paragraph, I would add we may
13 have to submit some documents for the record other than
14 previous EPA hearings, but maybe of CARB hearings.
15 One further clarification is that when we
16 address NOx standards, we also address light-duty trucks
17 in the same respect for gasoline below 1.0 and diesel
18 below 1.5.
19 Thank you, gentlemen.
20 CHAIRMAN JACKSON: Is your statement that
21 with regard to the diesels, your problem with the 1981
22 Option A standard is not the total hydrocarbon standard
23 of .41 or the NOx standard, where you have the option
24 running 100,000 miles, but the CO standard of 3.4?
25 MR. NUTSON: No. The present requirement

1 is it's for the entire product line. If we go with the
2 NOx option for diesel, the gasoline cars are forced
3 in '82 to go to 0.4. You have to look at it again
4 together in '81 and '82 as a package. Option A shoots
5 the gasoline cars in '82, and Option B shoots the
6 diesel in '81.
7 MR. GRAY: Why are you saying that Option
8 B would eliminate the gasoline vehicles in 1981? The
9 .7 as compared to a 1.0, that difference would eliminate
10 all Volkswagen vehicles?
11 MR. NUTSON: It comes down to a relatively
12 recent decision from CARB and not having enough
13 sufficient data available to know what we can do at
14 this time.
15 MR. GRAY: You mentioned that you are
16 confident that you can attain a .41 with a three-way
17 system. Is that total hydrocarbons?
18 MR. NUTSON: Yes.
19 MR. GRAY: 9.0 CO and a 1.0 NOx with gasoline
20 vehicles, of course, with a three-way system?
21 MR. NUTSON: Right. We are talking a
22 fuel injection system, okay?
23 MR. GRAY: Right.
24 You say the pilot program preparation for
25 1981 Federal standards. Is it infeasible for you to

1 meet a 3.4 CO standard?

2 MR. NUTSON: When?

3 MR. GRAY: In '81 federally.

4 MR. NUTSON: Not across the entire product

5 line.

6 CHAIRMAN JACKSON: Before we leave that

7 point, I'd like to ask for a point of clarification

8 from the CARB.

9 Is your interpretation of the product line

10 to include both gasoline and diesel in the definition

11 of "product line," or would there be a potential for

12 a breaking apart of the product line with regard to

13 gasoline and diesel?

14 MR. RUBENSTEIN: That isn't very explicit

15 in the regulations, and we have to have some more

16 discussions in-house before we can develop that. We

17 will do that before the close of the comment, and

18 inform the affected manufacturers.

19 CHAIRMAN JACKSON: Let me clarify the point,

20 then. If they were to say "Product line only means

21 gasoline"?

22 MR. NUTSON: Might make a difference.

23 CHAIRMAN JACKSON: Would it make a difference?

24 MR. NUTSON: In regard to the 0.7 NOx, we

25 still have the same problem, the ability to meet that.

1 CHAIRMAN JACKSON: You can select Option
2 A ostensibly. Then you have the CO problem?
3 MR. NUTSON: For which, gasoline?
4 CHAIRMAN JACKSON: Diesel.
5 MR. NUTSON: No, we don't have a CO problem
6 for diesel. We have a NOx problem for diesel.
7 CHAIRMAN JACKSON: What I am saying is
8 you break them apart.
9 MR. NUTSON: Makes a difference, yes.
10 CHAIRMAN JACKSON: Select Option A for
11 diesel, Option B for gas. Of course, you'd still have
12 to stick together for the two years.
13 MR. NUTSON: The Option A still presents
14 a problem for this 100,000 mile certification, which
15 is not too pleasant.
16 CHAIRMAN JACKSON: Other than not being
17 too pleasant, can you do it?
18 MR. NUTSON: I'm not sure about that. I'd
19 have to check back on that. We have reservations
20 about the 100,000 mile certification, okay, which
21 implies ten years also.
22 MR. GRAY: What do you plan to do with
23 respect to the Federal requirement for 1981?
24 MR. NUTSON: For 1981, there's a NOx
25 waiver available.

1 MR. GRAY: Which is Option A of the
2 California proposal?
3 MR. NUTSON: But at 50,000 mile certification.
4 If California were to revise their thinking and go
5 along with the same EPA thinking and do away with the
6 100,000 mile requrement. . .
7 MR. GRAY: What is your point with respect
8 to the problem with the diesel at the Option A standards
9 in California?
10 MR. NUTSON: Requires 100,000 mile certifi-
11 cation.
12 MR. GRAY: And how is that different from
13 the Federal requirement?
14 MR. NUTSON: Federal requirement is 50,000
15 miles.
16 MR. GRAY: At 1.0 gram NOx?
17 MR. NUTSON: At any level. Okay? But the
18 Federal standards are 1.0 in '81, with a waiver
19 available for 1.5 for diesel.
20 MR. GRAY: With 100,000 mile certification?
21 MR. NUTSON: No. 50,000 miles.
22 MR. GRAY: You are saying the difference
23 is you can't demonstrate that level with the diesel
24 for 100,000 miles?
25 MR. NUTSON: Can't or want to?

1 MR. GRAY: Well, the question is, is it
2 feasible?
3 MR. NUTSON: But then you hope for this
4 ten years also, which is a problem, and the emission
5 warranty, however California would enforce that.
6 MR. GRAY: I know, but we are trying to get
7 whether or not Option A would be feasible for diesel
8 vehicles in California.
9 MR. NUTSON: We may not opt for Option A
10 for 100,000 miles just for that reason.
11 MR. GRAY: But then I think you said in
12 your statement you couldn't sell diesels?
13 MR. NUTSON: That's right.
14 MR. GRAY: Couldn't, meaning it's technically
15 infeasible, or that you wouldn't; which one would be
16 appropriate here?
17 MR. NUTSON: Maybe we wouldn't.
18 MR. GRAY: Okay.
19 CHAIRMAN JACKSON: You are not saying it's
20 technically infeasible?
21 MR. NUTSON: You can run a car 100,000 miles.
22 Somebody else brought up this subject this morning of
23 one car running for that mileage for certification
24 purposes, but there's a lot of ramifications on vehicles
25 in the field.

1 CHAIRMAN JACKSON: Thank you, sir.

2 MR. NUTSON: Thank you.

3 MR. NELSON: Good afternoon, Mr. Jackson,
4 members of EPA, and ladies and gentlemen. I am Edwin
5 E. Nelson, Assistant Director, Automotive Emission
6 Control, General Motors Environmental Activities Staff.

7 With me today on my far right is Harold
8 W. Schwochert, Staff Engineer, General Motors Environ-
9 mental Activities Staff, and Richard I. Petersen,
10 Attorney with GM Legal Staff.

11 Mr. Jackson, we submitted a letter two
12 days ago that indicated we would only have comments
13 on two of the waiver hearing discussions. I assume
14 that you received that letter and that's a part of the
15 record.

16 CHAIRMAN JACKSON: This letter dated October
17 11, 1977, from Mr. Fisher?

18 MR. NELSON: That's correct.

19 CHAIRMAN JACKSON: We did receive the letter.
20 We will make it a part of the record.

21 MR. NELSON: Thank you.

22 Do you have any preference as to the order
23 with which we take the two subjects that we would like
24 to discuss?

25 CHAIRMAN JACKSON: No, sir.

1 MR. NELSON: All right. I will start off
2 with the one that affects passenger car standards for
3 model year 1980 and subsequent model years.
4 General Motors submits the following comments
5 regarding the consideration of granting California a
6 waiver for 1980 and subsequent model year passenger
7 car exhaust standards. The proposed California require-
8 ments continue the hydrocarbon standard at the present
9 level, increase the stringency of the carbon monoxide
10 standard from the present 9.0 grams per mile standard,
11 and increase the stringency of the oxides of nitrogen
12 standard through severl steps to the 0.4 gram per mile
13 level in the 1983 model year.
14 The specific California standards and
15 test procedures being considered at this hearing,
16 including the amendments recently adopted by the Air
17 Resources Board on September 29-30, 1977, are extremely
18 complicated. One method of reviewing the California
19 proposal is to individually comment on the standard
20 for each pollutant.
21 Hydrocarbons. The need for hydrocarbon
22 control in California has not been questioned because
23 scientists generally agree that hydrocarbon reduction
24 is a straightforward means of reducing oxidant everywhere
25 in the state. Because the basis for controlling

1 hydrocarbons is their contribution to atmospheric
2 reactions leading to oxidant formation, General Motors
3 supports the Air Resources Board's non-methane hydrocarbon
4 control rationale. Californi's standards emphasize
5 control of hydrocarbons most important to ambient air
6 quality and offer incentive to develop control systems
7 which address reduction in the more reactive hydrocarbons.
8 Carbon Monoxide. Control of carbon monoxide
9 to levels more stringent than the present 15 and 9
10 grams per mile Federal and California standards,
11 respectively, has received considerable discussion
12 over the past months. As our testimony and statements
13 have indicated, we believe a 9.0 grams per mile
14 automotive emission standard is sufficient control to
15 achieve the CO ambient air quality standard in California
16 and all other areas of the country. We have been
17 unable to find any technically valid data which
18 support a more stringent standard. All of the data
19 which we have examined and the analyses which we have
20 reviewed, support this conclusion.
21 Oxides of Nitrogen. As we pointed out at
22 the August 4, 1977, EPA hearing, the NOx control
23 question is surrounded by a great deal of technical
24 uncertainty and, hence, substantial controversy.
25 General Motors is genuinely concerned that any air

1 pollution control strategy be the correct one. Our goal
2 is one of assuring ourselves that a specific program
3 will have positive "real world" effects.
4 Regarding NOx control, a dilemma exists
5 because air quality standards have been established
6 for both nitrogen dioxide and oxidants. Control of
7 NOx to meet the NO_2 air quality standard is at odds
8 with meeting the oxidant air quality standard. When
9 these seemingly conflicting requirements are considered
10 along with the complex meteorology which exists in some
11 areas of California and the geography of the Los Angeles
12 Basin, it is our judgment that extreme caution should
13 be exercised in controlling NOx to levels more stringent
14 than the previous standards.
15 To date, the scientific community has not
16 put together an atmospheric model which considers
17 the necessary parameters and predicts the atmospheric
18 benefits of more stringent NOx automotive standards. As
19 we indicated at the previous EPA hearing, the APRAC
20 organization has contracted with Environmental Research
21 and Technology to analyze the detailed collection of
22 atmospheric data from the LARPP study. An objective
23 of this APRAC contract work is to mathematically model
24 the Los Angeles Basin using the LARPP data to verify
25 the model. With some scientific judgment, the model

1 can be used to extrapolate the atmospheric impact of
2 various NOx control strategies.
3 Although this analysis may not provide the
4 final answers to all questions, it should add information
5 to existing knowledge and allow better evaluations of
6 various control strategies. In the meantime, we are
7 using the best data available to make the judgments
8 which we have discussed at the previous hearing. Our
9 smog chamber data have shown that further reductions
10 in NOx will result in an increase in oxidant at the
11 pollution source which also is the area of highest
12 population density.
13 Recent chamber studies have also looked at
14 the downwind oxidant effect of NOx reductions. It is
15 not clear what the precise oxidant effect will be in
16 downwind locations such as Riverside. It does appear
17 that this effect will be rather small, and oxidant may
18 actually increase or decrease depending upon the location
19 and the factors considered.
20 It seems clear to GM that consideration
21 cannot just be given to the downwind oxidant effect.
22 Our recommended caution in moving toward more stringent
23 NOx control is based on projected oxidant increases
24 in the high population density areas. Experimental
25 smog chamber data have verified time and again that

1 oxidant increases will be observed. Since most health
2 experts agree that ozone health effects are more severe
3 than NO_2 health effects, the net effect is expected to
4 be adverse for additional NOx reduction.
5 Since a program is underway which will
6 provide additional information sometime early next
7 year, General Motors believes the results of this
8 atmospheric modeling should be used in evaluating the
9 scientific validity of NOx reductions more stringent
10 than 1.0 gram per mile.
11 During the recent amendments to the Clean
12 Air Act, Congress also recognized that the control
13 of automotive NOx emissions to 0.4 gram per mile
14 deserved additional study. To this end, Congress
15 requested the Environmental Protection Agency to study,
16 among other things, the public health implications
17 of such a standard.
18 For the reasons just explained, we feel
19 that it would be inappropriate for EPA to grant a
20 waiver on the 0.4 NOx standard at this time.
21 If studies show more stringent NOx control
22 is required, the CO standard should be set at as high
23 a numerical standard as possible while still achieving
24 the ambient air quality standard. From a manufacturer's
25 standpoint, this consideration is very significant.

1 Development work has shown that future control systems
2 experience substantial NOx/CO trade-off effects. To a
3 degree, the optional set of California standards has
4 recognized this factor, and we are encouraged by the
5 flexibility offered by this option.
6 If you'd like we can present the other
7 statement and then have questions on both, or we can
8 do it individually.
9 CHAIRMAN JACKSON: Go ahead with the other
10 section.
11 On May 26, 1977, the California Air Resources
12 Board adopted regulations that reduce or eliminate
13 permitted vehicle maintenance effective with the 1980
14 and subsequent model passenger cars, light-duty trucks
15 and medium-duty vehicles. These regulations were first
16 proposed in November 1976, and they were the subject of
17 several ARB workshops and hearings between November 1976
18 and May 26, 1977. General Motors participated in
19 this rule-making process by appearing and testifying
20 during the various workshops and hearings and by
21 submitting information to the Air Resources Board.
22 Many other manufacturers participated in this rule-
23 making process to a similar extent, and therefore, the
24 record of this rule-making proceeding is an extensive
25 record.

1 On August 3, 1977, EPA conducted a waiver
2 hearing to determine whether or not California should
3 be granted a waiver of Federal preemption to enable the
4 ARB to enforce these maintenance regulations. During
5 this hearing many interested parties testified, and
6 the record for that hearing clearly indicates that the
7 regulations are the subject of strong opposition and
8 are supported only by the testimony of the ARB. General
9 Motors hereby requests that the record of the August
10 waiver hearing, including the entire record of the
11 ARB rule-making proceeding, be incorporated into the
12 record of today's hearing.
13 General Motors has and will continue to
14 strive toward design changes to eliminate maintenance
15 items where the technology is available and where it is
16 feasible to do so. We firmly believe and history shows
17 that General Motors strives to reduce vehicle maintenance
18 requirements to the minimum amount which is reasonable
19 and necessary to help assure continued satisfactory
20 vehilcle operation.
21 Effective emission control is only one of
22 many factors in determining the amount of maintenance
23 which General Motors recommends to its customers: other
24 equally important factors include vehicle safety,
25 fuel economy, reliability, driveability, durability,

1 and overall customer satisfaction. General Motors has
2 repeatedly emphasized the fact that the recommendation
3 of a specific maintenance item is often based upon
4 several of the aforementioned factors; and although
5 it may be technologically feasible to eliminate a
6 maintenance item if consideration is limited to effective
7 emission control, it may nonetheless remain technologi-
8 cally infeasible to eliminate that same item when
9 vehicle safety, fuel economy, reliability, or some
10 other factor is considered. The Air Resources Board
11 has failed to address this important issue.
12 The Air Resources Board has failed to
13 demonstrate that the regulations are technologically
14 feasible. In fact, the ARB has only made a weak attempt
15 at best to support the feasibility of these
16 regulations by contending that all manufacturers are
17 capable of eliminating recommended maintenance for all
18 vehicles to the minimum amount of maintenance for any
19 single item which is recommended by any of the manufac-
20 turers. This contention is based upon an assumption and
21 is not supported by any data establishing its validity;
22 it is clearly illogical and not supported by plain common
23 sense.
24 Maintenance recommendations vary between
25 models manufactured by the same manufacturer: components

1 are different and different modesl are designed to
2 serve different purposes and therefore maintenance
3 requirements necessarily differ.
4 As we pointed out in our submission to Mr.
5 Jackson dated August 26, 1977, there is a real
6 possibility that these regulations will inhibit develop-
7 ment of improved technology, including emission control
8 technology. The most obvious example involves the
9 maintenance of the oxygen sensor required for three-way
10 catalyst systems. Had these regulations been adopted
11 at an earlier date, they would not have allowed any
12 maintenance to these devices.
13 General Motors has also questioned whether
14 or not the regulations will result in any improvement
15 whatsoever to air quality. As we have already pointed
16 out, the data on the record indicate that about four
17 out of five owners claim to closely follow manufacturer's
18 recommended maintenance. Further, those cars have been
19 shown to have a "passing frequency" nearly double the
20 remaining 20 per cent whose owners do not follow
21 manufacturer's recommendations. In forcing reduction
22 of recommended maintenance the ARB runs a major risk
23 of degrading teh emission control performance of the
24 80 per cent of vehicles whose owners now say they
25 follow manufacturer's recommendations - with no tangible

1 evidence to indicate a significant improvement in the
2 remaining 20 per cent. Thus, we believe that there is
3 reasonable support for the proposition that these
4 regulations will cause a degradation in air quality and
5 that therefore they will not be as protective of public
6 health as current EPA requirements. ARB has provided
7 no persuasive data to the contrary.
8 General Motors respectfully submits that
9 the subject requirements are clearly arbitrary and
10 capricious. They are unsupported by valid technical
11 data which demonstrate any improvement in air quality
12 and were adopted in spite of unanimous opposition by
13 interested parties. EPA, therefore, has no choice
14 but to deny this waiver.
15 Thank you.
16 MR. PETERSEN: Mr. Jackson, I'd like to add
17 just a couple comments.
18 My name is Richard I. Petersen, and I am
19 an attorney on the General Motors Legal Staff.
20 This hearing is being conducted pursuant
21 to Section 209 of the Clean Air Act as amended. That
22 section of the law authorizes EPA to waive Federal
23 preemption to enable California to enforce more
24 stringent emission standards than those applicable to
25 the other 49 states.

1 In part, Section 209 provides that a waiver
2 shall be granted if California determines that the
3 state standards will be, in the aggregate, at least as
4 protective of public health and welfare as applicable
5 Federal standards, but that no such waiver shall be
6 granted if the Administrator finds that the determination
7 by California is arbitrary and capricious, that California
8 does not need the standards to meet compelling and
9 extraordinary conditions, or that California standards
10 and accompanying enforcement procedures are not
11 consistent with Section 202(a) of the Act.
12 At prior hearings, EPA has heard testimony
13 regarding consistency, cost and technological feasibility.
14 The 1977 Clean Air Amendments now require EPA to consider
15 whether or not California's requirements are arbitrary
16 and capricious. Thus, the rule-making records of
17 the various ARB proposals become even more important
18 than before, and their review is absolutely necessary
19 before EPA can fulfill its functions under the law.
20 What do these words "arbitrary" and
21 "capricious" mean? As a responsible Federal agency,
22 EPA is well aware of their meaning, so I will not belabor
23 this point. But for the record, I would like to state
24 a few basic components of these characters "arbitrary"
25 and "capricious."

1 California courts have defined arbitrary
2 and capricious regulations as conduct not supported by
3 fair or substantial reason, stubborn insistence on
4 following unauthorized courses of action, action not
5 supported in the record for the action, action taken in
6 disregard of the facts, action without rational basis,
7 and unconsidered willful and irrational choice of conduct
8 unsupported by competent and substantial evidence.
9 I submit that these descriptions clearly
10 apply to the regulations on which we are testifying
11 today. In making a determination on this issue, EPA
12 must view the entire records of the appropriate rule-
13 making proceedings and determine whether or not based
14 upon the rule-making record arbitrary actions were
15 unreasonable and taken without consideration to facts,
16 data, and testimony provided by interested parties.
17 Although the review of the record will not
18 be easy, EPA's final determination will be.
19 The maintenance regulations present a clear
20 and undeniable case of arbitrary and capricious action.
21 One only need review the transcript of the December 1976
22 workshop when the ARB staff officials stated that the
23 regulations were based upon gut feelings rather than
24 actual data.
25 Mr. Jackson, more than a gut feeling is

1 required to substantiate costly and burdensome regulations
2 like those we are addressing today.
3 I'd like to add just a couple more points.
4 On Page 8 of his prepared remarks, Mr.
5 Macomber stated that the maintenance regulations are
6 at least as protective of public health and welfare and,
7 quote, obviously not arbitrary and capricious, end quote,
8 because no comparable Federal regulations exist. This
9 statement strains even the worst logic. An ARB regulation
10 can be arbitrary and capricious regardless of the
11 existence of comparable Federal regulations.
12 Secondly, although I have not seen the
13 legal memorandum referred to by Mr. Macomber this
14 morning, I inferred from his testimony that this
15 memorandum addresses and describes what represents the
16 rule-making record, which EPA must review in order
17 to determine whether or not the ARB regulations are
18 arbitrary and capricious. Because I haven't seen his
19 memorandum, Mr. Macomber may well agree, and I submit
20 that the relevant rule-making record includes all data
21 and all information upon which ARB relied in promulgating
22 this regulation. This includes statements submitted
23 by interested parties and all transcripts of ARB hearings
24 and workshops held upon these regulations. ARB must
25 submit such information for the record of this hearing

1 so EPA can fulfill its responsibility under Section 209
2 of the ACT. Obviously, the ARB rule-making records
3 do not include information not available at the time
4 the regulations were adopted by the Air Resources Board
5 on May 26th, 1977.
6 Thank you.
7 MR. GRAY: Referring first to your comment
8 regarding the exhaust emission standards, as I understand
9 your comments, they refer more to the air quality
10 need argument, rather than a GM argument of technological
11 infeasibility; is that appropriate or inappropriate?
12 MR. NELSON: That's correct.
13 MR. GRAY: Okay.
14 MR. PETERSEN: I'm sorry, Mr. Gray, could
15 you repeat that question?
16 MR. GRAY: Surely. I simply asked in
17 listening to the prepared statement and trying to read
18 it as it was being presented, it appeared that the
19 emphasis of the testimony was related to the need for
20 the various standards, rather than the technological
21 infeasibility of achieving those standards. And if
22 there was an argument being made of technological
23 infeasibility, then I wanted to pursue something more
24 specific because I didn't see anything that specific
25 in there on that topic.

1 MR. PETERSEN: I think that's correct on
2 today's statement, and I think we will stand on the
3 record of the previous waiver hearing so far as the
4 issue of technological feasibility is concerned.
5 MR. GRAY: Okay.
6 Referring to the second statement on allowable
7 maintenance, I simply want to ask a clarifying question.
8 On the first page, the last paragraph begins
9 with the statement, "General Motors has and will
10 continue to strive toward design changes to eliminate
11 maintenance items where the technology is available
12 and where it is feasible to do so." Is that a fair
13 summary of GM's position on this and GM's technical
14 judgment as to the technical situation; that is, that
15 General Motors cars now have only that maintenance
16 recommended that is technically necessary?
17 MR. NELSON: I think if you consider, Mr.
18 Gray, the statement we made that maintenance isn't
19 done just for one purpose; it's done for many purposes,
20 including the intangible customer satisfaction, the
21 convenience he has in operating his vehicle, the
22 breakdown frequency, these kind of things, I'd say that
23 yes, that statement does characterize what General
24 Motors has continuously done for years and years, and
25 still strives to do. And that's to provide the minimum

1 maintenance that's required to obtain those parameters
2 that I described.
3 CHAIRMAN JACKSON: On the unnumbered page,
4 I believe it's the first page of your statement with
5 regard to allowable maintenance practices, the last
6 sentence in the second paragraph says, "General Motors
7 hereby requests that the record of the August waiver
8 hearing, including the entire record of the ARB rule-
9 making proceeding, be incorporated into the record of
10 today's hearing."
11 Would you explain your reasoning for that
12 request.
13 MR. PETERSEN: I don't believe that it's
14 possible for ARB to make a determination on the arbitrary
15 and capricious issue without revealing the entire rule-
16 making record for the subject regulation.
17 CHAIRMAN JACKSON: If it's not possible for
18 the ARB?
19 MR. PETERSEN: I am sorry, if it is not
20 possible for the EPA.
21 CHAIRMAN JACKSON: So, following your line
22 of reasoning, it would be to the detriment of the ARB
23 if they did not provide this?
24 MR. PETERSEN: I am sorry, it would be to the
25 detriment --

1 CHAIRMAN JACKSON: Of CARB's position,
2 according to the waiver, if they did not provide this
3 record?
4 MR. PETERSEN: I can't speak on what would
5 be to ARB's detriment. I believe that the Clean Air
6 Act mandates action on the part of EPA, which requires
7 that EPA have the entire rule-making record in front of
8 it. I don't think EPA can make a determination on
9 the arbitrary and capricious issue without the record
10 of the entire rule-making proceeding in front of it.
11 That's impossible.
12 CHAIRMAN JACKSON: You mean that it can
13 find either way without looking at the entire record?
14 MR. PETERSEN: I am saying it cannot find
15 on the issue of arbitrary and capricious. It cannot
16 find either way, that's right.
17 CHAIRMAN JACKSON: Either way?
18 MR. PETERSEN: Yes. I think the case law
19 clearly supports that. You can't make a determination
20 of whether or not a regulation is arbitrary and
21 capricious by just looking at part of the record.
22 CHAIRMAN JACKSON: You are going to cite
23 us some case law?
24 MR. PETERSEN: I would be more than glad
25 to Xerox some copies of some pages out of some

1 Administrative Law Horn books, if that's necessary. I'll
2 be glad to provide some cites.
3 CHAIRMAN JACKSON: I must presume that by
4 this request you are asking me to direct the CARB to
5 incorporate this material into the record.
6 MR. PETERSEN: Yes, I am. You will recall
7 that we requested that that record be made part of the
8 record during the last waiver hearing. I don't think
9 that EPA has any discretion on this issue any longer.
10 I think EPA has to direct ARB to submit the entire
11 record of the rule-making proceeding.
12 CHAIRMAN JACKSON: Obviously, any rule-
13 making body has discretion. There's two: one is the
14 CARB, and one is the manufacturers. The EPA is in the
15 position of reviewing a decision-making process and
16 making certain findings and coming to a conclusion
17 with regard to a grant of a waiver, which would be in
18 their interest and not in your interest. So, we've
19 got two parties with separate interests here. How
20 they best present their case for the purposes of
21 review, in light of what their interests are, would
22 seem to be up to them, as opposed to me directing them
23 as to what they've got to put in the record for their
24 case.
25 MR. PETERSEN: In order to not belabor this

1 point today, I will submit something in writing on this.
2 The question before EPA is not whether or not these
3 regulations -- The question on the arbitrary and
4 capricious issue is not whether these regulations are
5 good or bad. The question is whether or not they were
6 adopted in an arbitrary and capricious manner. So,
7 we are talking about the adoption, the act of adopting
8 the regulations. That is the significant issue.
9 CHAIRMAN JACKSON: Are you saying that
10 they were adopted in an arbitrary and capricious manner?
11 MR. PETERSEN: I am saying without doubt
12 these regulations were adopted in a arbitrary and
13 capricious manner, and the only --
14 CHAIRMAN JACKSON: You are satisfied that
15 the information to support that contention is contained
16 within the record of these proceedings?
17 MR. PETERSEN: The record of the APB rule-
18 making proceedings.
19 CHAIRMAN JACKSON: The record of these
20 proceedings?
21 MR. PETERSEN: In order to make a determina-
22 tion --
23 CHAIRMAN JACKSON: You are not answering
24 my question. What I'm getting at is what you are
25 interested in, and you are making an allegation that it

1 was arbitrary and capricious. If you've got information
2 which will permit the agency to make a finding that
3 their adoption was arbitrary and capricious, I submit
4 that you should provide that into the record on your
5 own behalf. It's either one way or the other.
6 MR. PETERSEN: I'm not sure I agree with that.
7 I don't think EPA can make -- EPA has an obligation
8 under Section 209 to make a determination -- EPA has to
9 make the determination -- whether or not these regulations
10 are arbitrary and capricious. EPA cannot do this
11 without reviewing the entire rule-making record for
12 the regulations.
13 General Motors has requested through the
14 MVMA the entire rule-making record for the ARB regulations.
15 To the extent that we have obtained that record, it
16 has been submitted, I believe, to EPA. The request
17 is still outstanding. So, if there is anything left
18 in the record, ARB is still under a request to submit
19 that information and it will be forwarded to EPA prior
20 to the close of the record of the waiver hearing.
21 CHAIRMAN JACKSON: So that moots the
22 question as to whether or not I should direct --
23 MR. PETERSEN: It moots the question except
24 that a request from the Environmental Protection Agency
25 to the ARB certainly carries a lot more weight than a

1 request to the FROM THE MOTOR VEHICLE MANUFACTURERS
2 ASSOCIATION. Our request does not carry penalties of
3 Federal rule for failure to submit full and complete
4 information. We are looking out for our interest.
5 CHAIRMAN JACKSON: I figured that.
6 MR. PETERSEN: We will submit to EPA as
7 much of the record as ARB gives to us.
8 CHAIRMAN JACKSON: Fine. I think we will
9 leave it there.
10 MR. PETERSEN: Mr. Jackson, let me add one
11 more point.
12 CHAIRMAN JACKSON: Is this a red herring?
13 MR. PETERSEN: Yeah. No, it's not.
14 ARB is in the best position to know what
15 is the complete rule-making record, not General Motors,
16 MVMA. ARB is.
17 CHAIRMAN JACKSON: In support of that which
18 is of interest to them, we can presume they will put
19 their best case forward.
20 MR. PETERSEN: But based upon their best
21 case, EPA cannot necessarily make a determination as
22 to whether or not these regulations were arbitrary
23 and capricious.
24 Let's take an extreme case. Let's say that
25 ARB only submits to EPA their staff reports and their

1 data and does not submit to EPA any conflicting or
2 opposing data or information.
3 CHAIRMAN JACKSON: I'm not so sure that that's
4 relevant, as long as what they submit to us leads
5 actually to the conclusions that they arrived at.
6 MR. PETERSEN: I don't believe that's
7 exactly correct, Mr. Jackson. I think that the standard
8 of arbitrary and capricious imposes the burden to
9 look at the evidence on both sides. If the evidence
10 on one side of the question is substantial and
11 substantially outweighs the evidence on the other side
12 of the question, courts have found that regulations
13 are arbitrary and capricious.
14 Not only that, one of the important questions
15 in the issue of what is arbitrary and capricious is
16 did the administrative agency consider all the facts
17 and information in reaching their decision. Not
18 whether or not they came out on one side or the other,
19 but did they consider all the relevant facts.
20 Now, EPA can't make a determination as to
21 whether or not ARB considered all the facts unless
22 EPA has all the facts in front of it. If you are
23 relying on ARB to submit under its own free will what
24 it desires for the record, they might only submit that
25 information which is favorable to their case. I'm

1 not implying that they will.

2 CHAIRMAN JACKSON: I would presume that

3 they may be inclined to do that. However, there is

4 nothing to preclude General Motors from presenting

5 whatever information, evidence it may wish on its own

6 behalf, not for a moment embracing your concept of our

7 review, but at the same time saying that to the extent

8 you have material which you want to provide to this

9 proceeding to support your contentions, feel free to do

10 so.

11 But the issue of my directing the CARB to

12 provide information, and I'm not sure which way it would

13 go, whether it's for your interest or against your

14 interest, is inappropriate because at some point in

15 time, if we make a review, presumably we must make a

16 finding one way or the other. It could go against the

17 CARB as well as going for them in the context of

18 information that is provided upon which we perform

19 our review.

20 MR. PETERSEN: Well, let me just repeat --

21 CHAIRMAN JACKSON: If you are just going

22 to repeat the same thing, you don't need to.

23 MR. PETERSEN: ARB is in the best position

24 to know what is in the record, and EPA cannot make

25 their determination without reviewing the entire record.

1 I'll be glad to submit something to support that. That
2 is a very simple and basic concept of common law and
3 administrative law.
4 CHAIRMAN JACKSON: I see that Mr. Macomber
5 has come forward, and he may have something to say on
6 this matter.
7 MR. MACOMBER: Mr. Jackson, I think I can
8 represent right now that we intend to submit the
9 entire record as GM requests. It's not our intention
10 to expurgate portions of the testimony that we may wish
11 to cite in support of their position at all. I think
12 that would be unfair.
13 I think as a legal matter, I tend to agree
14 with your position that we can submit as a matter of
15 law whatever portions of the record we would like to
16 submit. However, as a matter of fairness and our role
17 as a public agency, I think it's only appropriate for
18 us to submit the entire transcript of our proceedings
19 or the written comments provided by General Motors and
20 other interested persons.
21 I think you will see that we have committed
22 to that already in our identification of the record
23 provided in my statement that was submitted earlier.
24 So, it's not something that we simply come up with here
25 under duress. It's a question of fairness that we've

1 already evaluated, and we are ready to be four square
2 about this problem. There is no question about that.
3 CHAIRMAN JACKSON: Those comments tend to
4 continue to moot the question.
5 MR. PETERSEN: I would submit that to the
6 extent ARB submits to EPA all information, testimony,
7 data, evidence upon which the ARB regulation was based,
8 the question is mooted and General Motors is satisfied.
9 Furthermore, EPA will be able to fulfill their functions
10 under 209.
11 CHAIRMAN JACKSON: In response to your
12 further remark, we have made no statement about what
13 we believe the standard of review is. By our not saying
14 that does not mean that we embrace your interpretation
15 of what our standard of review is.
16 MR. GRAY: I'd like to follow up on the
17 statement relative to technological feasibility. I
18 guess in thinking about your answer to my question
19 earlier, I'm not sure that it really gets at the question.
20 Let me be more specific and ask, perhaps
21 if I can approach it in a similar manner as was done
22 with Ford, does General Motors have any problems with
23 the current CARB regulations up until 1981 model year?
24 MR. SCHWOCHERT: I think the record will
25 be clear, Mr. Gray, regarding passenger car standards

1 we did not voice any strong opposition relative to the
2 1980 passenger car standard. I think the record is
3 also clear regarding the truck standard, which we are
4 considering for 1979 and subsequent model years. We
5 did have some objection to that standard, and our
6 objection is put forth in previous testimony.
7 MR. GRAY: To summarize that position, is it
8 the 1979 light-duty truck standard that you have problems
9 with, or the 1980, or both?
10 MR. SCHWOCHERT: Starting with 1979, and
11 principally, as you perhaps recall from the previous
12 testimony, with the hydrocarbon standard; although
13 once we get the same NOx standards that we do in
14 passenger cars that we have trouble with, obviously
15 we have trouble with those standards for trucks as well.
16 But it's the hydrocarbon standard starting in 1979.
17 MR. GRAY: You have no problem with the
18 oxides of nitrogen standard for light trucks or the
19 CO standards up until 1981?
20 MR. SCHWOCHERT: I think that's a fair
21 statement, yes.
22 MR. GRAY: Beginning in 1981, do you feel
23 that the passenger car total hydrocarbon standard of
24 .41, 3.4, and 1.0 total HC, CO and NOx is feasible?
25 MR. SCHWOCHERT: You have quoted the Federal

1 standard; is that correct?

2 MR. GRAY: Yes, existing Federal standard.

3 MR. SCHWOCHERT: We are working toward that

4 standard, Mr. Gray, and right now we hope to be able

5 to meet that standard in 1981.

6 MR. GRAY: Do you believe you can meet the

7 hydrocarbon standard in 1980 with the lower level of

8 CO and NOx required -- I mean higher level, excuse me.

9 Do you see any problem right now in achieving the .41

10 hydrocarbon standard for passenger cars Federally in

11 1980?

12 MR. NELSON: Mr. Gray, we'd like to answer

13 your question, but we aren't sure exactly what you're

14 asking. Could you repeat that, please?

15 MR. GRAY: I just want to be sure I understand

16 correctly, and I am being redundant, I admit, in that,

17 specifically do you see that there is no problem, or

18 do you anticipate no problem of being able to comply

19 in 1980 to the Federal standards? I think you said

20 that earlier.

21 MR. NELSON: Thanks for being positive for

22 us. We weren't that positive in our statement.

23 MR. GRAY: Well, I am asking you. Do you

24 anticipate problems in being able to, or not?

25 MR. NELSON: I didn't realize this was a

1 Federal standard review. We are hopeful to make it,
2 yes.
3 MR. GRAY: Should I say .41 in 1980? Would
4 that be better for you? There has been a question
5 raised with regard to the feasibility, and I want to
6 be sure I understand General Motors' position.
7 MR. NELSON: We aren't challenging the
8 feasibility of the Federal standard for 1979. I didn't
9 think that was the subject of the hearing.
10 MR. GRAY: No, 1980 in terms of when a .41
11 hydrocarbon standard can be met for passenger cars is
12 the question I am asking.
13 MR. SCHWOCHERT: I think it would be fair,
14 Mr. Gray, to say that we believe right now we will
15 have vehicles that we can offer for sale at that hydro-
16 carbon standard level. We can't say for sure that
17 it'll include the entire product lineup that we now
18 have, but we sure hope that we can provide as many
19 vehicles as possible. Surely, we will have some that
20 we can provide at that standard.
21 MR. GRAY: Has General Motors made any
22 sort of a tentative conclusion, at least perhaps, as to
23 which option they would elect in 1981 if California
24 is granted a waiver for those standards?
25 MR. NELSON: We have not made such a

1 conclusion.

2 MR. GRAY: Do you feel that both are

3 feasible, or both are infeasible?

4 MR. NELSON: I'd like to stand on the

5 statement we made, that we were encouraged that ARB

6 in adopting the alternate or option standard provided

7 additional flexibility to us in meeting the requirement.

8 From that viewpoint, we are encouraged by the require-

9 ment. We haven't made any determination which direction

10 we would elect to go.

11 After all, I think you ought to recognize

12 the hearing was just a week ago that established those

13 standards.

14 MR. GRAY: Do you feel it's infeasible

15 in 1982 to meet a .4 NOx standard?

16 MR. NELSON: We have stated many times we

17 do not know today how to meet that requirement.

18 MR. GRAY: Do you believe you could meet

19 the Option B in 1981? I refer only to the .4 NOx in

20 '82 because of the companion nature of '81-'82 options.

21 It seems the real difficulty of that option is tying

22 a manufacturer into the .4 NOx standard in 1982. Do

23 you feel that you can achieve the Option B standard

24 for 1981 and 1982 since it's the same for both years?

25 MR. NELSON: There's a better possibility

1 of meeting Option B than there is Option A for '82.
2 That's fairly apparent. We certainly haven't been able
3 to evaluate our product capability accurately enough
4 to tell you yes, we can meet it or no, we can't. We
5 did not make that argument. We discussed technology
6 feasibility at the last waiver hearings, and we were
7 under instruction to present new information at this
8 hearing.
9 MR. GRAY: I am driving at the question
10 of the new option in particular. You do acknowledge
11 in the introduction of your comments that option is
12 new and that the basic option has, of course, changed.
13 Since this is a new subject, I am simply asking: Do you
14 have difficulty, or do you think you would have difficulty
15 with respect to compliance with those changed standards?
16 It doesn't appear that you can totally rely on your
17 comments in the previous waiver hearing, since we were
18 really talking about, as I recall, different levels for
19 1981. We were talking about .39 non-methane, 9.0 CO,
20 and 1.0 NOx, and there's not an option exactly like
21 that available now for us to consider.
22 MR. NELSON: Certainly the option, as I
23 explained, does offer some flexibility because you can
24 go more than one direction.
25 Harry, do you have anything to comment?

1 MR. SCHWOCHERT: Yes. We will have difficulty
2 in meeting those standards. Again, we can't give you
3 any real definitive answers as to what part, if any,
4 of our product lineup will be able to meet those
5 standards. It's going to be difficult, surely. One
6 gram of NOx or lower control is going to be difficult
7 with the combined hydrocarbon standards.
8 MR. GRAY: Does GM plan to count on the
9 cleanup catalyst that we've heard referred to today in
10 order to achieve the lower levels of CO control?
11 MR. SCHWOCHERT: Right, now, based on what
12 we know today, we feel that we would need such a device
13 at a 3.4 gram per mile CO standard.
14 MR. GRAY: Do you have evidence to show
15 what increase in NOx emissions results with the use
16 of such catalysts due to the oxidation of ammonia with
17 your catalyst systems?
18 MR. SCHWOCHERT: It appears that the amount
19 of increase is probably somewhat dependent upon the
20 NOx level.
21 MR. GRAY: At the 1.0 gram NOx level, if
22 you will?
23 MR. SCHWOCHERT: Perhaps most of our work
24 has been directed toward as low a NOx level as we can
25 achieve. And, so, if we talked about a .4 gram per mile

1 NOx level approximately, we see maybe one-tenth or
2 two-tenths of a gram per mile increase at that level
3 across the oxidizing converter.
4 Now, I would like to point out that we don't
5 completely understand that increase, because it doesn't
6 appear to be just a straight oxidation of ammonia. At
7 least insofar as we can measure the ammonia output
8 from a system without an oxidizing converter, we cannot
9 account for the increase then that we do see when we
10 would put an oxidizing converter on that same system.
11 So, we don't quite understand why there is that increase;
12 nevertheless, there is an increase that appears to go
13 beyond what we see as far as the ammonia emissions go
14 without the oxidizing converter.
15 MR. GRAY: Will the additional one-year
16 lead time for a .4 NOx standard, if General Motors
17 elects Option B for '81 and '82, be a signficant help
18 in terms of being able to achieve that level? I mean
19 your comments at the previous hearing were directed
20 at .4 NOx for 1982, and this is another area where the
21 California Air Resources Board has changed their
22 programs last month. In electing to delay the .4 NOx
23 standard, if the manufacturer took Option B in '81 and
24 '82, does that change your position with respect to
25 achieving that standard, the additional one-year lead

1 time?

2 MR. NELSON: Certainly, an extra year would

3 allow you to do more work to reach the goal. It doesn't

4 give us confidence that we can get there. It certainly

5 gives us more time to work on that. From that viewpoint,

6 it's a help. We aren't sure that that's needed, as

7 we hope we pointed out clearly in our statement. If

8 we have to go that route, extra time is beneficial.

9 MR. GRAY: So, you don't have any sort of

10 a probability estimate or something like that as we

11 have heard discussed before as to what additional help

12 this would represent in terms of probability of

13 compliance, or something of that sort? It just generally

14 would help?

15 MR. SCHWOCHERT: You would have to keep in

16 mind, I think, that we are going to be introducing

17 the types of systems on a large scale basis that we

18 would hope to use to meet more stringent standards if

19 they were promulgated. Insofar as getting more and

20 more experience, hopefully that would increase your

21 learning process. But that's speculation to look into

22 a crystal ball and say for sure it would.

23 MR. GRAY: Do you have a quantitative

24 indication of the relative stringency -- if I can

25 continue to use that word for the discussion here -- of

1 a total hydrocarbon standard of .41 versus a non-methane
2 standard of .39?
3 MR. NELSON: I listened to the testimony
4 of the Air Resources Board this morning, and this differs
5 slightly from the interpretation I heard you make this
6 morning. That is, I thought that Mr. Rubenstein was
7 evaluating air quality differences and not stringency
8 of meeting the standard, and his comment was that they
9 are marginally different, depending upon -- I don't
10 know if he discussed this, but depending upon the type
11 of system, control system, whether it's a diesel or
12 stratified charged engine, or what. There is a very
13 marginal difference from that viewpoint, and we agree
14 with that. There is a marginal difference and ability
15 to meet such a standard, but we don't have any quanti-
16 fication to discuss.
17 MR. GRAY: What about a gasoline engine
18 with a three-way catalyst system, which I assume will
19 be most of GM's product line?
20 You did make a comment in your statement
21 today also that you supported a non-methane standard.
22 I am asking you in principle or in a practical situation,
23 insofar as it would actually make the standard easier
24 to achieve.
25 MR. NELSON: I would support it both from

1 a principle and a practical viewpoint.

2 In principle, it certainly makes sense that

3 you want to put your emphasis on the bad actor, and

4 in practical reality it may also be important.

5 MR. GRAY: Following up on the latter aspect

6 of this, do you have an indication of how important

7 it is from a practical standpoint what per cent of the

8 total hydrocarbon would be non-methane, or would be

9 methane, let me say, at these levels for the systems?

10 MR. NELSON: Well, I think we are running

11 about 15 per cent. Presently, we are running about

12 15 per cent methane. I don't know if that will be

13 the same or change in the future.

14 MR. GRAY: Is this presently running that

15 level with your three-way catalyst systems that are

16 targeted for these levels?

17 MR. NELSON: No. The ones that were

18 certified this year.

19 MR. GRAY: Right. But I mean with the

20 systems that you are working on now that have the

21 potential for achieving these levels, do you have an

22 indication of what the methane fraction is of those

23 vehicles?

24 MR. SCHWOCHERT: I don't think we have

25 enough information on extended mileage to give you a

1 good reading. The primary information that we have
2 on extended mileage vehicles are those that we certified
3 this year, or that we ran for certification purposes.
4 So, I don't think we can really give you a good
5 indication down the road. We just don't have that
6 information. We really don't have much reason to
7 believe that it's going to be significantly different,
8 because as we see it, the amount of methane that one
9 forms is a function of what goes on in the engine. That
10 is, there is essential change in the amount of methane
11 across the catalyst, and with three-way catalyst
12 systems, you are talking about the same air/fuel ratio.
13 Whether we are targeting for 1978 standards or 1980
14 standards, at least during most of the operating modes
15 during the Federal test, and air/fuel ratio is a very
16 important parameter, as far as the methane fraction in
17 the engine, I think. So, I don't expect big differences,
18 but we don't really have enough data to say that will
19 or will not happen.
20 MR. GRAY: Do you have any insight as to
21 why Ford Motor Company this morning would have raised
22 the issue as to the difficulty in meeting the total
23 hydrocarbon standard, as compared to a non-methane
24 hydrocarbon standard when, as best I can understand
25 the sytems, the basic approach that GM is following, or

1 that GM will be following and Ford is following are
2 very similar? Why would we expect a difference? Do
3 you have any technical comment to offer, or judgment
4 there?
5 MR. NELSON: I'd like to make a comment,
6 Mr. Gray.
7 One of the big advantages of using methane
8 adjustment is because of the requirement to optimize
9 fuel economy, and we haven't been able to quantify
10 exactly what that benefit will be. But it's significant.
11 And it may assist us in meeting other requirements. So,
12 we think it's very important.
13 Why artificially go farther than you have
14 to go for a given level of control? So, by using the
15 methane adjustment, we can accomplish several of our
16 objectives, hopefully, or at least get the best balance
17 possible between those objectives.
18 MR. GRAY: So, you have not seen a catalyst
19 formulation that would affect, for example, the
20 oxidation of methane? You stand on the statement that
21 you made earlier that the methane content in the exhaust
22 -- that the tailpipe methane level is only a function
23 of the feedgas to the catalyst? You have not seen
24 that vary with Cal's formulation, for example?
25 MR. SCHWOCHERT: I think we'd stand on the

1 statement that basically the methane in the tailpipe
2 is the result of its production in the engine.
3 CHAIRMAN JACKSON: Thank you, gentlemen.
4 (Short recess.)
5 MR. PERKINS: I am Stuart Perkins of American
6 Motors Corporation. I want to talk very briefly in
7 an oral statement on two subjects: One is the technolo-
8 gical feasibility of California passenger car standards
9 for low-volume manufacturers for 1980 and beyond; and
10 the other topic is 1979 and beyond light-duty truck
11 exhaust emission standards and test procedures.
12 Do you have any preference which short
13 statement I make first?
14 CHAIRMAN JACKSON: No.
15 MR. PERKINS: On the subject of 1979 and
16 beyond, light-duty truck exhaust emission standards and
17 test procedures, American Motors would like to supplement
18 its May 18, 1977, statement concerning the 1979 light-
19 duty truck standards.
20 As we previously stated, equating as a
21 proposed 1979 standard to all light-duty trucks under
22 4,000 pounds test weight with passenger cars is not
23 realistic with respect to our Jeep vehicles that are
24 designed primarily for off-road operation. The newly
25 amended Section 209(b)(1)(A) requires the Administrator

1 to deny a waiver request if he finds the standard was
2 arbitrary and capricious. American Motors submits
3 that the Air Resources Board was arbitrary and capricious
4 in requiring four-wheel drive vehicles designed
5 primarily for off-highway operation to meet the same
6 level emission control as passenger cars, if their
7 test weight was under 4,000 pounds.
8 As standards become more stringent,
9 regulatory considerations need to be cognizant of all
10 aspects of the vehicle population they are regulating.
11 Failure to recognize the unique characteristics of
12 four-wheel drive vehicles is an example of this lack
13 of consideration.
14 It is our belief that the ARB arbitrarily
15 and erroneously included our Jeep vehicles in their
16 light-duty truck standards. The following quote from
17 their statement to the EPA at the May 18, 1977 waiver
18 hearing supports this belief:
19 "The lighter classes of light-duty trucks
20 and medium-duty vehicles are almost identical to
21 passenger cars in design and weight and, therefore,
22 these vehicles should be able to meet the passenger
23 car standards with application of existing
24 technology already being used on passenger cars
25 such as three-way or oxidation catalysts, exhaust

1 gas recirculation and air injection."

2 The record of the May 18, 1977 waiver

3 hearing includes testimony and discussion on the basic

4 differences between our Jeep CJ vehicles and our

5 passenger cars that disputes the ARB's rationale for

6 the 1979 truck standards.

7 In addition, American Motors is unaware of

8 the basis for selecting 3,999 pounds as the split for

9 the light-duty truck class. Therefore, we consider

10 that the split at this point was purely arbitrary and

11 capricious and a waiver for these vehicles must be

12 denied.

13 The other subject is technological

14 feasibility of California passenger car standards for

15 low volume manufacturers for 1980 and beyond.

16 The 1977 amendment to the Clean Air Act

17 provided in Section 202(b) that the Administrator

18 shall prescribe standards which provide that emissions

19 of oxides of nitrogen may not exceed 2.0 grams per

20 vehicle mile in 1981 and 1982 for lower volume manufac-

21 turers who are dependent on other manufacturers for

22 technology development.

23 The ARB staff in a September 12 report to

24 its Board recommended that this exemption not be adopted

25 by California. American Motors disagrees with the ARB

1 staff's contention that California's regulations need be
2 consistent only with Section 202(a) of the Act, while the
3 exemption is contained in Section 202(b). The specific
4 federal limitation on emissions is wholly contained
5 within Section 202(b) and, therefore, is relevant to
6 California waivers.
7 In summary, American Motors asserts that
8 California ARB must develop some exemption in concert
9 with the intent of the Clean Air Act Amendments for
10 delay in the application of more stringent NOx standards
11 for lower volume vendor dependent manufacturers. To do
12 otherwise would be in direct conflict with all three of
13 the conditions that must be satisfied by California to
14 obtain a waiver. Consequently, the EPA must deny the
15 waiver.
16 We will not comment on each of the legal and
17 technical issues at this time. American Motors is workin
18 with the ARB staff to develop language to parallel the
19 Clean Air Act Amendments. We will soon submit a position
20 paper to the EPA record. We therefore request the EPA
21 to delay for 45 days its decision on the California
22 waiver related to California's emission standards for
23 passenger cars for the 1980 model year and beyond.
24 Thank you.
25 CHAIRMAN JACKSON: That's a new twist. I

1 thought about it, I guess, but I hadn't heard it
2 articulated quite that way.
3 What you are saying is that you think the
4 problem is going to be worked out as a result of your
5 efforts to get California to adopt an exemption provision
6 similar to that one which is in the Clean Air Act that
7 would apply to vendor dependent manufacturers?
8 MR. PERKINS: I'm not sure that I would go
9 so far at this point to say that I am certain that some-
10 thing is going to be worked out. My statement is that
11 we have talked to them, and we are working with my in-
12 tention toward that end.
13 CHAIRMAN JACKSON: You expect something to be
14 done in 45 days?
15 MR. PERKINS: I'm certain there would be a
16 conclusion within 45 days, either that we can work some-
17 thing out or that they would refuse to, and then we can
18 make a statement to the record of each of the legal and
19 technical arguments, rather than going over all of it at
20 this point.
21 CHAIRMAN JACKSON: Has the CARB got anything
22 to say on this matter?
23 MR. RUBENSTEIN: I think we would oppose any
24 delay in the EPA's consideration of the 1980 standards
25 because of this matter. If something were worked out at

1 a later date, there is no reason why the Board couldn't
2 make its regulations and apply for a waiver at that time.
3 CHAIRMAN JACKSON: One other observation that
4 I have with regard to your conclusion about the regulation
5 of four-wheel drive vehicles equivalent to the standard
6 drive counterpart. You might note that the Amendments to
7 the Clean Air Act, although addressing heavy duty
8 vehicles, provided specific language in terms of including
9 in the heavy duty regulations vehicles which have special
10 features in either off-street or off-highway operation
11 and use, the point being that the Congress in addressing
12 heavy duty vehicles specifically said includes off-highway,
13 off-street.
14 MR. PERKINS: These are light duty vehicles.
15 CHAIRMAN JACKSON: No, this is heavy duty.
16 MR. PERKINS: I'm sorry. These are light
17 duty (indicating his statement).
18 CHAIRMAN JACKSON: I understand that. I am
19 just saying with regard to heavy duty, Congress has made
20 an acknowledgement of its intent to that regard, thus you
21 can argue they had in front of them the EPA and CARB
22 regulations which would have given them the opportunity
23 to go the other way if they were concerned about that
24 point with regard to light duty.
25 MR. PERKINS: I would disagree with that.

1 They addressed heavy duty. They did not address light
2 duty.
3 CHAIRMAN JACKSON: That's the point, the
4 fact they didn't.
5 MR. PERKINS: They didn't consider it. They
6 didn't think about it.
7 But it comes, then, to the question of
8 technological feasibility with our four-wheel drive, and
9 these are not four-wheel drive counterparts to two-wheel
10 drive vehicles. We only build our Jeep CJ in the four-
11 wheel drive configuration. There is no two-wheel drive
12 configuration. It is technically infeasible for those
13 vehicles in the time span that was allowed to meet the
14 standards imposed by California.
15 The inherent design of the vehicles with
16 heavy transmissions, transfer cases and axels that are
17 different than passenger cars makes the application of
18 the same technology to Jeeps impossible to meet those
19 same low numbers as passenger cars do.
20 CHAIRMAN JACKSON: Let me make it clear that
21 I understand what you are concerned about with regard to
22 the exemption. I don't have your statement in front of
23 me, so I can't refer back to it.
24 Is what you want us to do is delay the
25 decision for 45 days from this date?

1 MR. PERKINS: Yes, permitting us, as quickly
2 as possible, to get a position paper to you. I don't
3 think it's appropriate for us to use this meeting as a
4 forum for American Motors and ARB to debate whether or
5 not Clean Air Act exemption for low volume manufacturers
6 applies to California. I think it's better that we try
7 to resolve many of those issues outside the public forum,
8 to agree on them ahead of time; and if it can be worked
9 out satisfactorily to what we view as feasible for
10 American Motors to produce vehicles during those model
11 years in California and ARB to conclude that with whatever
12 is worked out that the air quality in California is pro-
13 tected, I think it's better for us to do within technical
14 discussions rather than to debate this in a public forum.
15 CHAIRMAN JACKSON: I would encourage you to
16 provide whatever you are going to provide within the time
17 provided for the record to be open, which is October 31st,
18 I believe. I don't think on the basis of what you have
19 presented there is a sufficient case to commit to you that
20 the agency will not make a decision before 45 days from
21 this date. Although, if you look at our past record, you
22 probably don't even need to ask.
23 MR. PERKINS: We are currently working with
24 ARB on the subject, and both of us would like to resolve
25 it as quickly as possible.

1 CHAIRMAN JACKSON: Thank you, Mr. Perkins.

2 MR. WAGNER: I am Robert Wagner from the

3 Chrysler Corporation.

4 My statement will be short. I believe the

5 others have covered the issues very adequately. I think

6 the record clearly states Chyrsler's position on the

7 issues today.

8 We have supported the non-methane standard

9 primarily because it makes sense. It is clear that

10 methane is not reactive.

11 We support the flexibility offered in terms

12 of the options, even though we might not support the

13 numbers. We believe that there is a serious question

14 associated with the need for additional NOx control.

15 It is fairly clear to me that the effects of additional

16 NOx control are not very clear as to oxidants. I did

17 attend the January workshop, and one of the things

18 I did carry out of that meeting was that what I consider

19 the best scientific experts in this field concluded

20 was that they could not come to any conclusion about

21 the effect of NOx control on the atmosphere. They all

22 agreed that a substantial amount of additional study

23 was necessary before it was very clear what those

24 effects would be.

25 Questions?

1 CHAIRMAN JACKSON: But there wasn't any
2 question but what the more stringent NOx control would
3 reduce NOx in the immediate vicinity of the population
4 of cars?
5 MR. WAGNER: Oxidants?
6 CHAIRMAN JACKSON: Not oxidants.
7 MR. WAGNER: NO_2.
8 CHAIRMAN JACKSON: NO_2, yes.
9 MR. WAGNER: Yes, there is agreement to
10 the extent of NO_2 in the immediate area.
11 CHAIRMAN JACKSON: So the question is --
12 MR. WAGNER: The question associated with
13 oxidants and obvious questions associated with the
14 effect of ozone on health, whether the amount of ozone,
15 oxidants, in the atmosphere would increase or decrease
16 with lower NOx, those are serious questions in people's
17 minds. Would it actually increase or decrease? It
18 was interesting to me that there was not agreement
19 among those scientists as to whether those oxidants
20 would increase or decrease with lower NOx.
21 CHAIRMAN JACKSON: So it could go either
22 way?
23 MR. WAGNER: Could go either way.
24 CHAIRMAN JACKSON: I presume you were here
25 when Ford made their arguments about their problems

1 with the total hydrocarbon standards?

2 MR. WAGNER: Yes.

3 CHAIRMAN JACKSON: Option A and Option B

4 provides a non-methane hydrocarbon standard for 1981.

5 What is Chrysler's position with regard to its ability

6 to comply with either or both of those options for 1981?

7 MR. WAGNER: I believe that we could comply

8 with either one. I don't think either one of those

9 will put us out of business. As I previously stated,

10 we prefer the non-methane standard.

11 CHAIRMAN JACKSON: Because it makes sense?

12 MR. WAGNER: Because it makes sense.

13 CHAIRMAN JACKSON: As opposed to its

14 technological infeasibility?

15 MR. WAGNER: Right.

16 CHAIRMAN JACKSON: Do you have data which

17 demonstrates compliance with .39, 7.0, and .7?

18 MR. WAGNER: On what basis; on a one-car

19 research basis, or do you mean --

20 CHAIRMAN JACKSON: Whatever.

21 MR. WAGNER: Do you think we can go into

22 production with those numbers?

23 CHAIRMAN JACKSON: Do you think you can go

24 into production with those numbers?

25 MR. WAGNER: Not at the present time.

1 CHAIRMAN JACKSON: By 1981?

2 MR. WAGNER: We think we can meet .7 at
3 least on our small engines. There is serious question
4 as to whether our V-8's will meet .7. But I make that
5 statement from very limited information. We have been
6 shooting for the 1.0 NOx level, and we have stated that
7 we are going to meet 1.0 NOx level for 1980. And,
8 obviously, for 1981.

9 Whether we will have the same full product
10 offering as we presently have is certainly in serious
11 question.

12 CHAIRMAN JACKSON: Thank you very much, sir.

13 I believe the CARB has requested an
14 opportunity to return to the -- Did I notice a hand?

15 MR. SCHWENTKER: I'd like to make a few
16 procedural observations before you close.

17 CHAIRMAN JACKSON: We will permit the
18 procedural observations by Mr. Schwentker before the
19 CARB returns.

20 MR. SCHWENTKER: Do you want to do it now?

21 CHAIRMAN JACKSON: Yes.

22 MR. SCHWENTKER: Good afternoon. My name
23 is Don Schwentker, and I am counsel to the Automobile
24 Importers of America. I'd just like to speak briefly
25 to a few procedural issues.

1 The optional standards that California
2 adopted were considered at an ARB hearing on the 29th
3 of September. The decision was announced on the 30th
4 of September. AIA was notified that ARB intended to
5 consider these optional standards on Monday, September
6 26, three days before the public hearing, and we under-
7 stand that even the domestics, who are a lot closer, only
8 received notification the previous Friday. So, no one
9 had much notice that this was being considered at the
10 public hearing on Thursday, September 29. Therefore,
11 manufacturers couldn't adequately determine the effect
12 of these standards on their planned product line for
13 1981 and 1982.
14 This is especially true of manufacturers
15 whose engineering and production facilities are overseas.
16 The ARB record doesn't support the
17 technological feasibility of meeting these optional
18 standards in the lead time that was remaining. As a
19 matter of fact, at that hearing on Thursday, a week
20 or so ago, at the end of the day, the ARB chairman,
21 Tom Quinn, asked a couple of domestic manufacturers
22 about their ability to meet Option B by 1981. When
23 the manufacturers told them they were unable to answer
24 the question, they were told that they should phone
25 back to Michigan during the night and have someone

1 figure it out and give them the word the next morning,
2 to which I objected on the theory that the ARB record
3 ought to be based on something other than the overnight
4 determination by General Motors as to whether it can
5 meet Option B by 1981, and I still feel that way.
6 The ARB statement, on Page 14 of their
7 presentation, is also a bit misleading. The bottom of
8 Page 14 says, "Furthermore, at the Board's September 30,
9 1977 meeting when these changes were adopted, no
10 vehicle manufacturer expressed serious problems with
11 these changes and most manufacturers expressed the
12 belief that the optional standards would provide them
13 with additional flexibility which could improve their
14 ability to meet California's standard at minimum cost."
15 I attended the hearing on the 29th of
16 September, and whereas the manufacturers did agree that
17 an optional approach certainly offered flexibility,
18 I think it is misleading to say that no one expressed
19 serious problems. I think that everyone agreed that
20 they didn't know the effect that these standards would
21 have on their product line for 1981 and 1982.
22 And I think it's also not enough to say
23 that these standards are options. When someone complains
24 about the lack of a non-methane standard for hydrocarbon
25 under Option A, he's told that's an option. And then

1 when he complains about .7 NOx under Option B, he's
2 told that that's an option. But if you have problems
3 with one or more elements of each option, the fact that
4 it's an option doesn't console you a great deal.
5 We also think the options ought to be by
6 engine family and not by the entire product line. We
7 understand that the ARB concern is that if a manufacturer
8 were allowed to select Option A or Option B by engine
9 family that after having selected Option A with a
10 one-gram NOx standard in 1981 for part of his line and
11 for Option B with a .7 NOx for the remainder of his
12 line, the following year, if he felt he couldn't meet
13 .4 wtih the engine families for which he had selected
14 Option A, that there would be great pressure brought
15 to bear on the ARB to get rid of the .4 NOx standard.
16 That's something they have to face up to. They have
17 to face up to that 1983 in any case. If they are
18 concerned about public pressures about the ability to
19 meet a .4 NOx standard, they do have to face up to that.
20 I think it's inappropriate to say that this is reason
21 enough not to allow these standards to be met by engine
22 family at the manufacturer's option. They have concluded
23 that air quality is going to be served equally whether
24 the manufacturer selects Option A or B. If that in fact
25 is true, then he certainly should be allowed to do that

1 by engine family.

2 I'd also like to ask a question regarding

3 the sale of California vehicles outside of California.

4 Helen Petrauskas was raising an issue similarly earlier,

5 but I didn't hear any discussion on the option of a

6 manufacturer to sell a California vehicle outside of

7 California. It becomes very, very important to a

8 manufacturer who ships California vehicles, for instance,

9 to all West Coast ports for sale at all of the western

10 states, as is done by some of the import manufacturers.

11 It would be important to them to be able to sell these

12 other California vehicles in other states in the west

13 outside of California.

14 I'd like to know whether you have any

15 interpretation of the Clean Air Act Amendments with

16 respect to that, as distinct from the Eckhardt Amendment

17 under which a state could require California vehicles

18 to be sold.

19 Have you made any determination about that

20 question, or is it something that you haven't thought

21 about or don't care about.

22 CHAIRMAN JACKSON: One, haven't thought

23 about it until you just brought it up in exactly the

24 same slant that you have put on it.

25 MR. SCHWENTKER: It's an important

1 consideration if the California standards are indeed
2 different than the Federal standards.
3 CHAIRMAN JACKSON: I guess just at the risk
4 of being reversed and wrong, the way I see it working
5 would be: taking the language that says, "Compliance
6 with California standards will be deemed to be compliance
7 with Federal standards." At such time as another state
8 adopts California standards, then it would be in that
9 context.
10 MR. SCHWENTKER: I think that's clear.
11 It's not so clear --
12 CHAIRMAN JACKSON: When it breaks it out
13 in terms of the -- in the context in which you have
14 broken it out, the other state, whatever it may have
15 been, hasn't made this determination of its willingness
16 to adopt the California standards, which may include
17 a less stringent CO standard.
18 MR. SCHWENTKER: Right.
19 CHAIRMAN JACKSON: Therefore, you would
20 be preempting the state to some extent from the
21 prerogative of having a greater CO control as mandated
22 by the Federal standards, because that state didn't
23 say I want California's standards. With that line of
24 reasoning, I would argue that unless certified to the
25 Federal standards inclusive of the California standards,

1 that the sale of such a car would not be permitted.

2 MR. SCHWENTKER: This is a big problem,

3 I think, for domestics as well as importers. It's

4 probably a critical thing for importers who ship

5 California cars to West Coast ports. But I think

6 domestic manufacturers also sell California vehicles

7 in neighboring states to California.

8 One parting shot. I think before you

9 rule on the arbitrariness or capriciousness of California

10 rule making, you guys ought to be sentenced to sit

11 through a few rule-making sessions of the ARB. I think

12 that might open your eyes a little bit.

13 That's all I have to say. You might call it

14 cruel and unusual punishment.

15 CHAIRMAN JACKSON: Do you have any way of

16 enforcing this sentence?

17 MR. SCHWENTKER: No. No. We could offer

18 you something, I guess.

19 CHAIRMAN JACKSON: Thank you very much,

20 Mr. Schwentker.

21 MR. RUBENSTEIN: At the risk of inflicting

22 some additional cruel and unusual punishment on Mr.

23 Schwentker, I would like to make some final comments,

24 if I may --

25 MR. WAGNER: Would you speak a little

louder, Gary?

MR. RUBENSTEIN: I'll have to eat this thing.

With respect to a comment made by Volkswagen, I just wanted to reconfirm that we will clarify both to the EPA and to the affected manufacturers the question of whether or not that Option A or Option B split can be applied separately for gasoline and diesel-powered vehicles.

The second point --

CHAIRMAN JACKSON: Do you have any idea of which way it might go?

MR. RUBENSTEIN: No, not at this time.

The second point is that if EPA promulgates a non-methane hydrocarbon standard for 1981 model passenger cars, or if EPA in some way states that .39 non-methane hydrocarbon standard for 1981 passenger cars in California is at least as protective of public health as .41 total hydrocarbon standard, then under either of those conditions, I believe the ARB staff would recommend to the Board that it adopt a non-methane hydrocarbon standard for Option A in 1981 for California standards.

That was to address some concerns raised by some other vehicle manufacturers.

1 The third point I'd like to address is
2 on the discussion that occurred this morning on the
3 Eckhardt Amendment. We, I think, believe that's mostly
4 a discussion between EPA and the vehicle manufacturers.
5 The only point to which it concerns us is
6 that we very strongly believe, regardless of how the
7 EPA determination comes out, the Eckhardt Amendment
8 should not in any way make California's waiver conditions
9 or obligations more difficult. We believe that the
10 intent of the Clean Air Act Amendments of 1977 is
11 very clearly to ratify and strengthen California's
12 position in requesting and obtaining waivers and that
13 the Eckhardt Amendment was not intended to diminish
14 that right in any way.
15 MR. MACOMBER: That point is addressed
16 in my legal memorandum, which is in the record, in
17 further length.
18 MR. RUBENSTEIN: My fourth comment is
19 that GM made several additional arguments today
20 regarding air quality, and I guess several other
21 manufacturers as well. We don't believe that any new
22 arguments have been presented in terms of the air
23 quality and the trade-off between NO_2 and accident and
24 that all of these arguments were previously heard and
25 considered by the Board when they made their decision

1 to adopt the .4 NOx standard and related standards.
2 The fifth point is that GM in their statement
3 indicated that ARB had not considered several things
4 in adopting the maintenance regulations, and I'd like
5 to clarify that ARB did in fact consider the need for
6 scheduled maintenance for reasons other than emissions
7 control. Both in the transcript of the May 1976
8 hearing and an exchange between General Motors and
9 the Board, and as well in the final regulations, the
10 ARB did in fact recognize that there were some
11 circumstances in which maintenance for reasons other
12 than emission control might be required on emissions-
13 related components.
14 The last point that I'd like to make deals
15 with a comment, again by General Motors, regarding a
16 statement made at a workshop last December in which
17 they quoted an ARB staff member as saying that the
18 proposed regulation was based on "a gut feeling." This
19 is again with respect to the maintenance regulations.
20 That statement was made by an individual
21 ARB staff member and is not reflective of the Board's
22 decision-making process. The staff member's statement
23 further went on to say that in his opinion additional
24 work was required prior to final rule making.
25 After that 1976 rule-making workshop, as

1 a matter of fact, there was a questionnaire sent to
2 vehicle manufacturers for information on the subject
3 of maintenance. Written comments were received from
4 the manufacturers by the staff, a two-day workshop
5 was held, and two public hearings were held before
6 the Board made its final decision in adopting the
7 regulation. We think that it is totally absurd to
8 indicate that a "gut feeling" statement made by a
9 staff member early in the decision-making process could
10 in any way reflect on the effort and the consideration
11 that the Board gave to adopting those maintenance
12 regulations.
13 Sort of a final comment on that, we also
14 very strongly believe that the arbitrary and capricious
15 test clearly applies only to the "protective of public
16 health" finding and not ARB's entire rule-making
17 process. I believe that point is also covered in
18 Kingsley's memorandum.
19 CHAIRMAN JACKSON: With regard to the
20 maintenance instruction issue, as you probably noted
21 from the testimony by Ford, the Clean Air Amendments
22 changed considerably EPA's authority in that area.
23 What is your view of that change as it
24 relates to your program and intention to regulate the
25 content of maintenance instructions?

1 MR. MACOMBER: As far as the legal issues
2 are concerned, that again is addressed in the memorandum
3 already that we have supplied. I'm not aware of any
4 intention on our part to modify our regulations, or
5 to hold further hearings with respect to, say, appealing
6 or rolling back that program in any aspect.
7 Gary, are you aware of any thoughts along
8 that line?
9 MR. RUBENSTEIN: No. We may reconsider our
10 program if at some point in the future EPA does in
11 fact use that authority to propose or adopt regulations,
12 but at this point in time, since none have been
13 proposed, we have no plans to change our programs at all.
14 CHAIRMAN JACKSON: That's a staff view?
15 MR. RUBENSTEIN: That's correct.
16 CHAIRMAN JACKSON: It has not been addressed
17 by the Board?
18 MR. MACOMBER: The Board certainly has
19 never stated that they would consider rolling back a
20 program that they recently adopted, so I think we have
21 to assume that the Board intends to go ahead with those
22 regulations. We certainly have received no instructions
23 from them since August 7th to reconsider that program.
24 CHAIRMAN JACKSON: Well, I just reflect
25 on the motorcycle program, for example, where Federal

1 action in the area resulted in CARB rolling back, if
2 you will. Maybe that's not an appropriate way to
3 characterize your action, but my concern was whether this
4 had the same kind of effect, this change in the Federal
5 law, as the adoption by the Federal EPA of motorcycle
6 standards, and the kind of attitude towards that program.
7 MR. RUBENSTEIN: I think it could conceivably,
8 but we are at a different point in time in terms of our
9 relative rule-making processes than we were on the
10 motorcycle issue. I think that if EPA did in fact
11 adopt regulations governing vehicle manufacturers'
12 maintenance instructions to their owners that the staff
13 would definitely evaluate those regulations and would
14 recommend to the Board one way or another whether or
15 not the Board should modify its own regulations. Until
16 that time, we see no reason to approach the Board on
17 the subject.
18 MR. MACOMBER: I might point out, if I
19 understand the manufacturer's contentions on the legal
20 issue, it simply boils down to whether or not California
21 is somehow 100 per cent preempted from acting in this
22 area as a result of the Clean Air Act Amendments. As
23 we said in our memo, we don't think that's the case at
24 all. We think the question of preemption can be taken
25 care of by a waiver as a result of these proceedings.

1 That's why we are here today seeking a waiver for our
2 maintenance restrictions.
3 CHAIRMAN JACKSON: I think their point was
4 it was not waiverable.
5 MR. MACOMBER: Okay. I will concede that
6 to be their point. I'm not disagreeing with that being
7 their point.
8 What I am saying is that it clearly is
9 waiverable because, as our regulations require, it's
10 a condition for certification of new vehicles in
11 California. That's clearly a waiverable kind of program.
12 CHAIRMAN JACKSON: Clearly a precedent to
13 initial sale; is that what you are saying?
14 MR. MACOMBER: Yes.
15 MR. GRAY: I'd like to ask a couple questions
16 that we began to pursue this morning and deferred them.
17 The first one deals with the substantiation that the
18 CARB might have with respect to the feasibility of
19 the increased stringent 1981 passenger car standards.
20 Will the CARB or does the CARB intend to
21 supply additional information to the record that would
22 better justify the basis for their changing of that
23 regulation in terms of its feasibility? What information
24 does CARB have in hand that they felt would justify
25 making the standards more stringent?

1 MR. RUBENSTEIN: Taking a look at the
2 feasibility issue for Option A and Option B separately,
3 with respect to the Option A, I guess we did not feel
4 the need to submit any substantiation of that standard's
5 feasibility since that, as we understand it, will be
6 the Federal standard for all cars in 1981. Therefore,
7 we did not, as I say, see the need to submit any
8 further substantiation.
9 For Option B in 1982, the only change in
10 that standard from what we had previously addressed
11 at previous waiver hearings was a change in the standard
12 for CO from 9.0 down to 7.0. We indicated and we
13 believe that the testimony from the transcript of the
14 September 29th Board meeting will also support our
15 contention that that change in CO standard did not
16 affect the stringency or the lead time or the feasibility
17 issues for those standards.
18 MR. GRAY: To clarify, the transcript of
19 that hearing is the basis upon which you make that
20 statement that the --
21 MR. RUBENSTEIN: Change from 9.0 down to 7.0?
22 MR. GRAY: Correct.
23 MR. RUBENSTEIN: That's generally correct.
24 It's also based on the data that we used to support
25 the .4 NOx standard in the first place. We submitted

1 many documents supporting our position that the .4 NOx
2 standard is feasible for 1982, and we believe those
3 documents would also support our contention that there
4 is no effect on feasibility or lead time by changing
5 the CO standard from 9.0 to 7.0.
6 Looking at the feasibility for the Option
7 B, we believe that that should be treated primarily
8 as an option. We believe that there is some data that's
9 available. We believe that there has been -- We have
10 testimony from vehicle manufacturers to date about the
11 ability of at least small vehicles to meet those
12 standards.
13 Obviously, I think the bulk of our testimony,
14 though, has been directed at demonstrating the
15 feasibility and the lead time for Option A, and I think
16 the EPA would concur, as they have in previous times,
17 that the feasibility as demonstrated for at least one of
18 the options, then the question of feasibility for the
19 second option is somewhat mooted.
20 MR. GRAY: That question was basically
21 just framework upon which to ask this question: Do
22 you consider your Option B a strategy that would be
23 easier for a manufacturer to achieve?
24 MR. RUBENSTEIN: I could say that conversa-
25 tions with manufacturers and their testimony at the

1 last ARB hearing indicate that many manufacturers see
2 advantages to Option B. I presume those advantages
3 would be in the form of those standards being easier to
4 comply with than the Option A standards.
5 MR. GRAY: Is that to say that in the
6 aggregate -- whatever the appropriate words are in the
7 Act now, in the aggregate, do you feel that that package,
8 Option B, is at least as protective of the public
9 health and welfare as is Option A?
10 MR. RUBENSTEIN: Yes.
11 MR. GRAY: Do you have backup for that
12 judgment?
13 MR. RUBENSTEIN: The Board made that finding
14 at its September 30th meeting, and backup for that
15 finding would be based on the Staff Report, supplemental
16 Staff Report, and transcript of that hearing.
17 MR. GRAY: The Staff Report which is what?
18 Which Staff Report?
19 MR. RUBENSTEIN: 77-20-2.
20 MR. GRAY: At least in my reading of that
21 staff report, I do not recall seeing addressed the
22 question as to the benefit of that strategy as compared
23 to the strategy A in terms of improving the public
24 health and welfare.
25 MR. MACOMBER: I'm a little bit confused

1 by the question.

2 MR. GRAY: I guess what I am concerned

3 about --

4 MR. MACOMBER: The law requires the comparison

5 to be relative stringency or protectiveness to be made

6 with respect to Federal standards, not vis-a-vis

7 internally among California standards.

8 MR. GRAY: Option A is the Federal standard?

9 MR. MACOMBER: Right.

10 MR. RUBENSTEIN: In 1981.

11 MR. MACOMBER: Right, but it's a two-year

12 package.

13 MR. GRAY: The basic question, then, that

14 I am asking at this point is simply: Upon what basis

15 did the ARB make the determination that Option B is

16 in the aggregate at least as protective of the public

17 health and welfare as the Federal standard, which is

18 Option A?

19 This may be a little different twist to the

20 application of the arbitrary and capricious criterion,

21 but it seems like at least it hasn't been brought up

22 in this discussion here.

23 MR. RUBENSTEIN: Let me try to get your

24 question one more time. You're asking what the basis

25 is for the Board's finding that the standards in Option

1 B are at least as protective of the public health as
2 the Federal standards?
3 MR. GRAY: Yes.
4 MR. RUBENSTEIN: Okay.
5 MR. GRAY: As I understand the waiver
6 provisions, the EPA must make a determination that the --
7 MR. RUBENSTEIN: CARB must make a determina-
8 tion.
9 MR. GRAY: -- CARB did not make an arbitrary
10 and capricious determination with respect to adopting
11 Option B, which the manufacturers can adopt, which the
12 EPA must allow to be sufficient, which other states
13 can adopt, etc. So the question is simply --
14 MR. RUBENSTEIN: Okay. I believe --
15 MR. GRAY: -- to support that contingent.
16 MR. RUBENSTEIN: I believe that the basis
17 for that finding is contained in the supplemental Staff
18 Report which addressed those standards in particular,
19 and the Board essentially looked at the advantage of
20 achieving additional NOx control one year earlier --
21 or, excuse me, that's not the correct frame of reference.
22 We are comparing these with Federal standards
23 in each year.
24 MR. GRAY: Correct.
25 MR. RUBENSTEIN: The standards are at least

1 as protective of public health because they provide
2 an additional benefit of oxides of nitrogen at the
3 expense of a higher carbon monoxide standard and, in
4 our opinion, a marginally higher hydrocarbon standard.
5 Given the nature of the oxidants, carbon monoxide,
6 and NO_2 air quality problems in Southern California,
7 as were outlined in numerous Staff Reports already
8 included in the record of this hearing and presented
9 before the Board, the Board made the determination that
10 those standards in Option B for those two years were
11 in the aggregate at least as protective of public
12 health as applicable Federal standards.
13 MR. GRAY: Of course, that's the main reason
14 I was pursuing the question initially relative to the
15 quantification of "marginal." If marginal is 2 per cent,
16 then it's probably a moot point with respect to the
17 judgment. But if a non-methane standard really results
18 in significantly less control of reactive hydrocarbons
19 than would result with the implementation of a total
20 hydrocarbon standard, then that's a little different.
21 If you still say the trade-off is between HC and CO,
22 and that the hydrocarbon trade-off is just marginal,
23 it's not really worth considering, then data that
24 we may receive from the manufacturers showing that a
25 non-methane standard is much easier to achieve technically,

1 will also show that a non-methane standard will also
2 control reactive hydrocarbons to a much lesser degree
3 than would a total hydrocarbon standard. It would
4 seem consideration of that would be an important
5 consideration that the ARB should have.
6 I guess perhaps you have answered my question.
7 I didn't mean to elaborate so much.
8 The sole basis, then, is in the report of
9 that hearing and the Staff Report 77-20-3.
10 MR. RUBENSTEIN: That's correct, but in the
11 context of California's air pollution problem which was --
12 MR. GRAY: I realize that, but there is an
13 oxidant problem in that as well, and it seems like
14 that that is definitely the area that seems to be
15 troubling me, as it has been clearly expressed in the
16 line of questioning.
17 MR. RUBENSTEIN: The transcript of the
18 September Board meeting, I believe, will show that the
19 Board is not -- Perhaps this is not relevant for this
20 particular waiver decision -- is not giving up, as it
21 were, on oxidant control or hydrocarbon control for
22 motor vehicles and has directed the staff to investigate,
23 among other things, the possibility of reducing non-
24 methane hydrocarbon standards for future model years.
25 I can't see that -- I guess what I am saying

1 is that I think the Board's decision was based on a
2 presumption of the kind of technology that would be
3 developed to lead to either the .41 total hydrocarbon
4 or the .39 non-methane hydrocarbon standard. And based
5 upon the presumption of how that development would
6 proceed over the next several years before 1981, the
7 staff recommended and the Board agreed that the increase
8 in hydrocarbons, the difference in terms of health
9 effects between the non-methane standard of .39 and
10 total hydrocarbon standard of .41, were in fact marginal
11 or small.
12 CHAIRMAN JACKSON: You are telling us,
13 though, that the Board has made an affirmative determina-
14 tion with regard to the optional standards as to whether
15 they are at least as protective of public health as
16 applicable Federal standards?
17 MR. RUBENSTEIN: That's correct.
18 CHAIRMAN JACKSON: And you are satisfied
19 that the basis upon which that determination was made
20 is provided in the record?
21 MR. RUBENSTEIN: Yes, that's correct.
22 CHAIRMAN JACKSON: And you've cited in what
23 you believe adequate manner the places where that
24 support can be found?
25 MR. RUBENSTEIN: Yes.

1 MR. MACOMBER: I think the record will
2 speak for itself, and I'm sure that EPA will study it
3 carefully. I don't think we intend to bind ourselves
4 necessarily today in indicating exactly where the record
5 is. But I think Mr. Rubenstein's statements are
6 accurate, to my knowledge. But we don't intend to
7 be bound precisely with what we are saying today. The
8 record will speak for itself.
9 MR. RUBENSTEIN: Along this same line,
10 it seems to us that your concerns, Mr. Gray, about the
11 difference between a non-methane and total hydrocarbon
12 standard in terms of their health effects in California
13 must be based on some presumptions as to the kind of
14 technology that will in fact be used, just as our
15 determination or our statement that there is only a
16 marginal difference in terms of health effects were
17 based on some kind of technology. We believe that unless
18 you can in some way show that the Board's finding was
19 arbitrary and capricious that you have no grounds for
20 substituting your judgment for that of ARB or its staff.
21 MR. GRAY: Is this the first time that
22 you've heard Ford's comments relative to the non-methane
23 issue? Ford, in essence, said today that there were
24 substantial differences in the reactive hydrocarbons --
25 to keep away from the word "stringency" -- of a non-methane

1 standard, as opposed to the so-called equivalent total
2 hydrocarbon standard.
3 MR. RUBENSTEIN: Given the technology that
4 Ford is working with. No, this is not the first time
5 we have heard those comments. We have had discussions
6 with Ford and other manufacturers ever since the Board
7 first adopted the methane correction factor for the
8 '77 model year.
9 CHAIRMAN JACKSON: Then you continue to
10 harbor your beliefs, even given that the domestic
11 manufacturers who supply a preponderance of the cars in
12 California don't intend to use that technology or
13 appear not to be intending to use that technology? I
14 presume you are talking about the Volvo technology.
15 MR. RUBENSTEIN: You are basically talking
16 about the difference between the technology that has
17 5 to 10 per cent methane fraction versus the technology
18 that has 30 to 40 per cent?
19 CHAIRMAN JACKSON: That's correct.
20 MR. RUBENSTEIN: We don't believe that the
21 manufacturers strongly indicated one way or another
22 today which technology they would be using under Option B.
23 CHAIRMAN JACKSON: Well, Ford made it clear
24 that they only had one choice in terms of hardware,
25 and that's what they had locked in already. And that

1 was not, as I understood, the Volvo technology. And
2 therein lies their problem.
3 MR. RUBENSTEIN: Ford can correct me if I
4 am wrong, but I believe -- if they are still here; they
5 are still here -- that at the September Board meeting,
6 they indicated that if they chose to go to Option B,
7 there was a chance that they could delete the cleanup
8 oxidation catalyst on at least some portion of their
9 model lines, but then return to the straight three-way
10 catalyst system which is the one that has the relatively
11 low methane content.
12 CHAIRMAN JACKSON: Thank you, gentlemen.
13 I have a statement to make about the
14 proceedings as they go from here.
15 There has been quite a lot said today about
16 the standard of review the EPA must apply in making its
17 findings required under the Amendments. We have been
18 given a good deal of directions as to how we should
19 perform our review by the manufacturers and, indeed,
20 by the CARB. We may have from time to time said some
21 things on the part of the panel that reflected to some
22 extent our interpretation of the way the review will
23 be performed.
24 It's fair to say that the agency has made
25 no formal determination as to how it will make the

1 findings, perform the review required by the new
2 Amendments. We will take under consideration and
3 advisement the offerings made by the CARB, the manufac-
4 turers and, of course, our own lawyers in determining
5 how we will reach a conclusion here. But I say this
6 to avoid any undue reliance on statements that we may
7 have made here in response to some of the questions,
8 or indeed in posing some of the questions that would
9 lead the parties to conclude that the agency had formally
10 determined its policy with regard to the review issue.
11 With that, I'll ask if there are any more
12 statements that anyone desires to make to the record
13 of this proceeding.
14 If not, this hearing is adjourned.
15 MS. PETRAUSKAS: When will the record be
16 closed, Mr. Jackson?
17 CHAIRMAN JACKSON: The 31st of October.
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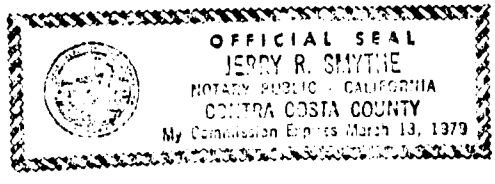
STATE OF CALIFORNIA)
o
City and County of San Francisco)

I, JERRY R. SMYTHE, hereby certify that the proceedings in the Public Hearing on the California Waiver Requests, held at the United States Federal Building, Room 13450, 450 Golden Gate Avenue, San Francisco, California 94102, on October 13, 1977, were taken down in shorthand by me, a Certified Shorthand Reporter and a disinterested person, at the time and place therein stated, and that the proceedings were thereafter reduced to typewriting under my supervision and direction.

I further certify that I am not of counsel or attorney for either or any of the parties to the said proceedings, nor in any way interested in the event of this cause, and that I am not related to any of the parties thereto.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office this 17th day of October, 1977.



NOTARY PUBLIC in and for the
County of Contra Costa,
State of California