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## LIST OF CFR SECTIONS AFFECTED

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## Title 12—BANKS AND BANKING

Chapter 1—Bureau of the Comptroller of the Currency, Department of the Treasury

### PART 9—FIDUCIARY POWERS OF NATIONAL BANKS AND COLLECTIVE INVESTMENT FUNDS

#### Miscellaneous Amendments

This amendment is issued pursuant to the authority contained in section 1(j) of Public Law 87-722, 76 Stat. 668, 12 U.S.C. 92a. Notice of the proposed amendment of Part 9 was published in the FEDERAL REGISTER on September 9, 1971 (36 F.R. 18082). A number of comments were received following publication and have been carefully considered.

This amendment differs from the published proposed amendment in that it reflects comments received and includes only part of the proposals which were published for comment. The remaining proposals are receiving further consideration.

Since this amendment reflects changes that do not impose substantial new requirements for which further notice would be necessary and desirable, delayed effectiveness is unnecessary and contrary to the public interest. Accordingly, this amendment will become effective upon publication (11-15-72).

Part 9, Chapter 1, Title 12 of the Code of Federal Regulations is amended as follows:

1. Section 9.1 by revising paragraphs (c), (g), and (i);
2. Section 9.2 by revising paragraphs (a) and (c);
3. Section 9.7 by revising paragraph (d);
4. Section 9.11 by revising paragraph (d);
5. Section 9.12 by adding a new subparagraph (4) to paragraph (b);
6. Section 9.13 by revising paragraph (a); and
7. Section 9.18 is revised.

Changes in the text are as follows:

#### § 9.1 Definitions.

(c) "Fiduciary powers" means the power to act in any fiduciary capacity authorized by the Act of September 28, 1962, 76 Stat. 668, 12 U.S.C. 92a. Under that Act, a national bank may be authorized to act, when not in contravention of local law, as trustee, executor, administrator, registrar of stocks and bonds, guardian of estates, assignee, receiver, committee of estates of lunatics, or in any other fiduciary capacity which State banks, trust companies, or other corporations which come into competi-

tion with the national bank may exercise under local law:

(g) "Managing agent" means the fiduciary relationship assumed by a bank upon the creation of an account which names the bank as agent and confers investment discretion upon the bank;

(i) "Trust department" means that group or groups of officers and employees of a bank organized under the supervision of officers or employees to whom are designated by the board of directors the performance of the fiduciary responsibilities of the bank, whether or not the group or groups are so named.

#### § 9.2 Applications.

(a) A national bank desiring to exercise fiduciary powers shall apply to the Comptroller of the Currency for a special permit to exercise such powers. Such application shall be made on Form CC-7510-01 (formerly TA-1).

(c) Each application made under the provisions of this section shall be executed and forwarded in duplicate, together with duplicate copies of documents containing any information submitted with the application, to the Regional Administrator of National Banks of the Region in which the applying bank is located.

#### § 9.7 Administration of fiduciary powers.

(d) The trust department may utilize personnel and facilities of other departments of the bank, and other departments of the bank may utilize the personnel and facilities of the trust department only to the extent not prohibited by law.

#### § 9.11 Investment of funds held as fiduciary.

(d) As a part of each examination of the trust department of a national bank and as provided by the Comptroller's Manual for Representatives in Trusts, the Comptroller of the Currency will examine the investments held by such bank as fiduciary, including the investment of funds under the provisions of § 9.18, in order to determine whether such investments are in accordance with law, this regulation and sound fiduciary principles.

#### § 9.12 Self-dealing.

(3) As is provided in § 9.18(b)(8)(ii);

(4) Where required by the Comptroller of the Currency.

#### § 9.13 Custody of investments.

(a) The investments of each account shall be kept separate from the assets of the bank, and shall be placed in the joint custody or control of not less than two of the officers or employees of the bank designated for that purpose by the board of directors of the bank or by one or more officers designated by the board of directors of the bank; and all such officers and employees shall be adequately bonded. To the extent permitted by law, a national bank may permit the investments of a fiduciary account to be deposited elsewhere.

#### § 9.18 Collective investment.

(a) Where not in contravention of local law, funds held by a national bank as fiduciary may be invested collectively:

(1) In a common trust fund maintained by the bank exclusively for the collective investment and reinvestment of moneys contributed thereto by the bank in its capacity as trustee, executor, administrator, or guardian.

(2) In a fund consisting solely of assets of retirement, pension, profit sharing, stock bonus or other trusts which are exempt from Federal income taxation under the Internal Revenue Code.

(b) Collective investments of funds or other property by national banks under paragraph (a) of this section (referred to in this paragraph as "collective investment funds") shall be administered as follows:

(1) Each collective investment fund shall be established and maintained in accordance with a written plan (referred to herein as the Plan) which shall be approved by a resolution of the bank's board of directors and filed with the Comptroller of the Currency. The Plan shall contain appropriate provisions not inconsistent with the rules and regulations of the Comptroller of the Currency as to the manner in which the fund is to be operated, including provisions relating to the investment powers and a general statement of the investment policy of the bank with respect to the fund; the allocation of income, profits and losses; the terms and conditions governing the admission or withdrawal of participations in the fund; the auditing of accounts of the bank with respect to the fund; the basis and method of valuing assets in the fund, setting forth specific criteria for each type of asset; the minimum frequency for valuation of assets of the fund; the period following each such valuation date during which the valuation may be made (which period in usual circumstances should not exceed 10 business days); the basis upon which the fund may be terminated; and such other matters as may be necessary to define clearly the rights of participants in the fund. A copy of the Plan shall be



available at the principal office of the bank for inspection during all banking hours, and upon request a copy of the Plan shall be furnished to any person.

(2) Property held by a bank in its capacity as trustee of retirement, pension, profit sharing, stock bonus, or other trusts which are exempt from Federal income taxation under any provisions of the Internal Revenue Code may be invested in collective investment funds established under the provisions of subparagraph (1) or (2) of paragraph (a) of this section, subject to the provisions herein contained pertaining to such funds, and may qualify for tax exemption pursuant to section 584 of the Internal Revenue Code. Assets of retirement, pension, profit sharing, stock bonus, or other trusts which are exempt from Federal income taxation by reason of being described in section 401 of the Code may be invested in collective investment funds established under the provisions of subparagraph (2) of paragraph (a) of this section if the fund qualifies for tax exemption under Revenue Ruling 56-267, and following rulings.

(3) All participants in the collective investment fund shall be on the basis of a proportionate interest in all of the assets. In order to determine whether the investment of funds received or held by a bank as fiduciary in a participation in a collective investment fund is proper, the bank may consider the collective investment fund as a whole and shall not, for example, be prohibited from making such investment because any particular asset is nonincome producing.

(4) Not less frequently than once during each period of 3 months a bank administering a collective investment fund shall determine the value of the assets in the fund as of the date set for the valuation of assets. No participation shall be admitted to or withdrawn from the fund except (i) on the basis of such valuation and (ii) as of such valuation date. No participation shall be admitted to or withdrawn from the fund unless a written request for or notice of intention of taking such action shall have been entered on or before the valuation date in the fiduciary records of the bank and approved in such manner as the board of directors shall prescribe. No requests or notice may be canceled or countermanded after the valuation date.

(5) (i) A bank administering a collective investment fund shall at least once during each period of 12 months cause an adequate audit to be made of the collective investment fund by auditors responsible only to the board of directors of the bank. In the event such audit is performed by independent public accountants, the reasonable expenses of such audit may be charged to the collective investment fund.

(ii) A bank administering a collective investment fund shall at least once during each period of 12 months prepare a financial report of the fund which shall be filed with the Comptroller of the Currency within 90 days after the end of the fund's fiscal year. This report, based

upon the above audit, shall contain a list of investments in the fund showing the cost and current market value of each investment; a statement for the period since the previous report showing purchases, with cost; sales, with profit or loss and any other investment changes; income and disbursements; and an appropriate notation as to any investments in default.

(iii) The financial report may include a description of the fund's value on previous dates, as well as its income and disbursements during previous accounting periods. No predictions or representations as to future results may be made. In addition, as to funds described in subparagraph (1) of paragraph (a) of this section, neither the report nor any other publication of the bank shall make reference to the performance of funds other than those administered by the bank.

(iv) A copy of the financial report shall be furnished, or notice shall be given that a copy of such report is available and will be furnished without charge upon request, to each person to whom a regular periodic accounting would ordinarily be rendered with respect to each participating account. A copy of such financial report may be furnished to prospective customers. The cost of printing and distribution of these reports shall be borne by the bank. In addition, a copy of the report shall be furnished upon request to any person for a reasonable charge. The fact of the availability of the report for any fund described in subparagraph (1) of paragraph (a) of this section may be given publicity solely in connection with the promotion of the fiduciary services of the bank.

(v) Except as herein provided, the bank shall not advertise or publicize its collective investment fund(s) described in subparagraph (1) of paragraph (a) of this section.

(6) When participations are withdrawn from a collective investment fund, distributions may be made in cash or ratably in kind, or partly in cash and partly in kind, provided that all distributions as of any one valuation date shall be made on the same basis.

(7) If for any reason an investment is withdrawn in kind from a collective investment fund for the benefit of all participants in the fund at the time of such withdrawal and such investment is not distributed ratably in kind, it shall be segregated and administered or realized upon for the benefit ratably of all participants in the collective investment fund at the time of withdrawal.

(8) (i) No bank shall have any interest in a collective investment fund other than in its fiduciary capacity. Except for temporary net cash overdrafts or as otherwise specifically provided herein, it may not lend money to a fund, sell property to, or purchase property from a fund. No assets of a collective investment fund may be invested in stock or obligations, including time or savings deposits, of the bank or any of its affiliates: *Provided*, That such deposits may be made

of funds awaiting investment or distribution. Subject to all other provisions of this part, funds held by a bank as fiduciary for its own employees may be invested in a collective investment fund. A bank may not make any loan on the security of a participation in a fund. If because of a creditor relationship or otherwise the bank acquires an interest in a participation in a fund, the participation shall be withdrawn on the first date on which such withdrawal can be effected. However, in no case shall an unsecured advance until the time of the next valuation date to an account holding a participation be deemed to constitute the acquisition of an interest by the bank.

(ii) Any bank administering a collective investment fund may purchase for its own account from such fund any defaulted fixed income investment held by such fund, if in the judgment of the board of directors the cost of segregation of such investment would be greater than the difference between its market value and its principal amount plus interest and penalty charges due. If the bank elects to so purchase such investment, it must do so at its market value or at the sum of cost, accrued unpaid interest, and penalty charges, whichever is greater.

(9) Except in the case of collective investment funds described in paragraph (a) (2) of this section:

(i) No funds or other property shall be invested in a participation in a collective investment fund if as a result of such investment the participant would have an interest aggregating in excess of 10 percent of the then market value of the fund: *Provided*, That in applying this limitation if two or more accounts are created by the same person or persons and as much as one-half of the income or principal of each account is payable or applicable to the use of the same person or persons, such accounts shall be considered as one;

(ii) No investment for a collective investment fund shall be made in stocks, bonds, or other obligations of any one person, firm, or corporation if as a result of such investment the total amount invested in stocks, bonds, or other obligations issued or guaranteed by such person, firm or corporation would aggregate in excess of 10 percent of the then market value of the fund: *Provided*, That this limitation shall not apply to investments in direct obligations of the United States or other obligations fully guaranteed by the United States as to principal and interest;

(iii) Any bank administering a collective investment fund shall have the responsibility of maintaining in cash and readily marketable investments such part of the assets of the fund as shall be deemed to be necessary to provide adequately for the needs of participants and to prevent inequities between such participants, and if prior to any admissions to or withdrawals from a fund the bank shall determine that after effecting the admissions and withdrawals which are



to be made less than 40 percent of the value of the remaining assets of the collective investment fund would be composed of cash and readily marketable investments, no admissions to or withdrawals from the fund shall be permitted as of the valuation date upon which such determination is made: *Provided*, That ratable distribution upon all participations shall not be so prohibited in any case.

(10) The reasonable expenses incurred in servicing mortgages held by a collective investment fund may be charged against the income account of the fund and paid to servicing agents, including the bank administering the fund.

(11) (i) A bank may (but shall not be required to) transfer up to 5 percent of the net income derived by a collective investment fund from mortgages held by such fund during any regular accounting period to a reserve account: *Provided*, That no such transfers shall be made which would cause the amount in such account to exceed 1 percent of the outstanding principal amount of all mortgages held in the fund. The amount of such reserve account, if established, shall be deducted from the assets of the fund in determining the fair market value of the fund for the purposes of admissions and withdrawals.

(ii) At the end of each accounting period, all interest payments which are due but unpaid with respect to mortgages in the fund shall be charged against such reserve account to the extent available and credited to income distributed to participants. In the event of subsequent recovery of such interest payments by the fund, the reserve account shall be credited with the amount so recovered.

(12) A national bank administering a collective investment fund shall have the exclusive management thereof. The bank may charge a fee for the management of the collective investment fund provided that the fractional part of such fee proportionate to the interest of each participant shall not, when added to any other compensations charged by a bank to a participant, exceed the total amount of compensations which would have been charged to said participant if no assets of said participant had been invested in participations in the fund. The bank shall absorb the costs of establishing or reorganizing a collective investment fund.

(13) No bank administering a collective investment fund shall issue any certificate or other document evidencing a direct or indirect interest in such fund in any form.

(14) No mistake made in good faith and in the exercise of due care in connection with the administration of a collective investment fund shall be deemed to be a violation of this part if promptly after the discovery of the mistake the

bank takes whatever action may be practicable in the circumstances to remedy the mistake.

(c) In addition to the investments permitted under paragraph (a) of this section, funds or other property received or held by a national bank as fiduciary may be invested collectively, to the extent not prohibited by local law, as follows:

(1) In shares of a mutual trust investment company, organized and operated pursuant to a statute that specifically authorizes the organization of such companies exclusively for the investment of funds held by corporate fiduciaries, commonly referred to as a "bank fiduciary fund."

(2) In a single real estate loan, a direct obligation of the United States, or an obligation fully guaranteed by the United States, or in a single fixed amount security, obligation or other property, either real, personal or mixed, of a single issuer: *Provided*, That the bank owns no participation in the loan or obligation and has no interest in any investment therein except in its capacity as fiduciary.

(3) In a common trust fund maintained by the bank for the collective investment of cash balances received or held by a bank in its capacity as trustee, executor, administrator, or guardian, which the bank considers to be individually too small to be invested separately to advantage. The total investment for such fund must not exceed \$100,000; the number of participating accounts is limited to 100, and no participating account may have an interest in the fund in excess of \$10,000: *Provided*, That in applying these limitations if two or more accounts are created by the same person or persons and as much as one-half of the income or principal of each account is presently payable or applicable to the use of the same person or persons, such account shall be considered as one; and *Provided*, That no fund shall be established or operated under this subparagraph for the purpose of avoiding the provisions of paragraph (b) of this section.

(4) In any investment specifically authorized by court order, or authorized by the instrument creating the fiduciary relationship, in the case of trusts created by a corporation, its subsidiaries and affiliates or by several individual settlors who are closely related: *Provided*, That such investment is not made under this subparagraph for the purpose of avoiding the provisions of paragraph (b) of this section.

(5) In such other manner as shall be approved in writing by the Comptroller of the Currency.

Dated: November 10, 1972.

[SEAL] WILLIAM B. CAMP,  
Comptroller of the Currency.

[FR Doc.72-19634 Filed 11-14-72;8:52 am]

## Chapter V—Federal Home Loan Bank Board

### SUBCHAPTER D—FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION

[No. 72-1306]

#### PART 564—SETTLEMENT OF INSURANCE

##### Updating of Examples of Insurance Coverage

NOVEMBER 8, 1972.

The Federal Home Loan Bank Board considers it advisable to amend Part 564 of the Rules and Regulations for Insurance of Accounts (12 CFR Part 564) for the purpose of clarifying certain of the Examples of Insurance Coverage Afforded Accounts in Institutions Insured by the Federal Savings and Loan Insurance Corporation, published as an appendix to said Part 564. Accordingly, on the basis of such consideration and for such purpose, the Federal Home Loan Bank Board hereby amends said Part 564 by revising Examples 8 and 10 of section E *Public unit accounts* and Examples 4 and 7 of section G *Trust accounts* contained in the appendix thereto to read as set forth below.

(Secs. 401, 402, 403, 405, 48 Stat. 1255, 1256, 1257, 1259, as amended; 12 U.S.C. 1724, 1725, 1726, 1728. Reorg. Plan No. 3 of 1947, 12 F.R. 4981, 3 CFR, 1943-1948, Comp., p. 1071)

By the Federal Home Loan Bank Board.

[SEAL]

JACK CARTER,  
Secretary.

#### APPENDIX—EXAMPLES OF INSURANCE COVERAGE AFFORDED ACCOUNTS IN INSTITUTIONS INSURED BY THE FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION

##### E. Public unit accounts. . . .

###### EXAMPLE 8

Question: A city treasurer deposits in an insured institution \$20,000 in each of the following accounts:

"General Operating Fund."  
"Police Department."  
"Fire Department."  
"Parks Department—Maintenance."

What is the insurance coverage?

Answer: The "Police Department" and "Fire Department" accounts would each be separately insured to \$20,000 if the funds in each such account have been allocated by law for the exclusive use of a separate city department or subdivision expressly authorized by State statute.

It is assumed that the Parks Department was not created under express authorization of State statute. If funds in the "Parks Department" account are expended only by order of the city treasurer, then they are added to the funds in the "General Operating Fund" account and are insured only to \$20,000 (§§ 561.5a, 564.8(a)).



## EXAMPLE 10

Question: A city treasurer deposits \$20,000 in each of the following accounts:

"Local Improvement District."  
"General Operating Fund."  
"Equipment Rental Fund."  
"Department of Public Welfare."  
"Bureau of Weights and Measures" (subordinate agency of "Department of Public Welfare").

What is the insurance coverage?

Answer: The "Department of Public Welfare" and the "Local Improvement District" accounts would each be separately insured to \$20,000 if the funds in each such account have been allocated by law for the exclusive use of a separate city department or subdivision expressly authorized by State law. In applying the \$20,000 limit to the "Department of Public Welfare" account, those funds allocated to the "Bureau of Weights and Measures" would be added to the DPW account since the Bureau is a subordinate agency of the Department. The "Equipment Rental" and "General Operating" accounts, held for citywide use, would be added together and separately insured to \$20,000 (§§ 561.5a, 564.8(a)).

## G. Trust accounts. \* \* \*

## EXAMPLE 4

Question: An account in the amount of \$40,000 is held pursuant to an irrevocable trust for the benefit of A and her sister B. Under the terms of the trust instrument, A is to receive the income for life and B is to receive the remainder at A's death. At the time of default, A is 70 years of age. What is the insurance coverage?

Answer: The proportionate value of A's life estate can be determined by the use of the present worth tables found at 26 CFR 20.2031-10. To ascertain A's beneficial interest in the account, the appropriate multiplier (0.47540) indicated by Table A(2) is multiplied by the amount in the account. A's interest is found to be \$19,016. The difference of \$20,984 represents B's beneficial interest in the account. The trustee is entitled to an insurance payment of \$39,016, representing A's complete interest (\$19,016) and \$20,000 of B's interest (§§ 564.2(c) (1) and 564.10).

## EXAMPLE 7

Question: G is settlor of a short-term irrevocable trust for the benefit of H university. Under the terms of the trust instrument, the university is to receive all of the income (payable annually) for 2 years. At the end of the 2-year period, the trust is to terminate, and the corpus is to revert to G. The trustee invests \$30,000 in a trust account. At the date of default, 1 year of the 2-year term of the trust has expired. What is the insurance coverage?

Although this arrangement constitutes an express irrevocable trust, G's reversionary interest is treated, for insurance purposes, as an individual account owned by him. (§ 561.4) To ascertain the value of H university's remaining 1-year income interest in the trust account, the appropriate multiplier (0.05660) indicated by Table B of the present worth tables is multiplied by the account balance. H university's trust estate in the account is \$1,698. G's reversionary interest is worth \$28,302. Assuming that G has no individual interest in any other account, the trustee is entitled to an insurance payment of \$21,698, representing H university's entire trust estate in the account (\$1,698) and \$20,000 of G's reversionary interest (§§ 564.2(c) (1) and 564.10).

[FR Doc.72-19633 Filed 11-14-72; 8:51 am]

## Title 14—AERONAUTICS AND SPACE

### Chapter I—Federal Aviation Administration, Department of Transportation

[Docket No. 72-SO-112; Amdt. No. 39-1557]

#### PART 39—AIRWORTHINESS DIRECTIVES

##### Piper Models PA-28 and PA-25 Series Airplanes

There have been reports of the engine failing to develop power after a rapid throttle advance from low-power operation to high-power operation on certain Piper PA-28 series airplanes. Since this condition is likely to exist or develop in other airplanes of the same type design, an airworthiness directive is being issued to require the installation of a placard to warn against abrupt throttle operation until such time as an appropriate design change can be effected. Since certain PA-25 series airplanes have the same basic powerplant, this airworthiness directive is being made applicable to the PA-25 (150 hp.).

Since a situation exists that requires immediate adoption of this regulation, it is found that notice and public procedure hereon are impracticable and good cause exists for making this amendment effective in less than 30 days.

In consideration of the foregoing, and pursuant to the authority delegated to me by the Administrator, 31 F.R. 13697, § 39.13 of Part 39 of the Federal Aviation Regulations is amended by adding the following new airworthiness directive:

**PIPER:** Applies to Models PA-28-140, PA-28-150, PA-28-160, PA-28-S-160, and PA-25 (150 hp.) airplanes, equipped with Lycoming O-320 engines and Marvel Schebler carburetors Model MA-4SPA, Part No. 10-3678-32 certificated in all categories.

Compliance required within the next 10-hours' time in service after the effective date of this airworthiness directive, unless already accomplished.

To prevent power interruption as a result of abrupt throttle movement, accomplish the following:

(a) Attach the following operating limitation placard to the instrument panel near the throttle control in full view of the pilot using one-eighth inch minimum size type: "Do Not Open the Throttle Rapidly. (Idle to Full Throttle in 2-Seconds Minimum.)" The placard may be fabricated by the owner/operator.

This amendment becomes effective November 17, 1972.

(Secs. 313(a), 601, 603, Federal Aviation Act of 1958, 49 U.S.C. 1354(a), 1421, 1423; sec. 6(c), Department of Transportation Act, 49 U.S.C. 1655(c))

Issued in East Point, Ga., on November 3, 1972.

DUANE W. FREER,  
Acting Director, Southern Region.

[FR Doc.72-19554 Filed 11-14-72; 8:45 am]

### Chapter II—Civil Aeronautics Board

#### SUBCHAPTER A—ECONOMIC REGULATIONS

[Reg. ER-774; Amdt. 207-7]

#### PART 207—CHARTER TRIPS AND SPECIAL SERVICES

##### Facilitation of Enforcement of Charter Regulations

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., on the 25th day of October 1972.

By notice of proposed rule making EDR-223, the Board proposed amendments to Parts 207, 208, 212, 214, and 249 of its Economic Regulations (14 CFR Parts 207, 208, 212, 214, and 249) which were intended to: (1) alleviate the problem of pro rata charter passengers being "stranded" abroad, and (2) facilitate general enforcement of the Board's pro rata charter regulations, including provisions having particular reference to foreign air carriers.

The proposed amendments directed toward general enforcement would, in brief, require that: (1) all passenger lists include telephone numbers; (2) the carrier verify the identity of all enplaning pro rata charter participants; (3) foreign air carriers performing pro rata charter flights departing from the United States file passenger lists with the Board's Bureau of Enforcement at least 20 days prior to the charter flight departure date; and (4) in the case of a charter flight which is the return leg of a charter trip originating in a foreign country, the foreign carrier file, at least 20 days in advance of the flight from the United States, the names, U.S. addresses, and U.S. telephone numbers of the passengers transported on the inbound flight.

Comments in response to the notice of proposed rulemaking were submitted by Air Canada, Aerlinde Elreann Teoranta, Alitalia, certain trunkline carriers, jointly<sup>2</sup> the American Society of Travel Agents, Britannia Airways, British Caledonian Airways, Consortium International (Consortium), Davis Agency, El Al Israel Airlines, Iberia Lineas Aereas de Espana, Japan Air Lines (JAL), KLM Royal Dutch Airlines, Laker Airways, Linea Aerea Nacional-Chile, Luftverkehrsunternehmen Atlantis (Atlantis), the Ambassador of the Netherlands, North Central Airlines, Pan American World Airways, SABENA Belgian World Airlines, Swissair, Trans International Airlines (TIA), Transavia, Viacao Aerea Rio-Grandense (Varig), Windward Island Airways International, and World Airways (World).

On May 31, 1972 the Board adopted,<sup>3</sup> with certain modifications, the proposed amendments directed toward the stranding problem, but deferred action upon the general enforcement proposals. This procedure was adopted because the comments filed in response to the notice

<sup>1</sup> Dated March 17, 1972, 37 F.R. 5826 (Docket 24329).

<sup>2</sup> American, Braniff, Delta, Eastern, National, Northwest, Pan American, TWA, United, and Western.

<sup>3</sup> ER-740, ER-741, ER-742, and ER-743. 37 F.R. 11235.



raised a number of issues with regard to the general enforcement proposals which warranted further consideration by the Board, and we were of the view that consideration of these issues should not impede adoption of a rule on stranding.

We have now determined to adopt in part, certain of the general enforcement proposals, with the modifications discussed hereinbelow. Each of the specific features of the various proposed amendments, and our conclusions with respect thereto in light of the comments, will be discussed.

1. *Proposed amendments applicable to United States and foreign air carriers—*  
a. *Inclusion of telephone numbers in passenger lists.* The present charter regulations require that the charterer submit a list of the passengers' names and addresses prior to the departure of a flight.<sup>4</sup> We proposed to amend this requirement so as to provide that the passenger lists must also include the passengers' telephone numbers.

Consortium, TIA, and World argue that this requirement would be unworkable.<sup>5</sup> Consortium and TIA contend that many pro rata charter travelers are students, who may not remain at the telephone numbers which they supply. TIA adds that the Board has not shown how the inclusion of passengers' telephone numbers will aid the enforcement of the Board's pro rata charter regulations; this being so, says TIA, the direct air carriers should not be burdened by the requirement. World says that it has been trying for some time to obtain telephone numbers on the passenger lists, and that its efforts have met with little success because charterers do not have the personnel to cope with this burden.

We have determined to adopt the requirement that passenger lists include telephone numbers.<sup>6</sup> The purpose of the requirement is to facilitate the use of telephones by the Board's enforcement officials in directing inquiries to passengers concerning their participation in a particular charter flight. The argument that this is an ineffective investigative tool because many passengers are students, who change their telephone numbers frequently, is not persuasive. After all, passengers' addresses may also be changed no less frequently than their telephone numbers, yet the existing requirement that passenger lists include addresses has been useful to the Board. Nor do we believe it to be unduly burdensome upon either the carrier or the charterer to require that passenger lists include telephone numbers as well as addresses.

b. *Identification of enplaning persons.* It was proposed to require that the carrier verify the identity of enplaning charter participants, noting the source of the verification on the passenger lists,

with passports to be used for this purpose on international flights.

Atlantis and World argue that such a requirement would unduly delay the passenger check-in procedure, and World suggests as an alternative that the carrier merely be required to note on the list, next to a passenger's name, that some form of identification was checked. JAL says that foreign carriers already verify the identity of enplaning passengers since they must ascertain that each passenger has a valid visa.<sup>7</sup>

The Board is not persuaded that the requirement of identifying passengers and recording the source of the identification on the passenger list will be unduly burdensome, and we believe on the other hand that it will significantly aid the Board's enforcement efforts. Accordingly, we have determined to adopt this requirement. However, since passports are not required for all international travel, we are modifying this aspect of the proposal by providing that, where there is no passport, any other travel identity document may be used.<sup>8</sup>

2. *Proposed amendments applicable only to foreign air carriers—*  
a. *Filing of statements of supporting information and passenger lists with the Board.* In EDR-223, we noted that the Director of the Board's Bureau of Enforcement can easily obtain access to passenger lists and statements of supporting information which have been submitted to U.S. carriers;<sup>9</sup> however, in the case of a foreign carrier, although these documents are required to be made available, upon request, to an authorized representative of the Board at a point in the United States,<sup>10</sup> experience has shown that it is often difficult for the Board's enforcement officials to actually obtain and inspect the documents sufficiently in advance of a flight's departure. Therefore, we propose that, in the case of charter flights from the United States, foreign air carriers be required to file all statements of supporting information and passenger lists with the Board's Bureau of Enforcement at least 20 days prior to the flight date.

This proposal has been vigorously opposed by the foreign air carriers, who argue that it would unfairly discriminate against them vis-a-vis U.S. carriers. Moreover, most of the commenting foreign carriers say that they have never refused the Board access to documents relating to charter flights.

Upon further consideration, the Board has determined not to adopt the proposed requirement that foreign air carriers file all statements of supporting information and passenger lists with the

Board. Instead, we are amending §§ 212.7 (b) and 214.6(d) so as to require that the statements of supporting information and the passenger lists be submitted to the Director, Bureau of Enforcement, within 48 hours after receipt of a written request therefor. This will remedy the enforcement difficulty alluded to earlier, while making the requirement which is applicable to foreign carriers approximately the same as that which is applicable to U.S. carriers.<sup>11</sup>

In view of our action herein, the proposed requirement that the passenger lists be submitted by the charterer to the foreign air carrier at least 30 days in advance, and the proposed deletion of the existing requirement that the foreign air carrier retain the documents, both of which followed from the proposed filing requirements, are not being adopted.

b. *U.S. telephone numbers and addresses of foreign-originating passengers.* Finally, in the case of a charter flight which is the return leg of a charter trip originating in a foreign country, we proposed to require the filing, at least 20 days in advance of the outbound flight, of the names, U.S. addresses, and U.S. telephone numbers of the passengers carried on the inbound flight.

This proposal, too, has been objected to by the foreign carriers. It is urged that the proposal would be unworkable, since it is unlikely that foreign persons traveling to the United States would be able to supply such information. Moreover, the proposed requirement is said to discriminate against foreign air carriers, since it would apply only to them. It is also argued that foreign persons might view with suspicion a governmental request for their U.S. addresses and telephone numbers.

We agree with the comments to the effect that many foreign persons may not be able to supply U.S. addresses and telephone numbers, and accordingly, we have determined not to adopt this portion of the proposal.

Accordingly, the Board hereby amends Part 207 of the Economic regulations (14 CFR Part 207), effective December 15, 1972, as follows:

1. Amend the Table of Contents of Part 207 by adding a new § 207.26 under Subpart B—Provisions Relating to Pro Rata Charters, the table as amended to read as follows:

Sec.  
207.26 Air carrier to identify enplanements.

2. Amend § 207.9 by revising paragraph (a), the section as amended to read as follows:

§ 207.9 Records and record retention.

• • • • •  
(a) A record of the names, addresses, and telephone numbers of all passengers

• • • • •  
<sup>11</sup> Documents requested of air carriers by the Director, Bureau of Enforcement, pursuant to § 385.22(c) must be submitted "within a specified reasonable period."

<sup>4</sup> §§ 207.45, 208.215, 212.45, and 214.35.

<sup>5</sup> Varig, while not objecting to the requirement, question its usefulness.

<sup>6</sup> This requirement has already been adopted for travel group charters, under Part 372a, SPR-61, September 27, 1972.

<sup>7</sup> JAL also states that our present regulations do not require foreign air carriers to retain passenger lists; apparently JAL has overlooked § 212.7(a)(3), which does so require.

<sup>8</sup> This requirement, as modified, has already been adopted for travel group charters, under Part 372a, SPR-61, Sept. 27, 1972.

<sup>9</sup> § 385.22(c).

<sup>10</sup> §§ 212.7(b) and 214.6(d).



transported on each pro rata charter trip.

3. Add a new § 207.26, to read as follows:

**§ 207.26 Air carrier to identify enplanements.**

The air carrier shall make reasonable efforts to verify the identity of all enplaning charter participants, and the documentary source of such verification shall be noted on the passenger list: *Provided however*, That in the case of international flights the identity of each enplaning charter participant shall be verified by means of his passport or, if there be none, by means of any other travel identity document, and the passport number or travel identity document number shall be entered on the passenger list.

4. Amend § 207.45(a) to read as follows:

**§ 207.45 Passenger lists.**

(a) Prior to each one-way or round-trip flight, a list shall be filed by the charterer with the air carrier showing the names, addresses, and telephone numbers of the persons to be transported, including standbys who may be transported, specifying the relationship of each such person to the charterer (by designating opposite his name one of the three relationship categories hereinafter described), the date the person joined or last renewed a lapsed membership in the charter organization, and the designation "one-way" in the case of one-way passengers. The list shall be amended if passengers are added or dropped before flight.

5. Amend the Statement of Supporting Information set forth at the end of Part 207 by modifying Item 7 of section B of Part II thereof, the statement as amended to read as follows:

**STATEMENT OF SUPPORTING INFORMATION<sup>1</sup>**

**Part II \* \* \***  
**Section B \* \* \***

7. Attach list of prospective passengers (including "standbys" and one-way passengers designated as such), showing for each: (a) name, address, and telephone number; (b) relationship of such person to chartering organization, i.e., member, spouse, dependent child, parent or "special" (a person whose proposed participation in the charter flight was permitted by the Board pursuant to request for waiver); (c) if such person is related to a member who is not a prospective passenger, the member's name, address, and telephone number; and (d) date member joined or last renewed a lapsed membership.

(NOTE: This is a list of prospective passengers and does not necessarily have to represent the passengers actually to be carried. The list is to be amended, if passengers are dropped or added before flights and the certification required by § 207.45 must be attached to the list.)

(Secs. 204(a), 401, and 407 of the Federal Aviation Act of 1958, as amended, 72 Stat.

743, 754, as amended by 76 Stat. 143, 82 Stat. 867, and 766, as amended by 83 Stat. 103; 49 U.S.C. 1324, 1371, and 1377)

NOTE: The record-retention requirements herein have been approved by the Office of Management and Budget in accordance with the Federal Reports Act of 1942.

By the Civil Aeronautics Board.

[SEAL]

HARRY J. ZINK,  
Secretary.

[FR Doc.72-19635 Filed 11-14-72; 8:52 am]

[Reg. ER-775; Amdt. 208-8]

**PART 208—TERMS, CONDITIONS, AND LIMITATIONS OF CERTIFICATES TO ENGAGE IN SUPPLEMENTAL AIR TRANSPORTATION**

**Facilitation of Enforcement of Charter Regulations**

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., on the 25th day of October 1972.

By notice of proposed rule making EDR-223, the Board proposed, inter alia, certain amendments to Part 208. For the reasons set forth in ER-774 (Part 207), published contemporaneously herewith, the Board hereby amends Part 208 of the Economic Regulations (14 CFR Part 208), effective December 15, 1972, as follows:

1. Amend the Table of Contents of Part 208 by adding a new § 208.202c under Subpart C—Provisions Relating to Pro Rata Charters, the table as amended to read as follows:

Sec.  
208.202c Air carrier to identify enplanements.

2. Amend § 208.4 by revising paragraph (a), the section as amended to read as follows:

**§ 208.4 Particular records.**

(a) A record of the names, addresses, and telephone numbers of all passengers transported on each pro rata charter trip.

3. Add a new § 208.202c, to read as follows:

**§ 208.202c Air carrier to identify enplanements.**

The air carrier shall make reasonable efforts to verify the identity of all enplaning charter participants, and the documentary source of such verification shall be noted on the passenger list: *Provided, however*, That in the case of international flights the identity of each enplaning charter participant shall be verified by means of his passport or, if there be none, by means of any other travel identity document, and the passport number or travel identity document

number shall be entered on the passenger list.

4. Amend § 208.215(a) to read as follows:

**§ 208.215 Passenger lists.**

(a) Prior to each one-way or round-trip flight, a list shall be filed by the charterer with the air carrier showing the names, addresses, and telephone numbers of the persons to be transported, including standbys who may be transported, specifying the relationship of each such person to the charterer (by designating opposite his name one of the three relationship categories hereinafter described), the date the person joined or last renewed a lapsed membership in the charter organization, and the designation "one-way" in the case of one-way passengers. The list shall be amended if passengers are added or dropped before flight.

5. Amend the statement of supporting information set forth at the end of Part 208 by modifying Item 7 of section B of Part II thereof, the statement is amended to read as follows:

**STATEMENT OF SUPPORTING INFORMATION<sup>1</sup>**

**Part II \* \* \***  
**Section B \* \* \***

7. Attach list of prospective passengers (including "standbys" and one-way passengers designated as such), showing for each: (a) Name, address, and telephone number; (b) relationship of such person to chartering organization, i.e., member, spouse, dependent child, parent or "special" (a person whose proposed participation in the charter flight was permitted by the Board pursuant to request for waiver); (c) if such person is related to a member who is not a prospective passenger, the member's name, address, and telephone number; and (d) date member joined or last renewed a lapsed membership. (NOTE: This is a list of prospective passengers and does not necessarily have to represent the passengers actually to be carried. The list is to be amended, if passengers are dropped or added before flights and the certification required by § 208.215 must be attached to the list.)

(Secs. 204(a), 401, and 407 of the Federal Aviation Act of 1958, as amended, 72 Stat. 743, 754, as amended by 76 Stat. 143, 82 Stat. 867, and 766, as amended by 83 Stat. 103; 49 U.S.C. 1324, 1371, and 1377)

By the Civil Aeronautics Board.

[SEAL]

HARRY J. ZINK,  
Secretary.

[FR Doc.72-19636 Filed 11-14-72; 8:52 am]

[Reg. ER-776; Amdt. 212-9]

**PART 212—CHARTER TRIPS BY FOREIGN AIR CARRIERS**

**Facilitation of Enforcement of Charter Regulations**

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., on the 25th day of October 1972.

<sup>1</sup> Dated Mar. 17, 1972, 37 F.R. 5826 (Docket 24329).



By notice of proposed rule making EDR-223,<sup>1</sup> the Board proposed, inter alia, certain amendments to Part 212. For the reasons set forth in ER-774 (Part 207), published contemporaneously herewith, the Board hereby amends Part 212 of the Economic Regulations (14 CFR Part 212), effective December 15, 1972, as follows:

1. Amend the Table of Contents by adding a new § 212.26 under Subpart B—Provisions Relating to Pro Rata Charters, the table as amended to read as follows:

Sec.  
212.26 Foreign air carrier to identify enplanements.

2. Amend § 212.7 by revising subparagraph (a) (3) and paragraph (b), the section as amended to read as follows:

§ 212.7 Records and record retention.

(a) \* \* \*

(3) A record of the names, addresses, and telephone numbers of all passengers transported on each pro rata charter trip originating or terminating in the United States.

(b) Such documents shall be made available, at a place in the United States, for inspection upon request by an authorized representative of the Board or the Federal Aviation Administration. Each foreign air carrier shall permit such authorized representative to make such notes and copies thereof as he deems appropriate: *Provided*, That the passenger lists and statements of supporting information described in paragraph (a) (3) and (4) of this section shall be submitted so as to be received by the Board within 48 hours after receipt by the carrier of a written request therefor from the Director, Bureau of Enforcement.

3. Add a new § 212.26, to read as follows:

§ 212.26 Foreign air carrier to identify enplanements.

The identity of each enplaning charter participant shall be verified by means of his passport or, if there be none, by means of any other travel identity document, and the passport number or travel identity document number shall be entered on the passenger list.

4. Amend § 212.45(a) to read as follows:

§ 212.45 Passenger lists.

(a) Prior to each one-way or round-trip flight, a list shall be filed by the charterer with the foreign air carrier showing the names, addresses, and telephone numbers of the persons to be transported, including standbys who may be transported, specifying the relationship of each person to the charterer (by designating opposite his name one of the three relationship categories hereinafter described), the date the person joined or last renewed a lapsed membership in the charter organization, and the designation "one-way" in the case of one-

way passengers. The list shall be amended if passengers are added or dropped before flight.

5. Amend the Statement of Supporting Information set forth at the end of part 212 by modifying item 7 of section B of part II thereof, the Statement as amended to read as follows:

STATEMENT OF SUPPORTING INFORMATION<sup>1</sup>

Part II \* \* \*

Section B \* \* \*

7. Attach list of prospective passengers (including "standbys" and one-way passengers designated as such), showing for each: (a) name, address, and telephone number; (b) relationship of such person to chartering organization, i.e., member, spouse, dependent child, parent or "special" (a person whose proposed participation in the charter flight was permitted by the Board pursuant to request for waiver); (c) if such person is related to a member who is not a prospective passenger, the member's name, address, and telephone number; and (d) date member joined or last renewed a lapsed membership.

NOTE: This is a list of prospective passengers and does not necessarily have to represent the passengers actually to be carried. The list is to be amended, if passengers are dropped or added before flights and the certification required by § 212.45 must be attached to the list.

(Secs. 204(a), 402 of the Federal Aviation Act of 1958, as amended, 72 Stat. 743, 757; 49 U.S.C. 1324, 1372)

NOTE: The record-retention requirements herein have been approved by the Office of Management and Budget in accordance with the Federal Reports Act of 1942.

By the Civil Aeronautics Board.

[SEAL] HARRY J. ZINK,  
Secretary.

[FR Doc.72-19637 Filed 11-14-72; 8:52 am]

[Reg. ER-777; Amdt. 214-12]

PART 214—TERMS, CONDITIONS, AND LIMITATIONS OF FOREIGN AIR CARRIER PERMITS AUTHORIZING CHARTER TRANSPORTATION ONLY

Facilitation of Enforcement of Charter Regulations

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., on the 25th day of October 1972.

By notice of proposed rule making EDR-223,<sup>2</sup> the Board proposed, inter alia, certain amendments to Part 214. For the reasons set forth in ER-774 (Part 207), published contemporaneously herewith, the Board hereby amends Part 214 of the Economic Regulations (14 CFR Part 214), effective December 15, 1972, as follows:

1. Amend the Table of Contents of Part 214 by adding a new § 214.19 under Subpart A—Provisions Relating to Pro

Rata Charters, the table as amended to read as follows:

Sec.  
214.19 Foreign air carrier to identify enplanements.

2. Amend § 214.6 by revising paragraph (d), the section as amended to read as follows:

§ 214.6 Record retention.

(d) Every foreign air carrier shall make the documents listed in this section available in the United States upon request by an authorized representative of the Board or the Federal Aviation Administration and shall permit such representative to make such notes and copies thereof as he deems appropriate: *Provided*, That the documents described in paragraph (a) (2) (4) of this section shall be submitted so as to be received by the Board within 48 hours after receipt by the carrier of a written request therefor from the Director, Bureau of Enforcement.

3. Add a new § 214.19, to read as follows:

§ 214.19 Foreign air carrier to identify enplanements.

The identity of each enplaning charter participant shall be verified by means of his passport or, if there be none, by means of any other travel identity document, and the passport number or travel identity document number shall be entered on the passenger list.

4. Amend § 214.35(a) to read as follows:

§ 214.35 Passenger lists.

(a) Prior to each one-way or round-trip flight, a list shall be filed by the charterer with the foreign air carrier showing the names, addresses, and telephone numbers of the persons to be transported, including standbys who may be transported, specifying the relationship of each such person, to the charterer (by designating opposite his name one of the three relationship categories hereinafter described), the date the person joined or last renewed a lapsed membership in the charter organization, and the designation "one-way" in the case of one-way passengers. The list shall be amended if passengers are added or dropped before flight.

5. Amend the Statement of Supporting Information set forth at the end of Part 214 by modifying item 7 of section B of Part II thereof, the Statement as amended to read as follows:

STATEMENT OF SUPPORTING INFORMATION<sup>1</sup>

Part II \* \* \*

Section B \* \* \*

7. Attach list of prospective passengers (including "standbys" and one-way passengers designated as such), showing for each:

<sup>1</sup> This must be retained by the foreign air carrier for 2 years pursuant to the requirements of § 214.6, but open to Board inspection, and to be filed with the Board on demand.

<sup>1</sup> Dated Mar. 17, 1972, 37 F.R. 5826 (Docket 24329).

<sup>2</sup> Dated March 17, 1972, 37 F.R. 5826 (Docket 24329).



(a) name, address, and telephone number; (b) relationship of such person to chartering organization, i.e., member, spouse, dependent child, parent or "special" (a person whose proposed participation in the charter flight was permitted by the Board pursuant to request for waiver); (c) if such person is related to a member who is not a prospective passenger, the member's name, address, and telephone number; and (d) date member joined or last renewed a lapsed membership.

NOTE: This is a list of prospective passengers and does not necessarily have to represent the passengers actually to be carried. The list is to be amended, if passengers are dropped or added before flights and the certification required by § 214.35 must be attached to the list.

(Secs. 204(a), 402 of the Federal Aviation Act of 1958, as amended, 72 Stat. 743, 757; 49 U.S.C. 1324, 1372)

NOTE: The record-retention requirements herein have been approved by the Office of Management and Budget in accordance with the Federal Reports Act of 1942.

By the Civil Aeronautics Board.

[SEAL] HARRY J. ZINK,  
Secretary.

[FR Doc. 72-19638 Filed 11-14-72; 8:52 am]

[Reg. ER-778; Amdt. 249-22]

## PART 249—PRESERVATION OF AIR CARRIER ACCOUNTS RECORDS AND MEMORANDA

### Charter Passengers' Telephone Numbers

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., on the 25th day of October 1972.

By notice of proposed rule making EDR-223,<sup>1</sup> the Board proposed, inter alia, certain amendments to Part 249. For the reasons set forth in ER-774 (Part 207), published contemporaneously herewith, the Board hereby amends Part 249 of the Economic Regulations (14 CFR Part 249), effective December 15, 1972, as follows:

1. Amend § 249.8 by modifying Item 12 of the "Category of records," the section as amended to read as follows:

§ 249.8 Period of preservation of records by supplemental air carriers.

Category of Records	Period to be retained
12. Names, addresses, and telephone numbers of all passengers transported on each pro rata charter trip	2 years.

2. Amend § 249.12(c) by revising subparagraph (3), the section as amended to read as follows:

§ 249.12 Period of preservation of records by foreign air carriers.

(c) Each carrier shall . . .

<sup>1</sup> Dated March 17, 1972, 37 F.R. 5326 (Docket 24329).

(3) A record of the names, addresses, and telephone numbers of all passengers transported on each pro rata charter trip originating or terminating in the United States: 2 years.

3. Amend § 249.13 by revising paragraph (c) of Item 302 of the "Category of records," the section as amended to read as follows:

§ 249.13 Period of preservation of records by certificated route air carriers.

Category of Records	Period to be retained
302. Reservations, reports and records:	
(c) Names, addresses, and telephone numbers of all passengers transported on each pro rata charter trip	2 years.

(Secs. 204(a), 402, 407, Federal Aviation Act of 1958, as amended, 72 Stat. 743, 757, and 766, as amended by 83 Stat. 103; 49 U.S.C. 1324, 1372, and 1377)

NOTE: The record-retention requirements herein have been approved by the Office of Management and Budget in accordance with the Federal Reports Act of 1942.

By the Civil Aeronautics Board.

[SEAL] HARRY J. ZINK,  
Secretary.

[FR Doc. 72-19639 Filed 11-14-72; 8:52 am]

## Title 16—COMMERCIAL PRACTICES

### Chapter I—Federal Trade Commission

[Docket No. C-2293]

## PART 13—PROHIBITED TRADE PRACTICES

### B. & H. Importing Corp. and Paul Silverberg

Subpart—Importing, manufacturing, selling, or transporting flammable wear: § 13.1060 Importing, manufacturing, selling, or transporting flammable wear.

(Sec. 6, 38 Stat. 721; 15 U.S.C. 46. Interpret or apply sec. 5, 38 Stat. 719, as amended, 67 Stat. 111, as amended; 15 U.S.C. 45, 1191) [Cease and desist order, B. & H. Importing Corp. et al., Middle Village, Docket No. C-2293, Oct. 2, 1972]

In the Matter of B. & H. Importing Corp., a Corporation, and Paul Silverberg, Individually and as an Officer of Said Corporation

Consent order requiring a Middle Village, N.Y., importer, manufacturer, and wholesaler of scarves, footwear, and accessories, among other things to cease manufacturing for sale, selling, importing, or transporting any products, fabric, or related material which fails to conform to an applicable standard of flammability or regulation issued or amended

under the provisions of the Flammable Fabrics Act.

The order to cease and desist, including further order requiring report of compliance therewith, is as follows:

It is ordered, That respondents B. & H. Importing Corp., a corporation, its successors and assigns, and its officers, and Paul Silverberg, individually and as an officer of said corporation, and respondents' agents, representatives, and employees, directly or through any corporation, subsidiary, division, or other device, do forthwith cease and desist from manufacturing for sale, selling, offering for sale, in commerce, or importing into the United States, or introducing, delivering for introduction, transporting or causing to be transported in commerce, or selling or delivering after sale or shipment in commerce any product, fabric, or related material; or manufacturing for sale, selling or offering for sale, any product made of fabric or related material which has been shipped or received in commerce, as "commerce," "product," "fabric" and "related material" are defined in the Flammable Fabrics Act, as amended, which product, fabric, or related material fails to conform to an applicable standard or regulation continued in effect, issued or amended under the provisions of the aforesaid Act.

It is further ordered, That the respondents notify all of their customers who have purchased or to whom have been delivered the products which gave rise to the complaint, of the flammable nature of said products and effect the recall of said products from such customers.

It is further ordered, That the respondents herein either process the products that gave rise to the complaint so as to bring them into conformance with the applicable standard of flammability under the Flammable Fabrics Act, as amended, or destroy said products.

It is further ordered, That the respondents herein shall within ten (10) days after service upon them of this order, file with the Commission a special report in writing setting forth the respondents' intentions as to compliance with this order. This special report shall also advise the Commission fully and specifically concerning: (1) The identity of the products which gave rise to the complaint, (2) the number of said products in inventory, (3) any action taken and any further actions proposed to be taken to notify customers of the inflammability of said products and effect the recall of said products from customers, and of the results thereof, (4) any disposition of said products since October 26, 1970, and (5) any action taken or proposed to be taken to bring said products into conformance with the applicable standard of flammability under the Flammable Fabrics Act, as amended, or destroy said products, and the results of such action. Such report shall further inform the Commission as to whether or not respondents have in inventory any product, fabric, or related material having a plain surface and made of paper, silk, rayon and acetate, nylon and



acetate, rayon, cotton, or any other material or combinations thereof in a weight of 2 ounces or less per square yard, or any product, fabric, or related material having a raised fiber surface. Respondents shall submit samples of not less than 1 square yard in size of any such product, fabric or related material with this report.

*It is further ordered*, That respondents notify the Commission at least 30 days prior to any proposed change in the corporate respondent such as dissolution, assignment or sale resulting in the emergence of a successor corporation, the creation or dissolution of subsidiaries or any other change in the corporation which may affect compliance obligations arising out of the order.

*It is further ordered*, That the respondent corporation shall forthwith distribute a copy of this order to each of its operating divisions.

*It is further ordered*, That the respondents herein shall, within sixty (60) days after service upon them of this order, file with the Commission a report in writing setting forth in detail the manner and form in which they have complied with this order.

Issued: October 2, 1972.

By the Commission.

[SEAL] CHARLES A. TOBIN,  
Secretary.

[FR Doc.72-19581 Filed 11-14-72; 8:47 am]

[Docket No. C-2296]

### PART 13—PROHIBITED TRADE PRACTICES

#### Conseenee Carpets, Inc. et al.

Subpart—Importing, manufacturing, selling, or transporting flammable wear: § 13.1060 *Importing, manufacturing, selling or transporting flammable wear.*

(Sec. 6, 38 Stat. 721; 15 U.S.C. 46. Interpret or apply sec. 5, 38 Stat. 719, as amended, 67 Stat. 111, as amended; 15 U.S.C. 45, 1191) [Cease and desist order, Conseenee Carpets, Inc., et al., Ellijay, Ga., Docket No. C-2296, Oct. 5, 1972]

*In the Matter of Conseenee Carpets, Inc., a Corporation, and Robert S. Mosley and E. Davis Lacey, Individually and as Officers of Said Corporation.*

Consent order requiring an Ellijay, Ga., manufacturer of carpets and rugs, among other things to cease selling and distributing carpeting which does not meet the acceptable criteria for carpeting under the Flammable Fabrics Act, as amended.

The order to cease and desist, including further order requiring report of compliance therewith, is as follows:

*It is ordered*, That respondent Conseenee Carpets, Inc., a corporation, its successors and assigns, and its officers, and Robert S. Mosley and E. Davis Lacey, individually and as officers of said corporation, and respondents' agents, representatives, and employees, directly or through any corporation, subsidiary, division, or other device, do forthwith

cease and desist from manufacturing for sale, selling, offering for sale, in commerce, or importing into the United States, or introducing, delivering for introduction, transporting or causing to be transported in commerce or selling or delivering after sale or shipment in commerce, any product, fabric, or related material; or manufacturing for sale, selling or offering for sale, any product made of fabric, or related material which has been shipped or received in commerce, as "commerce," "product," "fabric" and "related material" are defined in the Flammable Fabrics Act, as amended, which product, fabric or related material fails to conform to an applicable standard or regulation continued in effect, issued or amended under the provisions of the aforesaid Act.

*It is further ordered*, That respondents notify all of their customers who have purchased or to whom have been delivered the products which gave rise to this complaint, of the flammable nature of said products and effect the recall of said products from such customers.

*It is further ordered*, That the respondents herein either process the products which gave rise to the complaint so as to bring them into conformance with the applicable standard of flammability under the Flammable Fabrics Act, as amended, or destroy said products.

*It is further ordered*, That respondents herein shall, within ten (10) days after service upon them of this order, file with the Commission a special report in writing setting forth the respondents' intentions as to compliance with this order. This special report shall also advise the Commission fully and specifically concerning: (1) The identity of the products which gave rise to the complaint, (2) the identity of the purchasers of said products, (3) the amount of said products on hand and in the channels of commerce, (4) any action taken and any further actions proposed to be taken to notify customers of the flammability of said products and effect the recall of said products from customers, and the results thereof, (5) any disposition of said products since April 27, 1972, and (6) any action taken or proposed to be taken to bring said products into conformance with the applicable standard of flammability under the Flammable Fabrics Act, as amended, or to destroy said products, and the results of such action. Respondents will submit with their report, a complete description of each style of carpet or rug currently in inventory or production. Upon request, respondents will forward to the Commission for testing a sample of any such carpet or rug.

*It is further ordered*, That respondents notify the Commission at least 30 days prior to any proposed change in the corporate respondent such as dissolution, assignment, or sale resulting in the emergence of a successor corporation, the creation or dissolution of subsidiaries or any other change in the corporation which may affect compliance obligations arising out of the order.

*It is further ordered*, That the individual respondents named herein promptly notify the Commission of their discontinuance of their present business or employment and of their affiliation with a new business or employment. Such notice shall include respondents' current business or employment in which they are engaged as well as a description of their duties and responsibilities.

*It is further ordered*, That the respondent corporation shall forthwith distribute a copy of this order to each of its operating divisions.

*It is further ordered*, That the respondents herein shall, within sixty (60) days after service upon them of this order, file with the Commission a report in writing setting forth in detail the manner and form in which they have complied with this order.

Issued: October 5, 1972.

By the Commission.

[SEAL] CHARLES A. TOBIN,  
Secretary.

[FR Doc.72-19582 Filed 11-14-72; 8:47 am]

[Docket No. C-2294]

### PART 13—PROHIBITED TRADE PRACTICES

#### Devour Chemical Co., Inc., and Otis D. Powell, Jr.

Subpart—Advertising Falsely or Misleadingly: § 13.60 *Earnings and profits*; § 13.142 *Operation*; § 13.150 *Premiums and prizes*; § 13.150-30 *Premiums*. Subpart—Furnishing means and instrumentalities of misrepresentation or deception: § 13.1055 *Furnishing means and instrumentalities of misrepresentation or deception*. Subpart—Misrepresenting Oneself and Goods—Business Status, Advantages or Connections: § 13.1490 *Nature*; § 13.1513 *Operations generally*; —Goods: § 13.1615 *Earnings and profits*. Subpart—Neglecting, Unfairly, or Deceptively, To Make Material Disclosure: § 13.1892 *Sales contract, right-to-cancel provision*. Subpart—Offering Unfair, Improper, and Deceptive Inducements To Purchase or Deal: § 13.2020 *Premium or premium conditions*.

(Sec. 8, 38 Stat. 721; 15 U.S.C. 46. Interprets or applies sec. 5, 38 Stat. 719, as amended; 15 U.S.C. 45) [Cease and desist order, Devour Chemical Co., Inc., et al., Alma, Ark., Docket No. C-2294, Oct. 2, 1972]

*In the Matter of Devour Chemical Co., Inc., a corporation, and Otis D. Powell, Jr., individually and as an officer of said corporation*

Consent order requiring an Alma, Ark., manufacturer, seller, and distributor of household cleaners, among other things to cease its operation of a marketing program where financial gains to participants are dependent upon not only the sale of the promoter's goods, but upon the sale of redistributorships necessarily predicated upon the exploitation of others as well; misrepresenting past



earnings of participants; running a program in the nature of a lottery; failing to inform participants of their right to cancel their contract within 3 business days; and furnishing means and instrumentalities of deception.

The order to cease and desist, including further order requiring report of compliance therewith, is as follows:

*It is ordered,* That respondents Devour Chemical Co., Inc., a corporation, and Otis D. Powell, Jr., individually and as an officer of said corporation, its successors and assigns, and respondents' officers, agents, representatives, and employees, directly or through any corporation, subsidiary, division or other device, in connection with the advertising, offering for sale, sale or distribution of any product or of distributorships, franchises, licenses, or marketing agreements with respect thereto, in commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from directly or indirectly:

1. Operating or participating in the operation of any marketing program wherein the financial gains to the participants are dependent in any manner upon the continued successive recruitment of other participants.

2. Offering to pay, paying, or authorizing the payment of any finder's fee, bonus, override, commission, cross-commission, discount, rebate, dividend, or other consideration to any participant in respondents' marketing program for the solicitation or recruitment of other participants therein.

3. Offering to pay, paying, or authorizing payment of any bonus, override, commission, cross-commission, discount, rebate, dividend, or other consideration to any person, firm, or corporation in connection with the sale of said products or distributorships under respondents' marketing program unless such person, firm, or corporation performs a bona fide and essential supervisory, distributive, selling, or soliciting function in the sale and delivery of such products to the ultimate consumer.

4. Requiring prospective participants or participants in said program to purchase said products or pay any consideration, other than payment for necessary sales materials, in order to participate in any manner therein.

5. Using any marketing program, either directly or indirectly:

(a) Wherein any finder's fee, bonus, override, commission, cross-commission, discount, rebate, dividend, or other compensation or profit inuring to participants therein is dependent on the element of chance dominating over the skill or judgment of the participants; or

(b) Wherein no amount of judgment or skill exercised by the participant has any appreciable effect upon any finder's fee, bonus, override, commission, cross-commission, discount, rebate, dividend, or other compensation or profits which the participant may receive; or

(c) Wherein the participant is without that degree of control over the oper-

ation of such plan as to enable him substantially to affect the amount of any finder's fee, bonus, override, commission, cross-commission, discount, rebate, dividends, or other compensation or profits which he may receive or be entitled to receive.

6. Using any marketing program which fails to:

(a) Inform orally all participants in respondents' marketing program and to provide in writing in all contracts of participation that the contract may be canceled for any reason by notification to respondents in writing within three (3) business days from the date of execution of such contract.

(b) Refund immediately all moneys to (1) customers who have requested contract cancellation in writing within three (3) business days from the execution thereof, and (2) customers showing that respondents' contract solicitations or performance were attended by or involved violation of any of the provisions of this order: *Provided, however,* that subpart (2) hereof shall not apply to such contracts entered into before the date of this order, nor shall the payments of refunds hereunder be construed as an admission that this order or any part thereof has been violated.

7. Representing directly or by implication, orally or in writing, that participants in any marketing program will earn or receive any stated or gross or net amount of earnings or profits; or representing, in any manner, the past earnings of participants unless in fact the past earnings represented are those of a substantial number of participants in the community or geographical area in which such representations are made and accurately reflect the average earnings of these participants under circumstances similar to those of the participant to whom the representation is made.

8. Representing, directly or by implication, orally or in writing, that it is not difficult for participants to recruit or retain persons to invest in any marketing program as distributors or as sales personnel to sell said products.

9. Failing to deliver a copy of this order to cease and desist to all present and future distributors, salesmen or other persons engaged in the advertising, sale or distribution of any products through the use of a marketing program, and securing from each such distributor, salesman, or other person similarly involved a signed statement acknowledging receipt of said order.

10. Furnishing others any means or instrumentalities, services, and facilities, whereby they may mislead participants or prospective participants as to any of the matters or things prohibited by this order.

*It is further ordered,* That the respondent corporation shall forthwith distribute a copy of this order to each of its operating divisions.

*It is further ordered,* That:

(A) Respondents immediately obtain from each person described in paragraph 9 above a signed statement setting forth

his intention to conform his business practices to the requirements of this order.

(B) Respondents advise each such present and future salesman, agent, solicitor, independent contractor, distributor, or any person engaged in the promotion, sale, or distribution of any of respondents' products and/or franchises that respondents will not engage or will terminate the engagement or services of any said person, unless such person agrees to and does file a notice with the respondents that he will be bound by the provisions contained in this order.

(C) If such party will not agree to so file notice with the respondents and be bound by the provisions of the order, the respondents shall not use such third party, or the services of such third party to promote, sell, or distribute any of respondents' products and/or franchises or distributorships.

(D) Respondents so inform the persons so engaged that the respondents are obligated by this order to discontinue dealing with those persons who continue on their own the deceptive acts or practices prohibited by this order.

(E) Respondents institute a program of continuing surveillance adequate to reveal whether the business operations of each of said persons so engaged conform to the requirements of this order; and

(F) That respondents discontinue dealing with the persons so engaged, revealed by the aforesaid program of surveillance, who continue on their own, deceptive acts or practices prohibited by this order.

*It is further ordered,* That respondents herein shall notify the Commission at least thirty (30) days prior to any proposed change in any of the corporate respondents such as dissolution, assignment, or sale resulting in the emergence of a successor corporation, the creation or dissolution which may affect compliance obligations arising out of the order.

*It is further ordered,* That respondents herein shall within sixty (60) days after service upon them of this order, file with the Commission a report in writing setting forth in detail the manner and form in which they have complied with this order.

Issued: October 2, 1972.

By the Commission.

[SEAL]

CHARLES A. TOBIN,  
Secretary.

[FR Doc.72-19583 Filed 11-14-72; 8:47 am]

[Docket No. C-2292]

## PART 13—PROHIBITED TRADE PRACTICES

Kowa American Corp. and  
Masaaki Kawabe

Subpart—Importing, manufacturing, selling, or transporting flammable wear:  
§ 13.1060 Importing, manufacturing, selling, or transporting flammable wear.



(Sec. 6, 38 Stat. 721; 15 U.S.C. 46. Interpret or apply sec. 5, 38 Stat. 719, as amended, 67 Stat. 111, as amended; 15 U.S.C. 45, 1191) [Cease and desist order, Kowa American Corp. et al., New York, N.Y., Docket No. C-2292, Oct. 2, 1972]

*In the Matter of Kowa American Corp., a Corporation, and Masaaki Kawabe, Individually and as an Officer of Said Corporation.*

Consent order requiring a New York City importer and wholesaler of cameras, tiles, footwear, and textile products, among other things to cease manufacturing for sale, selling, importing, or transporting any product, fabric, or related material which fails to conform to an applicable standard of flammability or regulation issued or amended under the provisions of the Flammable Fabrics Act.

The order to cease and desist, including further order requiring report of compliance therewith, is as follows:

It is ordered, That respondents Kowa American Corp., a corporation, its successors and assigns and its officers, and Masaaki Kawabe, individually and as an officer of said corporation and respondents' agents, representatives, and employees, directly or through any corporation, subsidiary, division, or other device do forthwith cease and desist from manufacturing for sale, selling, offering for sale, in commerce, or importing into the United States, or introducing, delivering for introduction, transporting, or causing to be transported in commerce, or selling or delivering after sale or shipment in commerce any product, fabric or related material, or manufacturing for sale, selling or offering for sale, any product made of fabric or related material which has been shipped or received in commerce, as "commerce," "product," "fabric," and "related material" are defined in the Flammable Fabrics Act, as amended, which product, fabric, or related material fails to conform to an applicable standard or regulation continued in effect, issued, or amended under the provisions of the aforesaid Act.

It is further ordered, That the respondents notify all of their customers who have purchased or to whom have been delivered the products which gave rise to the complaint, of the flammable nature of said products and effect the recall of said products from such customers.

It is further ordered, That the respondents herein either process the products that gave rise to the complaint so as to bring them into conformance with the applicable standard of flammability under the Flammable Fabrics Act, as amended, or destroy said products.

It is further ordered, That the respondents herein shall within ten (10) days after service upon them of this order, file with the Commission a special report in writing setting forth the respondents' intentions as to compliance with this order. This special report shall also advise the Commission fully and specifically concerning (1) the identity of the products which gave rise to the

complaint, (2) the number of said products in inventory, (3) any action taken and any further actions proposed to be taken to notify customers of the flammability of said products and effect the recall of said products from customers, and of the results thereof (4) any disposition of said products since October 23, 1970, and (5) any action taken or proposed to be taken to bring said products into conformance with the applicable standard of flammability under the Flammable Fabrics Act, as amended, or destroy said products, and the results of such action. Such report shall further inform the Commission as to whether or not respondents have in inventory any product, fabric, or related material having a plain surface and made of paper, silk, rayon and acetate, nylon and acetate, rayon, cotton, or any other material or combinations thereof in a weight of 2 ounces or less per square yard, or any product, fabric, or related material having a raised fiber surface. Respondents shall submit samples of not less than 1 square yard in size of any such product, fabric, or related material with this report.

It is further ordered, That respondents notify the Commission at least 30 days prior to any proposed change in the corporate respondent such as dissolution, assignment, or sale resulting in the emergence of a successor corporation, the creation or dissolution of subsidiaries or any other change in the corporation which may affect compliance obligations arising out of the order.

It is further ordered, That the respondent corporation shall forthwith distribute a copy of this order to each of its operating divisions.

It is further ordered, That the respondents herein shall, within sixty (60) days after service upon them of this order, file with the Commission a report in writing setting forth in detail the manner and form in which they have complied with this order.

Issued: October 2, 1972.

By the Commission.

[SEAL] CHARLES A. TOBIN,  
Secretary.

[FR Doc.72-19584 Filed 11-14-72;8:47 am]

[Docket No. C-2300]

**PART 13—PROHIBITED TRADE PRACTICES**

**Playfield Industries, Inc., and John B. Whisnant, Jr.**

Subpart—Importing, manufacturing, selling, or transporting flammable wear: § 13.1060 Importing, manufacturing, selling, or transporting flammable wear.

(Sec. 6, 38 Stat. 721; 15 U.S.C. 46. Interpret or apply sec. 5, 38 Stat. 719, as amended, 67 Stat. 111, as amended; 15 U.S.C. 45, 1191) [Cease and desist order, Playfield Industries, Inc., et al., Chatsworth, Ga., Docket No. 2300, Oct. 6, 1972]

*In the Matter of Playfield Industries, Inc., a Corporation, and John B. Whisnant, Jr., Individually and as an Officer of Said Corporation*

Consent order requiring a Chatsworth, Ga., manufacturer and seller of carpets and rugs, among other things to cease selling and distributing carpeting which does not meet the acceptable criteria for carpeting under the Flammable Fabrics Act, as amended.

The order to cease and desist, including further order requiring report of compliance therewith, is as follows:

It is ordered, That respondent Playfield Industries, Inc., a corporation, its successors and assigns, and its officers, and respondent John B. Whisnant, Jr., individually and as an officer of said corporation and respondents' agents, representatives, and employees directly or through any corporation, subsidiary, division, or other device, do forthwith cease and desist from manufacturing for sale, selling, offering for sale, in commerce, or importing into the United States, or introducing, delivering for introduction, transporting, or causing to be transported in commerce, or selling or delivering after sale or shipment in commerce, any product, fabric, or related material; or manufacturing for sale, selling, or offering for sale, any product made of fabric or related material which has been shipped or received in commerce, as "commerce," "product," "fabric," and "related material" are defined in the Flammable Fabrics Act, as amended, which product, fabric or related material fails to conform to an applicable standard or regulation continued in effect, issued or amended under the provisions of the aforesaid Act.

It is further ordered, That respondents notify all of their customers who have purchased or to whom have been delivered the products which gave rise to this complaint, of the flammable nature of said products and effect the recall of said products from such customers.

It is further ordered, That the respondents herein either process the products which gave rise to the complaint so as to bring them into conformance with the applicable standard of flammability under the Flammable Fabrics Act, as amended, or destroy said products.

It is further ordered, That respondents herein shall, within ten (10) days after service upon them of this order, file with the Commission a special report in writing setting forth the respondents' intentions as to compliance with this order. This special report shall also advise the Commission fully and specifically concerning (1) the identity of the products which gave rise to the complaint, (2) the identity of the purchasers of said products, (3) the amount of said products on hand and in the channels of commerce, (4) any action taken and any further actions proposed to be taken to notify customers of the flammability of said products and effect the recall of said products from customers, and of the results thereof, (5) any disposition of said products since April 29, 1972, and



(6) any action taken or proposed to be taken to bring said products into conformance with the applicable standard of flammability under the Flammable Fabrics Act, as amended, or to destroy said products, and the results of such action. Respondents will submit with their report, a complete description of each style of carpet or rug currently in inventory or production. Upon request, respondents will forward to the Commission for testing a sample of any such carpet or rug.

*It is further ordered*, That respondents notify the Commission at least 30 days prior to any proposed change in the corporate respondent such as dissolution, assignment, or sale resulting in the emergence of a successor corporation, the creation or dissolution of subsidiaries or any other change in the corporation which may affect compliance obligations arising out of the order.

*It is further ordered*, That the individual respondent named herein promptly notify the Commission of the discontinuance of his present business or employment and of his affiliation with a new business or employment. Such notice shall include respondent's current business or employment in which he is engaged as well as a description of his duties and responsibilities.

*It is further ordered*, That the respondent corporation shall forthwith distribute a copy of this order to each of its operating divisions.

*It is further ordered*, That the respondents herein shall, within sixty (60) days after service upon them of this order, file with the Commission a report in writing setting forth in detail the manner and form in which they have complied with this order.

Issued October 6, 1972.

By the Commission.

[SEAL] CHARLES A. TOBIN,  
Secretary.

[FR Doc.72-19585 Filed 11-14-72;8:47 am]

[Docket No. C-2295]

## PART 13—PROHIBITED TRADE PRACTICES

### Rosen & Bachner, Inc., et al.

Subpart—Invoicing products falsely: § 13.1108 *Invoicing products falsely*: 13.1108-45 Fur Products Labeling Act. Subpart—Misbranding or mislabeling: § 13.1185 *Composition*: 13.1185-30 Fur Products Labeling Act; § 13.1212 *Formal regulatory and statutory requirements*: 13.1212-30 Fur Products Labeling Act; § 13.1255 *Manufacture or preparation*: 13.1255-30 Fur Products Labeling Act. Subpart—Misrepresenting oneself and goods—Goods: § 13.1590 *Composition*: 13.1590-30 Fur Products Labeling Act; § 13.1623 *Formal regulatory and statutory requirements*: 13.1623-30 Fur Products Labeling Act; § 13.1685 *Nature*: 13.1685-35 Fur Products Labeling Act. Subpart—Ne-

glecting, unfairly or deceptively, to make material disclosure: § 13.1852 *Formal regulatory and statutory requirements*: 13.1852-35 Fur Products Labeling Act.

(Sec. 6, 38 Stat. 721; 15 U.S.C. 46. Interpret or apply sec. 5, 38 Stat. 719, as amended, sec. 8, 65 Stat. 179; 15 U.S.C. 45, 69f) [Cease and desist order, Rosen & Bachner, Inc., et al., New York, N.Y., Docket No. C-2295, Oct. 2, 1972]

*In the Matter of Rosen & Bachner, Inc., a Corporation, and Marvin Rosen and Arthur Bachner, Individually and as Officers of Said Corporation*

Consent order requiring a New York City manufacturer of fur products, among other things to cease misbranding and deceptively invoicing its merchandise.

The order to cease and desist, including further order requiring report of compliance therewith, is as follows:

*It is ordered*, That Rosen & Bachner, Inc., a corporation, its successors and assigns, and its officers, and Marvin Rosen and Arthur Bachner, individually and as officers of said corporation, and respondents' representatives, agents, and employees, directly or through any corporation, subsidiary, division, or other device, in connection with the introduction, or manufacture for introduction, into commerce, or the sale, advertising or offering for sale in commerce, or the transportation or distribution in commerce, of any fur product; or in connection with the manufacture for sale, sale, advertising, offering for sale, transportation or distribution, of any fur product which is made in whole or in part of fur which has been shipped and received in commerce, as the terms "commerce", "fur", and "fur product" are defined in the Fur Products Labeling Act, do forthwith cease and desist from:

A. Misbranding any fur product by:

1. Representing directly or by implication on a label that the fur contained in such fur product is natural when such fur is pointed, bleached, dyed, tip-dyed, or otherwise artificially colored.

2. Failing to affix a label to such fur product showing in words and in figures plainly legible all of the information required to be disclosed by each of the subsections of section 4(2) of the Fur Products Labeling Act.

B. Falsely or deceptively invoicing any fur product by:

1. Failing to furnish an invoice, as the term "invoice" is defined in the Fur Products Labeling Act, showing in words and figures plainly legible all the information required to be disclosed by each of the subsections of section 5(b)(1) of the Fur Products Labeling Act.

2. Representing directly or by implication on an invoice that the fur contained in such fur product is natural, when such fur is pointed, bleached, dyed, tip-dyed, or otherwise artificially colored.

*It is further ordered*, That Rosen & Bachner, Inc., a corporation, its successors and assigns, and its officers, and Marvin Rosen and Arthur Bachner, individually and as officers of said corpora-

tion, and respondents' representatives, agents, and employees, directly or through any corporation, subsidiary, division, or other device, do forthwith cease and desist from furnishing a false guaranty that any fur product is not misbranded, falsely invoiced or falsely advertised when the respondents have reason to believe that such fur product may be introduced, sold, transported, or distributed in commerce.

*It is further ordered*, That respondents notify the Commission at least 30 days prior to any proposed change in the corporate respondent such as dissolution, assignment or sale resulting in the emergence of a successor corporation, the creation or dissolution of subsidiaries or any other change in the corporation which may affect compliance obligations arising out of the order.

*It is further ordered*, That the respondent corporation shall forthwith distribute a copy of this order to each of its operating divisions.

*It is further ordered*, That the individual respondents named herein promptly notify the Commission of the discontinuance of their present business or employment and of their affiliation with a new business or employment. Such notice shall include respondents' current business or employment in which they are engaged as well as a description of their duties and responsibilities.

*It is further ordered*, That the respondents herein shall, within sixty (60) days after service upon them of this order file with the Commission a report in writing setting forth in detail the manner and form in which they have complied with this order.

Issued: October 2, 1972.

By the Commission.

[SEAL] CHARLES A. TOBIN,  
Secretary.

[FR Doc.72-19586 Filed 11-14-72;8:48 am]

## Title 17—COMMODITY AND SECURITIES EXCHANGES

### Chapter II—Securities and Exchange Commission

[Release No. 34-9850]

### PART 240—GENERAL RULES AND REGULATIONS, SECURITIES EXCHANGE ACT OF 1934

#### Reporting of Market Information on Transactions in Listed Securities

The Securities and Exchange Commission today announced the adoption of Rule 17a-15 (17 CFR 240.17a-15) under the Securities Exchange Act of 1934 (the Act) requiring registered national securities exchanges, national securities associations and broker-dealers who are not members of such organizations to make available through vendors of market transaction information price and



volume reports as to completed transactions in securities registered on such exchanges. This rule is designed to implement the purposes and policies underlying the act and was originally proposed following the release of the Commission's Policy Statement on the Future Structure of the Securities Markets. It has been modified in view of the report and recommendations of the Commission's Advisory Committee on Market Disclosure and public comments received on previous proposals (Securities Exchange Act Release Nos. 9530, published in the FEDERAL REGISTER for March 21, 1972, at 37 F.R. 5761, and 9731, published in the FEDERAL REGISTER for September 19, 1972, at 37 F.R. 19148).

The rule as adopted contains several technical changes from the form in which it was proposed in Securities Exchange Act Release No. 9731. First, it has been revised in response to several suggestions that the rule define more clearly the type of market transaction information which must be reported. Second, with respect to the imposition by self-regulatory organizations and vendors of reasonable, uniform charges (irrespective of geographic location) for distribution of last sale reports, the rule has been modified to clarify that the Commission did not intend that any vendor be required to charge the same rates for its services as any other vendor. In this connection it should be noted that the term "vendor" can include, as well as independent vendors, any self-regulatory organization (or any joint or several instrumentalities thereof) which falls within the definition contained in the rule.

In addition, some commentators felt that the 75-day period after which trades must be reported pursuant to an effective plan is too short. The Commission wishes to note in this regard that plans may provide for a phase-in period, which should not in any event exceed 40 weeks, and distribution of last sale reports pursuant to such an effective plan would not be deemed to violate the prohibition.

There also appeared to be some confusion as to the contemplated role of independent vendors in distributing last sale reports by means of a composite tape, as distinguished from an interrogation system. It is not the intention of the rule to prescribe whether such distribution is to be effected solely by independent vendors, solely by self-regulatory bodies acting as vendors or by both, nor even to create an obligation on the part of self-regulatory bodies to make their last sale reports available for distribution by such vendors. This determination, which must initially be made by each self-regulatory body, cannot be final until the Commission has had an opportunity to examine the plans submitted pursuant to the rule.

Some commentators also recommended that the rule provide for public comment on any plans submitted pursuant to the rule. It is the Commission's intention to place such plans in its public files

so that they may be examined and commented upon by the public. It was also suggested that the Commission permit the sponsor of any plan the opportunity to comment on any changes or conditions that the Commission may wish to impose thereon. Before the Commission would impose changes or conditions on the effectiveness of any plan, its sponsors would of course be afforded an opportunity to respond.

Finally, in order to insure that no unjustified restrictions are imposed on access to the information reported pursuant to the rule, the rule has been revised to require that any plan submitted pursuant thereto must contain reasonable standards for denial of access to users and procedures for Commission review of such denials.

**Commission action.** The Securities and Exchange Commission, acting pursuant to the provisions of the Securities Exchange Act of 1934, and particularly sections 10(b), 15(c), 17(a), and 23(a) thereof, hereby adopts § 240.17a-15 of Chapter II of Title 17 of the Code of Federal Regulations, effective December 15, 1972, as set forth below:

**§ 240.17a-15 Reporting of market information on transactions in listed securities.**

(a) Every registered national securities exchange (exchange) shall, with respect to transactions executed through the facilities of such exchange, and every national securities association (association) shall, with respect to over-the-counter transactions executed by its members in securities registered or admitted to unlisted trading privileges on an exchange (listed securities), file with the Commission on or before December 26, 1972, a plan, with respect to such exchange or association, for the dissemination of the information required to be reported pursuant to this Section through vendors of market transaction information (vendors). Such plan shall not become effective unless the Commission, having due regard for the maintenance of fair and orderly markets, the public interest and the protection of investors, declares the plan, with whatever changes are deemed necessary or appropriate by the Commission, to be effective. In declaring any such plan effective, the Commission may impose such terms and conditions relating to the provisions of the plan and amendments thereto as it may deem necessary or appropriate. After January 22, 1973, last sale reports relating to transactions in listed securities executed through the facilities of any exchange or in the over-the-counter market shall not be released on a current and continuing basis by such exchange or association or member thereof except pursuant to such an effective plan.

(b) Each plan filed pursuant to paragraph (a) of this section may include joint procedures designed to comply with all or any portion of such paragraph, shall contain copies of all rules, by-laws, or other constituent instruments relat-

ing to any entity which may be established to implement the plan and shall specify, among other things:

(1) The manner of collecting, processing, sequencing, distributing, and displaying last sale reports;

(2) The applicable standards and methods which will be utilized to insure promptness of reporting, accuracy, completeness, and similar matters;

(3) All other rules or procedures which may be adopted to insure that the last sale reports will not be reported in a fraudulent or manipulative manner; and

(4) Standards for denial of access to users of last sale reports and procedures for Commission review of such denials.

Each such plan shall also provide that every vendor who receives any information reported pursuant to this section must agree to make available to its subscribers, on a current and continuing basis, through a moving, real-time last sale reporting system (composite tape) or an interrogation system, reports of prices and volume of all completed transactions (last sale reports) from all reporting markets in any listed security reported on by such vendor. The plans also shall require that any person displaying last sale reports shall agree not to exclude such reports based upon the market in which a transaction was executed and that any public display of selected last sale reports be clearly identified as only reporting selected transactions classified as to size, category of security, or other criteria. Each such composite tape or interrogation system, in displaying last sale reports, shall identify the marketplace where each such transaction was executed.

(c) A "vendor" of market transaction information shall include any person engaged in the business of disseminating to brokers and dealers, on a real-time or other current and continuing basis, reports of transactions in listed securities, whether distributed through an electronic communications network or shown on a terminal or other display device.

(d) Every member of an exchange or association shall make and keep current, and promptly transmit to the exchange or association of which it is a member, information and records required by such exchange or association pursuant to the plan declared effective under paragraph (a) of this section.

(e) Every broker or dealer who is not a member of an exchange or association and who effects transactions in listed securities, which transactions are not reported by any exchange or association pursuant to this section, shall file a plan meeting the requirements of paragraph (a) of this section, and such plan shall become effective in the manner specified in such paragraph.

(f) Nothing in this section shall preclude any exchange or association, separately or jointly: (1) From imposing reasonable, uniform charges (irrespective of geographic location) for distribution of last sale reports; nor (2) from requiring any vendor which distributes or



displays last sale reports to make the last sale reports it distributes or displays available to all qualified subscribers throughout the continental United States and to impose uniform charges on its subscribers (irrespective of geographic location).

(g) No broker or dealer shall operate or maintain any display of information reported pursuant to this section which excludes last sale reports based upon the market in which a transaction was executed.

(h) The Commission may exempt from the provisions of this section, either unconditionally or on specified terms and conditions, any exchange, association, broker, dealer, vendor or specified type of security if the Commission determines that it is not necessary in the public interest or for the protection of investors that such exchange, association, broker, dealer, vendor or type of security be subject to the provisions of this section.

(Secs. 10(b), 15(c), 17(a), 23(a), 48 Stat. 891, 895, 897, 901, 49 Stat. 1377, 1379, 52 Stat. 1075, 1076, 78 Stat. 570, 84 Stat. 1653, 15 U.S.C. 78j(b), 78o(c), 78q, 78w)

By the Commission.

[SEAL]

RONALD F. HUNT,  
Secretary.

NOVEMBER 8, 1972.

[FR Doc.72-19590 Filed 11-14-72; 8:48 am]

## Title 19—CUSTOMS DUTIES

### Chapter I—Bureau of Customs, Department of the Treasury

[T.D. 72-310]

#### PART 22—DRAWBACK

##### Proof of Export

##### Correction

In F.R. Doc. 72-19181 appearing at page 23712 of the issue for Wednesday, November 8, 1972, the Treasury Decision number should read as set forth above.

## Title 21—FOOD AND DRUGS

### Chapter I—Food and Drug Administration, Department of Health, Education, and Welfare

#### SUBCHAPTER B—FOOD AND FOOD PRODUCTS

#### PART 121—FOOD ADDITIVES

##### Subpart D—Food Additives Permitted in Food for Human Consumption

##### Diquat

Ten comments were received in response to the notice published in the FEDERAL REGISTER of September 13, 1972 (37 F.R. 18562), proposing establishment of an interim food additive tolerance of 0.01 part per million for residues of the herbicide diquat in potable water resulting from use of its dibromide salt in the control of aquatic weeds in canals, lakes,

ponds, and other potential sources of potable water. The 10 comments (from Federal, State, and local agencies in Florida plus the University of Florida and a private citizen) supported the proposal.

Having considered the comments received and other relevant information, it is concluded that the proposal should be adopted as published.

The Reorganization Plan No. 3 of 1970, published in the FEDERAL REGISTER of October 6, 1970 (35 F.R. 15623), transferred (effective December 2, 1970) to the Administrator of the Environmental Protection Agency the functions vested in the Secretary of Health, Education, and Welfare for establishing tolerances for pesticide chemicals under sections 406, 408, and 409 of the Federal Food, Drug, and Cosmetic Act, as amended (21 U.S.C. 346, 346a, and 348).

Therefore, pursuant to provisions of the act (sec. 409(d), 72 Stat. 1787; 21 U.S.C. 348(d)), the authority transferred to the Administrator of the Environmental Protection Agency (35 F.R. 15623), and the authority delegated by the Administrator to the Deputy Assistant Administrator for Pesticides programs (36 F.R. 9038), Part 121 is amended by adding the following new section to Subpart D:

##### § 121.1242 Diquat.

An interim tolerance of 0.01 part per million is established for residues of the herbicide diquat in potable water (calculated as the cation) resulting from the use of its dimromide salt to control aquatic weeds in canals, lakes, ponds, and other potential sources of potable water.

Any person who will be adversely affected by the foregoing order may at any time within 30 days after its date of publication in the FEDERAL REGISTER file with the Hearing Clerk, Environmental Protection Agency, Room 3902A, 4th & M Streets SW., Waterside Mall, Washington, DC 20460, written objections thereto in quintuplicate. Objections shall show wherein the person filing will be adversely affected by the order and specify with particularity the provisions of the order deemed objectionable and the grounds for the objections. If a hearing is requested, the objections must state the issues for the hearing. A hearing will be granted if the objections are supported by grounds legally sufficient to justify the relief sought. Objections may be accompanied by a memorandum or brief in support thereof.

*Effective date.* This order shall become effective on its date of publication in the FEDERAL REGISTER (11-15-72).

(Sec. 409(d), 72 Stat. 1787; 21 U.S.C. 348(d))

Dated: November 9, 1972.

EDWIN L. JOHNSON,  
Acting Deputy Assistant Administrator for Pesticides Programs.

[FR Doc.72-19596 Filed 11-14-72; 8:48 am]

#### SUBCHAPTER C—DRUGS

#### POTASSIUM HETACILLIN VETERINARY ORAL LIQUID

The Commissioner of Food and Drugs has evaluated a new animal drug application (55-048V) filed by Bristol Laboratories, Division of Bristol-Myers Co., Post Office Box 657, Syracuse, NY 13201, proposing the safe and effective use of potassium hetacillin veterinary oral liquid for the treatment of dogs and cats. The application is approved.

As said drug is subject to batch certification under provisions of section 512 (n) of the Federal Food, Drug, and Cosmetic Act, this order provides for the appropriate amendments to the antibiotic drug certification regulations.

Therefore, pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 512 (i) and (n), 82 Stat. 347; 350-351; 21 U.S.C. 360b (i) and (n)) and under the authority delegated to the Commissioner (21 CFR 2.120), Parts 135c, 141, and 149c are amended as follows:

#### PART 135c—NEW ANIMAL DRUGS IN ORAL DOSAGE FORMS

1. Part 135c is amended by adding the following new section:

##### § 135c.72 Potassium hetacillin veterinary oral liquid.

(a) *Specifications.* The drug is in liquid form and conforms to the certification requirements of § 149c.8 of this chapter.

(b) *Sponsor.* See code No. 044 in § 135c.501(c) of this chapter.

(c) *Conditions of use.* (1) It is used in dogs and cats as a treatment against strains of organisms susceptible to potassium hetacillin and associated with respiratory tract infections, urinary tract infections, gastrointestinal infections, skin infections, soft-tissue infections, and post-surgical infections.

(2) Dosage is administered as follows:

(i) In dogs, administer twice daily at a minimum rate of 5 milligrams per pound of body weight. In severe infections the frequency of the dosage may be increased to three times daily, or alternatively, the dosage may be increased to 10 milligrams per pound of body weight twice daily. For stubborn urinary tract infections, the dosage may be increased to 20 milligrams per pound of body weight twice daily. Treatment should be continued for 48 to 72 hours after the animal has become afebrile or asymptomatic. The drug should be administered 1 to 2 hours prior to feeding to insure maximum absorption. In stubborn infections, therapy may be required for several weeks.

(ii) In cats the recommended dosage is 50 milligrams twice daily. Treatment should be continued for 48 to 72 hours after the animal has become afebrile or asymptomatic. The drug should be administered 1 to 2 hours prior to feeding to insure maximum absorption. In stubborn infections, therapy may be required for several weeks.



(3) For use in dogs and cats only. Not to be used in animals raised for food production.

(4) Federal law restricts this drug to use by or on the order of a licensed veterinarian.

# **PART 141—TESTS AND METHODS OF ASSAY OF ANTIBIOTIC AND ANTI-BIOTIC-CONTAINING DRUGS**

2. Part 141 is amended by adding the following new section:

## **§ 141.554 Thin layer chromatographic identity test for hetacillin.**

(a) *Equipment*—(1) *Chromatography tank*. A rectangular tank, approximately 9 x 9 x 3.5 inches with a glass solvent trough on the bottom.

(2) *Plates*. Use 20 x 20 centimeter thin layer chromatography plates coated with Silica Gel G or equivalent to a thickness of 250 microns.

(b) *Developing solvent*. Mix 650 milliliters acetone with 100 milliliters distilled water, 100 milliliters benzene, and 25 milliliters acetic acid.

(c) *Spray solution*. Dissolve 300 milligrams of ninhydrin in 100 milliliters ethanol.

(d) *Preparation of spotting solutions*—

(1) *Sample solution*. Use the sample solution prepared as described in the section for the particular product to be tested.

(2) *Reference solutions*. Prepare a solution containing 10 milligrams of an authentic hetacillin sample per milliliter in a 4:1 solution of acetone and 0.1N hydrochloric acid, and a solution of ampicillin standard at 1 mg/ml in the same solvent.

(e) *Procedure*. Spot a plate as follows: Apply approximately 10 microliters of the sample solution, 1  $\mu$ l. of the reference hetacillin solution, and 1  $\mu$ l. of the ampicillin reference solution on a line 1.5 centimeters from the base of the silica gel plate and at intervals of not less than 2.0 centimeters. Pour developing solvent into the glass trough the bottom of the chromatography tank. After all spots are thoroughly dry, place the silica gel plate directly into the glass trough of the chromatography tank. Cover and seal the tank. Allow the solvent front to travel about 11.5 centimeters from the bottom of the plate, remove the plate from the tank, and allow to air dry. Apply the spray solution (do not saturate) and place immediately into an oven maintained at 90° C. Heat 15 minutes.

(f) *Evaluation*. Measure the distance the solvent front traveled from the starting line and the distance the spots are from the starting line. Calculate the *R<sub>f</sub>* value by dividing the latter by the former. The sample and standard should have spots of corresponding *R<sub>f</sub>* values.

## **PART 149c—HETACILLIN**

3. Part 149c is amended by adding the following new section:

### **§ 149c.8 Potassium hetacillin oral suspension, veterinary.**

(a) *Requirements for certification*—

(1) *Standards of identity, strength,*

*quality and purity*. Potassium hetacillin oral suspension veterinary is potassium hetacillin with one or more suitable and harmless colorings, flavorings and gelling agents suspended in a suitable and harmless non-aqueous vehicle. It contains in each milliliter an amount of potassium hetacillin equivalent to 50 milligrams of ampicillin. Its potency is satisfactory if it contains not less than 90 percent and not more than 120 percent of the number of milligrams of ampicillin it is represented to contain. Its moisture content is not more than 1.0 percent. Its pH is not less than 7.0 and not more than 9.0. It gives a positive identity test for hetacillin. The potassium hetacillin used conforms to the requirements of § 149c.1b.

(2) *Labeling*. It shall be labeled in accordance with the requirements of § 148.3 of this chapter, except that in lieu of the requirements of § 148.3(a) (1), it shall be labeled in accordance with the requirements of § 1.106(c) of this chapter.

(3) *Requests for certification; samples*. In addition to complying with the requirements of § 146.2 of this chapter, each such request shall contain:

(i) Results of tests and assays on:

(a) The potassium hetacillin used in making the batch for potency, safety, moisture, pH, potassium hetacillin content, identity and crystallinity.

(b) The batch for potency, moisture, pH and identity.

(ii) *Samples required*:

(a) The potassium hetacillin used in making the batch, 10 packages, each containing approximately 300 milligrams.

(b) The batch: A minimum of eight immediate containers.

(b) *Tests and methods of assay*—(1)

*Potency*. Proceed as directed for ampicillin in § 141.110 of this chapter, using the ampicillin working standard as the standard for comparison and preparing the sample for assay as follows: Place an accurately measured aliquot (usually 1 milliliter) into a high-speed glass blender jar, with sufficient 0.1 M potassium phosphate buffer, pH 8.0 (solution 3) to give a stock solution of convenient concentration. Blend 3 to 5 minutes. Further dilute an aliquot of the stock solution with solution 3 to the reference concentration of 0.1 microgram of ampicillin per milliliter (estimated).

(2) *Moisture*. Proceed as directed in § 141.502 of this chapter.

(3) *pH*. Proceed as directed in § 141.503 of this chapter, preparing the sample as follows: Transfer about 5.0 milliliters of the well shaken sample to a centrifuge tube. Add 10 milliliters of benzene, shake vigorously for 3 minutes and centrifuge at medium speed for 5 minutes. Carefully decant the benzene without disturbing the precipitate. Add 5 milliliters of carbon dioxide-free distilled water.

(4) *Hetacillin identity*. Proceed as directed in § 141.554 of this chapter preparing the sample solution as follows: Place 1.0 milliliter of the well shaken sample into a 50-milliliter volumetric

flask. Bring to volume with a 4:1 solution of acetone and 0.1 N hydrochloric acid.

*Effective date*. This order shall be effective upon publication in the FEDERAL REGISTER (11-15-72).

(Sec. 512(i) and (n), 82 Stat. 347; 350-351; 21 U.S.C. 360b(1) and (n))

Dated: November 7, 1972.

C. D. VAN HOUWELING,  
Director,

Bureau of Veterinary Medicine.

[FR Doc.72-19564 Filed 11-14-72; 8:46 am]

## **Title 30—MINERAL RESOURCES**

### **Chapter V—Interim Compliance Panel (Coal Mine Health and Safety)**

#### **SUBCHAPTER C—GENERAL ADMINISTRATION**

### **PART 505—PRACTICE AND PROCEDURE FOR HEARINGS UNDER SUBCHAPTERS A AND B OF THIS CHAPTER**

#### **Filing of Requests**

This amendment clarifies the procedures by which any person interested in an application for a permit for noncompliance may request a public hearing. The amendment also extends these procedures to hearings on applications for permits for noncompliance with the 2.0 mg./g.<sup>3</sup> respirable dust standard (30 CFR Part 502).

No notice of proposed rule making was published because under 5 U.S.C. 553(b) (A) these rules are exempted as rules of agency procedure or practice.

Accordingly, §§ 505.10 and 505.12 of Part 505 of Title 30 of the Code of Federal Regulations are amended to read as follows:

#### **§ 505.10 Persons who may file requests.**

Requests for public hearings will be considered by the Panel only if such requests are filed with the Panel by the following persons:

(a) Any interested person, including the applicant or a representative of the miners at the applicant's mine, after the Panel's decision on an application for an initial permit (other than one under section 305(a)(2) of the Act (30 U.S.C. 865(a)(2))).

(b) Any person interested in the application after publication in the FEDERAL REGISTER of a Notice of Opportunity for Hearing on an application for the renewal of any permit or an application for an initial permit under section 305(a)(2) of the Act.

(c) The applicant, concerning the decision of the Panel as to the application, when no public hearing has been held on an application for which Notice of Opportunity for Hearing was published.

#### **§ 505.12 Time for filing of requests.**

The Panel will consider a request for a public hearing:

(a) On its decision on an application for initial permit (other than one under



section 305(a)(2) of the Act, if such request is filed within 15 days after the date of mailing by the Panel of notice of such decision.

(b) On an application for a renewal permit or for an initial permit under section 305(a)(2) of the Act, if such request is filed within 15 days after publication in the FEDERAL REGISTER of a Notice of Opportunity for Hearing.

(c) Filed by an applicant if such a request is filed within 15 days after publication of mailing by the Panel of its decision on an application, when no public hearing has been held pursuant to the Notice of Opportunity for Hearing as described in paragraph (b) of this section.

(Sec. 508, 83 Stat. 803; 30 U.S.C. 957)

**Effective date.** This amendment shall become effective upon its publication in the FEDERAL REGISTER (11-15-72).

GEORGE A. HORNBECK,  
Chairman.

[FR Doc. 72-19629 Filed 11-14-72; 8:51 am]

## Title 32—NATIONAL DEFENSE

### Chapter VII—Department of the Air Force

#### SUBCHAPTER F—AIRCRAFT

#### PART 860—CONTRACTOR'S FLIGHT OPERATIONS

Part 860, Subchapter F of Chapter VII of Title 32 of the Code of Federal Regulations is revised to read as follows:

Sec.	Purpose.
860.1	Definitions.
860.2	Approving authority.
860.3	Contractor's flight operations procedures.
860.4	Forms and records.
860.5	Qualification requirements.
860.6	Minimum requirements.
860.7	Flight crewmember approval.
860.8	Contractor flight crewmembers proficiency requirements.
860.9	Other related publications.
860.10	Requests for waivers.
860.11	Disposition of Government flight representative records.
860.12	Supply of forms.

**AUTHORITY:** The provisions of this Part 860 issued under 10 U.S.C. 8012.

#### § 860.1 Purpose.

This part establishes procedures to obtain the required Army, Navy, Air Force, and Defense Supply Agency approval of contractor's flight operations procedures and contractor's personnel who operate aircraft for the Government. Also, it provides for the delegation of authority for such approvals, regardless of service affiliation. This part applies to all Army, Navy, Air Force, and Defense Supply Agency (DSA) Government flight representatives who approve contractor's flight operations procedures, and to contractor's personnel who operate any aircraft for which the Government may be contractually liable for

loss or damage. This part does not apply to contract flight training, or to the operation of leased aircraft.

#### § 860.2 Definitions.

(a) **Terms relating to Government—**  
(1) **Approving authority.** The commander or comparable individual of one of the following organizations having the administrative responsibility for a particular contractor facility.

(i) Army Heads of Procurement Activities (HPA) or their designee.

(ii) Naval Plant Representative Office (NAVPLANTREPO).

(iii) Air Force Heads of Procurement Activities (HPA) or their designee.

(iv) Commander, Defense Contract Administration Services Region (DCASR).

(2) **Cognizant Government agency.** Refers to the Army, the Navy, the Air Force, or DSA, whichever has cognizance over the contractor's facility, and the agency having cognizance over a Government installation where a contract for such services as aircraft maintenance is to be performed.

(3) **Government flight representative.** That pilot on current flight status (including Army aviators in an excused flying status, Navy pilots in Category II and III and Naval Flight Officers (NFO's), and Air Force pilots in flying status Code 3) to whom the approving authority has delegated responsibility to approve contractor flight operations procedures and flight crews for which the Government by contract assumes the risk for loss of, damage to, or destruction of aircraft.

(4) **Procuring and administrative contracting officers.** The individual designated in accordance with the Armed Services Procurement Regulation (ASPR) and defined in Part 1, Subchapter A, Chapter 1 of this title.

(b) **Terms relating to contractor—**  
(1) **Contractor.** Any individual, corporation, or other entity whose personnel may operate aircraft for which the Government assumes contractual liability for loss or damage to the aircraft.

(2) **Flight crewmembers.** Pilot, copilot, flight engineer/mechanic, navigator, bombardier-navigator, sensory systems operator, boom operator, and defensive systems operator when assigned to their respective crew positions to conduct any flight for the contractor.

(3) **Flight personnel (noncrewmember).** Those personnel designated by the contractor to perform a function while the aircraft is in flight; for example, technicians, observers, inspectors, systems engineers, and photographers.

(4) **Ground personnel.** Personnel designated by the contractor to perform taxiing, towing, and engine runup functions.

(5) **Requesting official.** The member of the contractor's first level of management (president, vice president) or his appointed designee authorized to sign the form letters "Request for Approval for Qualification Training" (§ 860.5(a)

(1)) and "Request for Approval of Contractor Flight Crewmember" (§ 860.5(b)(1)).

(c) **Terms relating to aircraft—**  
(1) **Test aircraft.** Any aircraft used for research, development, test, and evaluation purposes; the "first flight" of production aircraft; and the "first flight" of those aircraft falling under the meaning of "major alteration" explained in Federal Aviation Regulation, Part I (14 CFR Part I), available from the Federal Aviation Administration (FAA).

(2) **Production aircraft.** Any aircraft being manufactured for use in the operational inventory or undergoing depot-level maintenance, or contract modification, or inspect and repair as necessary (IRAN) before returning to the operational inventory.

(i) **Preaccepted aircraft.** Any aircraft which has not been accepted (DD Form 250, "Material Inspection and Receiving Report," has not been appropriately signed) by the Government, but for which the Government has assumed flight risk responsibilities.

(ii) **Accepted aircraft.** Any aircraft for which DD Form 250 has been signed.

(3) **Bailed and Government-furnished aircraft.** Government-owned aircraft provided to a contractor for use in conjunction with a specific contractual requirement.

(d) **Terms relating to flights—**  
(1) **Experimental test flights.** There are five types of these flights.

(i) Initial flight of a new type of model aircraft.

(ii) Flights to test or check compliance with specifications for structural integrity, spin test, etc.

(iii) Flights of experimental and research aircraft (X-22, X-24, etc.).

(iv) Flights to determine flight envelope and expansions thereto.

(v) Flights of an aircraft whose flight characteristics have been altered by configuration changes.

(2) **Functional flights—**  
(i) **Engineering flights.** (a) Subsystem development flights (for example, autopilot, fire control, bombardier/navigator systems).

(b) Specification compliance for subsystem flights.

(c) Engine, propeller, rotor, and transmission development flights.

(d) Flights where the aircraft serves as the vehicle carrying the item to be checked, for example, radar, missiles, etc.

(ii) **Acceptance flights.** (a) Acceptance flights of production aircraft.

(b) Flights following inspection, repair, and modification (TM 55-1500-204-25/1 and TO 1-1-300).

(3) **Support flights—**  
(i) **Photographic flights.**

(ii) **Chase flights.**

(iii) **Target or target towing.**

(iv) **Ferry flights.**

(v) **Demonstration flights** conducted according to AR 95-1, Navy OPNAVINST 3710.7 series, AFR 60-6, and contractor demonstration flights.

(vi) **Hurricane evacuation flights** conducted according to AR 95-87/



OPNAVINST 3730.3 series, and AFR 55-4 or appropriate overseas command directives.

(vii) Administrative flights, such as cargo flights, personnel carrier, etc. This includes flights of an emergency nature approved by the contract administration office.

(viii) Reliability, extended flight checks, training, instrument, or navigational proficiency flights.

(ix) First destination delivery flights.

#### § 860.3 Approving authority.

(a) The approving authority designates the Government flight representative for the contractor's facility. The approving authority also may designate a Government flight representative to act for the primary Government flight representative during his absence due to leave, TDY, or illness. This delegation must be in writing and may not be re-delegated. (Subparagraph (1) of this paragraph gives the format to be used for this delegation.) Notify the contractor when the Government flight representative is changed. The newly appointed Government flight representative furnishes the contractor a copy of his delegation of authority.

(1) Format for designating Government flight representatives:

(Service Letterhead)

Reply to attention of:

Subject: Delegation of Authority.

To:

1. Pursuant to AR 95-20, NAVAIRINST 3710.1 series, AFR 55-22, and DSAR 8210.1, you are hereby designated Government flight representative (primary/act in the absence due to leave, TDY, or illness) (delete inappropriate statement) and delegated authority to approve contractor personnel and procedures for operating aircraft under your jurisdiction for which the Government, by contract, assumes the risk for loss, damage, or destruction.

2. This authority is granted to you as an individual, and is not to be re-delegated. It is effective only so long as you remain physically qualified for flying status and in your present assignment, unless sooner terminated.

3. As the Government flight representative, you shall assure that the procedures contained in AR 95-20, NAVAIRINST 3710.1 series, AFR 55-22, or DSAR 8210.1 and appropriate ASPR provisions including departmental implementing instructions, are followed in the approval of contractor aircrew personnel and flight operations procedures.

(Signature of Approving Authority)

(b) Approval of the "Request for Approval of Contractor Flight Crewmember," "Request for Approval for Qualification Training," and the contractor's flight operations procedures shall be accomplished by the Government flight representative having cognizance of the contractor facility.

(c) Government flight representatives, when practical and possible, will be qualified in the mission, design, and series aircraft being operated at their facility.

#### § 860.4 Contractor's flight operations procedures.

(a) The contractor prepares written flight operations procedures to cover

flight operations at the contractors' operating facilities. The Government flight representative for each facility, or another qualified member of his staff, may assist in preparing but not actually prepare these procedures. Approved contractor operations procedures for principal operating facilities must cover the areas listed below, and are supplemented as necessary to cover other operational facilities.

(1) Flight management:

(i) Flight scheduling.

(a) Procedures for obtaining Government flight representative approval for flights, including flights of preaccepted aircraft. Where a type of flight is conducted repeatedly for the same purpose, the approval may be for all flights of a specified type which would follow the same mission profiles.

(b) Identification of contractor individual responsible for giving written flight authorization.

(c) Procedures governing the use of mixed aircrew (contractor and military crewmembers) in multiplace aircraft or formation flights.

(d) Procedure for designating pilot in command for aircraft with more than one pilot and for formation flights.

(e) Establish minimum crew requirements for the various type flight activities.

(f) Maximum crew duty time is 10 consecutive hours for single piloted aircraft, 12 consecutive hours for dual piloted aircraft without an operative autopilot installed, 16 consecutive hours for dual piloted aircraft with an operative autopilot installed. The crew duty period begins when the crewmember reports for work, and includes all time spent in flight planning and preflight. Twelve hours downtime with a minimum of 8 hours allowed for sleep is required before beginning a new crew duty period.

(g) Procedures to insure that flight crewmembers who will be exposed to night or instrument flying are currently qualified for these flight conditions.

(ii) Contractor personnel must use technical manuals and checklists in all cases where applicable technical data has been published. This includes ground operations—for example, towing, taxiing, refueling, scheduled maintenance, unscheduled maintenance, progressive aircraft rework (PAR), and IRAN—as well as flight operations. The contractor obtains normal publications distribution for all military technical manuals, changes, and supplements. Where only commercial manuals are available, the contractor is responsible for obtaining such publications. He insures that changes and supplements are promptly posted in the basic technical publications, so that his personnel can use the most current technical data available. Mixed crews (Government and contractor personnel) performing aircrew or maintenance tasks use identical checklists. Locally devised checklists are not available, or where deviation has been authorized by appropriate Government authority.

(iii) Aircraft currency requirements (§ 860.6(c)).

(iv) Multiple currency policies.

(v) Maintenance of flight crew qualifications and training folders.

(vi) Procedure for inspection of aircrew training folder and aircrew records folder.

(vii) Procedures to insure flight crewmember qualification for varying flight conditions and flight activities.

(viii) Procedures to comply with "Request for Government Approval for Qualification Training" (§ 860.5(a)(1)).

(ix) Procedure to comply with "Request for Approval of Contractor Flight Crewmember" (§ 860.5(b)(1)).

(x) Certificates, licenses, and permits (instrument ratings).

(xi) Procedure and criteria for selecting and designating contractor aircrew instructors, flight examiners, etc.

(xii) Procedure for termination of approval.

(xiii) Provisions for determining weight and balance for each aircraft and flight.

(xiv) Procedures for use of life support equipment.

(xv) Flight safety:

(a) The accident prevention program will include:

(1) Contractor's consolidated safety council.

(2) Regular recurring flight safety surveys. Use the following references as guidelines: For Army the USABAAR Guide to Aircraft Aviation Resources Management for Aircraft Mishap Prevention; for Navy the OPNAVINST 3710.7 series; for the Air Force AFM 127-1; and for Defense Supply Agency DSAM 8220.3.

(3) Safety publications.

(4) Published safety responsibilities.

(5) Hazard reporting/correction procedures.

(6) Regularly scheduled aircrew flying safety meetings (as a minimum these will be conducted monthly).

(7) Designation of aviation officer, with specific duties and responsibilities.

(8) Fire protection and prevention programs.

(9) Aircraft ground handling and services procedures and practices.

(b) Preaccident and crash alarm systems procedures must include a current roster of Government personnel to be notified of lost or damaged aircraft. Guidance on military accident reporting is provided in Department of Defense Index TD-3 (Data item description DI-H-1329-1331) for the Army, OPNAVINST 3750.6 series for the Navy, Joint Chiefs of Staff Publication No. 6, Vol. 5, for the Air Force, and DSAR 8200.4 for the Defense Supply Agency. This plan must include the procedure for contractor and subcontractor cooperation and participation in accident investigations conducted by the Government.

(c) Provisions for search and rescue procedures.

(2) Flight crewmember requirements:



(i) Detailed qualification, requalification, upgrading, crosstraining, and instructor qualification programs must be outlined in the contractor's operations procedures. These procedures must include the expiration dates for recurring training requirements, and the procedure to assure that flight crews do not fly if training requirements have not been met.

(ii) Training requirements.

(a) Survival training requirements, if essential.

(b) Personal and life support equipment training.

(c) Egress training.

(d) Physiological training (§ 860.6(d)).

(e) Ground school requirements.

(iii) Flying requirements.

(a) Annual flying time (§ 860.9).

(b) Annual written proficiency and emergency procedure examinations.

(c) Annual proficiency flight checks.

(d) Annual instrument flight checks.

(e) Who may administer flight checks.

(f) Current FAA flight physical.

(3) Flight personnel (noncrew) requirements:

(i) Procedures to comply with written approval.

(ii) Determination of contents and maintenance of records folder.

(iii) Flying requirements.

(a) Physiological training (§ 860.6(d)).

(b) Qualification procedures.

(c) Ejection or escape procedures.

(d) Ground egress procedures.

(e) Contractor physical requirements.

(4) Ground personnel requirements: Contractor personnel taxiing/towing aircraft and performing engine runups.

(i) Qualification procedures.

(ii) Ground egress training.

(iii) Contractor physical requirements.

(5) Procedures for passenger approval.

(6) Planning and flight mission procedures.

(i) Prepare mission profiles for each type of flight regularly conducted by the contractor's flight crewmembers and covered in the flight operations procedures. Establish specific geographical areas or point-to-point routes and flight following procedures for conduct of flights.

(ii) Mission profiles and specified geographical areas must make maximum use of ground radar, ground radio, and chase aircraft to monitor position and status of aircraft.

(iii) Crew briefings, conducted or received by supervisory personnel, must include, but are not limited to:

(a) Station and takeoff times.

(b) Primary mission, including mission aircraft, support aircraft, weather, crewmember duties, routes and ranges, communications, specific mission procedures, and recovery and landing.

(c) Alternate mission.

(d) Life support systems and equipment.

(e) Emergency procedures.

(f) Security assigned to the mission.

(g) Ground coordination procedures.

(iv) The contractor establishes operational procedures to cover items (a) through (f) of this subdivision. If the contractor flight activity is physically located at a fully operational civil or military airfield that has these procedures in operation, the contractor complies with local directives and executes an agreement with the airfield authority. All procedures must meet FAA requirements and, as a minimum, include the following:

(a) Basic regulations, to include flight areas.

(b) Weather minimum—test and functional.

(c) Traffic control tower requirements.

(d) Filing of flight plans.

(e) Standard operating procedures, to include:

(1) Radio failure.

(2) Gear malfunction.

(3) Cross wind landing criteria.

(4) Airdrome traffic procedures.

(5) Emergency procedures for takeoff and landing, to include procedures for use of fire equipment and barriers/arresting gear.

(6) Ejection and jettisoning areas.

(7) Arming and dearming (if applicable).

(8) Minimum fuel procedures.

(f) Severe weather plans.

(b) The contractor forwards the completed written flight operations procedures to the Government flight representative for approval. Government approval is accomplished by the Government flight representative using the Army USAVSCOM Pamphlet 715-1, Navy OPNAVINST 3710.7 series, or Air Force Manuals 60-1, 60-16, and the AFM 51 series, DSAM 8220.3 as a guide. Both the contractor and Government flight representatives must maintain in their offices or operations sections a current copy of the approved procedures. The flight operations procedures for support operating locations must be approved by the Government flight representative assigned in accordance with DODM 4105.59H for each location, and forwarded to the Government flight representative at the contractor's principal operating facility. A duplicate copy of these procedures is maintained by the contractor at each such facility. A list of approved crews and copies of operations procedures at the principal facility are furnished to all alternate support facilities.

(c) The contractor shall not begin flight operations until his operations procedures have been approved in writing by the Government flight representative.

(d) Reviews of contractor's flight operation procedures must be conducted at least every 6 months, or whenever the primary Government flight representative is changed, to assure currency and compliance. A record of the review dates and action taken is kept by the Government flight representative and the contractor. The contractor is responsible for assuring that the contractor's flight operations procedures are current. If the Government flight representative determines the procedures are deficient, in-

adequate, or outdated, the contractor is notified. Failure of the contractor to correct the procedures in a reasonable time shall be grounds for suspension of the Government flight representative's approval of the flight crewmembers and contractors flight operations procedures. Flights conducted during such suspension are deemed flights without the required approvals of the applicable clauses of 41 CFR, Part 1-10.

(e) Noncompliance with approved procedures and/or development of dangerous practice must be brought to the immediate attention of the contractor and the administrative contracting officer by the Government flight representative. If the initial notification is oral, immediately prepare a formal written communication fully outlining the deficiencies as a matter of contract record. Noncompliance with approved flight operations procedures and/or development of a dangerous practice is unreasonable condition or conduct within the meaning of the clause of 41 CFR, Part 1-10, and is grounds for suspension of the approval of the contractor's flightcrew. The Government reserves the right to take such other action as may be necessary for preserving the aircraft.

(f) If the procedures need revising, the contractor submits recommended revisions with applicable supporting documents to the Government flight representative for approval.

#### § 860.5 Forms and records.

Contractors must:

(a) Use subparagraph (1) of this paragraph, format for "Request for Approval for Qualification Training," Office of Management and Budget (OMB) Approval No. 22-RO195 to request the approval to qualify the contractor's flight crewmembers.

(1) Format for request for approval for qualification training:

Subject: Request for Government Approval for Aircrew Qualification and Training.  
To: Government Flight Representative.

I. Name: \_\_\_\_\_, Crew position: \_\_\_\_\_, Aircraft: \_\_\_\_\_

\_\_\_\_\_ Date of birth: \_\_\_\_\_  
Security clearance: \_\_\_\_\_, FAA rating: \_\_\_\_\_

II. Provide a résumé of education background. (High school, name and location; college or university name, location and degree obtained; flight school and date completed; test pilot school and date completed; and special professional schools.)

III. Have you ever served in any branch of the U.S. Military Service? \_\_\_\_\_ If so, state: Branch \_\_\_\_\_, Service dates: From \_\_\_\_\_ to \_\_\_\_\_, Last location \_\_\_\_\_, Highest rank \_\_\_\_\_, SSAN \_\_\_\_\_, Aero rating \_\_\_\_\_ Are you now a member of the Reserves or National Guard? \_\_\_\_\_ If yes, state: Branch \_\_\_\_\_, Present rank \_\_\_\_\_

IV. Provide a résumé of experience in the flight test field. Include both engineering and aircrew experience by project, type of aircraft, and hours flown.

#### FLIGHT PHASE

V. I certify that I have read and understand all of the contractor's procedures and



directives pertinent to the accomplishment of my assigned duty.

(Crewmember signature)  
VI. I have verified the records of \_\_\_\_\_ and it is requested that he be approved for experimental/functional flights (delete one not applicable) in \_\_\_\_\_ type aircraft.

(Type name of contractor's requesting official)

(Signature of contractor's requesting official)

Attachment DD Form 1821

VII. ☐ Approved  
☐ Disapproved

(Date of approval or disapproval)

(Type name of Government flight representative)

(Signature of Government flight representative)

(b) Use subparagraph (1) of this paragraph, format for "Request for Approval of Contractor Flight Crewmember" Office of Management and Budget (OMB) Approval No. 22-RO196 to request approval of contractor flight personnel.

(1) Format for request for approval of contractor flight crewmember:

Subject: Request for approval of contractor flight crewmember.

To: Government flight representative.

I. I have verified the records of \_\_\_\_\_ (crewmember's name) and it is requested that he be approved as a \_\_\_\_\_ (crew position)

for experimental/functional (delete one not appropriate) flights in \_\_\_\_\_ type aircraft.

Attachment DD Form 1821.

(Signature of Contractor's requesting official and date)

(Typed name of contractor's requesting official)

II. I certify that \_\_\_\_\_ has satisfactorily flown a proficiency flight check on \_\_\_\_\_ (date)

(Signature of instructor pilot/flight examiner)

III. ☐ Approved

(Signature of Government flight representative)

☐ Disapproved

(Type Name of Government flight representative)

(Date)

(c) Use DD Form 1821, "Contractor Crewmember Record," Office of Management and Budget (OMB) Approval No. 22-RO197 to record individual flight crew personnel records and approval to operate Government aircraft. It will be an enclosure to the forms listed in paragraphs (a) (1) and (b) (1) of this section.

(d) Maintain a training folder on each flightcrew member while in training status. This folder serves as a management tool to record training progress and assists in the orderly progression of training. The folder shall contain:

(1) Complete copy of form as shown in paragraph (a) (1) of this section.

(2) Copy of the most recent aircraft questionnaires, to be dated and corrected to 100.

(3) Hours, type, and dates of ground school completed.

(4) Each training/checkout flight numbered, with a résumé as to the areas covered, to include how trainee performed during that training period.

(5) Record of training prerequisites (§ 860.4 (a) (2) (ii)).

(e) Maintain a record folder for each flightcrew member after the completion of training and qualification to include the following:

(1) Complete training folder required in paragraph (d) of this section.

(2) Completed copy of forms shown in paragraph (b) (1) of this section. Documented records of special training completed that is required to perform all maneuvers required in conducting the test/functional check flights and mission profile, for example, formation, refueling, instrument, night, low level, etc.

(3) Certification of current FAA flight physical.

(4) Completed copies of aircrew proficiency checks administered by Government and/or company personnel during the preceding 2 years.

(5) Certification of physiological training.

(6) Certification of ejection seat or escape training, survival training and egress training, as required by the contractor's operations procedures.

(f) Maintain a records folder for flight personnel (noncrewmembers) to include the following:

(1) Completed copy of contractor's authorization to fly.

(2) Certification of current physical.

(3) Certification of training and qualifications as required in the contractor's operations procedures.

(4) Certification of physiological training.

(5) Certification of ejection seat or escape training, survival training, and egress training as required by the contractor's operations procedures.

(g) Make the records in paragraphs (a) through (f) of this section available to the Government flight representative at his request.

#### § 860.6 Qualification requirements.

(a) Minimum qualifications for approval of the "Request for approval of contractor flightcrew member" for test and functional flight categories are listed below. However, they are only minimums, and such factors as total experience, currency of experience, experience in similar aircraft, type of flying experience, and other related factors are evaluated by the Government flight representative before approving a contractor flightcrew member.

(NOTE: For contractors located in foreign countries, the appropriate civil aviation authority or foreign military department ratings, for example, Department of Transport (Canada), Royal Air Force (Great Britain), may be substituted for FAA in the following subparagraphs.)

The requirements are:

(1) *Experimental test flights*—(i) *Pilot*. FAA commercial and instrument rating and current FAA Class II physical qualification. Not less than 1,500 hours first pilot time, to include 100 hours as first pilot during engineering and/or acceptance flights listed under the functional flight category. Graduate of a military test pilot school.

(ii) *Copilot*. FAA commercial and instrument rating, and current FAA Class II physical qualification. Not less than 1,000 hours first pilot time, to include 100 hours of pilot time during engineering and/or acceptance flights listed under the functional flight category. Graduate of a military test pilot school.

(2) *Functional flights*—(i) *Pilot*. FAA commercial and instrument rating and current FAA Class II physical qualification. Not less than 1,000 hours first pilot time. Highly qualified in mission, design, and series of aircraft.

(ii) *Copilot*. FAA commercial and instrument rating and current FAA class II physical qualification. Not less than 500 hours first pilot time. Qualified in mission, design, and series aircraft.

(b) Minimum prerequisites to qualify in any specific type aircraft.

(1) *Pilots*. See § 860.7. These minimums have been established after considering that some contracts require that pilots operate Government aircraft only during VFR and daylight and within a few miles of the home station. If a contract requires flying under more adverse conditions, the Government flight representative shall require more experience than listed in § 860.7. In all cases, however, Government approval depends on experience and proficiency on a par with the type flying being contemplated or conducted. A comprehensive written questionnaire on the applicable mission, design, and, if appropriate, series of aircraft must be completed. A knowledge of all the aircraft systems, including normal and emergency procedures, must be demonstrated to a qualified instructor pilot approved by the Government flight representative. This demonstration may be made while the aircraft is on the ground or during flights.

(2) *Copilots*. A minimum of 5 hours or three sorties and five dual or supervised landings are required in the mission, design, and, if necessary, series aircraft for which approval is requested. The Government flight representative may require more experience at his discretion (for example: 25 or more hours may be appropriated for larger or more complex aircraft). Completion of ground school course is required for mission, design, and, if necessary, series of aircraft. Reference Army Training Circular 1-34, NATOPS for the Navy, and AFM 50-5 and 51 series manuals for the Air Force. A comprehensive written questionnaire



(b) *Jets and turboprop.*

Aircraft by group	First pilot time for this group	Dual or supervised time before checkout	Dual or supervised sorties, each including at least one landing	Other requirements	Instructor pilots
Hours	Hours	Hours	Hours		
(1) Single.....	50	5	5	(1) At the discretion of the Government flight representative.	Do.
(2) Twin engine.....	100	5	5	(1) Do.	Do.
(3) Three or four engines.....	100	15	10	(1) Do.	Do.
(4) Multiengine (more than four).....	200	20	10	(1) Do.	Do.

<sup>1</sup> Completion of ground school course required for mission, design, and, if necessary, series of aircraft. Reference Army Training Circular 1-34, NATOPS for the Navy, and AFM 50-5 and the 51 series manual for the Air Force.

(c) *VTOL helicopter/aircraft.*

Type of aircraft for group and similar aircraft weight and engine horsepower	Total first pilot rotary wing time	Dual time in type of helicopter before checkout	Dual autorotations either full touchdown or power recovery as applicable	Other requirements	Instructor pilot
Hours	Hours	Hours			
(1) 0-500 pounds..... 5 sorties	50	5	10	Completion of formal ground school course required.	At the discretion of the Government flight representative.
(2) 5,000-16,000 pounds. 5 sorties	250	5	10	Previous completion of a formal ground school course. Completion of specialized or formal ground school course for helicopter concerned. <sup>1</sup>	Do.
(3) 16,000-40,000 pounds. 10 sorties	500	10	10	Previous completion of a formal ground school course. Completion of specialized or formal ground school course for helicopter concerned. <sup>2</sup>	Do.
(4) 40,000 pounds and over. 10 sorties	500	10	10	do <sup>2</sup> .....	Do.

<sup>1</sup> To include checkout time.

<sup>2</sup> For qualification in amphibious aircraft, 10 water landings also are required.

on the applicable mission, design, and, if appropriate, series of aircraft must be completed. A knowledge of all the aircraft systems, including normal and emergency procedures, must be demonstrated to a qualified instructor pilot approved by the Government flight representative. This demonstration may be made while the aircraft is on the ground or during flight.

(3) *Other flight personnel.* A written questionnaire applicable to the particular function the individual is to perform (to include emergency procedures) must be completed before flight in that aircraft.

(c) A minimum of one flight and one landing in each mission, design, and series aircraft of significant difference in which qualified is required every 45 days to insure currency as either pilot or co-pilot. The Government flight representative determines the grouping of aircraft for currency requirements with regard to powerplants, control system, and airframe differences.

(a) *Reciprocating aircraft.*

Aircraft by group	First pilot time for this group <sup>1</sup>	Dual or supervised time before checkout	Dual or supervised sorties, each including at least one landing <sup>2</sup>	Other requirements	Instructor pilots
Hours	Hours	Hours			
(1) Single engine up to 5,000 pounds gross weight.	5	5	5	(3)	At the discretion of the Government flight representative.
(2) Single engine 5,000 to 20,000 pounds gross weight.	5	5	5	(3)	Do.
(3) Twin engine up to 12,000 pounds gross weight.	5	5	5	(3)	Do.
(4) Four or more engines.....	75	15	10	(3)	Do.

<sup>1</sup> To include checkout time.

<sup>2</sup> For qualification in amphibious aircraft, 10 water landings also are required.

<sup>3</sup> Completion of ground school course required for mission, design, and, if necessary, series of aircraft. Reference Army Training Circular 1-34, NATOPS for the Navy, and AFM 50-5 and the 51 series manual for the Air Force.



**§ 860.8 Flightcrew member approval.**

(a) Only contractor-designated requesting officials submit requests for crewmember approval and for qualification training. A list of these officials is provided in writing to the Government flight representative. The list is revised as necessary to insure currency by the contractor or subcontractor.

(b) The contractor official requesting approval for qualification training prepares, signs, and forwards to the Government flight representative for approval two copies in the format of § 860.5(a)(1). The Government flight representative indicates his action, and signs both copies. The original is retained by the Government flight representative. The contractor insures that flightcrew members do not fly or initiate qualification training before receipt of Government approval.

(1) The Government flight representative is allowed a minimum of 10 workdays for processing, analyzing, and approving or disapproving contractor requests for qualification training.

(2) Following approval, training must be initiated within 90 days, and completed without interruption. If interrupted for any reason, the resumption of training is a matter to be worked out between the Government flight representative and the contractor.

(3) Formal training offered by military agencies may be requested by the contractor on a space available basis. Unless otherwise provided in the contract, the contractor must reimburse the military agencies for such training.

(c) Request for approval of contractor flightcrew member.

(1) On completion of training, the contractor forwards to the Government flight representative two completed copies in the format of § 860.5(b)(1). The Government flight representative indicates his action and signs both copies. The original is kept in the Government flight representative's files; the duplicate copy must be returned to the contractor within 10 workdays.

(2) The contractor will not use the flightcrew member in his aircrew specialty until receipt of Government approval.

(d) Request for aircraft initial flights.

(1) The contractor submits a written request, including both the names of the flightcrew with current "Request for Approval for Qualification Training" (§ 860.5(a)(1)) and "Request for Approval of Contractor Flightcrew Member" (§ 860.5(b)(1)) for each crewmember and the date of anticipated flight, to the Government flight representative, not less than 90 days before the scheduled initial flight date. The Government flight representative forwards all requests to the appropriate project manager of the Procuring Contracting Officer, as appropriate.

(2) The Government flight representative returns the request to the contractor at least 30 days before initial

flight date. If disapproved, the contractor must be notified immediately by the service concerned.

(e) The contractor's requesting official grants written approval for each contractor and subcontractor noncrewmember required to fly in Government aircraft, before the individual's first flight, with a copy of the Government flight representative. The contractor's requesting official insures that each individual is required, and is qualified to serve in a specific capacity while aboard military aircraft. The contractor keeps the written approval on file until the individual is no longer authorized to fly.

(1) Limit personnel approved to those necessary for the contractor to perform on contract.

(2) If the Government flight representative determines that the written approval has been signed without adequate justification, the contractor is requested to remove the affected individual from flight status. If the contractor still feels that the individual should be allowed to fly, the matter is referred to the Administrative Contracting Officer. The contracting officer assures that the above mentioned individual(s) is not allowed to fly pending the result of any appeal.

(3) The Government flight representative reviews flight personnel assignment each 6 months to insure only those necessary to the mission have current written approval.

(f) Contractor instructor flightcrew members.

(1) Only the most highly qualified, proficient, and experienced personnel are designated as instructor flightcrew members. Certification of instructor pilot status must be documented on DD Form 1821.

(2) Contractor instructor flightcrew members shall administer flight checks to other flightcrew members employed by the contractor. Military personnel may receive qualification and recurrency checks from contractor instructor flightcrew members when deemed appropriate by the approval authority.

(3) Contractor personnel administering such checks must be qualified as instructors in accordance with the instructor's criteria as outlined in the contractor's operations procedures.

(g) Any person not approved either as flightcrew member or flight personnel requires written approval by the appropriate Government flight representative before flying in any aircraft which the Government, by contract, assumes the risk of loss, damage, or destruction.

(h) Ground personnel (personnel taxiing or towing aircraft, or performing engine runups) as well as fire crash rescue personnel must be qualified as outlined in the contractor's approved operations procedures. Written Government approval, except when otherwise specified in the applicable contract, is not required.

(i) Termination of approvals:

(1) Approvals of flightcrew members are automatically canceled on termina-

tion of employment, physical disqualification, or revocation of FAA rating. The contractor notifies the Government flight representative of such action by the most expeditious means, and confirms in writing within 10 calendar days.

(2) The contractor may request the Government flight representative to terminate any approval. This request must be in writing, and must be signed by a contractor's requesting official.

(3) The Government flight representative suspends approvals of flightcrew members and flight personnel who:

(i) Have failed to meet the general requirements of normal flight techniques and to exercise sound judgment in test or functional flights.

(ii) Have exhibited evidence of personal instability or similar undesirable tendencies or have conducted themselves contrary to the interests of the Government in promoting safety.

(iii) Have failed to accomplish annual (within 12 months) requirements.

(4) The Government flight representative promptly notifies the contractor when an approval is suspended. A written statement by the Government flight representative to the contractor must set forth in detail the reasons for the action. If the contractor feels that the approval should not have been suspended, he may request a review of the matter by the Administrative Contracting Officer.

(j) Verification by the Government flight representative as to the qualifications of contractor personnel flying military aircraft at locations other than the principal location is furnished by letter or message to the Government flight representative at the other location. The contents of the transmittal includes the level of the pilot's qualification (for example, experimental, functional flights, etc.), last flight, time in the model being flown, time in the last 90 days, and any other specific information pertinent to the maneuver/mission to be flown at that location.

(k) The Government flight representative will not approve any flightcrew member until he has approved the contractor's operations procedures. Flightcrew member qualifications procedures will place particular emphasis on ground training, flight training, and checkout requirements for any aircraft in which an individual is not currently qualified. These areas will be in sufficient detail to cover the requirements for initial checkouts, upgrading to test and experimental status, requalification, and any other specific training associated with the contractor's mission.

**§ 860.9 Contractor flightcrew members proficiency requirements.**

(a) The contractor must require a minimum of 80 hours per year total flying time for pilots and copilots, and 60 hours per year for all other flightcrew members. The requirement applies to the period covered by the flight operation phase of the Government contract. For contracts of less than a year's duration, a proportionate share are flown by each



flightcrew member. For pilots and copilots, a minimum of 35 hours must be flown in each 6-month period (Jan.-June, July-Dec.). All others, a minimum of 24 hours.

NOTE: This does not mean that the Government furnishes additional flying time for contractor flightcrew member; the flying time must be available under the contractor's flying program.

(b) In lieu of the total hourly requirements in paragraph (a) of this section, the contractor, with the approval of the Government flight representative, may

substitute a minimum of 80 sorties per year for each pilot and copilot. However, a minimum of 15 sorties must be flown in each quarter. No combination of this sortie minimum and the hourly minimum may be used in satisfying proficiency requirements for a period of less than 6 months. But, a 6-month period using the sortie basis may be combined with a 6-month period using the hourly basis to determine annual minimums. If so combined, the respective minimums must be 40 sorties and 40 hours. (Note in paragraph (a) of this section applies.)

(c) Proficiency requirements:

Aircrew	Event	First 6 months July-Dec. minimum	Last 6 months Jan.-June minimum	Annual minimum
Pilot and copilot.....	Night instruments.....	5 hours.....	5 hours.....	10 hours.
	Precision approaches.....	8 hours.....	8 hours.....	20 hours.
	Nonprecision approaches.....	5 each.....	5 each.....	10 each.
	Night.....	do.....	do.....	Do.
Navigator/bombardier/electronic warfare officer/weapons system officer.....	Night.....	4 hours.....	4 hours.....	8 hours.

(1) Night instrument time may be applied to either instrument time requirements or night requirements, but not to both.

(2) There is no requirement for contractor pilots to fulfill the night, instrument, or approach requirements, except in those cases where night and/or instrument flying by contractor personnel will be required. Those pilots maintaining night flying proficiency also must maintain instrument proficiency minimum.

(d) Proficiency flight evaluations and/or instrument flight evaluations (if applicable) may be administered to contractor flightcrew members by qualified military flight examiners, at the discretion of the cognizant Government flight representative.

NOTE: The Government may furnish flying time necessary to support this requirement.

(e) If a pilot fails to maintain acceptable proficiency, he is not permitted to fly as a pilot in command of aircraft covered by the Government flight risk clause until appropriate training as prescribed by the Government flight representative is accomplished and a satisfactory flight evaluation is completed. Additional flying time is not furnished by the Government if a training period is required. Flight checks conducted by military flight examiners must be conducted in accordance with criteria of the applicable major command flight evaluation/standardization program.

(f) Approved contractor flightcrew members must demonstrate their ability to operate aircraft, aircraft systems (to include egress systems), or perform other assigned aircrew functions safely and effectively, in accordance with contractor's existing procedures and directives, annually (within 12 months of the previous check) in each aircraft in which currency is maintained. These checks may be conducted as an integral part of the check pilots in the same aircraft or a regularly scheduled flight, with the

chase plane. Flight checks are documented on the DD Form 1821. For those aircraft with similar mission and design, but dissimilar series designations (for example, C-130A, C-130E), the Government flight representative determines which are considered like aircraft.

(g) Supervisory personnel (chief pilot) administers these checks.

(h) In conjunction with the flight check, the flightcrew member also must demonstrate orally to the check pilot his knowledge of the contractor's operations procedures. In addition, the contractor develops proficiency and emergency procedure examinations for the aircraft and its associated systems. These examinations are administered before the proficiency flight check. Crewmembers certify to having reviewed the contractor operations procedures annually and when revised. Accomplishment of these requirements are documented on the DD Form 1821.

#### § 860.10 Other related publications.

In all cases not specifically covered by this part, the contractor should, insofar as practicable, adhere to the procedures set forth in the operational flight instructions and requirements issued by the military services having plant cognizance. For the Army, AR 385-40 and AR 95 series; Navy OPNAVINST 3710.7 series, AFM's 60-1, 60-16, and the 51 series, and the DSA Flight Operations Manual.

#### § 860.11 Request for waivers.

Waivers regarding application of this part to the contractor's performance of a contractor contracts, unless specifically provided for in the contract or contracts, are forwarded through the Government flight representative for his recommendations, to the Administrative Contracting Officer, and submitted through channels to the procuring activity, or the requiring activity in those cases where the requiring activity is not the procuring activity (for example, military in-

terdepartmental purchase requests (MIPR)). Monetary or other consideration shall be given to the contractual requirements before processing any requests for waivers. Waivers to this part require approval of the heads of procurement activities (HPA) or his designee, or the HPA for the requiring activity where the contract is awarded as a result of a MIPR.

#### § 860.12 Disposition of Government flight representative records.

Records accumulated by the Government flight representatives are disposed of according to disposition standards published by the military services (AFM 12-50, AR 340-18-11, SECNAVINST 5212.5B, DSAM 5015.1).

#### § 860.13 Supply of forms.

Locally reproduce DD Form 1821, pages 1, 2, and 3 on 8"x10½" or 8½"x11" paper.

By order of the Secretary of the Air Force.

JOHN W. FAHRNEY,  
Colonel, U.S. Air Force, Chief,  
Legislative Division, Office of  
The Judge Advocate General.

[FR Doc. 72-19556 Filed 11-14-72; 8:45 am]

## Title 39—POSTAL SERVICE

### Chapter I—U.S. Postal Service

#### PART 155—CITY DELIVERY

#### PART 171—MONEY ORDERS

#### Miscellaneous Amendments

Sections 155.1 and 155.2 of Title 39, Code of Federal Regulations, relating to establishing and extending city delivery service, are amended to revise the criteria for inaugurating delivery service. The current requirement (among others) of \$10,000 in annual postal receipts at the post office where delivery service is contemplated is rescinded. The prime requirement henceforth will be a population of 2,500 or more in the area to be served, or 750 possible deliveries. The amendments also state the applicability of delivery service extension requirements to mobile home subdivisions.

Accordingly, §§ 155.1 and 155.2 are amended to read as follows:

#### § 155.1 Requirements for establishing city delivery service.

(a) Consideration for establishing city delivery service will be given when the following requirements are met:

(1) A population of 2,500 or more within the area to be served, or 750 possible deliveries. (Postal population may vary greatly from the general census population because of different boundary interpretations and designations);

(2) Fifty percent of the building lots in the area to be served are improved with houses or business places. Where a house or building and its yard or grounds cover more than one lot, all lots



# Title 40—PROTECTION OF ENVIRONMENT

## Chapter I—Environmental Protection Agency

### SUBCHAPTER E—PESTICIDES PROGRAMS

#### PART 180—TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE CHEMICALS IN OR ON RAW AGRICULTURAL COMMODITIES

##### Inorganic Bromides

A notice (PP 2E1280) was published by the Environmental Protection Agency in the FEDERAL REGISTER of September 21, 1972 (37 F.R. 19650), proposing establishment of a tolerance for residues of inorganic bromides resulting from post-harvest fumigation with the insecticide methyl bromide in or on the raw agricultural commodity pomegranates at 70 parts per million.

Subsequently, the petitioner amended the petition by increasing the proposed tolerance level from 70 parts per million to 100 parts per million. No comments or requests for referral to an advisory committee were received.

It is concluded that the proposal should be adopted.

Therefore, pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 408(e), 68 Stat. 514; 21 U.S.C. 346a(e)), the authority transferred to the Administrator of the Environmental Protection Agency (35 F.R. 15623), and the authority delegated by the Administrator to the Deputy Assistant Administrator for Pesticides Programs (36 F.R. 9038), § 180.123 is amended by revising the paragraph "100 parts per million in or on copra", as follows:

**§ 180.123 Inorganic bromides resulting from fumigation with methyl bromide; tolerances for residues.**

100 parts per million in or on copra and pomegranates.

Any person who will be adversely affected by the foregoing order may at any time within 30 days after its date of publication in the FEDERAL REGISTER file with the Hearing Clerk, Environmental Protection Agency, Room 3902A, Fourth and M Streets SW., Waterside Mall, Washington, DC 20460, written objections thereto in quintuplicate. Objections shall show wherein the person filing will be adversely affected by the order and specify with particularity the provisions of the order deemed objectionable and the grounds for the objections. If a hearing is requested, the objections must state

the issues for the hearing. A hearing will be granted if the objections are supported by grounds legally sufficient to justify the relief sought. Objections may be accompanied by a memorandum or brief in support thereof.

**Effective date.** This order shall become effective on its date of publication in the FEDERAL REGISTER (11-15-72).

(Sec. 408(e), 68 Stat. 514; 21 U.S.C. 346a(e))

Dated: November 9, 1972.

EDWIN L. JOHNSON,  
Acting Deputy Assistant Administrator  
for Pesticides Programs.

[FR Doc.72-19602 Filed 11-14-72; 8:49 am]

#### PART 180—TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE CHEMICALS IN OR ON RAW AGRICULTURAL COMMODITIES

##### Methomyl

A petition (PP 2F1254) was filed by E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. 19898, in accordance with provisions of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 346a), proposing establishment of tolerances for residues of the insecticide methomyl (S-methyl N-[(methylcarbamoyl)oxy] thioacetimidate) in or on the raw agricultural commodities grapefruit, lemons, oranges, and tangelos at 2 parts per million.

Based on consideration given data submitted in the petition and other relevant material, it is concluded that:

1. The insecticide is useful for the purpose for which the tolerances are being established.

2. There is no reasonable expectation of residues in eggs, meat, milk, or poultry, and § 180.6(a)(3) applies.

3. The tolerances established by this order will protect the public health.

4. An amendment published in the FEDERAL REGISTER of April 6, 1971 (36 F.R. 6495), eliminated the use of the term "tangelo" and replaced it with the term "tangerines."

Therefore, pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 408(d)(2), 68 Stat. 512; 21 U.S.C. 346a(d)(2)), the authority transferred to the Administrator of the Environmental Protection Agency (36 F.R. 15623), and the authority delegated by the Administrator to the Deputy Assistant Administrator for Pesticides Programs (36 F.R. 9038), § 180.253 is amended by revising the paragraph "2 parts per million \* \* \*", as follows:

involved are considered completely built up;

(3) Streets are paved or otherwise improved to permit travel of post office vehicles at all times without damage or delay;

(4) Street signs are in place and house numbers displayed, where applicable;

(5) Rights-of-way, turnouts and areas adjacent to roads and streets are improved so that installation and servicing of boxes will not be hazardous to the public or postal employees;

(6) Satisfactory walks for carriers where required; and

(7) Approved mail receptacles or door slots are installed at designated locations.

(b) The requirements set out above are essential to an efficient mail delivery service, and must be met before delivery is inaugurated in a community. In establishing delivery service, a combination of delivery methods is considered in order to provide adequate service to all residential and business sections of a community. All establishments of delivery service must have final approval of the Regional Postmaster General or his designee.

#### § 155.2 Delivery extension requirements.

Delivery service extension requirements are the same as those listed in § 155.1, with the exception of paragraph (a)(1), and apply to all extensions, including extensions to mobile home subdivisions.

Section 171.1(b)(2) is amended to extend the flat 15 cents money order fee available to the military overseas to civilians and their dependents who have APO/NPO privileges overseas.

Accordingly, in § 171.1 *Issuance of domestic money orders*, subdivision (ii) of paragraph (b)(2) is amended to read as follows:

#### § 171.1 Issuance of domestic money orders.

(b) \* \* \*

(2) \* \* \*

(ii) The fee for a postal money order issued to authorized civilian or military personnel or their dependents by an Armed Forces Postal Clerk on board any ship or at any other Military Post Office (APO or NPO) located outside the 50 States, Puerto Rico, and Guam is 15 cents, regardless of the amount of the money order. Postal money orders issued to others shall be charged at the fees indicated below.

(39 U.S.C. 401, 404)

ROGER P. CRAIG,  
Deputy General Counsel.

[FR Doc.72-19587 Filed 11-14-72; 8:48 am]



### § 180.253 Methomyl; tolerances for residues.

2 parts per million in or on beans (succulent), grapefruit, lemons, oranges, and tangerines.

Any person who will be adversely affected by the foregoing order may at any time within 30 days after its date of publication in the FEDERAL REGISTER file with the Hearing Clerk, Environmental Protection Agency, Room 3902A, Fourth and M Streets SW., Waterside Mall, Washington, DC 20460, written objections thereto in quintuplicate. Objections shall show wherein the person filing will be adversely affected by the order and specify with particularity the provisions of the order deemed objectionable and the grounds for the objections. If a hearing is requested, the objections must state the issues for the hearing. A hearing will be granted if the objections are supported by grounds legally sufficient to justify the relief sought. Objections may be accompanied by a memorandum or brief in support thereof.

**Effective date.** This order shall become effective on its date of publication in the FEDERAL REGISTER (11-15-72).

(Sec. 408(d)(2), 68 Stat. 512; 21 U.S.C. 346a(d)(2))

Dated: November 9, 1972.

EDWIN L. JOHNSON,  
Acting Deputy Assistant Administrator for Pesticides Programs.

[FR Doc.72-19599 Filed 11-14-72; 8:49 am]

## PART 180—TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE CHEMICALS IN OR ON RAW AGRICULTURAL COMMODITIES

### Isopropalin

A petition (PP 2F1278) was filed by Elanco Products Co., Post Office Box 1750, Indianapolis, IN 46206, in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 346a), proposing establishment of a tolerance for negligible residues of the herbicide isopropalin (2,6-dinitro-*N,N*-dipropylcumidine) in or on the raw agricultural commodity peppers at 0.05 part per million.

Based on consideration given data submitted in the petition and other relevant material, it is concluded that:

1. The pesticide is useful for the purpose for which the tolerance is being established.

2. The tolerance established by this order will protect the public health.

Therefore, pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 408(d)(2), 68 Stat. 512; 21 U.S.C. 346a(d)(2)), the authority transferred to the Administrator of the Environmental Protection Agency (35 F.R. 15623), and the authority delegated by

the Administrator to the Deputy Assistant Administrator for Pesticides Programs (36 F.R. 9038), § 180.313 is revised to read as follows:

### § 180.313 Isopropalin; tolerances for residues.

Tolerances are established for negligible residues of the herbicide isopropalin (2,6-dinitro-*N,N*-dipropylcumidine) in or on peppers and tomatoes at 0.05 part per million.

Any person who will be adversely affected by the foregoing order may at any time within 30 days after its date of publication in the FEDERAL REGISTER file with the Hearing Clerk, Environmental Protection Agency, Room 3902A, Fourth and M Streets SW., Waterside Mall, Washington, DC 20460, written objections thereto in quintuplicate. Objections shall show wherein the person filing will be adversely affected by the order and specify with particularity the provisions of the order deemed objectionable and the grounds for the objections. If a hearing is requested, the objections must state the issues for the hearing. A hearing will be granted if the objections are supported by grounds legally sufficient to justify the relief sought. Objections may be accompanied by a memorandum or brief in support thereof.

**Effective date.** This order shall become effective on its date of publication in the FEDERAL REGISTER (11-15-72).

(Sec. 408(d)(2), 68 Stat. 512; 21 U.S.C. 346a(d)(2))

Dated: November 9, 1972.

EDWIN L. JOHNSON,  
Acting Deputy Assistant Administrator for Pesticides Programs.

[FR Doc.72-19598 Filed 11-14-72; 8:49 am]

## PART 180—TOLERANCES AND EXEMPTIONS FROM TOLERANCES FOR PESTICIDE CHEMICALS IN OR ON RAW AGRICULTURAL COMMODITIES

### *N,N*-diethyl-2,4-dinitro-6-trifluoromethyl-1,3-phenylenediamine

A petition (PP 2F1267) was filed by U.S. Borax Research Corp., 412 Crescent Way, Anaheim, CA 92801, in accordance with provisions of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 346a), proposing establishment of tolerances for negligible residues of the herbicide *N,N*-diethyl-2,4-dinitro-6-trifluoromethyl-1,3-phenylenediamine in or on the raw agricultural commodities soybean forage, cottonseed, cotton forage, and soybeans at 0.05 part per million.

Based on consideration given data submitted in the petition and other relevant material, it is concluded that:

1. The herbicide is useful for the purposes for which the tolerances are being established.

2. There is no reasonable expectation of residues in eggs, meat, milk, or poultry, and § 180.6(a)(3) applies.

3. The tolerances established by this order will protect the public health.

Therefore, pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 408(d)(2), 68 Stat. 512; 21 U.S.C. 346a(d)(2)), the authority transferred to the Administrator of the Environmental Protection Agency (36 F.R. 15623), and the authority delegated by the Administrator to the Deputy Assistant Administrator for Pesticides Programs (36 F.R. 9038), Part 180 is amended by adding the following new paragraph to Subpart C:

### § 180.327 *N,N*-Diethyl-2,4-dinitro-6-trifluoromethyl-1,3-phenylenediamine; tolerances for residues.

Tolerances are established for negligible residues of the herbicide *N,N*-diethyl-2,4-dinitro-6-trifluoromethyl-1,3-phenylenediamine in or on the raw agricultural commodities cotton forage, cottonseed, soybean forage, and soybeans at 0.05 part per million.

Any person who will be adversely affected by the foregoing order may at any time within 30 days after its date of publication in the FEDERAL REGISTER file with the Hearing Clerk, Environmental Protection Agency, Room 3902A, Fourth and M Streets SW., Waterside Mall, Washington, DC 20460, written objections thereto in quintuplicate. Objections shall show wherein the person filing will be adversely affected by the order and specify with particularity the provisions of the order deemed objectionable and the grounds for the objections. If a hearing is requested, the objections must state the issues for the hearing. A hearing will be granted if the objections are supported by grounds legally sufficient to justify the relief sought. Objections may be accompanied by a memorandum or brief in support thereof.

**Effective date.** This order shall become effective on its date of publication in the FEDERAL REGISTER (11-15-72).

(Sec. 408(d)(2), 68 Stat. 512; 21 U.S.C. 346a(d)(2))

Dated: November 9, 1972.

EDWIN L. JOHNSON,  
Acting Deputy Assistant Administrator for Pesticides Programs.

[FR Doc.72-19597 Filed 11-14-72; 8:48 am]

## Title 41—PUBLIC CONTRACTS AND PROPERTY MANAGEMENT

### Chapter 7—Agency for International Development, Department of State

[AIDPR Notice 73-1]

### PART 7-3—PROCUREMENT BY NEGOTIATION

### PART 7-30—CONTRACT FINANCING

#### Miscellaneous Amendments

Subject: AIDPR Notice No. 73-1, Amendment of Subparts 7-3.1, 7-3.3, 7-30.4 and 7-30.45 of the AID Procurement Regulations (41 CFR Chapter 7).



1. The purpose of this notice is to (a) revise Agency policy on the use of negotiation; (b) add new procedures on the use of method determinations and findings; and (c) simplify the procedures applicable to Federal Reserve letters of credit. AID procuring activities shall comply with the new policies and procedures contained in paragraphs 2, 3, 4, and 5 of this notice in lieu of those currently appearing in the AIDPR (41 CFR Chapter 7).

2. Section 7-3.101-50 is revised to read as follows:

**§ 7-3.101-50 Exceptions to normal negotiation procedures.**

Competition should be obtained in negotiated procurements whenever possible. However, there are four types of exceptions to normal negotiation procedures which authorize departures from ordinary competitive practices as follows:

(a) The requirements of FPR 1-3.101 for the solicitation of proposals from the maximum number of qualified sources consistent with the nature of and requirements for the supplies or services to be procured shall be deemed satisfied when the selection of the contractor for Architect-Engineer services has been made pursuant to the procedures prescribed in AIDPR section 7-4.2.

(b) Negotiation without the solicitation of proposals from more than one offeror may be undertaken for the types of contracts listed below. In each of these cases, however, consideration of as many sources as is practicable, including informal solicitation to the maximum extent practicable, is required. In each case the contract file will include appropriate explanation and support.

(1) Procurements to be performed by the contractor in person.

(2) Procurements by an overseas procuring officer which do not exceed \$25,000.

(3) Procurements from State or local governmental agencies.

(c) Negotiation without solicitation of proposals from more than one offeror or informal solicitation may be undertaken for contracts for which one institution or firm has exclusive or predominate capability by reason of experience, specialized facilities or technical competence to perform the work within the time required and at reasonable prices. In such a circumstance, the initiating technical office may recommend, for approval by the contracting officer, that a proposal be solicited only from this one institution or firm. This recommendation shall be in writing and will be contained in a separate document entitled "Justification for Noncompetitive Procurement" which shall set forth full and complete justification for the selection. Specifically the "Justification" shall explain with particularity the exclusive or predominant capability the proposed contractor possesses which meets the requirements of the procurement, shall

cite any other circumstances which operate to make competitive negotiation impracticable and shall reflect the degree of consideration which has been given to other sources in the particular field and the reasons they lack the capability of the proposed contractor. The following illustrations represent factors which should be considered, as appropriate, in preparing the "Justification":

(1) What capability does the proposed contractor have which is important to the specific effort and makes him clearly more desirable than another firm in the same general field?

(2) What prior experience of a highly specialized nature does he possess which is vital to the proposed effort?

(3) What facilities or equipment does he have which are specialized and vital to the effort?

(4) Does he have a substantial investment of some kind which would have to be duplicated at Government expense by another source entering the field?

(5) If time schedules are involved, why are they critical and why can the proposed contractor best meet them?

(6) Does the proposed contractor have personnel considered predominant experts in the particular field?

Each "Justification" shall contain, in the first sentence of the document an appropriate recommendation (e.g., "I recommend that we negotiate only with the

----- for the -----  
(Name of entity) (Item  
-----").  
or services being procured)

(d) Negotiation without solicitation of proposals or informal solicitation and without consideration of other competitive sources may be undertaken for the types of contracts listed below. In each case the contract file will include appropriate explanation and support.

(1) Contracts based on unsolicited research and development proposals to be awarded to a qualified offeror upon the appropriate determination by the cognizant Assistant Administrator pursuant to AIDPR section 7-4.5301.

(2) Contract amendments which provide for the continuation of activities or assistance which in the judgment of the contracting officer are designed to meet a goal which is the same as or substantially similar to the goal stated in the original PROP.

(3) Procurements for which the contracting officer determines that the property or services can be obtained from only one person or firm (sole source of supply). See FPR 1-3.210(a)(1).

(4) Procurements for which the head of the procuring activity (this authority is not delegable except to his chief deputy) makes a written determination, with supporting findings (including the degree of consideration, if any, given to other sources in the particular field), that procurement from another source would impair foreign assistance objectives and would be inconsistent with fulfillment of

the foreign assistance program. A copy of the determination and findings shall be included in the contract file.

3. Subpart 7-3.3 of Chapter 7 is amended to add new § 7-3.302 as follows:

**§ 7-3.302 Determinations and findings required.**

The requirement of FPR 1-3.302(b) shall not apply to negotiated amendments to cost reimbursement contracts. The original determination and findings justifying the initial use of a cost reimbursement-type contract shall be deemed applicable to all subsequent amendments to said contracts.

4. Section 7-30.400 is revised to read as follows:

**§ 7-30.400 Scope of subpart.**

References to nonprofit contracts with nonprofit educational or research institutions for experimental, research, and development work include nonprofit contracts with nonprofit institutions for:

(a) Technical assistance services provided to or for another country or countries, and (b) projects which concern studies, demonstrations, and similar activities related to economic growth or the solution of social problems of developing countries.

5. Section 7-30.4501-2(a) is amended by deleting subparagraphs (1)(iii), (2)(ii) and (iii), and adding the following as subparagraph (2)(ii):

**§ 7-30.4501-2 Procedure to establish Federal Reserve Letter of Credit.**

-----  
\* \* \* \* \*  
(a) \* \* \*  
(2) \* \* \*  
(ii) Such other data as may be required to conform to the Controller's current requirements: e.g., copy of the contractor's latest available balance sheet, and income and expense statement.

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(Sec. 621, 75 Stat. 445, as amended; 22 U.S.C. 2381, E.O. 10973, November 3, 1961, 26 F.R. 10469; 3 CFR 1959-63 Comp.)

6. This AIDPR notice should be filed in front of the cover page of Amendment No. 14.

7. AIDPR Notice No. 73-1 is an interim procurement instruction issued pursuant to AIDPR 7-1.104 (41 CFR 7-1).

8. Effective date: The notice shall be effective 15 days after publication in the FEDERAL REGISTER. It will be canceled and superseded upon publication of its contents in an amendment to the AIDPR (41 CFR Chapter 7).

Dated: November 3, 1972.

WILLARD H. MEINECKE,  
Deputy Assistant Administrator  
for Program and Management Services.

[FR Doc.72-19649 Filed 11-14-72;8:53 am]



[S.O. 1109]

## Title 49—TRANSPORTATION

### Chapter X—Interstate Commerce Commission

#### SUBCHAPTER A—GENERAL RULES AND REGULATIONS

[S.O. 1094, Amdt. 4]

#### PART 1033—CAR SERVICE

##### Lehigh Valley Railroad Co.; Authorization To Operate Over Tracks of Lehigh Coal and Navigation Co.

At a session of the Interstate Commerce Commission, Railroad Service Board, held in Washington, D.C., on the 29th day of August 1972.

Upon further consideration of Service Order No. 1094 (37 F.R. 9028, 11066, 13334, and 15514), and good cause appearing therefor:

*It is ordered, That:* § 1033.1094 *Service Order No. 1094* (Lehigh Valley Railroad Co., John F. Nash and Robert C. Halderman, trustees, authorized to operate over tracks of Lehigh Coal and Navigation Co. (formerly operated by the Central Railroad Company of New Jersey, Robert D. Timpany, trustee) be, and it is hereby, amended by substituting the following paragraph (e) for paragraph (e) thereof:

(e) *Expiration date.* The provisions of this order shall expire at 11:59 p.m., September 11, 1972, unless otherwise modified, changed, or suspended by order of this Commission, provided that any extension of this order shall be subject to the continued concurrence of the Lehigh Coal and Navigation Co.

*Effective date.* This amendment shall become effective at 11:59 p.m., August 31, 1972.

(Secs. 1, 12, 15, and 17(2), 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15, and 17(2). Interprets or applies secs. 1(10-17), 15(4), and 17(2), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4), and 17(2))

*It is further ordered, That* copies of this amendment shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and car hire agreement under the terms of that agreement, and upon the American Short Line Railroad Association; and that notice of this order be given to the general public by depositing a copy in the Office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Railroad Service Board.

[SEAL] JOSEPH M. HARRINGTON,  
Acting Secretary.

[FR Doc.72-19628 Filed 11-14-72; 8:51 am]

#### PART 1033—CAR SERVICE

##### Burlington Northern, Inc. Authorized To Operate Over Trackage in Campbell County, Wyo.

At a session of the Interstate Commerce Commission, Railroad Service Board, held in Washington, D.C., on the 29th day of August 1972.

It appearing, that the Burlington Northern, Inc., has filed an application with the Interstate Commerce Commission in Finance Docket No. 27110 for a certificate of public convenience and necessity authorizing operation over approximately 17 miles of track between a point of connection with the main line of the Burlington Northern, Inc., at Chaining Station H.B. 4704+01 located in Campbell County, Wyo., approximately 10 miles east of Gillette, Wyo., and extending southward to a coal mine now being constructed by the Amax Coal Co., located in sections 34 and 35, Township 48 north, range 71 west, eighth Guide Meridian, Campbell County, Wyo.; that this track is the only source of rail service to the aforementioned mine; that the Commission is of the opinion that there is immediate need for service over this line pending decision by the Commission in Finance Docket No. 27110, and that operation of this line by the Burlington Northern, Inc., is necessary in the interest of the public and the commerce of the people; and that notice and public procedure herein are impracticable and contrary to the public interest, and that good cause exists for making this order effective upon less than 30 day's notice.

*It is ordered, That:*

§ 1033.1109 *Service Order No. 1109.*

(a) *Burlington Northern, Inc., authorized to operate over trackage in Campbell County, Wyo.* The Burlington Northern, Inc., be, and it is hereby, authorized to operate over trackage in Campbell County, Wyo., between a point of connection with the main line of the Burlington Northern, Inc., at Chaining Station H.B. 4704+01 located in Campbell County, Wyo., approximately 10 miles east of Gillette, Wyo., and extending southward to a coal mine now being constructed by Amax Coal Co. located in sections 34 and 35, Township 48 north, Range 71 west, eighth Guide Meridian, Campbell County, Wyo., a distance of approximately 17 miles.

(b) *Application.* The provisions of this order shall apply to intrastate, interstate, and foreign traffic.

(c) *Effective date.* This order shall become effective at 11:59 p.m., August 31, 1972.

(d) *Expiration date.* The provisions of this order shall expire at 11:59 p.m., December 31, 1972, unless otherwise modified,

changed, or suspended by order of this Commission.

(Secs. 1, 12, 15, and 17(2), 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15, and 17(2). Interprets or applies secs. 1(10-17), 15(4), and 17(2), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4), and 17(2))

*It is further ordered, That* copies of this order shall be served upon the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and car hire agreement under the terms of that agreement, and upon the American Short Line Railroad Association; and that notice of this order shall be given to the general public by depositing a copy in the Office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Railroad Service Board.

[SEAL] JOSEPH M. HARRINGTON,  
Acting Secretary.

[FR Doc.72-19627 Filed 11-14-72; 8:51 am]

## Title 50—WILDLIFE AND FISHERIES

### Chapter I—Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service, Department of the Interior

#### PART 32—HUNTING

##### Monte Vista National Wildlife Refuge, Colo.; Correction

In F.R. Doc. 72-17002, appearing on page 20945 of the issue for Thursday, October 5, 1972, subparagraphs (1) and (2) under special conditions (§ 32.12) should read as follows:

(1) Shooting hours will be from one-half hour before sunrise until sunset for ducks, geese, coots, and mergansers.

(2) Shooting hours will be from sunrise to sunset for sora and Virginia rails, and common snipe (Wilson's).

W. O. NELSON, Jr.,  
Regional Director, Bureau of  
Sport Fisheries and Wildlife,  
Albuquerque, N. Mex.

NOVEMBER 6, 1972.

[FR Doc.72-19558 Filed 11-14-72; 8:45 am]

#### PART 33—SPORT FISHING

##### Long Lake National Wildlife Refuge, N. Dak.

The following special regulation is issued and is effective on date of publication in the FEDERAL REGISTER (11-15-72).



§ 33.5 Special regulations; sport fishing; for individual wildlife refuge areas.

NORTH DAKOTA

LONG LAKE NATIONAL WILDLIFE REFUGE

Sport fishing on the Long Lake National Wildlife Refuge, Moffit, N. Dak., is permitted on refuge waters. These open areas, comprising 3,625 acres, are delineated on maps available at refuge headquarters and from the office of the Regional Director, Bureau of Sport Fisheries and Wildlife, Federal Building, Fort Snelling, Twin Cities, Minn. 55111. Sport fishing shall be in accordance with all applicable State regulations subject to the following special conditions:

(1) The open season for winter sport fishing on the refuge extends from December 15, 1972, to March 15, 1973.

The provisions of this special regulation supplement the regulations which govern fishing on wildlife refuges generally which are set forth in title 50, Part 33, and are effective through March 15, 1973.

LOUIS S. SWENSON,  
Refuge Manager, Long Lake National Wildlife Refuge, Moffit,  
N. Dak.

NOVEMBER 7, 1972.

[FR Doc. 72-19559 Filed 11-14-72; 8:45 am]

## Title 5—ADMINISTRATIVE PERSONNEL

### Chapter I—Civil Service Commission

#### PART 213—EXCEPTED SERVICE

##### Entire Executive Civil Service

Section 213.3102 is amended to show that the period during which new appointments may be made under the Schedule A authority covering the temporary employment of scientists and engineers under a program of Presidential internship is extended to December 31, 1973.

Effective on publication in the FEDERAL REGISTER (11-15-72), § 213.3102(ee) is amended as set out below.

§ 213.3102 Entire Executive Civil Service.

(ee) Positions in research and development facilities when filled for not to exceed 1 year by scientists and engineers appointed under a program of Presidential internships. No new appointments may be made under this authority after December 31, 1973.

(5 U.S.C. 3301, 3302, H.O. 10577; 3 CFR 1954-58 Comp. p. 218)

UNITED STATES CIVIL SERVICE COMMISSION,

[SEAL] JAMES C. SPRY,  
Executive Assistant to  
the Commissioners.

[FR Doc. 72-19563 Filed 11-14-72; 8:45 am]

#### PART 213—EXCEPTED SERVICE

##### United States Soldiers' and Airmen's Home; Change in Title

To conform with F.R. Doc. 72-18946 appearing in the FEDERAL REGISTER of November 4, 1972, on page 23533, § 213.3136 is amended to show the change in title of "United States Soldiers' Home" to "United States Soldiers' and Airmen's Home".

Effective September 7, 1972, the headnote of § 213.3136 is amended as set out below.

§ 213.3136 United States Soldiers' and Airmen's Home.

(5 U.S.C. secs. 3301, 3302, E.O. 10577; 3 CFR 1954-58 Comp. p. 218)

UNITED STATES CIVIL SERVICE COMMISSION,

[SEAL] JAMES C. SPRY,  
Executive Assistant  
to the Commissioners.

[FR Doc. 72-19802 Filed 11-14-72; 11:05 am]

#### PART 213—EXCEPTED SERVICE

##### Department of Agriculture

Section 213.3313 is amended to reflect the following organization redesignation: From Consumer and Marketing Service to Agricultural Marketing Service.

Effective on publication in the FEDERAL REGISTER (11-15-72), the headnote of paragraph (m) of § 213.3313 is amended as set out below.

§ 213.3313 Department of Agriculture.

(m) Agricultural Marketing Service.

(5 U.S.C. secs. 3301, 3302, E.O. 10577; 3 CFR 1954-58 Comp. p. 218)

UNITED STATES CIVIL SERVICE COMMISSION,

[SEAL] JAMES C. SPRY,  
Executive Assistant  
to the Commissioners.

[FR Doc. 72-19561 Filed 11-14-72; 8:45 am]

#### PART 213—EXCEPTED SERVICE

##### Office of Economic Opportunity

Section 213.3373 is amended to show that one position of Confidential Secretary to the Assistant Director for Planning, Research, and Evaluation is excepted under Schedule C.

Effective on publication in the FEDERAL REGISTER (11-15-72), § 213.3373(a) (31) is added as set out below.

§ 213.3373 Office of Economic Opportunity.

(a) Office of the Director. \* \* \*

(31) One Confidential Secretary to the Assistant Director for Planning, Research, and Evaluation.

(5 U.S.C. secs. 3301, 3302, E.O. 10577; 3 CFR 1954-58 Comp. p. 218)

UNITED STATES CIVIL SERVICE COMMISSION,

[SEAL] JAMES C. SPRY,  
Executive Assistant  
to the Commissioners.

[FR Doc. 72-19562 Filed 11-14-72; 8:45 am]

## Title 6—ECONOMIC STABILIZATION

### Chapter III—Price Commission

#### PART 300—PRICE STABILIZATION

##### Price Increases by Rate Bureaus or Conferences

The purpose of this amendment to § 300.310 of the regulations of the Price Commission is to clarify the intention of the Commission regarding prenotification of certain rate increases for public utilities, proposed by rate bureaus, conferences, or similar organizations.

Section 300.310 is being revised to make it clear that any price increase which is proposed by a rate bureau, conference, or similar organization that has been approved by an uncertificated regulatory agency, and which would cause an increase of more than 1 percent in the combined aggregate annual revenues of the members of the rate bureau, conference, or similar organization, may not be put into effect during the 60-working day period after the regulatory agency's approval unless, at an earlier date, the Price Commission determines that the increase complies with § 300.303. This amendment is consistent with the Price Commission's intention, as expressed in § 300.308(b) regarding prenotification public utilities, to prohibit any price increase from going into effect before the Price Commission has had the opportunity to review the price increase for conformity with § 300.303. Other editorial changes have been made which do not affect substance.

Because the purpose of this amendment is to provide clarification of existing provisions and not to effect any substantial change, notice and public procedure thereon is unnecessary and good cause exists for making it effective less than 30 days after publication.

(Economic Stabilization Act of 1970, as amended, Public Law 91-379, 84 Stat. 799; Public Law 91-558, 85 Stat. 1468; Public Law 92-8, 85 Stat. 13; Public Law 92-15, 85 Stat. 38; Economic Stabilization Act Amendments of 1971, Public Law 92-210; Executive Order No. 11640, 37 F.R. 1213, Jan. 27, 1972; Cost of Living Council Order No. 4, 36 F.R. 20202, Oct. 16, 1971)

In consideration of the foregoing, § 300.310 of title 6, Code of Federal Regulations is revised as set forth below, effective November 13, 1972.

By direction of the Commission.



Issued in Washington, D.C. on November 13, 1972.

C. JACKSON GRAYSON, JR.,  
Chairman, Price Commission.

**§ 300.310 Rate bureaus, conferences, and similar organizations.**

(a) Whenever any price increase (interim or final) proposed by a rate bureau, conference, or similar organization authorized by law to act on behalf of its members, which would cause an increase of more than 1 percent in the combined aggregate annual revenues of the members of the rating bureau, conference, or similar organization, is approved by a regulatory agency which has not been certificated pursuant to § 300.304 or whose certificate of compliance has been revoked pursuant to § 300.306, the rate bureau, conference, or similar organization must report the price increase to the Price Commission on a prescribed form within 3 working days after the date of the decision authorizing the price increase, and that increase may not be put into effect by any member thereof during the 60-working-day period after the date of that decision, unless, at an earlier date, the Commission determines that the increase complies with § 300.303. During the period it is subject to Commission review, the Commission may take any action authorized by § 300.311 (a).

(b) Any price increase proposed by a rating bureau, conference, or similar organization, other than an increase covered by paragraph (a) of this section, that is approved by a regulatory agency which has not been issued a certificate of compliance under § 300.304 or whose certificate of compliance has been re-

voked pursuant to § 300.306, must be certified by the rating bureau, conference, or similar organization in the manner prescribed for public utilities under § 300.308(c), and the Price Commission shall have the same power of review over such price increase as is provided in § 300.308(c).

[FR Doc.72-19768 Filed 11-14-72;9:33 am]

**PART 300—PRICE STABILIZATION**

**Certification in Forms PC-50 and PC-51**

The purpose of this amendment to Appendix II to Part 300 of the Price Commission regulations is to update the wording of the certification of no price increase specified in the instructions for the preparation of Forms PC-50 and PC-51, to cover Special Regulation No. 1, the custom products rule of § 300.410, and the volatile pricing rule of § 300.51(f).

Because the purpose of this amendment is to provide guidance and information that is needed immediately for compliance with the Price Stabilization Program, notice and public procedure is impracticable and good cause exists for making it effective in less than 30 days after publication in the FEDERAL REGISTER.

(Economic Stabilization Act of 1970, as amended, Public Law 91-379, 84 Stat. 799; Public Law 91-558, 84 Stat. 1468; Public Law 92-8, 85 Stat. 13; Public Law 92-15, 85 Stat. 38; Economic Stabilization Act Amendments of 1971, Public Law 92-210; Executive Order No. 11640, 37 F.R. 1213, January 27, 1972; Cost of Living Council Order No. 4, 36 F.R. 20202, October 16, 1971)

In consideration of the foregoing, Appendix II to Part 300 of Title 6 of the

Code of Federal Regulations is amended as set forth below, effective November 13, 1972.

Issued in Washington, D.C., on November 13, 1972. By direction of the Commission.

JAMES B. MINOR,  
General Counsel, Price Commission.

1. The certification appearing in the second paragraph of the "Who Must File" part of the "Instructions for the preparation of Form PC-50" and of the "Instructions for the preparation of Form PC-51," is amended to read as follows:

I certify that as of \_\_\_\_\_  
(last day in firm's fiscal  
quarter)  
\_\_\_\_\_ has not at any time  
(name of firm)

since November 13, 1971, charged a price in excess of base price established for any property or service under the regulations of the Price Commission, or if such a price was charged, that the firm has complied with all of the requirements of Special Regulation No. 1 and since that time has not increased a price above base price. I further certify that this firm has not (1) determined a base price for any custom product or service under § 300.410 of the regulations of the Price Commission, or, if it has determined such a price, that the annual revenues attributable to that product or service represent less than \$1 million and less than 1 percent of the firm's total annual revenues, and (2) increased a price pursuant to the special rule for volatile pricing under § 300.51(f) of the regulations of the Price Commission.

\_\_\_\_\_  
Chief Executive Officer (or  
other authorized executive  
officer)

[FR Doc.72-19693 Filed 11-14-72;8:53 am]



# Proposed Rule Making

## DEPARTMENT OF AGRICULTURE

### Agricultural Marketing Service

#### [ 7 CFR Part 905 ]

### ORANGES, GRAPEFRUIT, TANGERINES, AND TANGELOS GROWN IN FLORIDA

#### Proposed Handling Limitations

Consideration is being given to the following proposal submitted by the committees, established under the marketing agreement, as amended, and Order No. 905, as amended (7 CFR Part 905), regulating the handling of oranges, grapefruit, tangerines, and tangelos grown in Florida, effective under the applicable provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601-674).

The recommendation by the committees for more restrictive size requirements on shipments of tangerines is based on the increasing available supply of smaller size tangerines. The higher minimum size requirement is designed to prevent a general weakening of the price structure for all sizes of tangerines during the period of peak volume and to prevent an excessive build-up of small size tangerines in the markets. It is anticipated by the committees that the supply situation will be such that fresh market outlets will accept a percentage of tangerines of the smaller size in shipments during the period November 27, through December 3, 1972, at prices which will provide favorable returns to producers.

The proposal is as follows:

**Order.** In § 905.547 (Tangerine Regulation 44; 37 F.R. 21799) the provisions of paragraph (a) (2) are revised to read as follows:

#### § 905.547 Tangerine Regulation 44.

(a) \* \* \*

(2) Any tangerines, grown in the production area, which are of a size smaller than  $2\frac{1}{16}$  inches in diameter, except that a tolerance of 10 percent, by count, of tangerines smaller than such minimum diameter shall be permitted, which tolerance shall be applied in accordance with the provisions for the application of tolerances specified in the U.S. Standards for Florida Tangerines: *Provided*, That during the period November 27, through December 3, 1972, any handler may ship a quantity of tangerines which are smaller than  $2\frac{1}{16}$  inches in diameter, including the aforesaid tolerance, if (i) the number of standard packed boxes of such smaller tangerines does not exceed 40 percent of the total shipments of tangerines by such handler

during the last previous week, within the current fiscal period, in which he shipped tangerines; and (ii) such smaller tangerines are of a size not smaller than  $2\frac{1}{16}$  inches in diameter, except that a tolerance of 10 percent, by count, of tangerines smaller than such minimum diameter shall be permitted, which tolerance shall be applied in accordance with the provisions for the application of tolerances specified in said U.S. Standards for Florida Tangerines.

All written data, views, or arguments submitted in connection with the aforesaid proposal must be received in quadruplicate, by the Hearing Clerk, U.S. Department of Agriculture, Room 112A, Washington, D.C. 20250, not later than November 20, 1972. All written submissions made pursuant to this notice will be made available for public inspection at the Office of the Hearing Clerk during regular business hours (7 CFR 1.27 (b)).

Dated: November 10, 1972.

PAUL A. NICHOLSON,  
Deputy Director, Fruit and  
Vegetable Division, Agricultural  
Marketing Service.

[FR Doc.72-19651 Filed 11-14-72; 8:52 am]

#### [ 7 CFR Part 906 ]

### ORANGES AND GRAPEFRUIT GROWN IN THE LOWER RIO GRANDE VALLEY IN TEXAS

#### Proposed Container, Pack, and Container Marking Regulations

Consideration is being given to the following proposal, applicable to § 906.340 *Container, pack, and container marking regulations* (7 CFR 906.340; 37 F.R. 2765; 4707; 21800; 23626), recommended by the Texas Valley Citrus Committee, established pursuant to the marketing agreement, as amended, and Order No. 906, as amended (7 CFR Part 906) regulating the handling of oranges and grapefruit grown in the Lower Rio Grande Valley in Texas. This program is effective under the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601-674).

All persons who desire to submit written data, views, or arguments in connection with the proposal should file the same with the Hearing Clerk, Room 112A, U.S. Department of Agriculture, Washington, D.C. 20250, not later than the 7th day after the publication of this notice in the FEDERAL REGISTER. All written submissions made pursuant to this notice

will be made available for public inspection at the office of the Hearing Clerk during regular business hours (7 CFR 1.27(b)).

This action reflects the committee's appraisal of the need for restricting the use of containers and pack sizes to those most suitable for the packing and handling of fruit to promote orderly marketing so as to provide consumers with good quality fruit, while improving returns to producers pursuant to the declared policy of the act. The proposed amendment would require that fruit packed in bags having a capacity of 5 or 8 pounds of fruit be handled only in certain master containers.

The proposal is that the provisions of paragraph (a) (1) (iv) of § 906.340 (7 CFR 906.340; 37 F.R. 2765, 4707, 21800, 23626) be amended to read as follows:

#### § 906.340 Container, pack, and container marking regulations.

(a) \* \* \*

(1) \* \* \*

(iv) *Bags.* (a) Bags having a capacity of 5 pounds of fruit: *Provided*, That fruit when packed in such bags shall be handled only when packed in the number and container specified in subdivision (vi) of this subparagraph.

(b) Bags having a capacity of 8 pounds of fruit: *Provided*, That fruit when packed in such bags shall be handled only when packed in the number and container specified in subdivision (v) of this subparagraph, and

(c) Bags having a capacity of 18 pounds of fruit: *Provided*, That on and after August 1, 1973, bags having a capacity of 18 pounds of fruit shall be mesh or woven type;

Dated: November 10, 1972.

PAUL A. NICHOLSON,  
Deputy Director, Fruit and  
Vegetable Division, Agricultural  
Marketing Service.

[FR Doc.72-19652 Filed 11-14-72; 8:52 am]

#### Commodity Credit Corporation

#### [ 7 CFR Part 1464 ]

#### CIGAR TOBACCO

#### Advance Grade Rates for Price Support on 1972-Crop Tobacco

Consideration will be given to data, views, and recommendations pertaining to the advance rates set out in this notice which are submitted in writing to the Director, Tobacco Division, Agricultural Stabilization and Conservation Service, U.S. Department of Agriculture, Washington, D.C. 20250. All submissions,



## PROPOSED RULE MAKING

in order to be sure of consideration, must be received not later than 20 days from the date of publication of this notice in the FEDERAL REGISTER.

Under the Tobacco Loan Program published June 18, 1970 (35 F.R. 1000), amended June 17, 1971 (36 F.R. 11634, 12509), and August 5, 1972 (37 F.R. 15856), CCC proposes to establish advance rates by grades for the 1972 crop Ohio filler tobacco, types 42-44, Connecticut Valley broadleaf tobacco, type 51, Connecticut Valley Havana seed tobacco, type 52, New York and Pennsylvania Havana seed tobacco, type 53, and Southern Wisconsin tobacco, type 54, Northern Wisconsin tobacco, type 55, and Puerto Rican tobacco, type 46, as set forth herein. These proposed rates, calculated to provide the level of support of 51.9 cents per pound for types 51-52, 38.9 cents per pound for type 46, and 37.5 cents per pound for types 42-44, 53-55, as determined under section 106 of the Agricultural Act of 1949 (7 U.S.C. 1445), are as follows:

Sec.	
1464.22	1972 crop—Ohio filler tobacco, types 42-44, advance schedule.
1464.23	1972 crop—Connecticut Valley broadleaf tobacco, type 51, advance schedule.
1464.24	1972 crop—Connecticut Valley Havana seed tobacco, type 52, advance schedule.
1464.25	1972 crop—New York and Pennsylvania Havana seed tobacco, type 53, and Southern Wisconsin tobacco, type 54 advance schedule.
1464.26	1972 crop—Northern Wisconsin tobacco, type 55, advance schedule.
1464.27	1972 crop—Puerto Rican tobacco, type 46, advance schedule.

**AUTHORITY:** The provisions of this Part 1464 issued under sec. 4, 62 Stat. 1070, as amended, sec. 5, 62 Stat. 1072, secs. 101, 106, 401, 403, 63 Stat. 1051, as amended, 1054, 74 Stat. 6; 7 U.S.C. 1441, 1445, 1421, 1423, 15 U.S.C. 714b, 714c.

**§ 1464.22 1972 crop—Ohio filler tobacco, types 42-44, advance schedule.<sup>1</sup>**

Grade	Advance Rate
(Dollars per hundred pounds, farm sales weight)	
Crop run (stripped together):	
X1	38.50
X2	35.50
X3	32.50
X4	29.00
Nondescript:	
N	20.00

<sup>1</sup>The cooperative association through which price support is made available is authorized to deduct from the amount paid the grower 50 cents per hundred pounds to apply against receiving and overhead costs. Only the original producer is eligible to receive advances. No advance is authorized for tobacco designated "No-G" (no grade).

**§ 1464.23 1972 crop—Connecticut Valley broadleaf tobacco, type 51, advance schedule.<sup>1</sup>**

Grade	Advance rate
(Dollars per hundred pounds, farm sales weight)	
Binders:	
B1	72
B2	64
B3	55
B4	45
B5	40
Nonbinders:	
X1	34

**§ 1464.24 1972 crop—Connecticut Valley Havana seed tobacco, type 52, advance schedule.<sup>2</sup>**

Grade	Advance rate
(Dollars per hundred pounds, farm sales weight)	
Binders:	
B1	67
B2	59
B3	52
B4	44
B5	40
Nonbinders:	
X1	34

**§ 1464.25 1972 crop—New York and Pennsylvania Havana seed tobacco, type 53, and Southern Wisconsin tobacco, type 54, advance schedule.<sup>3</sup>**

Grade	Advance rate
(Dollars per hundred pounds, farm sales weight)	
Crop-run:	
X1	42.50
X2	38.00
X3	31.50
Farm fillers:	
Y1	29.00
Y2	27.00
Y3	25.00
Nondescript:	
N1	25.00
N2	19.00

<sup>1</sup>The cooperative association through which price support is made available is authorized to deduct from the amount paid the grower \$1 per hundred pounds to apply against receiving and overhead costs. Only the original producer is eligible to receive advances. No advance is authorized for tobacco graded "N1" (first quality nondescript), "N2" (second quality nondescript) or "S" (scrap), or designated "No-G" (no grade).

<sup>2</sup>The cooperative association through which price support is made available is authorized to deduct from the amount paid the grower \$1 per hundred pounds to apply against receiving and overhead costs. Only the original producer is eligible to receive advances. No advance is authorized for tobacco graded "N1" (first quality nondescript), "N2" (second quality nondescript) or "S" (scrap), or designated "No-G" (no grade).

<sup>3</sup>The cooperative association through which price support is made available is authorized to deduct from the amount paid the grower 50 cents per hundred pounds to apply against receiving and overhead costs. Only the original producer is eligible to receive advances. No advance is authorized for tobacco designated "No-G" (no grade).

**§ 1464.26 1972 crop—Northern Wisconsin tobacco, type 55, advance schedule.<sup>1</sup>**

Grade	Advance rate
(Dollars per hundred pounds, farm sales weight)	
Binders:	
B1	60.00
B2	55.00
B3	47.00
Strippers:	
C1	43.50
C2	39.00
C3	32.00
Crop-run:	
X1	43.00
X2	37.00
X3	29.00
Farm fillers:	
Y1	33.00
Y2	30.00
Y3	28.00
Nondescript:	
N1	23.00
N2	18.00

**§ 1464.27 1972 crop—Puerto Rican tobacco, type 46, advance schedule.<sup>2</sup>**

Grade	Advance rate
(Dollars per hundred pounds, farm sales weight)	
Price Block I (C1F and C1P)	44.50
Price Block II (X1F, X1P and X1S)	38.00
Price Block III (X2T, X2F, X2P and X2S)	27.50
Price Block IV (N)	14.00

All written submissions received pursuant to this notice will be available for public inspection at such times and places and in a manner convenient to the public business (7 CFR 1.27(b)).

Effective date: Date of filing with the Office of the Federal Register.

Signed at Washington, D.C., on November 10, 1972.

KENNETH E. FRICK,  
Executive Vice President,  
Commodity Credit Corporation.

[FR Doc.72-19631 Filed 11-10-72; 3:37 pm]

<sup>1</sup>The cooperative association through which price support is made available is authorized to deduct from the amount paid the grower 50 cents per hundred pounds to apply against receiving and overhead costs. Only the original producer is eligible to receive advances. No advance is authorized for tobacco designated "No-G" (no grade).

<sup>2</sup>The cooperative associations through which price support is made available to growers are authorized to deduct \$1 per hundred pounds from the advances to growers to apply against overhead and handling costs. Tobacco is eligible for advance only if consigned by the original producer. No advance is authorized for tobacco graded "S" (scrap) or designated "No-G" (no grade).



# DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Food and Drug Administration

[21 CFR Part 51]

## CANNED SWEET CORN

Standards of Identity, Quality, and  
Fill of Container

### Correction

In F.R. Doc. 72-16644 appearing at page 21112 of the issue for Thursday, October 5, 1972, the following changes should be made:

1. On page 21119 in the "Items of Comparison" column of the tabulated material, "Cream style corn", which appears under "9. Methods for determining quality:", should read "(b) Cream style corn"; and

2. In § 51.21 the reference in the fourth line of paragraph (b) now reading " (§ 15.20(b)(5)) " should read " (§ 51.20(b)(5)) ".

# DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[14 CFR Part 71]

[Airspace Docket No. 72-WA-55]

## VOR FEDERAL AIRWAYS

### Proposed Alteration

The Federal Aviation Administration (FAA) is considering amendments to Part 71 of the Federal Aviation Regulations that would realign Victor Airways 3, 39, and 93 northeast of Boston, Mass.

Interested persons may participate in the proposed rule making by submitting such written data, views, or arguments as they may desire. Communications should identify the airspace docket number and be submitted in triplicate to the Director, New England Region, Attention: Chief, Air Traffic Division, Federal Aviation Administration, 154 Middlesex Street, Burlington, MA 01803.

All communications received within 30 days after publication of this notice in the FEDERAL REGISTER will be considered before action is taken on the proposed amendments. The proposals contained in this notice may be changed in the light of comments received.

An official docket will be available for examination by interested persons at the Federal Aviation Administration, Office of the General Counsel, Attention: Rules Docket, 800 Independence Avenue SW., Washington, DC 20591. An informal docket will also be available for examination at the office of the Regional Air Traffic Division Chief.

The proposed amendments would:

1. Realign V-93 from Concord, N.H., via Kennebunk, N.H.; INT of the Kennebunk 045° T (062° M) and Bangor,

Maine, 220° T (239° M) radials; to Bangor.

2. Realign V-39 from Concord, N.H., via INT of the Concord 052° T (068° M) and Augusta, Maine, 227° T (245° M) radials; Augusta; to Millinocket, Maine.

3. Realign V-3 from Ipswich Intersection via Pease, N.H., VOR; INT of the Pease 005° T (021° M) and Augusta 227° T (245° M) radials; to Augusta.

These actions would update and modernize the utilization of low altitude airspace northeast of Boston, Mass., and would create a dual airway system along the east coast of Maine to the Canadian border. These proposed airway changes along with revised center-terminal procedures currently under development would significantly increase utilization of the airspace and provide better service to the users.

These amendments are proposed under the authority of sec. 307(a) of the Federal Aviation Act of 1958 (49 U.S.C. 1348(a)) and sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Issued in Washington, D.C., on November 8, 1972.

CHARLES H. NEWPOL,  
Acting Chief, Airspace and  
Air Traffic Rules Division.

[FR Doc.72-19555 Filed 11-14-72;8:45 am]

[14 CFR Part 75]

[Airspace Docket No. 72-WA-60]

## AREA HIGH ROUTE

### Proposed Alteration

The Federal Aviation Administration (FAA) is considering an amendment to Part 75 of the Federal Aviation Regulations that would realign a segment of J974R from Casanova, Va., to Westport, Ky.

Interested persons may participate in the proposed rule making by submitting such written data, views, or arguments as they may desire. Communications should identify the airspace docket number and be submitted in triplicate to the Federal Aviation Administration, Office of the General Counsel, Attention: Rules Docket, 800 Independence Avenue SW., Washington, DC 20591. All communications received within 20 days after publication of this notice in the FEDERAL REGISTER will be considered by the Administrator before taking action on the proposed rule. The proposal contained in this notice may be changed in the light of comments received. All comments submitted will be available, both before and after the closing date for comments, in the rules docket for examination by interested persons.

An official docket will be available for examination by interested persons at the Federal Aviation Administration, Office of the General Counsel, Attention: Rules Docket, 800 Independence Avenue SW., Washington, DC 20591. An informal docket also will be available for exam-

ination at the office of the Regional Air Traffic Division Chief.

The airspace action proposed in this docket would realign J974R in part from Casanova via Henderson, W. Va., to Westport. If this action is taken, J974R would coincide with J951R between Casanova and Henderson. This alignment would facilitate transition between en route and terminal procedures at Dulles Airport.

This amendment is proposed under the authority of section 307(a) of the Federal Aviation Act of 1958 (49 U.S.C. 1348(a)) and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

Issued in Washington, D.C., on November 13, 1972.

H. B. HELSTROM,  
Chief, Airspace and  
Air Traffic Rules Division.

[FR Doc.72-19699 Filed 11-14-72;8:53 am]

# ATOMIC ENERGY COMMISSION

[10 CFR Part 50]

## ENVIRONMENTAL EFFECTS OF THE URANIUM FUEL CYCLE

### Notice of Proposed Rule Making

Notice is hereby given that the Atomic Energy Commission is considering possible amendments to its regulations in 10 CFR Part 50, Appendix D, "Interim Statement of General Policy and Procedure: Implementation of the National Environmental Policy Act of 1969 (Public Law 91-190)," that would specifically deal with the question of consideration of environmental effects associated with the uranium fuel cycle in the individual cost-benefit analyses for light water cooled nuclear power reactors.

The Commission's regulation implementing the National Environmental Policy Act of 1969 (NEPA) in 10 CFR Part 50, Appendix D, requires that each draft and final detailed statement prepared pursuant to section 102(2)(C) of NEPA for a nuclear power reactor contain a cost-benefit analysis which, among other things, considers and balances the adverse environmental effects and environmental, economic, technical, and other benefits of the facility. This regulation further provides that the cost-benefit analysis will, to the fullest extent practicable, quantify the various factors considered.

In several nuclear power reactor licensing proceedings it has been argued that the cost-benefit analysis for the facility that is the subject of the licensing action should include costs and benefits associated with the uranium fuel cycle, such as environmental effects of reprocessing spent fuel and disposal of wastes resulting from reprocessing. Other factors related to the fuel cycle include those associated with uranium mining and milling, uranium hexafluoride production, isotopic enrichment, fuel fabrication, and transportation associated



with the above. It has been urged that in each power reactor case the contribution of the nuclear power reactor to the environmental costs associated with the fuel cycle activity should be ascertained and considered in the cost-benefit balance.

The Commission's Atomic Safety and Licensing Appeal Board has held that environmental impact statements for nuclear power reactors should consider, among other things, environmental effects of the transportation of irradiated nuclear fuel from the facility that is the subject of the licensing action, and the transportation of low level wastes and of high level solid wastes other than irradiated fuel from the facility to depositories, but should not consider environmental effects of reprocessing of irradiated nuclear fuel, the disposal of wastes resulting from reprocessing, or disposal of low and high level solid wastes. In the matter of Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), Docket No. 50-271, Memorandum and Order, June 6, 1972. Subsequently, the Appeal Board in that case held that mining and manufacturing of reactor fuel are not within the scope of the environmental review prescribed for nuclear power reactors by NEPA and the Commission's regulations (Decision, October 11, 1972).

In connection with the foregoing, it should be noted that in conjunction with the revision of Appendix D of 10 CFR Part 50 on September 9, 1971, there was transmitted by the Director of Regulation to applicants for licenses to construct or operate nuclear power plants, and made available to the public, a document dated September 1, 1971, which, among other things, indicated that applicants' environmental reports should describe the environmental effects of the transportation of fuel elements from the fuel fabrication plant to the reactor as well as the transportation of spent fuel elements from the reactor to the fuel reprocessing plant and the transportation of packaged radioactive material from the reactor to low level waste burial grounds.

There are in the United States well over 100 nuclear power reactors in operation, under construction, or on order, and, in addition, three commercial nuclear fuel reprocessing facilities have received operating licenses or are under construction. The existence of a uranium mine or mill, uranium hexafluoride plant, enrichment facility, fuel fabrication plant, fuel reprocessing plant, or ultimate waste depository does not depend upon the licensing of any one nuclear power reactor, nor does the cold or irradiated fuel or waste from any one reactor make more than a fractional contribution, if any, to the effects of such activities or facilities. Uranium mining and milling, uranium hexafluoride production, isotopic enrichment, and fuel fabrication will contribute fuel to many nuclear reactors and the effects associated with fuel

reprocessing and waste disposal will be those associated not only with nuclear power reactors now operating or under construction, but also with those that are no longer in operation and those that are planned for the future. There does not appear to be any way to ascertain with any degree of certainty which of the uranium mines or mills, uranium hexafluoride plants, isotopic enrichment facilities, and fuel fabrication plants in existence or to be operated in the future will contribute fuel to a given nuclear power reactor, or which of the various fuel reprocessing plants or commercial burial grounds now in existence or to be constructed from time to time will receive irradiated fuel or wastes from any given nuclear power reactor.

Many of the various elements in the nuclear fuel cycle involve varying methods or processes with different environmental and other effects and there is no reason to believe that during the useful life of any given nuclear power reactor other methods or processes with different effects will not be developed. In addition, effects of uranium milling and mining, uranium hexafluoride production, fuel element fabrication, spent fuel reprocessing, operation of licensed burial grounds, and transportation incident to each of the above, are, except as those activities are subject to agreement State jurisdiction, the subject of Commission NEPA review proceedings associated with issuance of materials or facility licenses that are separate from the review proceedings for issuance of licenses for nuclear power reactors.

Cost-benefit analyses of nuclear power reactor license applications should contain a full and frank disclosure and consideration of costs and benefits of the proposed action. The results of the application of this principle to the question of inclusion of environmental effects associated with the fuel cycle are not entirely clear. As the above discussion indicates, the fractional contribution, if any, of the environmental effects of the fuel cycle to the cost-benefit balance for a particular nuclear reactor is difficult, and may be impossible, to ascertain with any degree of certainty. This suggests that such matters, if they are to be considered at all, be considered in a generic fashion through the rule making process. The Commission's regulatory staff has prepared a report entitled "Environmental Survey of the Nuclear Fuel Cycle," dated November 6, 1972, which provides a basis for an informed consideration of the generic question of the environmental impact associated with the uranium fuel cycle in light water cooled nuclear power reactor licensing proceedings.

To aid the Commission in its consideration of possible amendments to Appendix D to 10 CFR Part 50 of its regulations that would deal with the question of the account to be taken of the environmental effects associated with the uranium fuel cycle in individual cost-benefit analyses for light water-

cooled nuclear power reactors, interested persons are invited to submit comments and suggestions, together with relevant data and information, with respect to possible additions to 10 CFR Part 50 along the following alternative lines:

(1) In the case of light water-cooled nuclear power reactors, the applicant's environmental report and the Commission's detailed statement shall contain a full discussion of, inter alia, the environmental effects of the transportation of cold fuel to the reactor and irradiated fuel from the reactor to a fuel reprocessing plant and the transportation of low level waste and high level solid wastes (other than irradiated fuel) from the reactor to depositories. Those documents need not cover the environmental effects of uranium mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, disposal of low level and high level solid wastes or transportation related to such activities (other than transportation of cold fuel to, and irradiated fuel from, the reactor), since the environmental effects of those activities as related to a particular light water-cooled nuclear power reactor have been analyzed in the Commission's "Environmental Survey of the Nuclear Fuel Cycle" and, when factored into the cost-benefit analysis, are sufficiently small as not to affect significantly the resultant conclusion. The environmental effects of the latter activities will generally be considered in detail in proceedings in which approval for such activities, or closely related activities, is sought.

(2) Or in the case of light water-cooled nuclear power reactors, the applicant's environmental report and the Commission's detailed statement shall contain a full discussion of, inter alia, the environmental effects of the transportation of cold fuel to the reactor and irradiated fuel from the reactor to a fuel reprocessing plant and the transportation of low level wastes and high level solid wastes (other than irradiated fuel) from the reactor to depositories. In such documents, the contribution of the environmental effects of uranium mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, transportation and disposal of wastes resulting from such reprocessing, disposal of low level and high level solid wastes and transportation related to such activities (other than transportation of cold fuel to, and irradiated fuel from, the reactor), to the environmental costs of licensing the nuclear power reactor, shall be as set forth in the following Table S-3 of the Commission's "Environmental Survey of the Nuclear Fuel Cycle":<sup>1</sup>

<sup>1</sup>The "Environmental Survey of the Nuclear Fuel Cycle" provides the supporting data for this summary table.



TABLE S-3

SUMMARY OF ENVIRONMENTAL CONSIDERATIONS FOR NUCLEAR FUEL CYCLE (NORMALIZED TO MODEL LWR ANNUAL FUEL REQUIREMENTS)

Natural resource use	Total	Effluents—Chemical (MT)	Total
Land (acres):		Gases (including entrainment): <sup>1</sup>	
Temporarily committed	63	SO <sub>2</sub>	4400
Undisturbed area	45	NO <sub>x</sub>	1170
Disturbed area	18	Hydrocarbons	11.3
Permanently committed	4.6	CO	28.7
Overburden moved (MT×10 <sup>-4</sup> )	2.7	Particulates	1166
Water (gallons×10 <sup>-4</sup> ):		Other gases:	
Discharged to air	163	F <sub>2</sub>	1.0
Discharged to water bodies	11,052	Liquids:	
Discharged to ground	123	SO <sub>2</sub>	5.8
Total	11,338	NO <sub>x</sub>	8.2
		Fluoride	0.4
		Ca <sup>+</sup>	5.4
		Cl <sup>-</sup>	8.2
		Na <sup>+</sup>	13.5
		NH <sub>3</sub>	8.4
		Fe	0.4
		Tailings solutions (×10 <sup>-3</sup> )	240
		Solids	91,000
Fossil fuel:			
Electrical energy (mw-hr.×10 <sup>-3</sup> )	317		
Equivalent coal (MT×10 <sup>-3</sup> )	116		
Natural gas (s.c.f.×10 <sup>-4</sup> )	103		
Effluents—Radiological (curies)	Total	Maximum effect per annual fuel requirement of model 1000 MWe LWR	
Gases (including entrainment):			
Rn-222	83	Principally from mills—Maximum annual dose rate <4 percent of average natural background within 5 miles of mill. Results in 0.06 man-rem per annual fuel requirement. Due to dilute concentration and short half-life of principal component, exposure beyond a 5-mile radius is miniscule relative to natural background.	
Ra-226	.02		
Th-230	.02		
Uranium	.046		
Tritium (×10 <sup>-4</sup> )	12		
Kr-85 (×10 <sup>-3</sup> )	350		
I-129	.002		
I-131	.02	Principally from fuel reprocessing plants—Whole body dose is 4.4 man-rem for population within 50-mile radius. This is <0.005 percent of average natural background dose to this population.	
Fission products	1.0		
Transuramics	.004		
Liquids:			
Uranium and daughters	2.4	Principally from milling—Included in tailings liquor and returned to ground—no effluents; therefore, no effect on environment.	
Ra-226	.027		
Th-230	.27	From UF <sub>6</sub> production—concentration <5 percent of 10 CFR 20 for total processing of 27.5 model LWR annual fuel requirements.	
Th-234	.001	From fuel fabrication plants—concentration <1 percent of 10 CFR 20 for total processing 26 annual fuel requirements for model LWR.	
Other uranium daughters	.001		
Ru-106	4		
Tritium (×10 <sup>-4</sup> )	6.2	From reprocessing plants—maximum concentration <4 percent of 10 CFR 20 for total reprocessing of 26 annual fuel requirements for model LWR.	
Solids (buried):			
Other than high level	1,200	From mills—Included in tailings returned to ground—no significant effluent to the environment.	
Thermal (B.t.u. ×10 <sup>-4</sup> )	3,370		

<sup>1</sup> Estimated effluents based upon combustion of equivalent coal for power generation.

<sup>2</sup> 1.2 percent from natural gas use and process.

The Commission will hold an informal rule-making hearing on possible amendments described in (1) and (2) above on February 1, 1973, at 10 a.m. The location and the presiding officer will be designated in a notice that will be published in the FEDERAL REGISTER in the near future.

Interested persons are invited to attend the hearing and present oral or written statements. Any person who intends to present views at this hearing should furnish in writing his name and the name of the organization he represents to the Secretary of the Commission by January 1, 1973. The hearing will be conducted as a legislative-type hearing. Since the hearing will be part of a rule making, rather than an adjudicatory proceeding, the provisions of Subpart G, "Rules of General Applicability," of 10 CFR Part 2, the Commission rules of practice, will not be applicable.

Nothing herein shall be construed as affecting the continuing validity of the above-described holdings by the Appeal Board in the Vermont Yankee proceeding during the course of this rule making

proceeding, and they shall continue in effect unless and until modified by promulgation of a regulation or other Commission action.

All interested persons who desire to submit written comments or suggestions in connection with the possible amendments to Appendix D of 10 CFR Part 50 or the "Environmental Survey of the Nuclear Fuel Cycle," should send them to the Secretary of the Commission, U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Chief, Public Proceedings Staff, within sixty (60) days after publication of this notice in the FEDERAL REGISTER.

Copies of comments on this notice as well as the "Environmental Survey of the Nuclear Fuel Cycle," dated November 6, 1972, may be examined at the Commission's Public Document Room at 1717 H Street NW., Washington, DC 20545. In addition, copies of the environmental survey may be obtained upon request addressed to the Deputy Director for Fuels and Materials, Directorate of Licensing, U.S. Atomic Energy Commission, Washington, D.C. 20545.

(Sec. 161, 68 Stat. 948; sec. 102, 83 Stat. 853, 42 U.S.C. 2201, 4332)

Dated at Germantown, Md., this 10th day of November 1972.

For the Atomic Energy Commission.

PAUL C. BENDER,  
Secretary of the Commission.

[FR Doc.72-19698 Filed 11-14-72; 8:53 am]

## CIVIL AERONAUTICS BOARD

[ 14 CFR Parts 207, 208, 212, 214 ]

[Economic Regs. Docket No. 24908; EDR-237]

### CHARTER GROUPS

#### Suspension of "Prior Affinity" Charter Authority Pending the Travel Group Charter Experiment

NOVEMBER 9, 1972.

Notice is hereby given that the Civil Aeronautics Board is considering whether it should propose amendments of Parts 207, 208, 212, and 214 of the Board's Economic Regulations which would suspend the "prior affinity" charter rules pending the travel group charter experiment. The principal features of the proposal are set forth in the attached explanatory statement. The amendments are being considered under the authority of sections 204(a), 401, 402, and 1001 of the Federal Aviation Act of 1958, as amended, 72 Stat. 743, 754 (as amended), 757, 788; 49 U.S.C. 1324, 1371, 1372, and 1481.

Interested persons may participate in this proceeding through submission of twelve (12) copies of written data, views, or arguments pertaining thereto, addressed to the Docket Section, Civil Aeronautics Board, Washington, D.C. 20428. Individual members of the general public who, as prospective passengers, could be affected by the outcome of this proceeding, may participate in the advance notice of rule making through submission of comments in letter form to the Docket Section at the above-indicated address, without the necessity of filing additional copies thereof. All relevant material in communications received on or before December 15, 1972, will be considered by the Board before it takes further action in this proceeding. Copies of such communications will be available for examination by interested persons in the Docket Section of the Board, Room 712, Universal Building, 1825 Connecticut Avenue NW., Washington, DC, upon receipt thereof.

By the Civil Aeronautics Board.

[SEAL] HARRY J. ZINK,  
Secretary.

### EXPLANATORY STATEMENT

By SPR-61, adopted and effective September 27, 1972, the Board provided for a new class of charter called Travel Group Charters (TGC), which will be applicable to all direct air carriers and



foreign air carriers. The new type of charter will enable any 40 or more persons to be formed into a charter group, regardless of any prior affinity among such persons, provided that certain prescribed conditions and limitations are met.

Among the general conditions of the TGC are the following: (1) The cost of the charter must be shared equally by all participants; (2) each participant must pay a nonrefundable deposit<sup>1</sup> of no less than 25 percent of the pro rata charter price at least 3 months before, and the full balance at least 60 days before the scheduled flight departure; (3) the charter must be for a round trip and be for a prescribed minimum stay (7 days for North American charters, as defined in the rule, or 10 days for all other charters); (4) no earlier than 4 months, and no later than 3 months, prior to scheduled departure the charter organizer and the carrier must jointly file with the Board various documents, including a "main list" of charter participants, and there may also be filed at the same time a "standby list" of persons who are interested in becoming substituted, as assignees, for "main list" participants; and (5) only charter participants whose names were included in the lists filed at least 3 months previously may be passengers on the TGC flight, and of those participants at least 80 percent must be from the "main list."

In the preamble to the travel-group charter rule,<sup>2</sup> we stated that we were not then determining the issue of whether TGC's should be a substitute for, rather than alternative to, the existing affinity charters,<sup>3</sup> but that we would institute in due course a rule making proceeding to consider this particular issue. Accordingly, we are now instituting this rule making proceeding to determine whether existing affinity charter rules should be suspended during the pendency of the TGC experiment.

There are, of course, sound reasons in favor of eliminating affinity charter authority. Indeed, our very adoption of the TGC rule was largely based on our view that the existing affinity charter rules are unsatisfactory,<sup>4</sup> because they tend to

discriminate against members of the public who do not belong to charter worthy organizations having a membership large enough to successfully mount a charter program, and also because they have proven to be extremely difficult to enforce. Moreover, since the TGC's are expected to attract principally those very passengers who are prospective participants in affinity charters (i.e., price conscious vacationers), suspension of affinity charters during the pendency of the TGC experiment would appear to be especially desirable, in order to more validly test the full potential of TGC's as a replacement for affinity charters. Indeed, unless the Board suspends the affinity charter rules during the TGC experiment, there will be a substantial incentive to operate illegal so-called affinity charters rather than undertake the operation of TGC's, since the restrictions surrounding TGC operations are more difficult to evade than those surrounding affinity charters. The basic restriction on affinity charters is the affinity concept itself, i.e., availability of such charters is limited to bona fide organizations interested in providing low cost air transportation to their bona fide members on a nonprofit basis. However, if that basic restriction is satisfied (or evaded, in the case of an illegal charter), operation of an affinity charter is not subject to some of the technical restrictions imposed on a TGC. For example, charters operated under our affinity charter rules, unlike those operated under our TGC rules, do not entail: (1) payment of a nonrefundable 25-percent deposit 3 months in advance of flight; (2) payment of the full price 60 days in advance; (3) restricting participation in the flight to persons whose names were filed with the Board at least 3 months in advance; (4) round trip and minimum-stay requirements; or (5) cancellation of the charter if, as a result of defaults, the pro rata charter price exceeds a specified maximum.

Another incidental benefit arising from the suspension of the affinity charter rules is that we would thereby eliminate operators who specialize in consolidating passengers for illegal so-called affinity charters. Elimination of these operators would, in turn, tend to eliminate the problem of passenger strandings abroad, since such strandings are mainly caused by illegal operators. TGC operators, in contrast, are required to be bonded and to place customer deposits in escrow.

On the other hand, the elimination—even temporarily—of affinity charters may well create a serious hiatus in our rules, and cause inconvenience to the traveling public, by precluding all charters which cannot satisfy the technical requirements of the TGC rule although they otherwise comport fully with the basic concept of bona fide group travel which should be charter worthy. For example, a bona fide group wishing to attend a special event could not charter air transportation under the TGC rule

unless such special event is to occur at least 3 months hence and the group is willing to meet the applicable minimum-stay requirements.

We have determined to follow the more tentative procedure afforded by advance notice of rule making, rather than the customary notice of a specific proposed rule, because we believe that the step of suspending traditional affinity charter rules during the pendency of a novel charter experiment should be taken, if at all, only after we have had an opportunity to consider as much factual material and discussion of alternatives as we are able to obtain. Accordingly, we are requesting the parties to file with their comments such documentation as is available to support their respective positions. Upon review of the comments and the accompanying data, the Board will then be in a position to decide what rule, if any, should be proposed in this proceeding.

The Board has tentatively concluded that any suspension of the affinity charter rules would not take effect before October 1, 1973, lest such suspension unduly disrupt plans already made, or about to be made, for air transportation under our affinity charter rules during the 1973 summer season. Such plans are frequently confirmed by the participating parties many months in advance of scheduled flight departure, and it seems obvious that the Board could not complete the pending rule making proceeding in time to avoid disruption of plans for the coming peak season. Therefore, we expect to postpone the effectiveness of any rule which may evolve from this proceeding until after completion of the 1973 summer season.

While we shall of course welcome all relevant comments, views, and information, we specifically request interested parties to focus upon the following questions:

(1) What would be the economic impact on total charter operations of the suspension of the affinity charter rules, i.e., how much of the total charter market could not be accommodated by the TGC rule? What is the basis for such conclusion? As much documentation should be provided as possible, as to the type and volume of affinity charters which could not be so accommodated.

(2) Should affinity charters be permitted to operate, but only on a prior approval basis? If so, should prior approval be required on an ad hoc basis for each flight, or could some more generalized type of prior approval be devised? To the maximum extent possible, the Board would obviously wish to avoid the administrative burden which a prior approval procedure entails.

(3) If the Board is to make special provision for the operation of certain types of affinity charters, such as the "special event" type discussed above, how could such an exception be expressed so as to be unambiguous, self-executing, and easily enforceable?

(4) Should special provision be made for charters to or from countries which

<sup>1</sup> After contracts are filed with the Board, refund of this 25 percent deposit is permitted only in case of death or illness of a charter participant, and only if such event occurs before the "tentative adjusted price" is computed (no later than 45 days before the date of scheduled flight departure). After that time no payments are refundable to defaulting participants.

<sup>2</sup> SPR-61, page 6 (mimeo.).

<sup>3</sup> By "affinity charters" we mean pro rata charters of all or part of an aircraft by groups of persons who share a "prior affinity" (e.g., membership in a social or professional organization). These have been the traditional group charters and are authorized to be performed by certificated air carriers and foreign air carriers under the following subparts of the rules: Subpart B of Part 207; Subpart C of Part 208; Subpart B of Part 212; and Subpart A of Part 214.

<sup>4</sup> See, for example, SPR-61, supra, pages 1-2 (mimeo.).



do not permit the operation of travel group charters?

The Board also invites comments as to what regulatory action, if any, should be taken with respect to affinity group fares offered on scheduled services, in the event that affinity charters are suspended.

[FR Doc.72-19641 Filed 11-14-72;8:53 am]

## FEDERAL COMMUNICATIONS COMMISSION

[ 47 CFR Part 2 ]

[Docket No. 19547]

### SPACE WARC, GENEVA, 1971

#### Extension of Time for Filing Comments

*Order.* In the Matter of amendment of Part 2 of the Commission's rules to conform, to the extent practicable, with the Geneva Radio Regulations, as revised by the Space WARC, Geneva, 1971, Docket No. 19547.

1. On September 29, 1972, the Commission, by its General Counsel, granted a 30-day extension of time for the filing of comments and replies in this proceeding in response to motions by the Central Committee on Communication Facilities of the American Petroleum Institute and the Utilities Telecommunications Council.<sup>1</sup> Comments were accordingly filed on October 30, 1972, by some 17 parties raising a number of issues concerning the proposed rule amendments. Subsequently, there have been informal requests by several parties and a motion filed by the Communications Satellite Corp. (Comsat) for a brief extension of the reply comment date. Comsat states that it has been unable to analyze adequately and respond to the comments of other parties in the short time allowed for reply comments.

2. In our earlier Order extending the time for filing comments in this proceeding, we pointed out the urgency of completing this rule making to align the U.S. Table of Frequency Allocations with the new international regulations adopted at the 1971 World Administrative Radio Conference on Space Telecommunications, which become effective on January 1, 1973. However, considering the number of comments filed and the importance of this proceeding, a 1-week extension of time for the filing or replies would appear to be warranted and should not prejudice the interests of any concerned party.

3. Accordingly, the date for filing reply comments in this proceeding is extended from November 10 to November 17, 1972. Authority for this action is taken

pursuant to § 0.251(b) of the Commission's rule.

Adopted: November 10, 1972.

Released: November 10, 1972.

FEDERAL COMMUNICATIONS COMMISSION,

[SEAL] JOHN W. PETTIT,  
General Counsel.

[FR Doc.72-19653 Filed 11-14-72;8:52 am]

## FEDERAL HOME LOAN BANK BOARD

[ 12 CFR Part 563 ]

[No. 72-1266]

### FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION

#### Nationwide Lending and Participation Loans

OCTOBER 31, 1972.

Section 563.9(a)(4) of the rules and regulations for insurance of accounts (12 CFR 563.9(a)(4)) imposes certain requirements with respect to the servicing of "nationwide" loans made or purchased by insured institutions. Under the present regulation, each such loan must be serviced by an FSLIC-insured institution, an FDIC-insured bank, or an approved FHA mortgagee having an office within 100 miles of the real estate securing the loan. The Federal Home Loan Bank Board considers it desirable to liberalize these servicing requirements in several respects. First, it proposes to expand the list of eligible servicers to include any wholly owned subsidiary of an FDIC-insured bank and any savings and loan "service corporation." Second, the 100-mile requirement would be enlarged in the case of servicing by an FSLIC-insured institution having a "normal lending territory" which extends beyond the 100-mile limit (usually due to "grandfather" lending rights). Third, the local servicing requirement would no longer apply in the case of a loan in excess of \$500,000.

Section 563.9-1(b) of such regulations (12 CFR 563.9-1(b)), which governs participations in loans on real estate located outside of the "normal lending territory" of an insured institution, imposes certain requirements with respect to the servicing of such loans and "retainage" interests in such loans. Under the present regulation, the real estate securing a participation loan must be located within 100 miles of an office of an "approved lender" servicing such loan and having a certain "retainage" interest in such loan. The Board considers it desirable to liberalize these requirements in several respects.

With regard to servicing, the Board proposes to enlarge the 100-mile requirement in the case of an FSLIC-insured institution having a "normal lending territory" extending beyond such limit. As to the "retainage" requirement, the proposal would permit participation in a

"nationwide" loan without "retainage" by a local servicer if the institution which held the whole loan keeps the required "retainage" interest in such loan. The proposal would also permit the local servicing requirement to be met by a wholly owned subsidiary of an "approved lender" holding the required "retainage" in other participation loans.

Accordingly, it is hereby proposed to amend 12 CFR Part 563 by revising §§ 563.9(a)(4) and 563.9-1(b)(1), (2), and (3) to read as set forth below.

Interested persons are invited to submit written data, views, and arguments to the Office of the Secretary, Federal Home Loan Bank Board, 101 Indiana Avenue NW., Washington, DC 20552, by December 15, 1972, as to whether this proposal should be adopted, rejected, or modified. Written material submitted will be available for public inspection at the above address unless confidential treatment is requested or the material would not be made available to the public or otherwise disclosed under § 505.6 of the General Regulations of the Federal Home Loan Bank Board (12 CFR 505.6).

1. It is proposed to amend § 563.9 by revising subparagraph (4) of paragraph (a) thereof to read as follows:

#### § 563.9 Loans and investments.

(a) *General provisions.* \* \* \*

(4) Any insured institution which, at the close of its most recent semiannual period, had a ratio of scheduled items (other than assets acquired in a merger instituted for supervisory reasons) to specified assets of less than 2.5 percent may, to the extent that it has legal power to do so, make, or invest its funds in, any loan on the security of real estate located outside its normal lending territory but within any State of the United States, subject to the following requirements:

(i) The aggregate amount of investment in all such loans may not exceed 10 percent of the insured institution's assets;

(ii) The loan must be serviced by or through one of the following:

(a) An insured institution;

(b) A lending institution whose deposits are insured by the Federal Deposit Insurance Corporation, or a wholly owned subsidiary of any such lending institution;

(c) A service corporation in which the entire capital stock is held by one or more insured institutions or institutions which are eligible to apply for insurance of accounts under title IV of the National Housing Act, as amended; or

(d) An approved Federal Housing Administration mortgagee which has furnished to the insured institution documentation of its current approved status.

(iii) Except in the case of a loan in an amount in excess of \$500,000, the real estate security for the loan must be located within the normal lending territory

<sup>1</sup> 37 FR, 23152, October 7, 1972.



of another insured institution servicing such loan or within 100 miles of the principal or a branch office of any other servicer of such loan; and

(iv) The insured institution must have obtained a signed report of appraisal of the real estate security for the loan by an appraiser, designated by such institution, who has no interest, direct or indirect, in the real estate or in any loan on the security thereof.

2. It is proposed to amend § 563.9-1 by revising subparagraphs (1), (2), and (3) of paragraph (b) thereof to read as follows:

**§ 563.9-1 Participation loans.**

(b) *Loans on real estate located outside normal lending territory*—(1) *General*. Subject to the provisions of this section, any insured institution, to the extent it has legal power to do so, may purchase from any other approved lender a participation interest in any loan secured by a first lien upon real estate located outside its normal lending territory, and may participate with any other approved lender or lenders in the making of any such loan, if such loan is in one of the following three categories:

(i) The loan is an insured loan or a guaranteed loan;

(ii) (a) The loan is secured by property located (1) within the normal lending territory of another insured institution servicing such loan or (2) within 100 miles of the principal or a branch office of any other approved lender (or wholly owned subsidiary thereof) servicing such loan; and (b) at the close of the participation transaction, such servicer or any approved lender holding all of the stock of such servicer has an interest in such loan of at least—

(1) 10 percent, if the loan is secured by residential real estate; or

(2) 50 percent, if the loan is secured by real estate other than residential real estate; or

(iii) (a) The loan was originally made or purchased by an insured institution under the provisions of paragraph (a) (4) of § 563.9 and is being serviced in accordance therewith; and (b) at the close of the participation transaction, such insured institution has an interest in such loan of at least—

(1) 10 percent, if the loan is secured by residential real estate; or

(2) 50 percent, if the loan is secured by real estate other than residential real estate.

(2) *Scheduled items limitation*. (i) No insured institution may, pursuant to either subdivision (ii) or (iii) of subparagraph (1) of this paragraph, purchase a participation interest from, or enter into a participation with, any insured institution which had, at the close of its immediately preceding semiannual period, scheduled items (other than assets acquired in a merger instituted for supervisory reasons) in excess of 4 percent of its specified assets, unless the prior

written approval of the Corporation has been obtained as provided in subdivision (ii) of this subparagraph.

(ii) An insured institution having scheduled items in excess of 4 percent of its specified assets may request Corporation approval for other insured institutions to purchase from it participation interests in loans and to participate with it in the making of loans pursuant to subparagraph (1) of this paragraph. Any such request by the institution for Corporation approval shall be transmitted to the Director, Office of Examinations and Supervision, Federal Home Loan Bank Board, Washington, D.C. 20552, with a copy thereof to the Supervisory Agent.

(3) *Requirements as to servicing and retainage*. An insured institution may maintain a participation interest in a loan, other than an insured loan or a guaranteed loan, only if the relevant servicing and retainage requirements contained in subdivisions (ii) and (iii) of subparagraph (1) of this paragraph continue to be met. In the event that such requirements cease to be met with respect to a loan in which an insured institution has a participation interest, such institution shall dispose of such participation interest within 90 days from the date that such requirements ceased to be met, unless it has, prior to the expiration of such 90-day period, obtained the written approval of the Corporation to maintain such investment for such longer period as the Corporation may provide.

(Secs. 402, 403, 48 Stat. 1256, 1257, as amended; 12 U.S.C. 1725, 1726. Reorg. Plan No. 3 of 1947, 12 F.R. 4981, 3 CFR, 1943-48 Comp., p. 1071)

By the Federal Home Loan Bank Board.

[SEAL]

EUGENE M. HERRIN,  
Assistant Secretary.

[FR Doc. 72-19632 Filed 11-14-72; 8:51 am]

[No. 72-1324]

**[ 12 CFR Parts 563, 571 ]**

**FEDERAL SAVINGS AND LOAN  
INSURANCE CORPORATION**

**Federal Insurance Reserve and Net  
Worth Requirements of Insured In-  
stitutions**

NOVEMBER 9, 1972.

By Resolution No. 72-951, dated August 10, 1972, the Federal Home Loan Bank Board proposed to amend Parts 563 and 571 of the rules and regulations for Insurance of Accounts (12 CFR Parts 563, 571) for the purpose of revising the regulatory provisions regarding the Federal insurance reserve and net worth requirements of insured institutions.

Notice of such proposed rule making was published in the FEDERAL REGISTER on August 25, 1972 (37 F.R. 17216-17), with an invitation for interested persons

to submit written comments thereon by September 29, 1972.

After consideration of all relevant material presented by interested persons or otherwise available, the Board decided to make certain changes in the provisions of the proposal as so published. Since several of such changes could have a substantial effect on some insured institutions, the Board has determined that it is advisable to withdraw such proposal and to publish notice of proposed rule making with respect to the revised proposal and receive additional comment by interested persons. Accordingly, it is hereby proposed to amend said Parts 563 and 571 as set forth below.

Interested persons are invited to submit written data, views, and arguments to the Office of the Secretary, Federal Home Loan Bank Board, 101 Indiana Avenue NW., Washington, DC 20552, by December 1, 1972, as to whether this proposal should be adopted, rejected, or modified. Written material submitted will be available for public inspection at the above address unless confidential treatment is requested or the material would not be made available to the public or otherwise disclosed under § 505.6 of the general regulations of the Federal Home Loan Bank Board (12 CFR 505.6).

1. It is proposed to amend Part 563 by revising §§ 563.11, 563.13, and 563.14 thereof to read as follows:

**§ 563.11 Federal insurance reserve; establishment of and earmarking to.**

(a) *Establishment of account*. Each insured institution shall set up a Federal insurance reserve account which shall be used solely for the purpose of absorbing losses. No insured institution may pay dividends or interest on savings accounts from its Federal insurance reserve account. Any insured State-chartered institution, by specific and appropriate corporate action, may permanently designate as part of its Federal insurance reserve account all of any reserve account which under the provisions of State law is established for the sole purpose of absorbing losses. Evidence of such action shall be filed promptly with the corporation.

(b) *Earmarking of net worth accounts*. Any insured institution, by specific and appropriate corporate action, and with the prior written approval of the corporation, may earmark as part of its Federal insurance reserve account (1) any portion of any other reserve account which, by such corporate action, is made subject to charges for losses only, or (2) any amount of pledged savings accounts, capital stock (where permitted by State law to be used for absorbing losses), capital surplus, contributed surplus, or retained earnings. Such corporation approval may set forth the conditions under which such earmarked amounts may be released.

(c) *Reserves of Federal associations*. The general reserves of Federal savings and loan associations are deemed to meet the requirements of paragraph (a) of this section.



(d) *Adjustment for negative net worth account balances.* In determining the amount of the Federal insurance reserve account, any net negative balance in the aggregate of all other net worth accounts shall be deducted from the Federal insurance reserve account.

**§ 563.13 Required amounts and maintenance of Federal insurance reserve and net worth.**

(a) *Federal insurance reserve requirements—(1) Minimum required amounts.* After the fiscal year in which a certificate of insurance is issued, each insured institution shall build up its Federal insurance reserve account so that, as of the close of business on the annual closing date following each anniversary of the date of insurance of accounts, such account shall be at least equal to the amount obtained by multiplying the percentage corresponding to such anniversary date, as set forth in the table below, by either (i) the amount of the institution's savings account balance on such closing date, or (ii) the average of the savings account balance on such closing date and on one or more of the 4 immediately preceding annual closing dates, provided all such dates are consecutive. In any event, unless otherwise permitted in writing by the corporation, each insured institution shall build up its Federal insurance reserve account so that, at any one annual closing date prior to the twenty-sixth anniversary of its insurance of accounts, such account shall be at least equal to 5 percent of the institution's savings account balance on such closing date.

Anniversary	Percentage
2	0.50
3	0.75
4	1.00
5	1.25
6	1.50
7	1.75
8	2.00
9	2.25
10	2.50
11	2.75
12	3.00
13	3.25
14	3.50
15	3.75
16	4.00
17	4.25
18	4.50
19	4.75
20 and thereafter	5.00

(2) *Maintenance of minimum level.* Each insured institution must maintain in its Federal insurance reserve account (until the next annual closing date) at least the dollar amount required at any annual closing date under the provisions of the first sentence of subparagraph (1) of this paragraph.

(b) *Net worth requirements—(1) Minimum required amounts.* After the fiscal year in which a certificate of insurance is issued, each insured institution shall build up its net worth so that, as of the close of business on the annual closing date following each anniversary of the date of insurance of accounts, such net worth shall be at least equal to the

greater of (i) the applicable Federal insurance reserve account requirement plus an amount equal to 20 percent of the institution's scheduled items, or (ii) the amount determined under the Asset Composition and Net Worth Index set forth in subparagraph (2) of this paragraph, as adjusted by multiplying such amount by a fraction of which the numerator is the applicable Federal insurance reserve percentage (from the table set forth in paragraph (a) (1) of this section) and the denominator is 5.00.

(2) *Asset Composition and Net Worth Index.* (i) The Asset Composition and Net Worth Index referred to in subparagraph (1) of this paragraph shall be as follows:

ASSET COMPOSITION AND NET WORTH INDEX	
Asset Category	Minimum Net Worth Percentage
<i>First mortgage loans and contracts:</i>	
Insured or guaranteed mortgage loans	2
Mortgage loans, participations, and mortgage-backed certificates insured or guaranteed by an agency or instrumentality of the United States	2
<i>Conventional mortgage loans</i>	
Single-family dwellings	3
Homes—2-4 dwelling units	5
Multifamily—more than four dwelling units	6
Other improved real estate—commercial and industrial	7
Developed building lots and sites	6
Acquisition and development of land	8
Undeveloped land	8
Nonconforming mortgage loans and contracts to facilitate sale of real estate owned	8
<i>Other loans:</i>	
Property improvement, alteration, or repair	
Insured or guaranteed loans	3
Other than insured or guaranteed loans	5
Educational loans	
Insured or guaranteed loans	2
Other than insured or guaranteed loans	6
Mobile home chattel paper	6
Insured or guaranteed	3
Other than insured or guaranteed	6
Equipping and consumer loans	6
<i>Real estate:</i>	
Foreclosed and in judgment	10
Held for development or investment	7
<i>Office premises—</i>	
Land and buildings	3
Leasehold and leasehold improvements	3
Fixtures	3
<i>Investment securities—Non-liquid:</i>	
Securities other than those that qualify as liquid assets under § 523.10(g) or would so qualify except for maturity	3
<i>Other assets:</i>	
Furniture and equipment	10
Investment in service corporations and other subsidiaries	5
All other (except excluded assets)	3

(ii) The following rules shall apply in making determinations under such Index.

(a) Before a minimum net worth percentage is applied to an asset item, the amount of such asset item may be reduced by the amount of (1) any applicable allowance or reserve for depreciation, valuation allowance or reserve, specific reserve, or loss reserve, and (2) any applicable loans-in-process.

(b) The following are "excluded assets" and shall not be included in any asset category under such Index:

- (1) Cash on hand and demand deposits in banks;
- (2) Loans on the security of savings accounts;
- (3) Prepaid FSLIC insurance premiums and secondary reserve prepayments;
- (4) Securities that qualify as liquid assets under § 523.10(g) of this chapter or would so qualify except for maturity;
- (5) Time deposits that qualify as liquid assets under § 523.10(g) of this chapter;

(6) Stock of a Federal Home Loan Bank or the Federal National Mortgage Association; and

(7) Prepaid expenses.

(c) Deferred income (in any form) may not be deducted from any asset item.

(3) *Maintenance of minimum level.* Each insured institution must maintain (until the next annual closing date) at least the dollar amount of net worth required at any annual closing date under the provisions of subparagraph (1) of this paragraph.

(c) *Failure to meet Federal insurance reserve or net worth requirements.* If any insured institution fails to meet the Federal insurance reserve requirements set forth in paragraph (a) of this section or the net worth requirements set forth in paragraph (b) of this section, the corporation may, whether through enforcement proceedings (as provided in parts 565 and 566 of this subchapter) or otherwise, require such institution to take any one or more of the following corrective actions:

(1) Increase the amount of its Federal insurance reserve account and/or net worth to a specified level or levels;

(2) Convene a meeting or meetings of its board of directors with the Director, Office of Examinations and Supervision, or his designee, for the purpose of accomplishing the objectives of this section;

(3) Reduce the rate of earnings that may be paid on savings accounts;

(4) Limit the receipt of savings to deposits to existing savings accounts;

(5) Cease or limit the issuance of new savings accounts of any or all classes or categories, except in exchange for existing savings accounts;

(6) Cease or limit lending or the making of a particular type or category of loan;

(7) Cease or limit the purchase of loans or the making of specified other investments;

(8) Limit operational expenditures to specified levels;

(9) Increase liquid assets and maintain such increased liquidity as specified levels; or



(10) Take such other action or actions as the corporation may deem necessary or appropriate for the protection of the corporation, the insured institution, or depositors or investors in the insured institution.

**§ 563.14 Payment of dividends and interest where losses are chargeable to the FIR.**

No insured institution which has recognized losses chargeable to its Federal insurance reserve account may declare any dividends or pay any interest on savings accounts unless the amount standing to the credit of such account, after deduction of all such losses, is equal to at least the amount required under § 563.13. However, for any period when recognized losses are chargeable to such reserve and the amount remaining to the credit of such account after deduction of all such losses is less than the amount required under § 563.13, the declaration of such dividends or the payment of such interest on savings may be made if prior written approval is obtained from the corporation. The corporation hereby approves, for any such insured institution which has been insured for a period of 20 years or more and whose Federal insurance reserve account, prior to the charging of such losses, equalled at least 5 percent of all savings accounts, the declaration of dividends or the payment of interest on savings accounts, if such insured institution provides for the transfer to its Federal insurance reserve account of not less than 25 percent of its net income (as defined in § 572.3 of this subchapter) for such distribution period.

**§ 571.3 [Rescinded]**

2. It is proposed to amend Part 571 by rescinding § 571.3 thereof.

(Secs. 402, 403, Stat. 1256, 1257, as amended; 12 U.S.C. 1725, 1726. Reorg. Plan No. 3 of 1947, 12 F.R. 4981, 3 CFR, 1943-48 Comp., p. 1071)

By the Federal Home Loan Bank Board.

[SEAL]

EUGENE M. HERRIN,  
Assistant Secretary.

[FR Doc.72-19658 Filed 11-14-72; 8:53 am]

## FEDERAL POWER COMMISSION

[18 CFR Parts 101, 104, 141, 201, 204, 260]

[Dockets Nos. R-424, R-446]

### UNIFORM SYSTEM OF ACCOUNTS AND CERTAIN FORMS

#### Notice of Postponement of Conference

NOVEMBER 10, 1972.

Accounting for premium, discount, and expense of issue, gains and losses on refunding and reacquisition of long-term debt, and interperiod allocation of income taxes, Docket No. R-424; amendments to the Uniform Systems of Accounts for Classes A, B, and C public utilities and licenses and natural gas

companies; deferred income taxes, Docket No. R-446.

On November 8, 1972, the Independent Natural Gas Association of America filed a request for a postponement of the conference scheduled for November 22, 1972, by notice issued November 3, 1972 (37 F.R. 23733, November 8, 1972).

Upon consideration, notice is hereby given that the conference in the above-designated matter is postponed to December 5, 1972, at 10 a.m., e.s.t., in a hearing room of the Federal Power Commission, 441 G Street NW., Washington, DC 20426.<sup>1</sup>

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19607 Filed 11-14-72; 8:49 am]

## VETERANS ADMINISTRATION

[38 CFR Part 13]

### RECOVERY OF PAYMENT OF INDEBTEDNESS

#### Single Standard for Waiver

Public Law 92-328 (86 Stat. 393), enacted June 30, 1972, amends sections 1820 and 3102, title 38, United States Code, to provide a single and a more equitable standard in lieu of dual sets of standards, under which the Administrator of Veterans Affairs may waive collection of certain debts.

The law extends the term "overpayment" to the indebtedness of a veteran-transferee and a veteran-purchaser of a vendee account; it permits waiver of certain debts or overpayments heretofore excluded; and increases the time limitation to 2 years for application for waiver in other than loan program. Sections 13.207 and 13.208 are amended accordingly.

Sections 13.208 and 13.209 reflect the single standard for waiver and § 13.210 prescribes the application of the standard and elements to be considered. Also, § 13.209 authorizes the right to request waiver in the loan program not only to a veteran-borrower, but also to a veteran-transferee, a veteran-purchaser of a vendee account, and to a former spouse of a veteran. Other nonveteran obligors are excluded from waiver consideration.

The law makes no provision for (a) initiating a new claim for waiver or, (b) a waiver request by a veteran other than one so defined in sections 101 and 1801 of 38 U.S.C. This excludes a request for waiver made by a serviceman.

Interested persons are invited to submit written comments, suggestions, or objections regarding the proposal to the Administrator of Veterans Affairs (232H), Veterans Administration, 810 Vermont Avenue NW., Washington, DC 20420. All relevant material received not later than 30 days after publication of

<sup>1</sup> Notice of proposed rule making in Docket No. R-424 was published at 36 F.R. 16069, Aug. 19, 1971, and in Docket No. R-446 at 37 F.R. 13805, July 14, 1972.

this notice in the FEDERAL REGISTER will be considered. All written comments received will be available for public inspection at the above address only between the hours of 8 a.m. and 4:30 p.m. Monday through Friday (except holidays), during the mentioned 30-day period and for 10 days thereafter. Any person visiting Central Office for the purpose of inspecting any such comments will be received by the Central Office Veterans Assistance Unit in Room 132. Such visitors to any VA field station will be informed that the records are available for inspection only in Central Office and furnished the address and the above room number.

Notice is also given that it is proposed to make any regulations that are adopted effective June 30, 1972, date of enactment of Public Law 92-328.

1. Section 13.205 is revised to read as follows:

#### § 13.205 Legal and technical assistance.

Legal questions involving a determination under § 2.6(f)(4) of this chapter will be referred to the Chief Attorney for action in accordance with delegations of the General Counsel, unless there is in existence a General Counsel's opinion or an approved Chief Attorney's opinion dispositive of the controlling legal principle. As to matters not controlled by § 2.6(f)(4) of this chapter, the chairman of the field station Committee or at his instance, a member, may seek and obtain advice from the Chief Attorney on legal matters within his jurisdiction and from other division chiefs in their areas of responsibility, on any matter properly before the Committee. Guidance may also be requested from Central Office Board.

2. Section 13.207 is revised to read as follows:

#### § 13.207 Waiver of overpayments.

The term "overpayment" means payments made and determined to be erroneous, indebtedness resulting from services erroneously furnished, and indebtedness of a veteran-borrower or veteran-transferee under the loan guaranty program or the indebtedness of his spouse, under laws administered by the Veterans Administration.

(a) Benefits subject to waiver include indebtedness due the Veterans Administration because of or in connection with hospitalization, domiciliary care, or treatment of a veteran, a person who claimed he was a veteran, or a person to whom such benefits were granted on the assumption that he was an eligible veteran.

(b) In any case where there is an indication of fraud or misrepresentation of a material fact on the part of the debtor or any other party having an interest in the claim, action on a request for waiver will be deferred pending appropriate disposition of the matter. However, the existence of a prima facie case of fraud shall, nevertheless, entitle a claimant to an opportunity to make a rebuttal with countervailing evidence; similarly, the misrepresentation must be



more than nonwillful or a mere inadvertence. The Committee may act on a request for waiver concerning such debts, after the Chief Attorney has determined that prosecution is not indicated, or the Department of Justice has notified the Veterans Administration that the alleged fraud or misrepresentation does not warrant action by that department, or the Department of Justice or the appropriate U.S. Attorney specifically authorized action on the request for waiver.

3. In § 13.208, paragraphs (a) and (b) are amended to read as follows:

**§ 13.208 Waiver; other than loan guaranty.**

(a) *General.* Recovery of overpayments of any benefits made under laws administered by the Veterans Administration shall be waived if recovery of the indebtedness from the payee who received such benefits would be against equity and good conscience.

(b) *Application.* Request for waiver of an overpayment will be considered only if received within 2 years following the date of notice to the payee.

4. In § 13.209, paragraphs (a), (c), and (e) are amended and paragraph (f) is added so that the amended and added material reads as follows:

**§ 13.209 Waiver; loan guaranty.**

(a) *General.* An indebtedness of a veteran or the indebtedness of his spouse may be waived only when both of the following factors are determined to exist:

(1) Following default there was a loss of the property which constituted security for the loan guaranteed, insured or made under chapter 37 of title 38, United States Code; and

(2) Collection of such indebtedness would be against equity and good conscience.

(c) *Widow or former spouse.* A widow of a veteran or the former spouse of a veteran may be granted a waiver of her

indebtedness provided the requirements of paragraph (a) of this section are met.

(e) *Application.* There is no time limit for filing an application for waiver of indebtedness under this section.

(f) *Exclusion.* Except as otherwise provided in this section, the indebtedness of a nonveteran obligor under the loan program is excluded from waiver.

5. Section 13.210 is revised to read as follows:

**§ 13.210 Application of standard.**

(a) The standard "Equity and Good Conscience," will be applied when the facts and circumstances in a particular case indicate a need for reasonableness and moderation in the exercise of the Government's rights. The decision reached should not be unduly favorable or adverse to either side. The phrase "equity and good conscience" means arriving at a fair decision between the obligor and the Government. In making this determination, consideration will be given to the following elements, which are not intended to be all inclusive:

(1) Fault of debtor: Where actions of the debtor contribute to creation of the debt.

(2) Balancing of faults: Weighing fault of debtor against Veterans Administration fault.

(3) Undue hardship: Whether collection would deprive debtor or family of basic necessities.

(4) Defeat the purpose: Whether withholding of benefits or recovery would nullify the objective for which benefits were intended.

(5) Unjust enrichment: Failure to make restitution would result in unfair gain to the debtor.

(6) Changing position to one's detriment: Reliance on Veterans Administration benefits results in relinquishment of a valuable right or incurrence of a legal obligation.

(b) In applying this single standard for all areas of indebtedness, the following elements will be considered, anyone of which, if found, will preclude the granting of waiver:

(1) Fraud or misrepresentation of a material fact (see § 13.207(b)).

(2) Material fault: The inexcusable commission or omission of an act that directly results in the creation of a debt to the Government.

(3) Lack of good faith: Absence of an honest intention to abstain from taking unfair advantage of the holder and/or the Government.

**§ 13.211 [Revoked]**

6. Section 13.211 *Standards for waiver; loan guaranty* is revoked.

7. In § 13.212, paragraph (b) (2) (i) is amended to read as follows:

**§ 13.212 Scope of waiver decisions.**

(b) A field station committee or Central Office Board may:

(2) Waive or decline to waive recovery from specific benefits or sources, except that:

(i) There shall be no waiver of recovery out of insurance of an indebtedness secured thereby; i.e., an insurance overpayment to an insured. However, recovery may be waived of any or all of such indebtedness out of benefits other than insurance then or thereafter payable to the insured.

8. In § 13.213, paragraph (c) is amended to read as follows:

**§ 13.213 Refunds.**

(c) Amounts which have been recovered by the U.S. Government prior to the date of receipt by the Veterans Administration of a request for waiver, will not be refunded and will be excluded from waiver.

Approved: November 9, 1972.

By direction of the Administrator.

[SEAL] RUFUS H. WILSON,  
Associate Deputy Administrator.

[FR Doc.72-19630 Filed 11-14-72; 8:51 am]



# Notices

## DEPARTMENT OF THE TREASURY

Bureau of Customs

### IMPRESSION FABRIC OF MAN-MADE FIBER FROM JAPAN

#### Withholding of Appraisal Notice

OCTOBER 17, 1972.

Information was received on January 5, 1972, that impression fabric of man-made fiber from Japan was being sold at less than fair value within the meaning of the Antidumping Act, 1921, as amended (19 U.S.C. 160 et seq.) (referred to in this notice as "the Act"). This information was the subject of an "Antidumping Proceeding Notice" which was published in the *FEDERAL REGISTER* of February 24, 1972, on page 3922. The "Antidumping Proceeding Notice" indicated that there was evidence on record concerning injury to or likelihood of injury to or prevention of establishment of an industry in the United States.

Pursuant to section 201(b) of the Act (19 U.S.C. 160(b)), notice is hereby given that there are reasonable grounds to believe or suspect that the purchase price (section 203 of the Act; 19 U.S.C. 162) of impression fabric of man-made fiber from Japan is less, or is likely to be less, than the foreign market value (section 205 of the Act; 19 U.S.C. 164).

*Statement of reasons.* The information before the Bureau of Customs tends to indicate that the probable basis of comparison for fair value purposes will be between purchase price and the adjusted home market price of such or similar merchandise.

Purchase price will probably be calculated on the basis of a c.i.f., f.o.b., or ex-warehouse price, as applicable, with deductions made, where applicable, for ocean freight, marine insurance, inspection charges, and inland freight in Japan.

Home market price will probably be based on a weighted-average delivered price to purchasers in the home market. Where applicable, deductions will be made for inland freight. Adjustments will probably be made, where applicable, for differences in packing, credit costs, and for differences in the merchandise.

Using the above criteria, there are reasonable grounds to believe or suspect that purchase price will be lower than adjusted home market price.

Customs officers are being directed to withhold appraisal of impression fabric of man-made fiber from Japan in accordance with § 153.48, Customs Regulations (19 CFR 153.48).

In accordance with § 153.32(b) and 153.37, Customs Regulations (19 CFR

153.32(b), 153.37), interested parties may present written views or arguments, or request in writing that the Secretary of the Treasury afford an opportunity to present oral views.

Any requests that the Secretary of the Treasury afford an opportunity to present oral views should be addressed to the Commissioner of Customs, 2100 K Street NW., Washington, DC 20226, in time to be received by his office not later than 10 calendar days from the date of publication of this notice in the *FEDERAL REGISTER*.

Any written views or arguments should likewise be addressed to the Commissioner of Customs in time to be received by his office not later than 30 days from the date of publication of this notice in the *FEDERAL REGISTER*.

This notice, which is published pursuant to § 153.34(b), Customs Regulations shall become effective upon publication in the *FEDERAL REGISTER*. It shall cease to be effective at the expiration of 6 months from the date of this publication, unless previously revoked.

[SEAL] LEONARD LEHMAN,  
Acting Commissioner of Customs.

Approved: November 10, 1972.

EUGENE T. ROSSIDES,  
Assistant Secretary of the  
Treasury.

[FR Doc.72-19708 Filed 11-14-72; 8:53 am]

## DEPARTMENT OF THE INTERIOR

Office of the Secretary

[DES 72-112]

### PROPOSED ALLAMUCHY MOUNTAIN STATE PARK ACQUISITION PROJECT

#### Notice of Availability of Draft Environmental Statement

Pursuant to section 102(2)(c) of the National Environmental Policy Act of 1969, the Department of the Interior has prepared a draft environmental statement for the proposed Allamuchy Mountain State Park Acquisition Project and invites written comment within forty-five (45) days of this notice.

The environmental statement considers the acquisition of approximately 3,604.6 acres in a rural, mountainous area of northwestern New Jersey, containing portions lying in Warren, Sussex, and Morris Counties. The land acquired will be added to other State-owned lands in Allamuchy Mountain State Park serving the New Jersey-New York metropolitan area.

Copies are available for inspection at the following locations:

Office of Communications, Room 7200, Department of the Interior, Washington, D.C. 20240, Telephone: 202-343-4662.

Division of Information, Bureau of Outdoor Recreation, Room 4022, Department of the Interior, Washington, D.C. 20240, Telephone: 202-343-5726.

Division of State and Regional Planning, Department of Community Affairs, Post Office Box 1978, Trenton, NJ 08625.

Tri-State Regional Planning Commission, 100 Church Street, New York, N.Y. 10007.

Office of the Regional Director, Bureau of Outdoor Recreation, 1421 Cherry Street, Philadelphia, PA 19102, Telephone: 215-597-7989.

Copies may be obtained by writing the National Technical Information Service, Department of Commerce, Springfield, Va. 22151. Please refer to the statement number above.

Dated: November 6, 1972.

W. W. LYONS,  
Deputy Assistant Secretary  
of the Interior.

[FR Doc.72-19588 Filed 11-14-72; 8:48 am]

[DES 72-113]

### PROPOSED ROADS AND UTILITIES, WILLOW CREEK RECREATION SITE, HERON RESERVOIR, N. MEX.

#### Notice of Availability of Draft Environmental Statement

Pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969, the Department of the Interior has prepared a draft environmental statement for the proposed construction of Roads and Utilities, Willow Creek Recreation Site, Heron Reservoir, N. Mex., and invites written comment within forty-five (45) days of this notice. Written comment should be addressed to the Director, Southwest Region at the address given below.

The environmental statement discusses the effects of developments consisting of an entrance road and car/boat trailer parking area, residential road, complete water system, underground powerlines, comfort station, and sewage system.

Copies are available for inspection at the Office of the Director, Southwest Region, 1100 Old Santa Fe Trail, Santa Fe, NM 87501. Single copies may be obtained by writing to the same official. Post Office Box 728, Santa Fe, NM 87501.

Dated: November 6, 1972.

W. W. LYONS,  
Deputy Assistant Secretary  
of the Interior.

[FR Doc.72-19589 Filed 11-14-72; 8:48 am]



## DEPARTMENT OF COMMERCE

## Maritime Administration

## U.S.-FLAG BULK CARGO VESSELS

## Adoption of Standard Operating-Differential Subsidy Contract for Carrying Bulk Raw and Processed Agricultural Commodities From U.S. to U.S.S.R.

Notice is hereby given that the Maritime Subsidy Board/Maritime Administration has adopted a standard contract under which operating-differential subsidy will be paid for U.S.-flag bulk cargo vessels engaged in carrying bulk raw and processed agricultural commodities from the United States to the Union of Soviet Socialist Republics.

Copies of the contract may be obtained, without charge, from the Secretary, Maritime Subsidy Board, Maritime Administration, Washington, DC. 20235.

Dated: November 13, 1972.

By Order of the Maritime Subsidy Board.

JAMES S. DAWSON, Jr.,  
Secretary.

[FR Doc.72-19764 Filed 11-14-72; 8:53 am]

[Docket No. S-308]

## MATHIASSEN'S TANKER INDUSTRIES, INC. ET AL.

## Notice of Multiple Applications

Notice is hereby given that the following corporations have filed application for an operating-differential subsidy contract to carry bulk cargoes to expire on June 30, 1973 (unless extended only for subsidized voyages in progress on that date). The bulk cargo carrying vessels proposed to be subsidized and the trades in which each proposes to engage are presented also.

Applicant's name and address	Type of ship	Name of ship
Mathiasen's Tanker Industries, Inc., Public Ledger Building, Philadelphia, Pa. 19106.	Tanker.....	SS Prairie Grove.
	do.....	SS Joseph D. Potts.
	do.....	SS Sohio Intrepid.
	do.....	SS Sohio Resolute.
Freighters, Inc., 111 Sutter Street, Suite 1412, San Francisco, CA 94104.	Bulk carrier.....	SS American Wheat.
American Rice Steamship Co., 111 Sutter Street, Suite 1412, San Francisco, CA 94104.	do.....	SS American Rice.
Texas City Tankers Corp., Post Office Box 1271, Texas City, TX 77901.	Tanker.....	SS William J. Fields.
Intercontinental Bulk Tank Corp., 511 Fifth Avenue, New York, NY 10017.	do.....	ST Overseas Alaska.
Ocean Tankships Corp., 511 Fifth Avenue, New York, NY 10017.	do.....	ST Overseas Vivian.
Overseas Bulk Tank Corp., 511 Fifth Avenue, New York, NY 10017.	do.....	ST Overseas Arctic.

The foregoing applications may be inspected in the Office of the Secretary, Maritime Subsidy Board, Maritime Administration, U.S. Department of Commerce, Washington, D.C., during regular working hours.

These vessels are to engage in the carriage of export bulk raw and processed agricultural commodities in the foreign commerce of the United States (U.S.) from ports in the U.S. to ports in the Union of Soviet Socialist Republics (U.S.S.R.), or other permissible ports of discharge. Liquid and dry bulk cargoes may be carried from U.S.S.R. and other foreign ports inbound to U.S. ports during voyages subsidized for carriage of export bulk raw and processed agricultural commodities to the U.S.S.R.

Full details concerning the U.S.-U.S.S.R. export bulk raw and processed agricultural commodities subsidy program, including terms, conditions, and restrictions, upon both the subsidized operators and vessels, appear in the regulations published in the FEDERAL REGISTER on October 21, 1972 (37 F.R. 22747).

For purposes of section 605(c), Merchant Marine Act, 1936, as amended (Act), it should be assumed that each vessel named will engage in the trades described on a full-time basis through June 30, 1973 (with extension to termination of approved subsidized voyages in progress on that date). Each voyage must be approved for subsidy before com-

mencement of the voyage. The Maritime Subsidy Board (Board) will act on each request for a subsidized voyage as an administrative matter under the terms of the individual operating-differential subsidy contract for which there is no requirement for further notices under section 605(c) of the Act.

Any person having an interest in the granting of one or any of such applications and who would contest a finding of the Board that the service now provided by vessels of U.S. registry for the carriage of cargoes as previously specified is inadequate, must, on or before November 22, 1972, notify the Board's Secretary, in writing, of his interest and of his position, and file a petition for leave to intervene in accordance with the Board's rules of practice and procedure (46 CFR Part 201). Each such statement of interest and petition to intervene shall state whether a hearing is requested under section 605(c) of the Act and with as much specificity as possible the facts that the intervenor would undertake to prove at such hearing. Further, each such statement shall identify the applicant or applicants against which the intervention is lodged.

In the event a hearing under section 605(c) of the Act is ordered to be held with respect to any application(s), the purpose of such hearing will be to receive evidence relevant to: (1) Whether the application(s) hereinabove described is

one with respect to vessels to be operated in an essential service, served by citizens of the U.S. which would be in addition to the existing service, or services, and if so, whether the service already provided by vessels of U.S. registry is inadequate and (2) whether in the accomplishment of the purposes and policy of the Act additional vessels should be operated thereon.

If no request for hearing and petition for leave to intervene is received within the specified time, or if the Board determines that petitions for leave to intervene filed within the specified time do not demonstrate sufficient interest to warrant a hearing, the Board will take such action as may be deemed appropriate.

Dated: November 13, 1972.

By Order of the Maritime Subsidy Board.

JAMES S. DAWSON, Jr.,  
Secretary.

[FR Doc.72-19766 Filed 11-14-72; 8:53 am]

[Docket No. S-309]

## OVERSEAS BULK TANK CORP. ET AL.

## Notice of Multiple Applications

Notice is hereby given that applications have been filed under the Merchant Marine Act of 1936, as amended, for operating-differential subsidy with respect to bulk cargo carrying service in the U.S. foreign trade, principally between the United States and the Union of Soviet Socialist Republics, to expire on June 30, 1973 (unless extended only for subsidized voyages in progress on that date). Inasmuch as the below listed applicants and/or related persons or firms, employ ships in the domestic, intercoastal, or coastwise service, written permission of the Maritime Administration under section 805(a) of the Merchant Marine Act, 1936, as amended, will be required for each such applicant if its application for operating-differential subsidy is granted.

The following applicants have requested permission involving the domestic, intercoastal, or coastwise services described below:

## Name of Applicants:

Overseas Bulk Tank Corp. (Bulk Tank), Intercontinental Bulk Tank Corp. (Intercontinental), Ocean Tankships Corp. (Tankships).

Description of domestic service and vessels: The applicants, Bulk Tank, Intercontinental, and Tankships, are subsidiaries of Overseas Shipholding Group, Inc. (Shipholding), whose subsidiaries have engaged in domestic coastwise, intercoastal, and noncontiguous petroleum trades with tanker vessels, and each applicant has requested written permission to continue such operations. The following tanker vessels are owned by the applicants and other subsidiaries of Shipholding:



Ship	Owner
Overseas Alaska-----	Intercontinental.
Overseas Alice-----	Do.
Overseas Aleutian-----	Ocean Transportation Co., Inc.
Overseas Ulla-----	Do.
Overseas Arctic-----	Bulk Tank.
Overseas Valdez-----	Do.
Overseas Joyce-----	Overseas Oil Carriers, Inc.
Overseas Anchorage-----	Globe Seaways, Inc.
Overseas Vivian-----	Tankships.
Alpha Reserve-----	Sea Tankers, Inc.
Beta Reserve-----	Do.
Gamma Reserve-----	Do.

Written permission is now required by the applicants (Bulk Tank, Intercontinental, and Tankships) notwithstanding that a voyage in the proposed service for which subsidy is sought would not be eligible for subsidy if the vessel carried domestic commerce of the United States on that voyage.

Interested parties may inspect these applications in the Office of The Secretary, Maritime Subsidy Board, Maritime Administration, Department of Commerce Building, 14th and E Streets NW., Washington, DC 20235.

Any person, firm, or corporation having any interest (within the meaning of section 805(a)) in any application and desiring to be heard on issues pertinent to section 805(a) or desiring to submit comments or views concerning the application must, by close of business on November 22, 1972, file same with the Maritime Subsidy Board/Maritime Administration, in writing, in triplicate, together with petition for leave to intervene which shall state clearly and concisely the grounds of interest, and the alleged facts relied on for relief.

If no petitions for leave to intervene are received within the specified time or if it is determined that petitions filed do not demonstrate sufficient interest to warrant a hearing, the Maritime Subsidy Board/Maritime Administration will take such action as may be deemed appropriate.

In the event petitions regarding the relevant section 805(a) issues are received from parties with standing to be heard, a hearing has been tentatively scheduled for 10 a.m., November 24, 1972, in room 4896, Department of Commerce Building, 14th and E Streets NW., Washington, DC 20235. The purpose of the hearing will be to receive evidence under section 805(a) relative to whether the proposed operation (a) could result in unfair competition to any person, firm, or corporation operating exclusively in the coastwise or intercoastal services, or (b) would be prejudicial to the objects and policy of the act.

By order of the Maritime Subsidy Board/Maritime Administration.

Dated: November 13, 1972.

JAMES S. DAWSON, Jr.,  
Secretary.

[FR Doc.72-19765 Filed 11-14-72; 8:53 am]

## Office of the Secretary

[Dept. Organization Order 30-2B, Amdt. 1]

## NATIONAL BUREAU OF STANDARDS

### Organizations and Functions

This order effective November 2, 1972, amends the material appearing at 37 F.R. 14423 of July 20, 1972.

Department Organization Order 30-2B, dated June 12, 1972, is hereby amended as follows:

1. In section 4. *Staff Units Reporting to the Director*, new paragraphs .03 and .04 are added to read:

.03 The "Office of Public Affairs" shall serve as the public information office of the Bureau, acting as the official point of contact and coordinating office for all activities relating to the general and trade press and other media, and providing direction for the activities of the Bureau that relate to public affairs such as press releases, brochures and other written materials, radio and television materials, photography, exhibits, tours, and related activities.

.04 The "Office of Engineering and Information Processing Standards" shall implement Bureau and departmental policy concerning voluntary standardization activities; serve as the focal point for the Bureau's participation in voluntary standards programs; serve as the liaison office with private, national, and international standards organizations; and provide staff guidance and direction to Bureau management on matters relating to voluntary standardization.

2. A new section 6 is added to read as follows:

Sec. 6. *Office of Experimental Technology Incentives Program*. The Office of Experimental Technology Incentives Program shall investigate the effectiveness of various incentives and mechanisms to stimulate increased development and use of technology by industry. These investigations shall be designed to provide an experimental basis for the formulation of Government policy in this area.

3. Old sections 6 through 12 are renumbered 7 through 13, respectively.

4. The title of section 9, and paragraphs .01, .02, and .03 of the section, are revised to read:

Sec. 9. *Institute for Computer Sciences and Technology*.

.01 The "Institute for Computer Sciences and Technology" shall conduct research and provide technical services designed to aid Government agencies in improving cost effectiveness in the conduct of their programs through the selection, acquisition, and effective utilization of automatic data processing equipment (Public Law 89-306); and serve as the principal focus within the executive branch for the development of Federal standards for automatic data processing

equipment, techniques, and computer languages.

.02 The "Director" shall direct the development, execution, and evaluation of the programs of the Institute.

.03 The functions of the organizational units of the Institute are as follows:

5. In section 12. *Institute for Applied Technology*, paragraph .03 is revised to read:

.03 The "Engineering and Product Standards Division" shall provide guidance to the engineering and product standards programs conducted in the Institute for Applied Technology, serve as the NBS point of contact on matters pertaining to the metric system of measurement, provide a library and reference service on engineering and product standards, and conduct the Department of Commerce Voluntary Product Standards Program.

6. The organization chart of June 12, 1972, is superseded by the organization chart attached to this amendment. A copy of the organization chart is on file with the original of this document in the Office of the Federal Register.

Effective date: November 2, 1972.

GUY W. CHAMBERLIN, Jr.,  
Acting Assistant Secretary  
for Administration.

[FR Doc.72-19580 Filed 11-14-72; 8:47 am]

[Dept. Organization Order 25-5B, Amdt. 4]

## NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

### Organizations and Functions

This order effective November 1, 1972, further amends the material appearing at 37 F.R. 6411 of March 19, 1972, 37 F.R. 14421 of July 20, 1972, 37 F.R. 19390 of September 20, 1972, and 37 F.R. 21863 of October 14, 1972.

Department Organization Order 25-5B, effective March 10, 1972, is hereby further amended as follows:

Section 8 is amended to read:

Sec. 8. *Office of Sea Grant*. The Office of Sea Grant shall provide grant support, primarily to institutions, for research, education, and advisory services aimed at assisting those who are interested in and responsible for the development, utilization, and management of the seas and the Great Lakes of the United States, including their resources; and shall manage NOAA's Marine Advisory Services to the user community.

Effective date: November 1, 1972.

GUY W. CHAMBERLIN, Jr.,  
Acting Assistant Secretary  
for Administration.

[FR Doc.72-19579 Filed 11-14-72; 8:47 am]



# DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

## Food and Drug Administration

[DESI 5743; Docket No. FDC-D-529; NDA 5-743]

### AYERST LABORATORIES

#### Sodium Fluoride, Ascorbic Acid, and Ergocalciferol Lozenge; Notice of Opportunity for Hearing on Proposal to Withdraw Approval of New Drug Application

In an announcement (DESI 5743) published in the FEDERAL REGISTER of July 26, 1972 (37 F.R. 14899), the Commissioner of Food and Drugs announced his conclusions pursuant to the evaluation of a report received from the National Academy of Sciences-National Research Council, Drug Efficacy Study Group on Enzifur Lozenges containing sodium fluoride, ascorbic acid, and ergocalciferol; previously marketed by Ayerst Laboratories, 685 Third Avenue, New York, NY 10017 (NDA 5-743).

The announcement stated that there is a lack of substantial evidence that this drug will have the effects it purports or is represented to have under the conditions of use prescribed, recommended, or suggested in the labeling and that each component of the combination drug contributes to the total effects claimed, and that the Commissioner intended to initiate proceedings to withdraw approval of the new drug application. Interested persons were invited to submit any pertinent data bearing on the proposal within 30 days following publication of the announcement. No data have been received, and Ayerst has informed the Administration that marketing of the drug was discontinued in 1971.

Therefore, notice is given to the holder(s) of the new drug application(s) and to any other interested person that the Commissioner proposes to issue an order under section 505(e) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355(e)) withdrawing approval of the listed new drug application(s) and all amendments and supplements thereto on the grounds that new information before him with respect to the drug(s), evaluated together with the evidence available to him at the time of approval of the application(s), shows there is a lack of substantial evidence that the drug(s) will have all the effects purported or represented to have under the conditions of use prescribed, recommended, or suggested in the labeling.

All identical, related, or similar products, not the subject of an approved new drug application, are covered by the new drug application(s) reviewed. See 21 CFR 130.40 (37 F.R. 23185, October 31, 1972). Any manufacturer or distributor of such an identical, related, or similar product is an interested person who may in response to this notice submit data and information, request that the new drug application(s) not be withdrawn, request a hearing, and participate as a

party in any hearing. Any person who wishes to determine whether a specific product is covered by this notice should write to the Food and Drug Administration, Bureau of Drugs, Office of Compliance (BD-300), 5600 Fishers Lane, Rockville, MD 20852.

In accordance with the provisions of section 505 of the Act (21 U.S.C. 355) and the regulations promulgated thereunder (21 CFR Part 130), the Commissioner hereby gives the applicant(s) and any other interested person an opportunity for a hearing to show why approval of the new drug application(s) should not be withdrawn.

Within 30 days after publication hereof in the FEDERAL REGISTER the applicant(s) and any other interested person is required to file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 6-88, 5600 Fishers Lane, Rockville, Md. 20852, a written appearance electing whether or not to avail himself of the opportunity for a hearing. Failure of an applicant or any other interested person to file a written appearance of election within said 30 days will constitute an election by him not to avail himself of the opportunity for a hearing.

If no person elects to avail himself of the opportunity for a hearing, the Commissioner without further notice will enter a final order withdrawing approval of the application(s).

If an applicant or any other interested person elects to avail himself of the opportunity for a hearing, he must file, within 30 days after publication of this notice in the FEDERAL REGISTER, a written appearance requesting the hearing, giving the reasons why approval of the new drug application(s) should not be withdrawn, together with a well-organized and full-factual analysis of the clinical and other investigational data he is prepared to prove in support of his opposition. A request for a hearing may not rest upon mere allegations or denials, but must set forth specific facts showing that a genuine and substantial issue of fact requires a hearing (21 CFR 130.14(b)).

If review of the data submitted by an applicant or any other interested person warrants the conclusion that there exists substantial evidence demonstrating the effectiveness of the product(s) for the labeling claims involved, the Commissioner will rescind this notice of opportunity for hearing.

If review of the data in the application(s) and data submitted by the applicant(s) or any other interested person in a request for a hearing, together with the reasoning and factual analysis in a request for a hearing, warrants the conclusion that no genuine and substantial issue of fact precludes the withdrawal of approval of the application(s), the Commissioner will enter an order of withdrawal making findings and conclusions on such data.

If, upon the request of the new drug applicant(s) or any other interested person, a hearing is justified, the issues will be defined, a hearing examiner will be named, and he shall issue, as soon as practicable after the expiration of such

30 days, a written notice of the time and place at which the hearing will commence. All persons interested in identical, related, or similar products covered by the new drug application(s) will be afforded an opportunity to appear at the hearing, file briefs, present evidence, cross-examine witnesses, submit suggested findings of fact, and otherwise participate as a party. The hearing contemplated by this notice will be open to the public except that any portion of the hearing that concerns a method or process the Commissioner finds entitled to protection as a trade secret will not be open to the public, unless the respondent specifies otherwise in his appearance.

Requests for a hearing and/or elections not to request a hearing may be seen in the Office of the Hearing Clerk (address given above) during regular business hours, Monday through Friday.

This notice is issued pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 505, 52 Stat. 1052-53, as amended; 21 U.S.C. 355), and the Administrative Procedure Act (5 U.S.C. 554), and under authority delegated to the Commissioner (21 CFR 2.120).

Dated: November 7, 1972.

SAM D. FINE,  
Associate Commissioner  
for Compliance.

[FR Doc.72-19566 Filed 11-14-72; 8:46 am]

[DESI 6261; Docket No. FDC-D-524;  
NDA 6-257]

### G. D. SEARLE AND CO.

#### Combination Containing Diphenhydramine, Aminophylline, and Racedrine Hydrochloride for Oral Use; Notice of Opportunity for Hearing on Proposal to Withdraw Approval of New Drug Application

In an announcement (DESI 6261) published in the FEDERAL REGISTER of July 27, 1972 (37 F.R. 15031), the Commissioner of Food and Drugs announced his conclusions pursuant to the evaluation of a report received from the National Academy of Sciences-National Research Council, Drug Efficacy Study Group on that part of NDA 6-257 pertaining to Hvdrrllin with Racedrine Tablets containing diphenhydramine, aminophylline, and racedrine hydrochloride; G. D. Searle and Co., Post Office Box 5110, Chicago, Ill. 60680.

The announcement stated that there is a lack of substantial evidence that this fixed combination drug will have the effect that it purports or is represented to have under the conditions of use prescribed, recommended, or suggested in the labeling and that each component of such drug contributes to the total effects claimed and that the Commissioner of Food and Drugs intended to initiate proceedings to withdraw approval of that part of the new drug application providing for that drug. Interested persons were invited to submit pertinent data bearing on the proposal within 30 days following publication of the announcement. No



data providing substantial evidence of effectiveness have been received.

Therefore, notice is given to the holder(s) of the new-drug application(s) and to any other interested person that the Commissioner proposes to issue an order under section 505(e) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355 (e)) withdrawing approval of the application of part(s) of the listed new-drug application(s) and all amendments and supplements thereto on the grounds that new information before him with respect to the drug(s), evaluated together with the evidence available to him at the time of approval of the application(s), shows there is a lack of substantial evidence that the drug(s) will have all the effects purported or represented to have under the conditions of use prescribed, recommended, or suggested in the labeling.

All identical, related, or similar products, not the subject of an approved new-drug application, are covered by the new-drug application(s) reviewed. See 21 CFR 130.40 (37 F.R. 23185, October 31, 1972). Any manufacturer or distributor of such an identical, related, or similar product is an interested person who may in response to this notice submit data and information, request that the new-drug application(s) not be withdrawn, request a hearing, and participate as a party in any hearing. Any person who wishes to determine whether a specific product is covered by this notice should write to the Food and Drug Administration, Bureau of Drugs, Office of Compliance (BD-300), 600 Fishers Lane, Rockville, MD 20852.

In accordance with the provisions of section 505 of the Act (21 U.S.C. 355) and the regulations promulgated thereunder (21 CFR Part 130), the Commissioner hereby gives the applicant(s) and any other interested person an opportunity for a hearing to show why approval of said parts of the new-drug application(s) should not be withdrawn.

Within 30 days after publication hereof in the FEDERAL REGISTER the applicant(s) and any other interested person is required to file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 6-88, 5600 Fishers Lane, Rockville, MD 20852, a written appearance electing whether or not to avail himself of the opportunity for a hearing. Failure of an applicant or any other interested person to file a written appearance of election within said 30 days will constitute an election by him not to avail himself of the opportunity for a hearing.

If no person elects to avail himself of the opportunity for a hearing, the Commissioner without further notice will enter a final order withdrawing approval of said parts of the application(s).

If an applicant or any other interested person elects to avail himself of the opportunity for a hearing, he must file, within 30 days after publication of this notice in the FEDERAL REGISTER, a written appearance requesting the hearing, giving

the reasons why approval of the new-drug application(s) should not be withdrawn, together with a well-organized and full-factual analysis of the clinical and other investigational data he is prepared to prove in support of his opposition. A request for a hearing may not rest upon mere allegations or denials, but must set forth specific facts showing that a genuine and substantial issue of fact requires a hearing (21 CFR 130.14 (b)).

If review of the data submitted by an applicant or any other interested person warrants the conclusion that there exists substantial evidence demonstrating the effectiveness of the product(s) for the labeling claims involved, the Commissioner will rescind this notice of opportunity for hearing.

If review of the data in the application(s) and data submitted by the applicant(s) or any other interested person in a request for a hearing, together with the reasoning and factual analysis in a request for a hearing, warrants the conclusion that no genuine and substantial issue of fact precludes the withdrawal of approval of the application(s), the Commissioner will enter an order of withdrawal making findings and conclusions on such data.

If, upon the request of the new-drug applicant(s) or any other interested person, a hearing is justified, the issues will be defined, a hearing examiner will be named, and he shall issue, as soon as practicable after the expiration of such 30 days, a written notice of the time and place at which the hearing will commence. All persons interested in identical, related, or similar products covered by the new-drug application(s) will be afforded an opportunity to appear at the hearing, file briefs, present evidence, cross-examine witnesses, submit suggested findings of fact, and otherwise participate as a party. The hearing contemplated by this notice will be open to the public except that any portion of the hearing that concerns a method or process the Commissioner finds entitled to protection as a trade secret will not be open to the public, unless the respondent specifies otherwise in his appearance.

Requests for a hearing and/or elections not to request a hearing may be seen in the Office of the Hearing Clerk (address given above) during regular business hours, Monday through Friday.

This notice is issued pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 505, 52 Stat. 1052-53, as amended; 21 U.S.C. 355), and the Administrative Procedure Act (5 U.S.C. 554), and under authority delegated to the Commissioner (21 CFR 2.120).

Dated: November 7, 1972.

SAM D. FINE,  
Associate Commissioner  
for Compliance.

[FR Doc.72-19567 Filed 11-14-72; 8:46 am]

[DESI 10296; Docket No. FDC-D-523; NDA 10-296]

#### ELI LILLY AND CO.

#### Combination Drug Containing Diethylstilbestrol, Methyltestosterone and Reserpine for Oral Use; Notice of Opportunity for Hearing on Proposal To Withdraw Approval of New-Drug Application

In an announcement (DESI 10296) published in the FEDERAL REGISTER of July 27, 1972 (37 F.R. 15040), the Commissioner of Food and Drugs announced his conclusions pursuant to the evaluation of a report received from the National Academy of Sciences-National Research Council, Drug Efficacy Study Group, on the following drug:

Tylandril Tablets containing diethylstilbestrol, methyltestosterone and reserpine; Eli Lilly and Co., Post Office Box 618, Indianapolis, IN 46206 (NDA 10-296).

The announcement stated that there is a lack of substantial evidence that this fixed-combination drug will have the effect that it purports or is represented to have under the conditions of use prescribed, recommended, or suggested in the labeling, and that each ingredient of the drug contributes to the total effects claimed, and that the Commissioner of Food and Drugs intended to initiate proceedings to withdraw approval of the new-drug application. Interested persons were invited to submit pertinent data bearing on the proposal within 30 days following publication of the announcement. No data has been received.

Therefore, notice is given to the holder(s) of the new-drug application(s) and to any other interested person that the Commissioner proposes to issue an order under section 505(e) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355(e)) withdrawing approval of the listed new-drug application(s) and all amendments and supplements thereto on the grounds that new information before him with respect to the drug(s), evaluated together with the evidence available to him at the time of approval of the application(s), shows there is a lack of substantial evidence that the drug(s) will have all the effects purported or represented to have under the conditions of use prescribed, recommended, or suggested in the labeling.

All identical, related, or similar products, not the subject of an approved new-drug application, are covered by the new-drug application(s) reviewed. See 21 CFR 130.40 (37 F.R. 23185, October 31, 1972). Any manufacturer or distributor of such an identical, related, or similar product is an interested person who may in response to this notice submit data and information, request that the new-drug application(s) not be withdrawn, request a hearing, and participate as a party in any hearing. Any person who



wishes to determine whether a specific product is covered by this notice should write to the Food and Drug Administration, Bureau of Drugs, Office of Compliance (BD-300), 5600 Fishers Lane, Rockville, MD 20852.

In accordance with the provisions of section 505 of the Act (21 U.S.C. 355) and the regulations promulgated thereunder (21 CFR Part 130), the Commissioner hereby gives the applicant(s) and any other interested person an opportunity for a hearing to show why approval of the new-drug application(s) should not be withdrawn.

Within 30 days after publication hereof in the FEDERAL REGISTER the applicant(s) and any other interested person is required to file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 6-88, 5600 Fishers Lane, Rockville, MD 20852, a written appearance electing whether or not to avail himself of the opportunity for a hearing. Failure of an applicant or any other interested person to file a written appearance of election within said 30 days will constitute an election by him not to avail himself of the opportunity for a hearing.

If no person elects to avail himself of the opportunity for a hearing, the Commissioner without further notice will enter a final order withdrawing approval of the application(s).

If an applicant or any other interested person elects to avail himself of the opportunity for a hearing, he must file, within 30 days after publication of this notice in the FEDERAL REGISTER, a written appearance requesting the hearing, giving the reasons why approval of the new-drug application(s) should not be withdrawn, together with a well-organized and full-factual analysis of the clinical and other investigational data he is prepared to prove in support of his opposition. A request for a hearing may not rest upon mere allegations or denials, but must set forth specific facts showing that a genuine and substantial issue of fact requires a hearing (21 CFR 130.14 (b)).

If review of the data submitted by an applicant or any other interested person warrants the conclusion that there exists substantial evidence demonstrating the effectiveness of the product(s) for the labeling claims involved, the Commissioner will rescind this notice of opportunity for hearing.

If review of the data in the application(s) and data submitted by the applicant(s) or any other interested person in a request for a hearing, together with the reasoning and factual analysis in a request for a hearing, warrants the conclusion that no genuine and substantial issue of fact precludes the withdrawal of approval of the application(s), the Commissioner will enter an order of withdrawal making findings and conclusions on such data.

If, upon the request of the new-drug applicant(s) or any other interested person, a hearing is justified, the issues will be defined, a hearing examiner will be named, and he shall issue, as soon as practicable after the expiration of such 30 days, a written notice of the time and

place at which the hearing will commence. All persons interested in identical, related, or similar products covered by the new-drug application(s) will be afforded an opportunity to appear at the hearing, file briefs, present evidence, cross-examine witnesses, submit suggested findings of fact, and otherwise participate as a party. The hearing contemplated by this notice will be open to the public except that any portion of the hearing that concerns a method or process the Commissioner finds entitled to protection as a trade secret will not be open to the public, unless the respondent specifies otherwise in his appearance.

Requests for a hearing and/or elections not to request a hearing may be seen in the Office of the Hearing Clerk (address given above) during regular business hours, Monday through Friday.

This notice is issued pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 505, 52 Stat. 1052-53, as amended; 21 U.S.C. 355), and the Administrative Procedure Act (5 U.S.C. 554), and under authority delegated to the Commissioner (21 CFR 2.120).

Dated: November 7, 1972.

SAM D. FINE,  
Associate Commissioner  
for Compliance.

[FR Doc. 72-19571 Filed 11-14-72; 8:46 am]

[DESI 12056; Docket No. FDC-D-519; NDA 12-056, etc.]

#### LEDERLE LABORATORIES; ROCHE LABORATORIES

#### Certain Sulfanomides With Phenazopyridine; Notice of Opportunity for Hearing on a Proposal To Withdraw Approval of New Drug Applications

In the FEDERAL REGISTER of April 26, 1972 (37 F.R. 8405), the Commissioner of Food and Drugs announced his conclusions (DESI 12056) pursuant to evaluation of reports received from the National Academy of Sciences-National Research Council, Drug Efficacy Study Group, on the following drugs:

1. Azo Gantanol Tablets containing sulfamethoxazole and phenazopyridine hydrochloride; Roche Laboratories, Division of Hoffmann-La Roche, Inc., 340 Kingsland Avenue, Nutley, NJ 07110 (NDA 13-294).

2. Azo Kynex Tablets containing sulfamethoxypyridazine and phenazopyridine hydrochloride; formerly marketed by Lederle Laboratories, Division of American Cyanamid Co., West Middletown Road, Pearl River, NY 10965 (NDA 12-056).

The announcement stated that there is a lack of substantial evidence, within the meaning of the Federal Food, Drug, and Cosmetic Act, that these fixed combination drugs will have the effects that they purport or are represented to have under the conditions of use prescribed, recommended, or suggested in the labeling, including their recommended use in certain urinary tract infections asso-

ciated with pain or discomfort, and that each component of the combination contributes to the total effects claimed for the drugs. It further stated that the Commissioner intended to initiate proceedings to withdraw approval of the new drug applications. Interested persons were invited to submit pertinent data within 30 days.

Lederle Laboratories has advised the Administration that marketing of Azo Kynex has been discontinued. Substantial evidence showing the effectiveness of either of these drugs has not been received.

Therefore, notice is given to the holder(s) of the new drug application(s) and to any other interested person that the Commissioner proposes to issue an order under section 505(e) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355(e)) withdrawing approval of the listed new drug application(s) and all amendments and supplements thereto on the grounds that new information before him with respect to the drug(s), evaluated together with the evidence available to him at the time of approval of the application(s), shows there is a lack of substantial evidence that the drug(s) will have all the effects purported or represented to have under the conditions of use prescribed, recommended, or suggested in the labeling.

All identical, related, or similar products, not the subject of an approved new drug application, are covered by the new drug application(s) reviewed. See 21 CFR 130.40 (37 F.R. 23185, October 31, 1972). Any manufacturer or distributor of such an identical, related, or similar product is an interested person who may in response to this notice submit data and information, request that the new drug application(s) not be withdrawn, request a hearing, and participate as a party in any hearing. Any person who wishes to determine whether a specific product is covered by this notice should write to the Food and Drug Administration, Bureau of Drugs, Office of Compliance (BD-300), 5600 Fishers Lane, Rockville, MD 20852.

In accordance with the provisions of section 505 of the Act (21 U.S.C. 355) and the regulations promulgated thereunder (21 CFR Part 130), the Commissioner hereby gives the applicant(s) and any other interested person an opportunity for a hearing to show why approval of the new drug application(s) should not be withdrawn.

Within 30 days after publication hereof in the FEDERAL REGISTER the applicant(s) and any other interested person is required to file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 6-88, 5600 Fishers Lane, Rockville, MD 20852, a written appearance electing whether or not to avail himself of the opportunity for a hearing. Failure of an applicant or any other interested person to file a written appearance of election within said 30 days will constitute an election by him not to avail himself of the opportunity for a hearing.

If no person elects to avail himself of the opportunity for a hearing, the Commissioner without further notice will en-



ter a final order withdrawing approval of the application(s).

If an applicant or any other interested person elects to avail himself of the opportunity for a hearing, he must file, within 30 days after publication of this notice in the *FEDERAL REGISTER*, a written appearance requesting the hearing, giving the reasons why approval of the new drug application(s) should not be withdrawn, together with a well-organized and full-factual analysis of the clinical and other investigational data he is prepared to prove in support of his opposition. A request for a hearing may not rest upon mere allegations or denials, but must set forth specific facts showing that a genuine and substantial issue of fact requires a hearing (21 CFR 130.14 (b)).

If review of the data submitted by an applicant or any other interested person warrants the conclusion that there exists substantial evidence demonstrating the effectiveness of the product(s) for the labeling claims involved, the Commissioner will rescind this notice of opportunity for hearing.

If review of the data in the application(s) and data submitted by the applicant(s) or any other interested person in a request for a hearing, together with the reasoning and factual analysis in a request for a hearing, warrants the conclusion that no genuine and substantial issue of fact precludes the withdrawal of approval of the application(s), the Commissioner will enter an order of withdrawal making findings and conclusions on such data.

If, upon the request of the new drug applicant(s) or any other interested person, a hearing is justified, the issues will be defined, a hearing examiner will be named, and he shall issue, as soon as practicable after the expiration of such 30 days, a written notice of the time and place at which the hearing will commence. All persons interested in identical, related, or similar products covered by the new drug application(s) will be afforded an opportunity to appear at the hearing, file briefs, present evidence, cross-examine witnesses, submit suggested findings of fact, and otherwise participate as a party. The hearing contemplated by this notice will be open to the public except that any portion of the hearing that concerns a method or process the Commissioner finds entitled to protection as a trade secret will not be open to the public, unless the respondent specifies otherwise in his appearance.

Requests for a hearing and/or elections not to request a hearing may be seen in the Office of the Hearing Clerk (address given above) during regular business hours, Monday through Friday.

This notice is issued pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 505, 52 Stat. 1052-53, as amended; 21 U.S.C. 355), and the Administrative Procedure Act (5 U.S.C.

554), and under authority delegated to the Commissioner (21 CFR 2.120).

Dated: November 7, 1972.

SAM D. FINE,  
Associate Commissioner  
for Compliance.

[FR Doc.72-19573 Filed 11-14-72; 8:46 am]

[DESI 6363; Docket No. FDC-D-532;  
NDA 12-281 etc.]

# **METHOCARBAMOL WITH PHENACETIN, ASPIRIN, HYOSCYAMINE SULFATE AND PHENOBARBITAL; AND METHOCARBAMOL WITH ASPIRIN**

## **Notice of Opportunity for Hearing on Proposal to Withdraw Approval of New Drug Applications**

In an announcement (DESI 6363), published in the *FEDERAL REGISTER* of February 11, 1970 (35 F.R. 2836), the Commissioner of Food and Drugs announced his conclusions pursuant to the evaluation of reports received from the National Academy of Sciences-National Research Council, Drug Efficacy Study Group, on the following drugs:

1. Robaxial-PH Tablets; methocarbamol, phenacetin, aspirin, hyoscyamine sulfate and phenobarbital; A. H. Robins Co., 1407 Cummings Drive, Richmond, VA 23220 (NDA 12-399).

2. Robaxial Tablets; methocarbamol and aspirin; A. H. Robins (NDA 12-281).

The announcement stated that there is a lack of substantial evidence that these drugs are effective as fixed combinations for the uses recommended or suggested in their labeling and that each component of the combination drugs contributes to the total effects claimed, and that the Commissioner of Food and Drugs intended to initiate proceedings to withdraw approval of the new drug applications. Interested persons were invited to submit pertinent data bearing on the proposal within 30 days following publication of the announcement. Data submitted by A. H. Robins pursuant to the announcement have been reviewed and found not to provide substantial evidence of effectiveness of the drugs.

Therefore, notice is given to the holder(s) of the new drug application(s) and to any other interested person that the Commissioner proposes to issue an order under section 505(e) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355 (e)) withdrawing approval of the listed new drug application(s) and all amendments and supplements thereto on the grounds that new information before him with respect to the drug(s), evaluated together with the evidence available to him at the time of approval of the application(s), shows there is a lack of substantial evidence that the drug(s) will have all the effects purported or represented to have under the conditions of use prescribed, recommended, or suggested in the labeling.

All identical, related, or similar products, not the subject of an approved new drug application(s) reviewed. See 21 CFR 130.40 (37 F.R. 23185, October 31, 1972). Any manufacturer or distributor of such an identical, related, or similar product is an interested person who may in response to this notice submit data and information, request that the new drug application(s) not be withdrawn, request a hearing, and participate as a party in any hearing. Any person who wishes to determine whether a specific product is covered by this notice should write to the Food and Drug Administration, Bureau of Drugs, Office of Compliance (BD-300), 5600 Fishers Lane, Rockville, MD 20852.

In accordance with the provisions of section 505 of the Act (21 U.S.C. 355) and the regulations promulgated thereunder (21 CFR Part 130), the Commissioner hereby gives the applicant(s) and any other interested person an opportunity for a hearing to show why approval of the new drug application(s) should not be withdrawn.

Within 30 days after publication hereof in the *FEDERAL REGISTER* the applicant(s) and any other interested person is required to file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 6-88, 5600 Fishers Lane, Rockville, MD 20852, a written appearance electing whether or not to avail himself of the opportunity for a hearing. Failure of an applicant or any other interested person to file a written appearance of election within said 30 days will constitute an election by him not to avail himself of the opportunity for a hearing.

If no person elects to avail himself of the opportunity for a hearing, the Commissioner without further notice will enter a final order withdrawing approval of the application(s).

If an applicant or any other interested person elects to avail himself of the opportunity for a hearing, he must file, within 30 days after publication of this notice in the *FEDERAL REGISTER*, a written appearance requesting the hearing, giving the reasons why approval of the new drug application(s) should not be withdrawn, together with a well-organized and full-factual analysis of the clinical and other investigational data he is prepared to prove in support of his opposition. A request for a hearing may not rest upon mere allegations or denials, but must set forth specific facts showing that a genuine and substantial issue of fact requires a hearing (21 CFR 130.14(b)).

If review of the data submitted by an applicant or any other interested person warrants the conclusion that there exists substantial evidence demonstrating the effectiveness of the product(s) for the labeling claims involved, the Commissioner will rescind this notice of opportunity for hearing.

If review of the data in the application(s) and data submitted by the applicant(s) or any other interested person



son in a request for a hearing, together with the reasoning and factual analysis in a request for a hearing, warrants the conclusion that no genuine and substantial issue of fact precludes the withdrawal of approval of the application(s), the Commissioner will enter an order of withdrawal making findings and conclusions on such data.

If, upon the request of the new drug applicant(s) or any other interested person, a hearing is justified, the issues will be defined, a hearing examiner will be named, and he shall issue, as soon as practicable after the expiration of such 30 days, a written notice of the time and place at which the hearing will commence. All persons interested in identical, related, or similar products covered by the new drug application(s) will be afforded an opportunity to appear at the hearing, file briefs, present evidence, cross-examine witnesses, submit suggested findings of fact, and otherwise participate as a party. The hearing contemplated by this notice will be open to the public except that any portion of the hearing that concerns a method or process the Commissioner finds entitled to protection as a trade secret will not be open to the public, unless the respondent specifies otherwise in his appearance.

Requests for a hearing and/or elections not to request a hearing may be seen in the Office of the Hearing Clerk (address given above) during regular business hours, Monday through Friday.

This notice is issued pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 505, 52 Stat. 1052-53, as amended; 21 U.S.C. 355), and the Administrative Procedure Act (5 U.S.C. 554), and under authority delegated to the Commissioner (21 CFR 2.120).

Dated: November 7, 1972.

SAM D. FINE,  
Associate Commissioner  
for Compliance.

[FR Doc.72-19568 Filed 11-14-72; 8:46 am]

[DESI 10547; Docket No. FDC-D-525; NDA 10-547]

PHILIPS ROXANE LABORATORIES,  
INC.

**Combination Drug Containing Iso-  
proterenol Hydrochloride, Phenyl-  
propanolamine Hydrochloride, and  
Glyceryl Guaiacolate; Notice of  
Opportunity for Hearing on Pro-  
posal To Withdraw Approval of  
New Drug Application**

In an announcement (DESI 10547) published in the FEDERAL REGISTER of July 27, 1972 (37 F.R. 15040), the Commissioner of Food and Drugs announced his conclusions pursuant to the evaluation of a report received from the National Academy of Sciences-National Research Council, Drug Efficacy Study Group, on the following drug:

Bronkodyl Tablets containing iso-  
proterenol hydrochloride, phenylpro-

panolamine hydrochloride, and glyceryl guaiacolate; previously marketed by Philips Roxane Laboratories, Inc., 330 Oak Street, Columbus, Ohio 43216 (NDA 10-547).

The announcement stated that there is a lack of substantial evidence that this fixed combination drug will have the effect that it purports or is represented to have under the conditions of use prescribed, recommended, or suggested in the labeling, and that each component of the combination contributes to the total effects claimed, and that the Commissioner intended to initiate proceedings to withdraw approval of the new drug application. Interested persons were invited to submit pertinent data bearing on the proposal within 30 days following publication of the announcement. No data have been received pursuant to the announcement. The applicant informed the Food and Drug Administration that the manufacture of Bronkodyl Tablets has been discontinued.

Therefore, notice is given to the holder(s) of the new drug application(s) and to any other interested person that the Commissioner proposes to issue an order under section 505(e) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355(e)) withdrawing approval of the listed new drug application(s) and all amendments and supplements thereto on the grounds that new information before him with respect to the drug(s), evaluated together with the evidence available to him at the time of approval of the application(s), shows there is a lack of substantial evidence that the drug(s) will have all the effects purported or represented to have under the conditions of use prescribed, recommended, or suggested in the labeling.

All identical, related, or similar products, not the subject of an approved new drug application, are covered by the new drug application(s) reviewed. See 21 CFR 130.40 (37 F.R. 23185, October 31, 1972). Any manufacturer or distributor of such an identical, related, or similar product is an interested person who may in response to this notice submit data and information, request that the new drug application(s) not be withdrawn, request a hearing, and participate as a party in any hearing. Any person who wishes to determine whether a specific product is covered by this notice should write to the Food and Drug Administration, Bureau of Drugs, Office of Compliance (BD-300), 5600 Fishers Lane, Rockville, Md. 20852.

In accordance with the provisions of section 505 of the Act (21 U.S.C. 355) and the regulations promulgated thereunder (21 CFR Part 130), the Commissioner hereby gives the applicant(s) and any other interested person an opportunity for a hearing to show why approval of the new drug application(s) should not be withdrawn.

Within 30 days after publication hereof in the FEDERAL REGISTER the applicant(s) and any other interested person is required to file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 6-88, 5600 Fishers

Lane, Rockville, MD 20852, a written appearance electing whether or not to avail himself of the opportunity for a hearing. Failure of an applicant or any other interested person to file a written appearance of election within said 30 days will constitute an election by him not to avail himself of the opportunity for a hearing.

If no person elects to avail himself of the opportunity for a hearing, the Commissioner without further notice will enter a final order withdrawing approval of the application(s).

If an applicant or any other interested person elects to avail himself of the opportunity for a hearing, he must file, within 30 days after publication of this notice in the FEDERAL REGISTER, a written appearance requesting the hearing, giving the reasons why approval of the new drug application(s) should not be withdrawn, together with a well-organized and full-factual analysis of the clinical and other investigational data he is prepared to prove in support of his opposition. A request for a hearing may not rest upon mere allegations or denials, but must set forth specific facts showing that a genuine and substantial issue of fact requires a hearing (21 CFR 130.14(b)).

If review of the data submitted by an applicant or any other interested person warrants the conclusion that there exists substantial evidence demonstrating the effectiveness of the product(s) for the labeling claims involved, the Commissioner will rescind this notice of opportunity for hearing.

If review of the data in the application(s) and data submitted by the applicant(s) or any other interested person in a request for a hearing, together with the reasoning and factual analysis in a request for a hearing, warrants the conclusion that no genuine and substantial issue of fact precludes the withdrawal of approval of the application(s), the Commissioner will enter an order of withdrawal making findings and conclusions on such data.

If, upon the request of the new drug applicant(s) or any other interested person, a hearing is justified, the issues will be defined, a hearing examiner will be named, and he shall issue, as soon as practicable after the expiration of such 30 days, a written notice of the time and place at which the hearing will commence. All persons interested in identical, related, or similar products covered by the new drug application(s) will be afforded an opportunity to appear at the hearing, file briefs, present evidence, cross-examine witnesses, submit suggested findings of fact, and otherwise participate as a party. The hearing contemplated by this notice will be open to the public except that any portion of the hearing that concerns a method or process the Commissioner finds entitled to protection as a trade secret will not be open to the public, unless the respondent specifies otherwise in his appearance.

Requests for a hearing and/or elections not to request a hearing may be seen in the Office of the Hearing Clerk (address given above) during regular business hours, Monday through Friday.



This notice is issued pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 505, 52 Stat. 1052-53, as amended; 21 U.S.C. 355), and the Administrative Procedure Act (5 U.S.C. 554), and under authority delegated to the Commissioner (21 CFR 2.120).

Dated: November 7, 1972.

SAM D. FINE,  
Associate Commissioner  
for Compliance.

[FR Doc.72-19569 Filed 11-14-72;8:46 am]

[DESI 16; Docket No. FDC-D-521; NDA 16]

#### RIKER LABORATORIES, INC.

#### Combination Drug Containing Ephedrine Hydrochloride, Atropine Sulfate, and Pentobarbital for Oral Use; Notice of Opportunity for Hearing on Proposal To Withdraw Approval of New Drug Application

In an announcement (DESI 16) published in the FEDERAL REGISTER of June 23, 1972 (37 F.R. 12417), the Commissioner of Food and Drugs announced his conclusions pursuant to the evaluation of a report received from the National Academy of Sciences-National Research Council, Drug Efficacy Study Group, on Rinofeds Capsules, containing ephedrine hydrochloride, atropine sulfate and pentobarbital; Riker Laboratories, Inc., subsidiary of 3M Co., 19901 Nordhoff Street, Northridge, CA 91324 (NDA 16), and previously marketed by Broemmel Pharmaceuticals, 1235 Sutter Street, San Francisco, CA 94109.

The announcement stated that there is a lack of substantial evidence, within the meaning of the Federal Food, Drug, and Cosmetic Act, that this drug is effective as a fixed combination for its labeled claims relating to the treatment of respiratory conditions and that the Commissioner of Food and Drugs intended to initiate proceedings to withdraw approval of the new drug application. Interested persons were invited to submit any pertinent data bearing on the proposal within 30 days following publication of the announcement. No data have been received pursuant to the announcement.

Therefore, notice is given to the holder(s) of the new drug application(s) and to any other interested person that the Commissioner proposes to issue an order under section 505(e) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355(e)) withdrawing approval of the listed new drug application(s) and all amendments and supplements thereto on the grounds that new information before him with respect to the drug(s), available to him at the time of approval of the application(s), shows there is a evaluated, together with the evidence lack of substantial evidence that the drug(s) will have all the effects purported or represented to have under the conditions of use prescribed, recommended, or suggested in the labeling.

All identical, related, or similar products, not the subject of an approved new

drug application, are covered by the new drug application(s) reviewed. See 21 CFR 130.40 (37 F.R. 23185, October 31, 1972). Any manufacturer or distributor of such an identical, related, or similar product is an interested person who may in response to this notice submit data and information, request that the new drug application(s) not be withdrawn, request a hearing, and participate as a party in any hearing. Any person who wishes to determine whether a specific product is covered by his notice should write to the Food and Drug Administration, Bureau of Drugs, Office of Compliance (BD-300), 5600 Fishers Lane, Rockville, Md. 20852.

In accordance with the provisions of section 505 of the Act (21 U.S.C. 355) and the regulations promulgated thereunder (21 CFR Part 130), the Commissioner hereby gives the applicant(s) and any other interested person an opportunity for a hearing to show why approval of the new-drug application(s) should not be withdrawn.

Within 30 days after publication hereof in the FEDERAL REGISTER the applicant(s) and any other interested person is required to file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 6-88, 5600 Fishers Lane, Rockville, MD 20852, a written appearance electing whether or not to avail himself of the opportunity for a hearing. Failure of an applicant or any other interested person to file a written appearance of election within said 30 days will constitute an election by him not to avail himself of the opportunity for a hearing.

If no person elects to avail himself of the opportunity for a hearing, the Commissioner without further notice will enter a final order withdrawing approval of the application(s).

If an applicant or any other interested person elects to avail himself of the opportunity for a hearing, he must file, within 30 days after publication of this notice in the FEDERAL REGISTER, a written appearance requesting the hearing, giving the reasons why approval of the new-drug application(s) should not be withdrawn, together with a well-organized and full-factual analysis of the clinical and other investigational data he is prepared to prove in support of his opposition. A request for a hearing may not rest upon mere allegations or denials, but must set forth specific facts showing that a genuine and substantial issue of fact requires a hearing (21 CFR 130.14(b)).

If review of the data submitted by an applicant or any other interested person warrants the conclusion that there exists substantial evidence demonstrating the effectiveness of the product(s) for the labeling claims involved, the Commissioner will rescind this notice of opportunity for hearing.

If review of the data in the application(s) and data submitted by the applicant(s) or any other interested person in a request for a hearing, together with the reasoning and factual analysis in a request for a hearing, warrants the conclusion that no genuine and substantial issue of fact precludes the withdrawal of approval of the application(s), the Commis-

sioner will enter an order of withdrawal making findings and conclusions on such data.

If, upon the request of the new drug applicant(s) or any other interested person, a hearing is justified, the issues will be defined, a hearing examiner will be named, and he shall issue, as soon as practicable after the expiration of such 30 days, a written notice of the time and place at which the hearing will commence. All persons interested in identical, related, or similar products covered by the new drug application(s) will be afforded an opportunity to appear at the hearing, file briefs, present evidence, cross-examine witnesses, submit suggested findings of fact, and otherwise participate as a party. The hearing contemplated by this notice will be open to the public except that any portion of the hearing that concerns a method or process the Commissioner finds entitled to protection as a trade secret will not be open to the public, unless the respondent specifies otherwise in his appearance.

Requests for a hearing and/or elections not to request a hearing may be seen in the Office of the Hearing Clerk (address given above) during regular business hours, Monday through Friday.

This notice is issued pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 505, 52 Stat. 1052-53, as amended; 21 U.S.C. 355), and the Administrative Procedure Act (5 U.S.C. 554), and under authority delegated to the Commissioner (21 CFR 2.120).

Dated: November 7, 1972.

SAM D. FINE,  
Associate Commissioner for Compliance.  
[FR Doc.72-19565 Filed 11-14-72;8:46 am]

[DESI 10911; Docket No. FDC-D-530;  
NDA 10-911]

#### STUART CO.

#### Bucizine Hydrochloride with Pyridoxine Hydrochloride, Scopolamine Hydrobromide, Atropine Sulfate, and Hyoscyamine Sulfate; Notice of Opportunity for Hearing on Proposal To Withdraw Approval of New-Drug Application

In an announcement (DESI 10911) published in the FEDERAL REGISTER of July 28, 1972 (37 F.R. 15186), the Commissioner of Food and Drugs announced his conclusions pursuant to the evaluation of a report received from the National Academy of Sciences-National Research Council, Drug Efficacy Study Group, on the following drug:

Bucadin Tablets, containing buclizine hydrochloride, pyridoxine hydrochloride, scopolamine hydrobromide, atropine sulfate, and hyoscyamine sulfate; The Stuart Co., Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899 (NDA 10-911).

The announcement stated that there is a lack of substantial evidence that this fixed combination drug has the effects that it purports or is represented to have under the conditions of use prescribed.



recommended, or suggested in the labeling and that each ingredient contributes to the total effects claimed, and that the Commissioner of Food and Drugs intended to initiate proceedings to withdraw approval of the new-drug application. Interested persons were invited to submit pertinent data bearing on the proposal within 30 days following publication of the announcement. No data providing substantial evidence of effectiveness were submitted pursuant to the announcement.

Therefore, notice is given to the holder(s) of the new-drug application(s) and to any other interested person that the Commissioner proposes to issue an order under section 505(e) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355(e)) withdrawing approval of the listed new-drug application(s) and all amendments and supplements thereto on the grounds that new information before him with respect to the drug(s), evaluated together with the evidence available to him at the time of approval of the application(s), shows there is a lack of substantial evidence that the drug(s) will have all the effects purported or represented to have under the conditions of use prescribed, recommended, or suggested in the labeling.

All identical, related, or similar products, not the subject of an approved new-drug application, are covered by the new-drug application(s) reviewed. See 21 CFR 130.40 (37 F.R. 23185, October 31, 1972). Any manufacturer or distributor of such an identical, related, or similar product is an interested person who may in response to this notice submit data and information, request that the new-drug application(s) not be withdrawn, request a hearing, and participate as a party in any hearing. Any person who wishes to determine whether a specific product is covered by this notice should write to the Food and Drug Administration, Bureau of Drugs, Office of Compliance (BD-300), 5600 Fishers Lane, Rockville, Md. 20852.

In accordance with the provisions of section 505 of the Act (21 U.S.C. 355) and the regulations promulgated thereunder (21 CFR Part 130), the Commissioner hereby gives the applicant(s) and any other interested person an opportunity for a hearing to show why approval of the new-drug application(s) should not be withdrawn.

Within 30 days after publication hereof in the FEDERAL REGISTER the applicant(s) and any other interested person is required to file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 6-88, 5600 Fishers Lane, Rockville, MD 20852, a written appearance electing whether or not to avail himself of the opportunity for a hearing. Failure of an applicant or any other interested person to file a written appearance of election within said 30 days will constitute an election by him not to avail himself of the opportunity for a hearing.

If no person elects to avail himself of the opportunity for a hearing, the Commissioner without further notice will enter a final order withdrawing approval of the application(s).

If an applicant or any other interested person elects to avail himself of the opportunity for a hearing, he must file, within 30 days after publication of this notice in the FEDERAL REGISTER, a written appearance requesting the hearing, giving the reasons why approval of the new-drug application(s) should not be withdrawn, together with a well-organized and full-factual analysis of the clinical and other investigational data he is prepared to prove in support of his opposition. A request for a hearing may not rest upon mere allegations or denials, but must set forth specific facts showing that a genuine and substantial issue of fact requires a hearing (21 CFR 130.14 (b)).

If review of the data submitted by an applicant or any other interested person warrants the conclusion that there exists substantial evidence demonstrating the effectiveness of the product(s) for the labeling claims involved, the Commissioner will rescind this notice of opportunity for hearing.

If review of the data in the application(s) and data submitted by the applicant(s) or any other interested person in a request for a hearing, together with the reasoning and factual analysis in a request for a hearing, warrants the conclusion that no genuine and substantial issue of fact precludes the withdrawal of approval of the application(s), the Commissioner will enter an order of withdrawal making findings and conclusions on such data.

If, upon the request of the new-drug applicant(s) or any other interested person, a hearing is justified, the issues will be defined, a hearing examiner will be named, and he shall issue, as soon as practicable after the expiration of such 30 days, a written notice of the time and place at which the hearing will commence. All persons interested in identical, related, or similar products covered by the new-drug application(s) will be afforded an opportunity to appear at the hearing, file briefs, present evidence, cross-examine witnesses, submit suggested findings of fact, and otherwise participate as a party. The hearing contemplated by this notice will be open to the public except that any portion of the hearing that concerns a method or process the Commissioner finds entitled to protection as a trade secret will not be open to the public, unless the respondent specifies otherwise in his appearance.

Requests for a hearing and/or elections not to request a hearing may be seen in the office of the Hearing Clerk (address given above) during regular business hours, Monday through Friday.

This notice is issued pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 505, 52 Stat. 1052-53, as amended; 21 U.S.C. 355), and the Administrative Procedure Act (5 U.S.C. 554), and under authority delegated to the Commissioner (21 CFR 2.120).

Dated: November 7, 1972.

SAM D. FINE,  
Associate Commissioner  
for Compliance.

[FR Doc.72-19570 Filed 11-14-72; 8:46 am]

[DESI 11234; Docket No. FDC-D-527; NDA 11-234]

### WINTHROP LABORATORIES

#### Combination Drug Containing Quinacrine Hydrochloride, Chloroquine Phosphate, and Hydroxychloroquine Sulfate; Notice of Opportunity for Hearing on Proposal To Withdraw Approval of New Drug Application

In an announcement (DESI 11234) published in the FEDERAL REGISTER of July 26, 1972 (37 F.R. 14899), the Commissioner of Food and Drugs announced his conclusions pursuant to the evaluation of a report received from the National Academy of Sciences-National Research Council, Drug Efficacy Study Group, on the following drug:

Triquin tablets containing quinacrine hydrochloride, chloroquine phosphate, and hydroxychloroquine sulfate; formerly marketed by Winthrop Laboratories, 90 Park Avenue, New York, N.Y. 10016 (NDA 11-234).

The announcement stated that there is a lack of substantial evidence that this fixed combination drug will have the effect that it purports or is represented to have under the conditions of use prescribed, recommended, or suggested in the labeling and that each component of such drug contributes to the total effects claimed and that the Commissioner of Food and Drugs intended to initiate proceedings to withdraw approval of the new drug application. Interested persons were invited to submit any pertinent data bearing on the proposal within 30 days following publication of the announcement. No data have been received pursuant to the announcement.

Therefore, notice is given to the holder(s) of the new drug application(s) and to any other interested person that the Commissioner proposes to issue an order under section 505(e) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355(e)) withdrawing approval of the listed new drug application(s) and all amendments and supplements thereto on the grounds that new information before him with respect to the drug(s), evaluated together with the evidence available to him at the time of approval of the application(s), shows there is a lack of substantial evidence that the drug(s) will have all the effects purported or represented to have under the conditions of use prescribed, recommended, or suggested in the labeling.

All identical, related, or similar products, not the subject of an approved new drug application, are covered by the new drug application(s) reviewed. See 21 CFR 130.40 (37 F.R. 23185, October 31, 1972). Any manufacturer or distributor of such an identical, related, or similar product is an interested person who may in response to this notice submit data and information, request that the new drug application(s) not be withdrawn, request a hearing, and participate as a party in any hearing. Any person who wishes to determine whether a specific product is covered by this notice should write to the Food and Drug Administration,



tion, Bureau of Drugs, Office of Compliance (BD-300), 5600 Fishers Lane, Rockville, Md. 20852.

In accordance with the provisions of section 505 of the Act (21 U.S.C. 355) and the regulations promulgated thereunder (21 CFR Part 130), the Commissioner hereby gives the applicant(s) and any other interested person an opportunity for a hearing to show why approval of the new drug application(s) should not be withdrawn.

Within 30 days after publication hereof in the FEDERAL REGISTER the applicant(s) and any other interested person is required to file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 6-88, 5600 Fishers Lane, Rockville, Md. 20852, a written appearance electing whether or not to avail himself of the opportunity for a hearing. Failure of an applicant or any other interested person to file a written appearance of election within said 30 days will constitute an election by him not to avail himself of the opportunity for a hearing.

If no person elects to avail himself of the opportunity for a hearing, the Commissioner without further notice will enter a final order withdrawing approval of the application(s).

If an applicant or any other interested person elects to avail himself of the opportunity for a hearing, he must file, within 30 days after publication of this notice in the FEDERAL REGISTER, a written appearance requesting the hearing, giving the reasons why approval of the new drug application(s) should not be withdrawn, together with a well-organized and full-factual analysis of the clinical and other investigational data he is prepared to prove in support of his opposition. A request for a hearing may not rest upon mere allegations or denials, but must set forth specific facts showing that a genuine and substantial issue of fact requires a hearing (21 CFR 130.14 (b)).

If review of the data submitted by an applicant or any other interested person warrants the conclusion that there exists substantial evidence demonstrating the effectiveness of the product(s) for the labeling claims involved, the Commissioner will rescind this notice of opportunity for hearing.

If review of the data in the application(s) and data submitted by the applicant(s) or any other interested person in a request for a hearing, together with the reasoning and factual analysis in a request for a hearing, warrants the conclusion that no genuine and substantial issue of fact precludes the withdrawal of approval of the application(s), the Commissioner will enter an order of withdrawal making findings and conclusions on such data.

If, upon the request of the new drug applicant(s) or any other interested person, a hearing is justified, the issues will be defined, a hearing examiner will be named, and he shall issue, as soon as practicable after the expiration of such 30 days, a written notice of the time and

place at which the hearing will commence. All persons interested in identical, related, or similar products covered by the new drug application(s) will be afforded an opportunity to appear at the hearing, file briefs, present evidence, cross-examine witnesses, submit suggested findings of fact, and otherwise participate as a party. The hearing contemplated by this notice will be open to the public except that any portion of the hearing that concerns a method or process the Commissioner finds entitled to protection as a trade secret will not be open to the public, unless the respondent specifies otherwise in his appearance.

Requests for a hearing and/or elections not to request a hearing may be seen in the Office of the Hearing Clerk (address given above) during regular business hours, Monday through Friday.

This notice is issued pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 505, 52 Stat. 1052-53, as amended; 21 U.S.C. 355), and the Administrative Procedure Act (5 U.S.C. 554), and under authority delegated to the Commissioner (21 CFR 2.120).

Dated: November 7, 1972.

SAM D. FINE,  
Associate Commissioner  
for Compliance.

[FR Doc.72-19572 Filed 11-14-72;8:46 am]

#### Office of Education

### ADVISORY COMMITTEE ON ACCREDITATION AND INSTITUTIONAL ELIGIBILITY

#### Notice of Public Meeting

Notice is hereby given, pursuant to Executive Order 11671, that the next meeting of the Advisory Committee on Accreditation and Institutional Eligibility will be held on December 13, 1972, at 9 a.m., local time, in Room 129, the Brookings Institution, 1775 Massachusetts Avenue NW., Washington, DC.

The Advisory Committee on Accreditation and Institutional Eligibility is established pursuant to section 253 of the Veterans' Readjustment Assistance Act (Chapter 33, Title 38 United States Code). The Committee is established to advise the Commissioner of Education in fulfilling his statutory obligations to publish a list of nationally recognized accrediting agencies and associations which he determines to be reliable authority as to the quality of training offered by educational institutions and programs.

The meeting of the Committee shall be open to the public on Wednesday, December 13, 1972. The proposed agenda includes presentations by representatives of accrediting agencies and associations which have petitions for recognition pending before the Committee and a review of the second draft of proposed changes in the Commissioner's Criteria for Recognition of Nationally Recognized Accrediting Agencies and Associations. Records shall be kept of all committee proceedings.

Signed at Washington, D.C., on November 2, 1972.

JOHN R. PROFFITT,  
Director, Accreditation and  
Institutional Eligibility Staff.

[FR Doc.72-19560 Filed 11-14-72;8:45 am]

#### Office of the Secretary

### ADVISORY COMMITTEE ON OLDER AMERICANS, HEALTH SUBCOMMITTEE

#### Notice of Public Meeting

The Advisory Committee on Older Americans was established by the Older Americans Act of 1965 for the purpose of advising the Secretary of Health, Education, and Welfare on matters bearing on his responsibilities under this Act and related activities of his Department.

The Health subcommittee of the committee will meet on November 16, 11 a.m. to 5 p.m., HEW North Building, Room 3627, 330 Independence Avenue, SW., Washington, DC. They will review the medical program for the aged of the Veterans' Administration, the implications of the Social Security Amendments of 1972 for health services for the elderly and identify future concern areas for the subcommittee. Meeting open to public observation.

CLEONICE TAVANI,  
Staff Director.

NOVEMBER 8, 1972.

[FR Doc.72-19689 Filed 11-14-72;8:53 am]

## DEPARTMENT OF TRANSPORTATION

### National Transportation Safety Board

[Docket No. SS-R-22]

### RAILWAY ACCIDENT AT CHICAGO, ILL.

#### Notice of Designation of Chairman of Board of Inquiry and Notice of Investigation Hearing

#### Correction

In F.R. Doc. 72-19497 appearing on page 24132 of the issue for Tuesday, November 14, 1972, the headings should appear as set forth above.

## ATOMIC ENERGY COMMISSION

[Dockets Nos. 50-342 and 50-343]

### CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

#### Notice of Withdrawal of Application for Utilization Facility Licenses

The Consolidated Edison Company of New York, Inc., 4 Irving Place, New York, NY 10003, by letter dated October 20, 1972, has withdrawn its application



for licenses to construct and operate the Verplanck Nuclear Facility, Units 1 and 2, a two-unit nuclear power station at its 130-acre site on the east side of the Hudson River in the town of Cortlandt, Westchester County, N.Y. The site is contiguous to the company's Indian Point site at Buchanan. A copy of the letter of withdrawal is available for inspection in the AEC's Public Document Room, 1717 H Street NW., Washington, DC. The Atomic Energy Commission approves the withdrawal of this application without prejudice.

Notice of receipt of the application was published in the *FEDERAL REGISTER* on July 7, 1971, 36 F.R. 12322.

Dated at Bethesda, Md., this 6th day of November 1972.

For the Atomic Energy Commission.

ROGER S. BOYD,  
Assistant Director for Boiling  
Water Reactors, Directorate  
of Licensing.

[FR Doc. 72-19557 Filed 11-14-72; 8:45 am]

[Dockets Nos. 50-315, 50-316]

## INDIANA AND MICHIGAN ELECTRIC CO. AND INDIANA AND MICHIGAN POWER CO.

### Notice and Order for Special Prehearing Conference

In the matter of Indiana and Michigan Electric Co. and Indiana and Michigan Power Co. (Donald C. Cook Nuclear Plant Units 1 and 2).

Take notice, that pursuant to the Atomic Energy Commission's "Notice of Hearing On A Facility Operating License," dated September 29, 1972, and in accordance with § 2.751a of said Commission's restructured rules of practice, a special prehearing conference will be held in the subject proceeding on December 7, 1972, at 10 a.m. local time, in Courtroom No. 4 (second floor), Hall of Justice, 333 Monroe Avenue NW., Grand Rapids, MI 49502.

The special prehearing conference will deal with the following matters:

1. The status of negotiations regarding identification and simplification of the issues;
2. The need for discovery, and the time required for such discovery;
3. Establishment of schedules for further action;
4. Procedures, including rules of evidence, to be followed at the actual evidentiary hearing; and
5. Such other matters as may aid in the orderly disposition of the instant proceeding.

It is so ordered.

Issued at Washington, D.C., this 10th day of November 1972.

ATOMIC SAFETY AND LICENSING BOARD,  
JEROME GARFINKEL,  
Chairman.

[FR Doc. 72-19578 Filed 11-14-72; 8:47 am]

## CIVIL AERONAUTICS BOARD

[Docket No. 23333; Order 72-11-25]

### INTERNATIONAL AIR TRANSPORT ASSOCIATION

#### Order Approving Agreement

Issued under delegated authority November 8, 1972.

An agreement has been filed with the Board pursuant to section 412(a) of the Federal Aviation Act of 1958 (the Act) and Part 261 of the Board's economic regulations between various air carriers, foreign air carriers and other carriers embodied in the resolutions of the Traffic Conferences of the International Air Transport Association (IATA). The agreement, which has been assigned the above-designated CAB agreement number, was adopted at a special meeting held October 3, 1972, in New York.

The agreement, for intended effectiveness January 1, 1973, would amend an

attachment to an existing resolution governing terminal charges on freight shipments in international carriage at airports within the continental United States, Alaska and Hawaii, by specifying those items on new U.S. Department of Commerce Form 7525-V Alternate (Shipper's Export Declaration) which may be completed by the carrier at no charge to the shipper. The agreement would also delete references to U.S. Customs Forms 5119 and 7501, pertaining to the assessment of charges for release of parts of multi-piece shipments and for partial delivery of a single shipment, in order to insure that these charges may be levied regardless of the particular U.S. Customs Form involved.

Pursuant to authority duly delegated by the Board in the Board's regulations, 14 CFR 385.14, it is not found that the following resolution, incorporated in Agreement CAB 23365, is adverse to the public interest or in violation of the Act:

Agreement CAB	IATA No.	Title	Application
23365	512b	Air Cargo Rates—Airport to Airport	1; 1/2; 1/2/3.

Accordingly, it is ordered, That: Agreement CAB 23365 be and hereby is approved.

Persons entitled to petition the Board for review of this order pursuant to the Board's regulations, 14 CFR 385.50, may file such petitions within 10 days after the date of service of this order.

This order shall be effective and become the action of the Civil Aeronautics Board upon expiration of the above period, unless within such period a petition for review thereof is filed or the Board gives notice that it will review this order on its own motion.

This order will be published in the *FEDERAL REGISTER*.

[SEAL] HARRY J. ZINK,  
Secretary.

[FR Doc. 72-19642 Filed 11-14-72; 8:53 am]

[Docket No. 24599; Order 72-11-26]

### TEXAS INTERNATIONAL AIRLINES, INC.

#### Order To Show Cause

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., on the 9th day of November 1972.

By application in Docket 24599, Texas International Airlines, Inc. (TXI), has requested amendment of its certificate of public convenience and necessity for Route 82 so as to delete Galveston, Tex., therefrom. Simultaneously, TXI filed for the issuance of a show-cause order.

No answers were filed in response to TXI.

Upon consideration of TXI's request and all the relevant facts, we have decided to issue an order to show cause, proposing to grant the requested deletion.

We tentatively find and conclude that the public convenience and necessity require the amendment of TXI's certificate for Route 82, so as to delete Galveston, Tex., therefrom. In support of our ultimate conclusion, we tentatively find and conclude as follows: TXI's Galveston operations have not been and are not likely to be economically sound. Despite intensive promotional efforts by TXI from June 1969 through March 1972 traffic sufficient to sustain economic service has failed to develop.<sup>1</sup> Thus, the passengers boarded by TXI per departure were 3.3 in 1969, 3.6 in 1970 and 4.6 in 1971. Fiscal year 1972 loads averaged less than five passengers per flight on the CV-600. In 1973 we estimate that continued service at Galveston would produce revenues of almost \$58,000, incur expenses of almost \$115,000, and would fall more than \$70,000 short (\$24.50 per forecast passenger) of meeting the carrier's full return and tax requirement. Moreover, elimination of Galveston, coupled with an upgrading in service in other markets, would permit the carrier to retain a portion of its Galveston revenues, gain increased revenues in other markets, and eliminate the costs incident to providing direct service at Galveston. We estimate that all such changes in the carrier's operation would result in a decrease in subsidy need of almost \$90,000.

<sup>1</sup> In the Trans Texas Airways "Use It or Lose It" investigation (Order E-20283, Dec. 19, 1963) it was decided that Galveston was to be temporarily retained as a subsidized point (Order E-22237, May 28, 1965) because it was anticipated that sufficient traffic would be generated by increasing economic activity in the Galveston area and by the shift of most commercial Houston air traffic from Hobby Airport to the then soon to be opened and more remote Intercontinental Airport. The expected traffic has failed to develop.



Galveston is suitably connected to the nearest air service center, Houston International, by convenient and reasonably priced alternate means of transportation. Highways which directly connect Galveston to Houston International provide speedy travel by automobile within a travel time of approximately 75 minutes. Hourly scheduled limousine service is available from Galveston to Houston International between 5 a.m. and 10:30 p.m. and from Houston International to Galveston between 7:30 a.m. and 1 a.m. The traveltime by limousine is 90 minutes. In addition, Galveston is connected to Houston International by an air taxi, Houston Metro, which provides eight round trips per weekday (O.A.G. Nov. 1, 1972).<sup>2</sup>

Interested persons will be given 20 days following service of this order to show cause why the tentative findings and conclusions set forth herein should not be made final. We expect such persons to support their objections, if any, with detailed answers, specifically setting forth the tentative findings and conclusions to which objection is taken. Such objections should be accompanied by arguments of fact or law and should be supported by legal precedent or detailed economic analysis. If any evidentiary hearing is requested, the objector should state in detail why such a hearing is considered necessary and what relevant and material facts he would expect to establish through such a hearing. General, vague, or unsupported objections will not be entertained.

Accordingly, it is ordered, That:

1. All interested persons are directed to show cause why the Board should not issue an order making final the tentative findings and conclusions stated herein, and amending Texas International Airlines, Inc.'s certificate of public convenience and necessity for route 82 so as to delete Galveston, Tex. therefrom;

2. Any interested persons having objections to the issuance of an order making final any of the proposed findings, conclusions, or certificate amendments set forth herein shall, within 20 days after service of a copy of this order, file with the Board and serve upon all persons listed in paragraph 5 a statement of objections together with a summary of testimony, statistical data, and other evidence expected to be relied upon to support the stated objections;<sup>3</sup>

3. If timely and properly supported objections are filed, full consideration will be accorded the matters and issues

<sup>2</sup> Houston Metro also provides service between Houston International and Clear Lake. Clear Lake is only 20 miles from Galveston. The TXI fare between Houston and Galveston is \$16. The estimated cost of a private auto trip is less than \$6. The limousine fare, one way, is \$7.50. Metro's fare is \$16 from Houston to Galveston and \$12 from Houston to Clear Lake.

<sup>3</sup> All motions and/or petitions for reconsideration shall be filed within the period allowed for filing objections and no further such motions, requests, or petitions for reconsideration of this order will be entertained.

raised by the objections before further action is taken by the Board;

4. In the event no objections are filed, all further procedural steps will be deemed to have been waived and the Board may proceed to enter an order in accordance with the tentative findings and conclusions set forth herein; and

5. A copy of this order shall be served upon Texas International Airlines, Inc., Houston Metro Airlines; mayor, city of Beaumont; mayor, city of Galveston; mayor, city of Houston; mayor, city of Port Arthur; and director, Texas Aeronautics Commission.

This order will be published in the FEDERAL REGISTER.

By the Civil Aeronautics Board.

[SEAL]

HARRY J. ZINK,  
Secretary.

[FR Doc.72-19643 Filed 11-14-72; 8:53 am]

## COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

### CERTAIN WOOL AND MAN-MADE FIBER TEXTILE PRODUCTS PRODUCED OR MANUFACTURED IN THE REPUBLIC OF CHINA

#### Entry or Withdrawal From Warehouse for Consumption

NOVEMBER 14, 1972.

On October 4, 1972, there was published in the FEDERAL REGISTER (37 F.R. 20883) a letter of September 29, 1972, from the Chairman, Committee for the Implementation of Textile Agreements, to the Commissioner of Customs implementing those provisions of the bilateral Wool and Man-Made Fiber Textile Agreement of December 30, 1971, between the Governments of the United States and the Republic of China which establish specific export limitations on wool and man-made fiber textile products in certain categories, produced or manufactured in the Republic of China, for the agreement year beginning October 1, 1972.

The bilateral Wool and Man-Made Fiber Textile Agreement also established group ceilings of: (1) 4,390,500 square yards equivalent for wool apparel in Categories 111-125; and (2) 414,000 square yards equivalent for wool fabrics and made-up and miscellaneous textiles in Categories 101-110 and 126-132, produced or manufactured in the Republic of China, for the agreement year beginning October 1, 1972. The U.S. Government has decided to control imports in these groups at the aforesaid levels for the remainder of the agreement year.

<sup>4</sup> By Order 72-9-39, Sept. 12, 1972, the Board proposed to approve an agreement between Texas International Airlines and Houston Metro Airlines which provided for performance of certain reservation and ground services by TXI for Metro's Houston-Galveston flights. On Sept. 22, 1972, TXI filed a letter indicating that the carriers had terminated the agreement.

Accordingly, there is published below a letter of November 14, 1972, from the Chairman of the Committee for the Implementation of Textile Agreements to the Commissioner of Customs, directing that the amounts of wool textile products in Categories 101-110, 111-125, and 126-132, produced or manufactured in the Republic of China, which may be entered or withdrawn from warehouse for consumption in the United States for the 12-month period beginning October 1, 1972, and extending through September 30, 1973, be limited to the designated levels.

STANLEY NEHMER,  
Chairman, Committee for the  
Implementation of Textile  
Agreements, and Deputy Assistant  
Secretary and Director,  
Bureau of Resources and  
Trade Assistance.

#### COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

COMMISSIONER OF CUSTOMS:  
Department of the Treasury,  
Washington, D.C. 20226.

NOVEMBER 14, 1972.

DEAR MR. COMMISSIONER: Under the provisions of the bilateral Wool and Man-Made Fiber Textile Agreement of December 30, 1971, between the Governments of the United States and the Republic of China and in accordance with the procedures of Executive Order 11651 of March 3, 1972, you are directed to prohibit, effective as soon as possible, and for the period extending through September 30, 1973, entry into the United States for consumption and withdrawal from warehouse for consumption of wool textile products produced or manufactured in the Republic of China and exported to the United States on or after October 1, 1972, in excess of the following group levels of restraint: Categories

12-month  
levels of  
restraint<sup>1</sup>

111/125—square yards equivalent. 4,390,500  
101/110 and 126/132—do— 414,000

Inasmuch as the group levels of restraint applicable to the above wool textile products, produced or manufactured in the Republic of China and exported to the United States during the agreement year beginning October 1, 1971, and extending through September 30, 1972, have been exhausted by previous entries, such goods entered on or after the effective date of this directive shall be subject to the levels contained in this letter.

Wool textile products which have been released from the custody of the Bureau of Customs under the provisions of 19 U.S.C. 1448(b) prior to the effective date of this directive shall not be denied entry under this directive.

A detailed description of the wool textile categories in terms of T.S.U.S.A. numbers and conversion factors was published in the FEDERAL REGISTER on April 29, 1972 (37 F.R. 8802).

In carrying out this directive, entry into the United States for consumption shall be construed to include entry for consumption into the Commonwealth of Puerto Rico.

The actions taken with respect to the Government of the Republic of China and with respect to imports of wool textile products from the Republic of China have been deter-

<sup>1</sup> These levels of restraint have not been adjusted to reflect any entries made on or after October 1, 1972.



mined by the Committee for the Implementation of Textile Agreements to involve foreign affairs functions of the United States. Therefore, the directions to the Commissioner of Customs, being necessary to the implementation of such actions, fall within the foreign affairs exception to the rule making provisions of 5 U.S.C. 553. This letter will be published in the FEDERAL REGISTER.

Sincerely,

STANLEY NEHMER,  
Chairman, Committee for the Implementation of Textile Agreements  
and Deputy Assistant Secretary  
and Director, Bureau of Resources  
and Trade Assistance.

[FR Doc.72-19795 Filed 11-14-72;10:44 am]

## ENVIRONMENTAL PROTECTION AGENCY

U.S. BORAX CORP.

### Establishment of Temporary Tolerances

U.S. Borax Corp., 412 Crescent Way, Anaheim, CA 92801, submitted a petition (PP 2G1279) requesting establishment of temporary tolerances for negligible residues of the herbicide  $N^2,N^3$ -diethyl-2,4-dinitro-6-trifluoromethyl-*m*-phenylenediamine in or on the raw agricultural commodities—bean vines, dried beans, peanuts, and peanut forage, hay, and hulls at 0.05 part per million.

It has been determined that temporary tolerances for negligible residues in or on bean vines, dried beans, peanuts, and peanut forage, hay, and hulls at 0.05 part per million are safe and will protect the public health.

They are therefore established as requested on condition that the herbicides be used in accordance with the temporary permits being issued concurrently by the Environmental Protection Agency and which provide for distribution under the U.S. Borax Corp. name.

These temporary tolerances expire November 9, 1973.

This action is being taken pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 408(j), 68 Stat. 516; 21 U.S.C. 346a(j)), the authority transferred to the Administrator of the Environmental Protection Agency (35 F.R. 15623), and the authority delegated by the Administrator to the Deputy Assistant Administrator for Pesticides Programs (36 F.R. 9038).

Dated: November 9, 1972.

EDWIN L. JOHNSON,  
Acting Deputy Assistant Administrator for Pesticides Programs.

[FR Doc.72-19600 Filed 11-14-72;8:49 am]

UPJOHN CO.

### Filing of Petition Regarding Pesticide Chemicals

Pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 408

(d) (1), 68 Stat. 512; 21 U.S.C. 346a(d) (1)), notice is given that a petition (PP 3F1322) has been filed by the Upjohn Co., Kalamazoo, Mich. 49001, proposing establishment of tolerances (40 CFR Part 180) for combined residues of the insecticide benzoyl chloride (2,4,6-trichlorophenyl)hydrazide and its metabolite benzoic acid (2,4,6-trichlorophenyl)hydrazide in or on the raw agricultural commodities citrus fruits at 1 part per million and liver of cattle, goats, and sheep at 0.05 part per million.

The analytical method proposed in the petition for determining residues of the insecticide and its metabolite is a gas chromatographic procedure using electron capture detection. The insecticide and its metabolite are first separated by column chromatography and the insecticide is converted to its diethylamine derivative before the gas chromatographic determination is made.

Dated: November 9, 1972.

EDWIN L. JOHNSON,  
Acting Deputy Assistant Administrator for Pesticides Programs.

[F.R. Doc.72-19601 Filed 11-14-72;8:49 am]

## FEDERAL POWER COMMISSION

### NATIONAL GAS SURVEY COORDINATING TASK FORCE

#### Notice of Meeting and Its Agenda

Agenda, meeting, coordinating task force, to be held in Conference Room 4008 of the Federal Power Commission, 441 G Street NW., Washington, DC, November 30, 1972—9:30 a.m.

Presiding: Mr. William J. McCabe, FPC Survey Coordinating Representative and Secretary.

1. Introductory Remarks—Mr. McCabe.

2. General Review—Mr. Richard C. Young, Task Force Director.

3. Report on Work Program of Supply-Technical Advisory Committee—Mr. William T. Slick, Jr., Deputy Vice Chairman, Supply-TAC.

4. Report on Work Program of Transmission-Technical Advisory Committee—Mr. Ferdinand Gagne, Deputy Vice Chairman, Transmission-TAC.

5. Report on Work Program of Distribution-Technical Advisory Committee—Mr. Ralbern H. Murray, Deputy Vice Chairman, Distribution-TAC.

6. Discussion of Assigned Work Program and Estimated Date for Completion—Mr. Young.

7. General Discussion Including Environmental and Ecological Aspects of the National Gas Survey Program—Mr. Thomas H. Jenkins, Director, National Gas Survey.

8. Adjournment—Mr. McCabe.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19616 Filed 11-14-72;8:50 am]

## NATIONAL POWER SURVEY EXECUTIVE ADVISORY COMMITTEE

### Order Designating Initial Membership and Chairmanship

AUGUST 11, 1972.

The Federal Power Commission hereby determines that the establishment of the National Power Survey Executive Advisory Committee is in the public interest, and necessary and appropriate for the purposes of the Federal Power Act, 16 U.S.C. 791(a) et seq., and the Commission establishes this Committee in accordance with the provisions of the Commission's order issued June 29, 1972, 37 F.R. 13380—Order Authorizing the Establishment of National Power Survey Advisory Committees and Prescribing Procedures and the provisions of this order.

1. *Purpose.* The Executive Advisory Committee shall constitute the principal policy advisory committee to the Commission and its Staff in the Commission's planning, conduct, and execution of the National Power Survey. In this policy advisory role, the Executive Advisory Committee will be called upon to offer suggestions to assist the Commission and staff in their activities in formulating planning assumptions and directing the work of the survey, including the work of other advisory committees; to assist in establishing priorities for work to be performed and in the coordination of all aspects of the survey; to assist in assembling and assimilating comprehensive, accurate, and reliable data required for the survey; and to assist in such other ways as it may from time to time be called upon by the Commission or its staff.

2. *Membership.* The chairman, secretary, and other members of the Executive Advisory Committee, as selected by the Chairman of the Commission, with the approval of the Commission, are designated in the appendix hereto.

3. *Selection of future committee members.* All future committee members, and persons designated to act as committee chairman, shall be selected and designated by the Chairman of the Commission with the approval of the Commission; provided, however, the Chairman of the Commission may select and designate persons to serve in the capacity of alternate secretary.

4. The following paragraphs of the aforementioned Commission order issued June 29, 1972, are hereby incorporated by reference:

3. Conduct of Meetings.
4. Minutes and Records.
5. Secretary of the Committee.
6. Location and Time of Meetings.
7. Advice and Recommendations Offered by the Committee.
8. Duration of the Committee.

The Secretary of the Commission shall cause prompt publication of this order to be made in the FEDERAL REGISTER.

By the Commission.

[SEAL]

MARY B. KIDD,  
Acting Secretary.



# NATIONAL POWER SURVEY EXECUTIVE ADVISORY COMMITTEE

Chairman: Shearon Harris, Chairman, Carolina Power & Light Co.  
Secretary: Robert B. Boyd, Deputy Chief, Bureau of Power, Federal Power Commission.

## Members

Mrs. Erma Angevine, Executive Director, Consumer Federation of America.  
Lt. Gen. F. J. Clarke, Chief of Engineers, Department of the Army.  
Michael Collins, General Manager, Municipal Light Department, Wakefield, Mass.; President, American Public Power Association.  
Donald C. Cook, President, American Electric Power Co., Inc.  
J. E. Corette, Chairman of the Board, The Montana Power Co.  
Edward E. David, Jr., Director, Office of Science and Technology.  
William E. Dean, Association of Illinois Electric Cooperatives.  
Bernard Falk, President, National Electrical Manufacturers Association.  
T. J. Galligan, Jr., President, Boston Edison Co.  
Sim Gideon, General Manager, Lower Colorado River Authority.  
R. F. Gilkeson, President, Philadelphia Electric Co.  
J. L. Grahl, General Manager, Basin Electric Power Cooperative.  
David A. Hamil, Administrator, Rural Electrification Administration.  
John D. Harper, Chairman, Aluminum Company of America.  
Edwin I. Hatch, President, Georgia Power Co.  
Durwood Hill, General Manager, Nebraska Public Power District.  
Jack K. Horton, Chairman of the Board, Southern California Edison Co.  
Mrs. Virginia H. Knauer, Director, Office of Consumer Affairs.  
George A. Lincoln, Director, Office of Emergency Preparedness.  
Clarence Linder, President, National Academy of Engineering.  
D. C. Lutken, President, Mississippi Power & Light Co.  
D. Bruce Mansfield, President, Ohio Edison Co.  
T. Justin Moore, Jr., President, Virginia Electric & Power Co.  
Rogers C. B. Morton, Secretary of the Interior.  
Charles McCoy, Chairman of the Board, E. I. du Pont de Nemours & Co.  
Marshall McDonald, President, Florida Power & Light Co.  
William B. McGuire, Chairman, National Electric Reliability Council.  
G. W. Nichols, President and Chief Executive Officer, New England Electric System.  
Dr. Ruth Patrick, Curator and Chairman, Department of Limnology, Academy of Natural Sciences, Philadelphia, Pa.  
Peter G. Peterson, Secretary of Commerce.  
Charles H. Pillard, President, International Brotherhood of Electrical Workers.  
John G. Quale, President, Wisconsin Electric Power Co.  
William P. Reilly, President, Arizona Public Service Co.  
Francis J. Riordan, New Hampshire Public Utilities Commission; President, National Association of Regulatory Utility Commissioners.  
P. H. Robinson, Chairman of the Board, Houston Lighting & Power Co.  
William D. Ruckelshaus, Administrator, Environmental Protection Agency.  
James R. Schlesinger, Chairman, Atomic Energy Commission.  
Raymond J. Sherwin, President, Sierra Club.  
Shermer L. Sibley, President, Pacific Gas &

Electric Co.  
M. Frederik Smith, Rockefeller Associate.  
H. Guyford Stever, Director, National Science Foundation.  
Louis Strong, General Manager, Kentucky Rural Electric Cooperative Corp.; President, National Rural Electric Cooperative Association.  
W. C. Tallman, President, Public Service Company of New Hampshire.  
Russell E. Train, Chairman, Council on Environmental Quality.  
Aubrey J. Wagner, Chairman, Tennessee Valley Authority.  
Colston E. Warne, President, Board of Directors, Consumers Union of the United States, Inc.  
Frank M. Warren, President, Portland General Electric Co.; Chairman, Edison Electric Institute.

[FR Doc.72-19576 Filed 11-14-72;8:47 am]

[Docket No. CI73-331]

## ATLAS CORP. ET AL.

### Notice of Application

NOVEMBER 10, 1972.

Take notice that on November 6, 1972, Atlas Corporation (Applicant), 707 National Bank of Tulsa Building, Tulsa, OK 74103, filed in Docket No. CI73-331 an application pursuant to section 7(c) of the Natural Gas Act for a certificate of public convenience and necessity authorizing the sale for resale and delivery of natural gas in interstate commerce to United Gas Pipe Line Co. from the Oakes Field, Claiborne Parish, La., all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Applicant proposes to sell up to 200 Mcf of natural gas per day at 35.0 cents per Mcf at 15.025 p.s.i.a. for 1 year within contemplation of § 2.70 of the Commission's general policy and interpretations (18 CFR 2.70).

It appears reasonable and consistent with the public interest in this case to prescribe a period less than 15 days for the filing of protests and petitions to intervene. Therefore, any person desiring to be heard or to make any protest with reference to said application should on or before November 21, 1972, file with the Federal Power Commission, Washington, D.C. 20426, a petition to intervene or a protest in accordance with the requirements of the Commission's rules of practice and procedure (18 CFR 1.8 or 1.10). All protests filed with the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party to a proceeding or to participate as a party in any hearing therein must file a petition to intervene in accordance with the Commission's rules.

Take further notice that, pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by sections 7 and 15 of the Natural Gas Act and the Commission's rules of practice and procedure, a hearing will be held without further notice before the Commission on this application if no petition to inter-

vene is filed within the time required herein, if the Commission on its own review of the matter finds that a grant of the certificate is required by the public convenience and necessity. If a petition for leave to intervene is timely filed, or if the Commission on its own motion believes that a formal hearing is required, further notice of such hearing will be duly given.

Under the procedure herein provided for, unless otherwise advised, it will be unnecessary for Applicant to appear or be represented at the hearing.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19574 Filed 11-14-72;8:47 am]

[Docket No. R-441]

## OPTIONAL PROCEDURE FOR CERTIFICATING NEW PRODUCER SALES OF NATURAL GAS

### Order Denying Petition to Reopen and Reconsider

NOVEMBER 9, 1972.

On October 10, 1972, Hamilton Treadway (Petitioner) filed in Docket No. R-441 a petition for rehearing and reconsideration of Commission Order No. 455, Optional Procedure for Certifying New Producer Sales of Natural Gas,<sup>1</sup> alleging that the Commission did not comply with certain provisions of the National Environmental Policy Act of 1969,<sup>2</sup> when it issued Order No. 455.

On October 21, 1972, the Commission submitted the record in Order No. 455 and Order No. 455-A to the United States Court of Appeals for the District of Columbia Circuit, in the matter of John E. Moss, et al. v. F.P.C., CADC, No. 72-1837. According to section 19(b) of the Natural Gas Act, the Court assumes exclusive jurisdiction in the matter once the record has been filed, and the Commission loses jurisdiction thereby. Accordingly, the Commission does not have jurisdiction at the present time in this matter and therefore must deny the petition herein. It is significant, however, to note that Petitioner raises no issues herein which were not fully considered in Order No. 455, as amended by Order No. 455-A.

In Order No. 455 the Commission stated at Paragraphs 79 and 80:

79. As we have noted above . . . natural gas is the cleanest burning, and insofar as is known today, the least polluting of all the fossil fuels. This, of course, is one of the reasons for its present enlarged demand and desirability as a fuel. Indeed, in some of our metropolitan areas, "clean-air" regulations and restrictions have made natural gas not only desirable, but almost a necessity for some commercial and industrial users. The Environmental Protection Agency (EPA) filed its response in this proceeding, stating that in its opinion the optional procedure we provide for herein will be a major step towards elimination of the gas shortage and

<sup>1</sup> Issued Aug. 3, 1972, 37 F.R. 16188 (8/11/72), as amended by Order No. 455-A issued Sept. 8, 1972, 37 F.R. 18721 (9/12/72).

<sup>2</sup> 83 Stat. 852.



the nation's air pollution problem through the addition of new gas reserves.

80. These rules herein adopted are inherently procedural, providing an optional method by which to obtain certification; accordingly, our rulemaking involves no direct impact on the environment (such as construction of facilities would) nor does it indirectly affect the environment through the setting of rates. Questions of environmental concern may be proper at the time of certification, but such questions are of no relevance to the establishment of procedural rules.

The Commission finds:

The Commission lacks jurisdiction for the reasons discussed above.

The Commission orders:

The petition to reopen and reconsider Order No. 455, as amended by Order No. 455-A, is hereby denied.

By the Commission.

[SEAL] KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19612 Filed 11-14-72;8:50 am]

[Docket No. CI73-293]

## BELCO PETROLEUM CORP.

### Notice of Application

NOVEMBER 10, 1972.

Take notice that on October 24, 1972, Belco Petroleum Corp., Agent (Applicant), 630 Third Street, New York, NY 10017, filed in Docket No. CI73-293 an application pursuant to section 7(c) of the Natural Gas Act and § 2.75 of the Commission's general policy and interpretations (18 CFR 2.75) for a certificate of public convenience and necessity authorizing the sale for resale and delivery of natural gas in interstate commerce to Tennessee Gas Pipeline Co., a Division of Tenneco Inc. (Tennessee), from the West Delta Block 64 Field, offshore Louisiana, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Applicant proposes under the optional gas pricing procedure to sell natural gas to Tennessee from the West Delta Block 64 Field until June 8, 1982, at an initial rate of 45 cents per Mcf subject to upward B.t.u. adjustment above 1,050 B.t.u.'s per cubic foot at 15.025 p.s.i.a. The subject contract with Tennessee dated June 8, 1972, provides for price escalations of 1.5 cents per Mcf annually.

Applicant asserts that at the 45 cents per Mcf initial price proposed herein, this proposed sale is more reliable and less costly than any of a number of alternative sources of pipeline gas supplies including the importation of foreign gas, liquefied natural gas, and feedstocks, domestic production of synthetic pipeline gas, domestic coal gasification proposals and Alaskan natural gas, which either have been certificated by the Commission, are now pending before the Commission or are under active consideration by pipeline companies. Applicant further asserts that the proposed sale is justified in light of the proposed increase in the price of natural gas for the Appalachian area to 50 cents per

Mcf and the prices being paid for natural gas in the intrastate market as evidenced by reports that certain companies have contracted to sell their gas at rates of 52 cents and 73 cents per Mcf in Oklahoma and Ohio, respectively.

Any person desiring to be heard or to make any protest with reference to said application should on or before November 29, 1972, file with the Federal Power Commission, Washington, D.C. 20426, a petition to intervene or a protest in accordance with the requirements of the Commission's rules of practice and procedure (18 CFR 1.8 or 1.10). All protests filed with the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party to a proceeding or to participate as a party in any hearing therein must file a petition to intervene in accordance with the Commission's rules.

Take further notice that, pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by sections 7 and 15 of the Natural Gas Act and the Commission's rules of practice and procedure, a hearing will be held without further notice before the Commission on this application if no petition to intervene is filed within the time required herein, if the Commission on its own review of the matter finds that a grant of the certificate is required by the public convenience and necessity. If a petition for leave to intervene is timely filed, or if the Commission on its own motion believes that a formal hearing is required, further notice of such hearing will be duly given.

Under the procedure herein provided for, unless otherwise advised, it will be unnecessary for Applicant to appear or be represented at the hearing.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19575 Filed 11-14-72;8:47 am]

[Docket No. CS72-792]

## ALBUQUERQUE NATIONAL BANK AND EXECUTOR OF THE ESTATE OF LEE W. KILGORE

### Notice of Redesignation

NOVEMBER 10, 1972.

By letter dated September 5, 1972, Albuquerque National Bank has advised the Commission that it has been appointed as executor of the estate of Lee W. Kilgore, deceased, in accordance with an order of the probate court for San Juan County, N. Mex., on July 20, 1972, and requests that the necessary action be taken to transfer the small producer certificate of public convenience and necessity issued to Lee W. Kilgore in Docket No. CS72-792 to Albuquerque National Bank.

Accordingly the small producer certificate of public convenience and necessity issued pursuant to section 7(c) of

the Natural Gas Act in Docket No. CS72-792 to Lee W. Kilgore is redesignated as that of Albuquerque National Bank, executor of the estate of Lee W. Kilgore, deceased.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19617 Filed 11-14-72;8:50 am]

[Docket No. CP73-121]

## ALGONQUIN GAS TRANSMISSION CO.

### Notice of Application

NOVEMBER 9, 1972.

Take notice that on November 3, 1972, Algonquin Gas Transmission Co. (Applicant), 1284 Soldiers Field Road, Boston, MA 02135, filed in Docket No. CP73-121 an application pursuant to section 7(c) of the Natural Gas Act for a certificate of public convenience and necessity authorizing the transportation and exchange of natural gas for the benefit of New Bedford Gas and Edison Light Co. (New Bedford), all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Applicant proposes, pursuant to a temporary exchange-transportation agreement dated October 24, 1972, to reduce its deliveries of natural gas to Commonwealth Gas Co. (Commonwealth) and to deliver to New Bedford through Applicant's existing facilities an amount of natural gas equivalent to the liquefied natural gas, which is to be delivered to Commonwealth by Hopkinton LNG Corp., for the account of New Bedford, all for the period beginning November 16, 1972, and ending April 15, 1973. Applicant asserts that unless it assists New Bedford, it will not be possible for New Bedford to be the beneficiary of such gas this winter.

Applicant proposes to charge New Bedford 10 cents for each Mcf of gas delivered.

It appears reasonable and consistent with the public interest in this case to prescribe a period shorter than 15 days for the filing of protests and petitions to intervene. Therefore, any person desiring to be heard or to make any protest with reference to said application should on or before November 21, 1972, file with the Federal Power Commission, Washington, D.C. 20426, a petition to intervene or a protest in accordance with the requirements of the Commission's rules of practice and procedure (18 CFR 1.8 or 1.10) and the Regulations under the Natural Gas Act (18 CFR 157.10). All protests filed with the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party to a proceeding or to participate as a party in any hearing therein must file a petition to intervene in accordance with the Commission's rules.

Take further notice that, pursuant to the authority contained in and subject



to the jurisdiction conferred upon the Federal Power Commission by sections 7 and 15 of the Natural Gas Act and the Commission's rules of practice and procedure, a hearing will be held without further notice before the Commission on this application if no petition to intervene is filed within the time required herein, if the Commission on its own review of the matter finds that a grant of the certificate is required by the public convenience and necessity. If a petition for leave to intervene is timely filed, or if the Commission on its own motion believes that a formal hearing is required, further notice of such hearing will be duly given.

Under the procedure herein provided for, unless otherwise advised, it will be unnecessary for Applicant to appear or be represented at the hearing.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19610 Filed 11-14-72;8:49 am]

[Docket No. CP73-116]

### ARKANSAS LOUISIANA GAS CO.

#### Notice of Application

NOVEMBER 9, 1972.

Take notice that on November 1, 1972, Arkansas Louisiana Gas Co. (Applicant), Post Office Box 1126, Shreveport, LA 71163, filed in Docket No. CP73-116 a budget-type application pursuant to section 7(c) of the Natural Gas Act, as implemented by § 157.7(b) of the Commission's Regulations thereunder, for a certificate of public convenience and necessity authorizing the construction, during the calendar year 1973, and operation of certain natural gas purchase facilities, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Applicant states that the purpose of this budget-type application is to augment its ability to act with reasonable dispatch in contracting for and connecting to its pipeline system supplies of natural gas in producing areas generally co-extensive with its system.

The total cost of the facilities proposed herein shall not exceed \$7 million with no single project to exceed \$1 million. Applicant plans to finance these costs from cash on hand, from cash generated from normal internal sources, and cash from short term bank loans and other short term borrowings utilized in the normal operation of the company's total business.

Any person desiring to be heard or to make any protest with reference to said application should on or before December 4, 1972, file with the Federal Power Commission, Washington, D.C. 20426, a petition to intervene or a protest in accordance with the requirements of the Commission's rules of practice and procedure (18 CFR 1.8 or 1.10) and the regulations under the Natural Gas Act (18 CFR 157.10). All protests filed with

the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party to a proceeding or to participate as a party in any hearing therein must file a petition to intervene in accordance with the Commission's Rules.

Take further notice that, pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by sections 7 and 15 of the Natural Gas Act and the Commission's Rules of Practice and Procedure, a hearing will be held without further notice before the Commission on this application if no petition to intervene is filed within the time required herein, if the Commission on its own review of the matter finds that a grant of the certificate is required by the public convenience and necessity. If a petition for leave to intervene is timely filed, or if the Commission on its own motion believes that a formal hearing is required, further notice of such hearing will be duly given.

Under the procedure herein provided for, unless otherwise advised, it will be unnecessary for Applicant to appear or be represented at the hearing.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19609 Filed 11-14-72;8:49 am]

[Project 1196]

### ESTES BROTHERS, INC.

#### Notice of Issuance of Annual License

NOVEMBER 10, 1972.

The licensees for minor Project No. 1196, located on an unnamed creek, which is a tributary of Upper Trail Lake, in Seward Recording District, Third Judicial Division, Alaska, and affecting lands of the United States are Robert R. Estes and Edward R. Estes, operating the project as Estes Brothers, Inc.

The license for Project No. 1196 was issued effective October 13, 1962, for a period ending October 12, 1972. In order to authorize the continued operation of the project pursuant to section 15 of the Federal Power Act, it is appropriate and in the public interest to issue an annual license to Estes Brothers, Inc. for the continued operation and maintenance of Project No. 1196.

Take notice that an annual license is issued to Estes Brothers, Inc. for the period October 13, 1972, to October 12, 1973, or until the issuance of a new license for the project, whichever comes first, for the continued operation and maintenance of Project No. 1196, subject to the terms and conditions of its present license.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19611 Filed 11-14-72;8:49 am]

[Docket No. RP71-87]

### MISSISSIPPI RIVER TRANSMISSION CORP.

#### Notice of Proposed Purchased Gas Adjustment Clause

NOVEMBER 10, 1972.

Take notice that Mississippi River Transmission Corp. (MRT) on October 26, 1972, tendered for filing as part of its FPC Gas Tariff, First Revised Volume No. 1, copies of the following tariff sheets:

Substitute First Revised Sheet No. 27A.  
Substitute First Revised Sheet No. 27B.  
Substitute First Revised Sheet No. 27C.  
Substitute First Revised Sheet No. 27D.  
First Revised Sheet No. 27E.  
First Revised Sheet No. 27F.  
First Revised Sheet No. 27G.  
First Revised Sheet No. 27H.  
First Revised Sheet No. 27I.

MRT states that the purpose of the filing is to conform MRT's PGA clause to the requirements of § 154.38(d)(4) of the Commission's regulations. MRT claims that the instant filing contains modifications to its effective PGA clause to provide for rate changes concurrent with pipeline supplier rate changes and to reflect the handling of supplier refunds in accordance with the provisions of § 154.38(d)(4).

Because the above listed tariff sheets contain a proposed effective date of August 10, 1972, MRT requests that the Commission waive the notice requirements of § 154.22 of its regulations and permit this filing to become effective as proposed.

On November 1, 1972, MRT filed Seventh Revised Sheet No. 3A to its FPC Gas Tariff, First Revised Volume No. 1 to reflect various rate changes applicable to MRT from its pipeline suppliers and to replace Substitute Fifth Revised Sheet No. 3A.

MRT therefore requests waiver of the requirements of the Commission's Regulations, particularly Section 154 thereof, in order that the Seventh Revised Sheet No. 3A of its FPC Gas Tariff, First Revised Volume No. 1 may become effective December 1, 1972, as proposed.

Any person desiring to be heard or to protest said application should file a petition to intervene or protest with the Federal Power Commission, 441 G Street NW., Washington, DC 20426, in accordance with sections 1.8 and 1.10 of the Commission's rules of practice and procedure (18 CFR 1.8, 1.10). All such petitions or protests should be filed on or before November 20, 1972. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any per-

<sup>1</sup> On Nov. 1, 1972, MRT filed copies of substitute Fifth Revised Sheet No. 3A to its FPC Gas Tariff, First Revised Volume No. 1, which MRT says it had inadvertently omitted from its Oct. 26, 1972, filing.



son wishing to become a party must file a petition to intervene. Copies of this application are on file with the Commission and are available for public inspection.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19605 Filed 11-14-72;8:49 am]

[Docket No. CI73-322]

## UNION TEXAS PETROLEUM

### Notice of Application

NOVEMBER 9, 1972.

Take notice that on October 31, 1972, Union Texas Petroleum, a Division of Allied Chemical Corp. (Applicant), 3000 Richmond Avenue, Houston, TX 77006, filed in Docket No. CI73-322 an application pursuant to section 7(c) of the Natural Gas Act for a certificate of public convenience and necessity authorizing the transportation of natural gas in interstate commerce through Applicant's existing Winnie processing plant supply system in Jefferson County, Tex., all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Applicant states that Natural Gas Pipeline Company of America (Natural) has entered into a contract with Mitchell Energy Offshore Corp., et al. (Mitchell), providing for the purchase of natural gas produced in the Block 176-S Prospect Area, offshore Texas, and that Natural will transport such gas onshore and deliver it to Applicant in Galveston County, Tex. Applicant proposes to transport the gas to its Winnie plant for processing, compression, and redelivery to Texas Gas Pipe Line Corp. for the account of Natural. Applicant will process the gas for Mitchell but will not purchase any gas. Applicant proposes to charge 3.5 cents per Mcf at 14.65 p.s.i.a. for transportation and 2.5 per Mcf at 14.65 p.s.i.a. for compression. Estimated monthly volumes to be transported are 450,000 Mcf of gas.

Any person desiring to be heard or to make any protest with reference to said application should on or before December 1, 1972, file with the Federal Power Commission, Washington, D.C. 20426, a petition to intervene or a protest in accordance with the requirements of the Commission's rules of practice and procedure (18 CFR 1.8 or 1.10). All protests filed with the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party to a proceeding or to participate as a party in any hearing therein must file a petition to intervene in accordance with the Commission's Rules.

Take further notice that, pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by sections 7 and 15 of the Natural Gas Act and the Commission's rules of practice and procedure, a hearing will be held without fur-

ther notice before the Commission on this application if no petition to intervene is filed within the time required herein, if the Commission on its own review of the matter finds that a grant of the certificate is required by the public convenience and necessity. If a petition for leave to intervene is timely filed, or if the Commission on its own motion believes that a formal hearing is required, further notice of such hearing will be duly given.

Under the procedure herein provided for, unless otherwise advised, it will be unnecessary for Applicant to appear or be represented at the hearing.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19613 Filed 11-14-72;8:50 am]

[Docket No. CP 73-123, etc.]

## UNITED GAS PIPE LINE CO. ET AL.

### Notice of Petition for Declaratory Order, and for Order Directing Compliance, and of Motion for Consolidation of Proceedings

NOVEMBER 8, 1972.

United Gas Pipe Line Company v. Humble Oil & Refining Company and Isaac Arnold et al., Docket No. CP73-123; Texas Gas Exploration Corporation, et al., Docket Nos. CI72-674, et al.

Take notice that on November 2, 1972, United Gas Pipe Line Co. (Petitioner) filed in Docket No. CP 73-123, pursuant to § 1.7(c) of the Commission's rules of practice and procedure and section 554 (e) of the Administrative Procedure Act, a petition for Declaratory Order and for Order Directing Compliance, requesting the Commission to order Humble Oil & Refining Co. (Humble) and Isaac Arnold et al., (Arnold) to desist from reducing deliveries to Petitioner under a 1958 contract, as amended in 1963, between Humble and Arnold as sellers, and Petitioner as buyer, all as more fully set forth in the petition which is on file with the Commission and open to public inspection.

Concurrently, Petitioner filed a motion for consolidation of the instant docket with the previously consolidated proceedings in Texas Gas Exploration Corp., Docket No. CI72-674, Gulf Oil Corp., Docket No. CI62-965, and Southern Natural Gas Co., Docket No. CP73-72.

At issue in the above-mentioned consolidated proceedings are contractual rights to the gas produced from the Garden City Field, St. Mary Parish, La., which gas is the subject of the Petition for Declaratory Order filed by Petitioner herein.

It appears reasonable and consistent with the public interest in this case to prescribe a period shorter than 15 days for the filing of protests and petitions to intervene. Therefore, any person desiring to be heard or to make any protest with reference to said application should on or before November 20, 1972, file with the Federal Power Commission, Washington, D.C. 20426, a petition to

intervene or a protest in accordance with the requirements of the Commission's rules of practice and procedure (18 CFR 1.8 or 1.10). All protests filed with the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding. Any person wishing to become a party to a proceeding or to participate as a party in any hearing therein must file a petition to intervene in accordance with the Commission's rules.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19614 Filed 11-14-72;8:50 am]

[Docket No. CP73-117]

## UNITED GAS PIPE LINE CO.

### Notice of Application

NOVEMBER 10, 1972.

Take notice that on November 2, 1972, United Gas Pipe Line Co. (Applicant), Post Office Box 1407, Shreveport, LA 71158, filed in Docket No. CP73-117 an application pursuant to section 7(b) of the Natural Gas Act for permission and approval to abandon the delivery of natural gas to American Cyanamid Co. (American Cyanamid) and the facilities used therefor, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Applicant proposes to discontinue deliveries of natural gas on January 1, 1973, to American Cyanamid at its acrylic fiber plant located near Pensacola, Santa Rosa County, Fla. Applicant states that its available supply of natural gas is depleted to the extent that continuance of service to American Cyanamid for the principal purpose for which the gas is used is unwarranted. The application indicates that deliveries to American Cyanamid totaled 2,713,266 Mcf of gas in 1971 and 1,165,867 Mcf of gas through August 31, 1972. Applicant states that American Cyanamid uses 12 Mcf of gas per day as fuel for pilot lights and the remainder of the gas as boiler fuel and that following cessation of service American Cyanamid will use butane as pilot light fuel and fuel oil as boiler fuel.

Applicant proposes to abandon and remove a sales meter and regulator station and to abandon in place 2.5 miles of 6-inch pipeline, all of which have been operated exclusively to serve American Cyanamid.

Any person desiring to be heard or to make any protest with reference to said application should on or before December 4, 1972, file with the Federal Power Commission, Washington, D.C. 20426, a petition to intervene or a protest in accordance with the requirements of the Commission's rules of practice and procedure (18 CFR 1.8 or 1.10) and the regulations under the Natural Gas Act (18 CFR 157.10). All protests filed with the Commission will be considered by it in determining the appropriate action to be taken but will not serve to make the protestants parties to the proceeding.



Any person wishing to become a party to a proceeding or to participate as a party in any hearing therein must file a petition to intervene in accordance with the Commission's rules.

Take further notice that, pursuant to the authority contained in and subject to the jurisdiction conferred upon the Federal Power Commission by sections 7 and 15 of the Natural Gas Act and the Commission's rules of practice and procedure, a hearing will be held without further notice before the Commission on this application if no petition to intervene is filed within the time required herein, if the Commission on its own review of the matter finds that permission and approval for the proposed abandonment are required by the public convenience and necessity. If a petition for leave to intervene is timely filed, or if the Commission on its own motion believes that a formal hearing is required, further notice of such hearing will be duly given.

Charles Stewart Mott Foundation,  
Flint, Mich.

Minnesota Small Loan Co., Min-  
neapolis, Minn.

Water utilities.  
Real estate leasing.  
Real estate development.  
Sugar production and cattle raising.  
Small loan business.

## FIRST NEW MEXICO BANKSHARE CORP.

### Acquisition of Bank

First New Mexico Bankshare Corp., Albuquerque, N. Mex., has applied for the Board's approval under section 3(a)(3) of the Bank Holding Company Act (12 U.S.C. 1842(a)(3)) to acquire 80 percent or more of the voting shares of The Clovis National Bank, Clovis, N. Mex. The factors that are considered in acting on the application are set forth in section 3(c) of the Act (12 U.S.C. 1842(c)).

The application may be inspected at the office of the Board of Governors or at the Federal Reserve Bank of Kansas City. Any person wishing to comment on the application should submit his views in writing to the Secretary, Board of Governors of the Federal Reserve System, Washington, D.C. 20551, to be received not later than December 4, 1972.

Board of Governors of the Federal Reserve System, November 7, 1972.

[SEAL] MICHAEL A. GREENSPAN,  
Assistant Secretary of the Board.

[FR Doc.72-19595 Filed 11-14-72;8:48 am]

## PRICE COMMISSION

[Notice 39]

### BITUMINOUS COAL INDUSTRY

#### Allowable Costs Under Price Commission Regulations

The Price Commission has determined that, as a general practice, the following direct and indirect costs incurred after

Under the procedure herein provided for, unless otherwise advised, it will be unnecessary for Applicant to appear or be represented at the hearing.

KENNETH F. PLUMB,  
Secretary.

[FR Doc.72-19615 Filed 11-14-72;8:50 am]

## FEDERAL RESERVE SYSTEM

### BANK HOLDING COMPANIES

#### Grandfather Privileges

##### Correction

In F.R. Doc. 72-17851 appearing at page 22414 of the issue for Thursday, October 19, 1972, the entries in the table concerning "Charles Stewart Mott Foundation, Flint, Mich." and "Minnesota Small Loan Co., Minneapolis, Minn.," should read as set forth below:

classes of products or different marketing areas, it must be applied in reasonable proportion to those products or markets.

The limitations imposed by this determination on the pass-through of increased costs do not apply to sales for export.

The Price Commission will apply the criteria set forth in this notice in acting on requests for price increases, filed by price category I firms engaged in producing coal, to be put into effect after November 11, 1972. Price category II and III firms engaged in the production of coal shall be governed by this notice in implementing price increases after that date.

Issued in Washington, D.C., on November 13, 1972.

C. JACKSON GRAYSON, Jr.,  
Chairman, Price Commission.

[FR Doc.72-19659 Filed 11-14-72;8:53 am]

## SECURITIES AND EXCHANGE COMMISSION

[70-5260]

### NORTHEAST UTILITIES ET AL.

#### Notice of Proposed Permanent Financing of Nuclear Fuel Cores

NOVEMBER 8, 1972.

Notice is hereby given that Northeast Utilities (Northeast), Post Office Box 270, Hartford, CT 06101, a registered holding company, and the Connecticut Light & Power Co. (CL&P), the Hartford Electric Light Co. (HELCO), and Western Massachusetts Electric Co. (WMECO), public utility subsidiary companies of Northeast, and the Millstone Point Co. (Millstone), a subsidiary company of Northeast, have filed with this Commission an application-declaration, and amendments thereto, pursuant to the Public Utility Holding Company Act of 1935 (Act), designating sections 6(a), 7, 9, 10, 12, and 13 thereof and Rules 42(b), 43, 45, and 50(a)(2), promulgated thereunder as applicable to the proposed transactions. All interested persons are referred to the amended application-declaration, which is summarized below, for a complete statement of the proposed transactions.

CL&P, HELCO, and WMECO (Owners) own, as tenant-in-common, the Millstone Nuclear Power Station (Station), their participation interests therein being 53 percent, 28 percent, and 19 percent, respectively. Under an Operating Agreement (Holding Company Act Release No. 15691, March 20, 1967), Millstone is acting as Owners' agent respecting the construction and operation of the Station, of which the first unit (Unit No. 1) of 660,000 kw. was placed in operation in 1970, and the second unit (Unit No. 2) of 830,000 kw. is expected to begin operation in 1974. Owners expect to install subsequent additional nuclear generating units at the Station or other sites.



Owners have entered into a contract with General Electric Co. covering the furnishing of the nuclear fuel required for the first three complete cores for Unit No. 1 (Unit No. 1 Fuel Contract). The first core (which is already in place) is estimated to cost \$31,900,000, and the second and third cores \$35,400,000 and \$37,900,000, respectively. The initial fuel core for Unit No. 2, including the uranium, will be purchased from Combustion Engineering, Inc. for an estimated \$26,100,000. Under its contract with Owners (Unit No. 2 Fuel Contract), Combustion Engineering will also fabricate the second core for an estimated \$7,500,000, with uranium (estimated to cost \$21,300,000) provided by the applicants. In addition, the anticipated total cost of the fuel and fabrication for the first three cores for a projected 1,100,000 kw. nuclear unit scheduled for 1979 is approximately \$101 million.

In a series of orders under File No. 70-4755, the Commission has authorized, among other things: (1) The transfer and assignment by Owners of their respective interests in the Unit No. 1 Fuel Contract to Millstone pursuant to an Interim Agreement, and (2) interim financings by Millstone pending the completion of satisfactory arrangements for the permanent financing of nuclear fuel by the latter. Pursuant to such orders, Millstone is presently authorized to issue and sell to banks a maximum aggregate of \$12,500,000 principal amount of short-term notes (Interim Bank Notes) and \$12,500,000 principal amount of subordinated notes (Interim Subordinated Notes) to its parent, Northeast. (See Holding Company Act Release No. 17692, Sept. 11, 1972.) Millstone also has outstanding \$150,000 principal amount of long-term subordinated notes and \$15,000 common equity, all held by Northeast.

Applicants now propose to institute a permanent financing program for Millstone providing, among other things: (1) For the refinancing of Millstone's outstanding Interim Bank Notes and Interim Subordinated Notes (initial phase financing), and (2) for the financing of Millstone's additional capital requirements through 1978 in respect of the procurement of nuclear fuel for Units No. 1 and No. 2 of the Station (subsequent phase financing). In connection therewith, Owners propose to enter into a contract (Fuel Supply Contract) with Millstone, extending until December 1, 1982, whereby (a) Owners' interests in Unit No. 2 Fuel Contract will be assigned to Millstone (their interests in Unit No. 1 Fuel Contract having heretofore been so assigned, as previously indicated); (b) Millstone as the owner thereof will procure and supply nuclear fuel, including replacement fuel, to Owners for use in Units No. 1 and No. 2 of the Station; and (c) Owners will pay Millstone's costs and expenses plus a return on invested capital, as more fully described below. It is further proposed that the Operating Agreement between Owners and Millstone be appropriately amended to reflect the foregoing and the associated proposed financing program.

The payments to Millstone under the Fuel Supply Contract will be made monthly by Owners in proportion to their respective participations in the Station. Such payments (which will be subject to the jurisdiction of the appropriate regulatory commission) are designed to cover (i) amounts chargeable as amortization of costs of the nuclear fuel elements; (ii) all other amounts chargeable to fuel costs for the Station, less applicable credits thereto for the salvage value of uranium and plutonium recovered in fuel reprocessing; (iii) to the extent not chargeable to fuel costs under (i) and (ii), all payments on account of indebtedness or lease obligations incurred in connection with the nuclear core elements, including interest expense and payments of principal when due. In addition, to the extent not reflected in the foregoing, Owners will pay Millstone monthly an amount equal to one-twelfth of 8.5 percent of Millstone's total capitalization. It is intended that the monthly payments shall also cover all other expenses of Millstone incident to its undertaking, such as license fees and all other governmental charges and taxes including taxes on income. The Fuel Supply Contract also obligates Owners to supply, or cause to be supplied, to Millstone such amounts of Equity Capital as shall be required to enable Millstone to comply with the capitalization-ratio covenants of the Indenture applicable to Millstone's secured notes, hereinafter described.

Both the initial and subsequent phases of the proposed permanent financing program will involve the issuance and sale by Millstone of long-term notes (Secured Notes) and short-term notes to banks (Bank Notes); in addition, both phases will involve equity capital investments by Northeast from time to time through purchases of common stock and/or capital contributions.

Millstone's outstanding interim debt is estimated to aggregate \$23,200,000 as at December 1, 1972, consisting of \$12,500,000 Interim Bank Notes, and \$10,700,000 Interim Subordinated Notes held by Northeast. As initial phase financing, it is proposed that Millstone issue and sell \$9 million principal amount of Secured Notes (to be designated Series A) and \$9,450,000 face amount of Bank Notes—the total proceeds to be used to pay all the outstanding Interim Bank Notes and \$5,950,000 of the outstanding Interim Subordinated Notes. It is further proposed that the balance of Millstone's Interim Subordinated Notes (\$4,750,000) and the \$150,000 of long-term notes—all held by Northeast—be converted into permanent equity capital of Millstone. After giving effect to the foregoing initial phase financing, Millstone's capital structure will consist of approximately 65 percent long-term debt and 35 percent equity capital. Beyond the initial phase financing, Millstone's capital requirements are expected to increase irregularly but substantially as additional nuclear fuel elements (and replacements) are procured by it for use in Units No. 1 and No. 2 of the Station.

It is proposed that such procurements be financed through further issuances of Bank Notes and Secured Notes and through equity capital investments by Northeast.

The proposed initial \$9 million principal amount of Secured Notes (Series A) will be sold to The Travelers Insurance Co. at 100 percent of principal amount; will bear an interest rate of 8.5 percent per annum; will be dated as of December 1, 1972; and will mature December 1, 1982. The Series A will be issued under an open-end Trust Indenture (Indenture) dated as of December 1, 1972, between Millstone and The Connecticut Bank and Trust Co., Trustee. The Indenture will prohibit the redemption of any of the Series A Secured Notes prior to December 1, 1977, through the direct or indirect use of funds borrowed at an effective interest cost to Millstone of less than 8.5 percent per annum. The Series A Secured Notes will not be subject to a sinking fund. The Indenture will also provide, among other things: (1) An adequate inventory of nuclear fuel elements shall be maintained at all times for efficient operation of the station, the fair value of such inventory fuel to be not less than 100 percent of all Secured Notes outstanding. (2) Additional Secured Notes may be issued in amounts not exceeding 65 percent of the fair value of "eligible nuclear core elements" certified to the Trustee as the basis for such issuance. To be "eligible," the core elements must be at the site of the generating unit referred to in the relevant Fuel Supply Contract and must be useful in such unit. No earnings test is provided; Millstone, however, is required to execute and maintain the Fuel Supply Contract on terms as hereinabove described, with Owners, or, in the case of future Fuel Supply Contracts, with Owners and with other utilities provided for in the Indenture. (3) Millstone shall at all times maintain an amount of Equity Capital (consisting of capital stock and surplus plus any subordinated indebtedness to Northeast or wholly owned subsidiaries thereof) equal to not less than (a) 35 percent of the sum of Equity Capital and Secured Notes, and (b) 17½ percent of the sum of Equity Capital, Secured Notes, and bank borrowings. (4) Cash dividends and other distributions on the common stock after December 1, 1972, shall not in the aggregate exceed Millstone's aggregate earnings applicable to common stock after that date, plus such additional amounts as the Commission may authorize under the Act.

To provide Millstone with financing flexibility in meeting its month-to-month capital requirements, the Commission is requested to authorize the issuance, sale, repayment and/or reissuance of Bank Notes through December 31, 1974, in a total aggregate amount not to exceed \$25 million at any one time outstanding. Although no formal commitments have been made for such bank borrowings, Millstone expects that a portion thereof will be effected from the following banks in the amounts indicated:



Bank	Maximum Amount
The Connecticut Bank and Trust Co.	\$9,000,000
Hartford National Bank and Trust Co.	9,000,000
	18,000,000

Bank borrowings to be effected from additional banks or in larger maximum amounts will be the subject of one or more post-effective amendments hereto. The Bank Notes will each be dated the date of issue; will have a maximum maturity date of 9 months with right of renewal; will bear interest at the prime rate in effect from time to time at The Connecticut Bank and Trust Co., adjusted as of the date of any change in such rate; will be subject to prepayment at any time at Millstone's option without premium; and will be subordinated to all Secured Notes issued by Millstone. There will be no compensating-balance requirement.

It is contemplated that after the initial phase financing Millstone's capital requirements will be met in the first instance by the issue and sale of Bank Notes pursuant to the requested authorization. Outstanding Bank Notes will be refinanced from time to time through successive sales of Secured Notes and equity investments by Northeast. The issuance and sale of future series of Secured Notes and the terms thereof (including redemption provisions, sinking fund requirements, etc.) will be the subject of future applications under the Act.

Authorization is requested for the issuance by Millstone of its common stock to, and/or the making of capital contributions by, Northeast, in such amounts as may be required from time to time to meet the capital ratio limitations of the Indenture and to carry out the Fuel Supply Contract. It is estimated that, in all, the amount of common stock issued and capital contributions made before December 31, 1978, will not exceed \$25 million. The common stock is without par value; purchases thereof by Northeast will be at a price of \$1,000 per share.

A statement of the fees, commissions, and expenses paid or incurred or to be paid or incurred, directly or indirectly, in connection with the proposed transactions will be supplied by amendment.

It is stated that the Massachusetts Department of Public Utilities has approved the form of the Fuel Supply Contract to be executed by WMECO; that the approval of the Connecticut Public Utilities Commission is required for the issue by Millstone of its common stock and Secured Notes; and that no other State commission and no Federal commission, other than this Commission, has jurisdiction over the proposed transactions.

Notice is further given that any interested person may, not later than November 29, 1972, request in writing that a hearing be held on such matter, stating the nature of his interest, the reasons for such request, and the issues of fact or law raised by said application-declaration which he desires to controvert; or he may request that he be notified if the Commission should order a

hearing thereon. Any such request should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C. 20549. A copy of such request should be served personally or by mail (airmail if the person being served is located more than 500 miles from the point of mailing) upon the applicants-declarants at the above-stated address, and proof of service (by affidavit or, in case of an attorney-at-law, by certificate) should be filed with the request. At any time after said date, the application-declaration, as now amended or as it may be further amended, may be granted and permitted to become effective as provided in Rule 23 of the general rules and regulations promulgated under the Act, or the Commission may grant exemption from such rules as provided in Rules 20(a) and 100 thereof or take such other action as it may deem appropriate. Persons who request a hearing or advice as to whether a hearing is ordered will receive notice of further developments in this matter, including the date of the hearing (if ordered) and any postponements thereof.

For the Commission, by the Division of Corporate Regulation, pursuant to delegated authority.

[SEAL]

RONALD F. HUNT,

Secretary.

[FR Doc.72-19592 Filed 11-14-72; 7:48 am]

[70-5255]

**WHEELING ELECTRIC CO.****Notice of Proposed Issue and Sale of Long Term Notes to Banks**

NOVEMBER 8, 1972.

Notice is hereby given that Wheeling Electric Co. (Wheeling), 51-16th Street, Wheeling, WV 26003, a public-utility subsidiary company of American Electric Power Company, Inc., a registered holding company, has filed a declaration with this Commission pursuant to the Public Utility Holding Company Act of 1935 (Act), designating sections 6(a) and 7 thereof as applicable to the proposed transactions. All interested persons are referred to the declaration, which is summarized below, for a complete statement of the proposed transactions.

Wheeling proposes pursuant to a bank loan agreement to issue and sell on or before November 1, 1975, its unsecured notes maturing November 1, 1979, in the aggregate amount of \$19 million outstanding at any one time. The names of the banks and their commitments are as follows:

Mellon National Bank and Trust Co., Pittsburgh, Pa.	\$10,000,000
First National City Bank, New York, N.Y.	5,000,000
Bankers Trust Co., New York, N.Y.	4,000,000
	19,000,000

Borrowings from Mellon and Bankers Trust will bear interest at 114 percent of the prime rate in effect at each bank from time to time, plus  $\frac{1}{4}$  of 1 percent in the fourth and fifth years and  $\frac{1}{2}$  of

1 percent in the sixth and seventh years. The effective interest rate of the notes sold to First National City will range from 114 percent of its prime rate in the first 2 years to 123 percent of its prime rate in the seventh year. The agreement provides further that the average annual interest rate paid to any of the banks shall not exceed 7.5 percent. Wheeling will pay to each bank substitute interest computed at the rate of  $\frac{1}{2}$  of 1 percent per annum on the daily average unused amount of such bank's commitment. Prepayment of the notes, in whole or in part, may be made at any time without premium. Wheeling has agreed not to create or suffer to exist any mortgage upon its property, or to incur any indebtedness for borrowed money (other than short term debt in an amount not exceeding 10 percent of its capitalization) if the total of all indebtedness (other than short term debt to the extent specified) shall exceed 65 percent of Wheeling's capitalization.

Wheeling states that the \$19 million of notes are to be issued for the purpose of (a) paying at maturity the \$13 million of its presently outstanding notes due December 1, 1972, (b) prepaying its short term notes payable to banks of which \$4,190,000 were outstanding at June 30, 1972, and (c) providing additional cash to be used to pay, in part, the cost of its 1972 and 1973 construction programs estimated to cost approximately \$1,600,000 and \$1,900,000, respectively.

Fees and expenses to be incurred in connection with the proposed transactions are estimated at \$2,500. It is stated that no State or Federal commission, other than this Commission, has jurisdiction over the proposed transactions.

Notice is further given that any interested person may, not later than November 29, 1972, request in writing that a hearing be held on such matter, stating the nature of his interest, the reasons for such request, and the issues of fact or law raised by said declaration which he desires to controvert; or he may request that he be notified if the Commission should order a hearing thereon. Any such request should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C. 20549. A copy of such request should be served personally or by mail (airmail if the person being served is located more than 500 miles from the point of mailing) upon the declarant at the above-stated address, and proof of service (by affidavit or, in case of an attorney at law, by certificate) should be filed with the request. At any time after said date, the declaration, as filed or as it may be amended, may be permitted to become effective as provided in Rule 23 of the general rules and regulations promulgated under the Act, or the Commission may grant exemption from such rules as provided in Rules 20(a) and 100 thereof or take such other action as it may deem appropriate. Persons who request a hearing or advice as to whether a hearing is ordered will receive notice of further developments in this matter, including the date of the hearing (if ordered) and any postponements thereof.



For the Commission, by the Division of Corporate Regulation, pursuant to delegated authority.

[SEAL] RONALD F. HUNT,  
Secretary.

[FR Doc.72-19591 Filed 11-14-72; 8:48 am]

## INTERSTATE COMMERCE COMMISSION

[Notice 117]

### ASSIGNMENT OF HEARINGS

NOVEMBER 10, 1972.

Cases assigned for hearing, postponement, cancellation or oral argument appear below and will be published only once. This list contains prospective assignments only and does not include cases previously assigned hearing dates. The hearings will be on the issues as presently reflected in the Official Docket of the Commission. An attempt will be made to publish notices of cancellation of hearings as promptly as possible, but interested parties should take appropriate steps to insure that they are notified of cancellation or postponements of hearings in which they are interested. No amendments will be entertained after the date of this publication.

MC-F-11275, Navajo Freight Lines, Inc.—Control—Joe Hodges Transportation Corp., now assigned January 29, 1973, at Denver, Colo., is postponed to January 22, 1973, at Denver, Colo., in a hearing room to be later designated.

Ex Parte No. 270 Sub 1B, Export—Import rates and charges Great Lakes, continued to February 5, 1973 (1 week), at Chicago, Ill., in a hearing room to be later designated.

MC 117304 Sub 30, Don Paffie, doing business as Paffie Truck Lines, now being assigned hearing January 18, 1973 (2 days), at Seattle, Wash., in a hearing room to be later designated.

MC 138070 Sub 1, John F. Schroeder, Inc., now being assigned hearing January 15, 1973 (2 days), at Seattle, Wash., in a hearing room to be later designated.

MC 112989 Sub 25, West Coast Truck Lines, Inc., now being assigned hearing January 17, 1973 (1 day), at Seattle, Wash., in a hearing room to be later designated.

MC 1515 Sub 181, Greyhound Lines, Inc., now being assigned hearing January 22, 1973 (3 days), at Portland, Oreg., in a hearing room to be later designated.

I & S No. 8707, Refrigeration Provisions, Florida East Coast Railway, I & S No. 8720, Icing Services, U.S. Railroads, now assigned November 27, 1972, at Los Angeles, Calif., will be held in Tax Courtroom, Customhouse, Federal Office Building, 300 Los Angeles Street.

MC-C-7823, New England-New York Transport, Inc.—Investigation and revocation of certificates, now assigned December 7, 1972, at Boston, Mass., will be held in Room 221B, John Fitzgerald Kennedy Building, Government Center.

I & S 8789, Passenger Fare Increase, Penn Central, now assigned December 4, 1972, at Providence, R.I., will be held in Conference Room, State of Rhode Island P.U.C., Alwyn-Mason Building, 169 Weybosset Street.

MC-129291 (Sub-No. 5), McDaniel Motor Express, Inc., now assigned December 4, 1972, will be held in Room G-2, Capitol Plaza Tower, Department of Transportation, Frankfort, Ky.

MC 111812 Sub 478, Midwest Coast Transport, Inc., MC 117799 Sub 37, Best Way Frozen Express, Inc., now being assigned hearing February 1, 1973, at Omaha, Nebr., in a hearing room to be later designated.

MC-F-11372, Roadway Express, Inc.—Control and Merger—Poole Transfer, Inc., continued to November 28, 1972, at the Offices of the Interstate Commerce Commission, Washington, D.C.

MC-C-7786, Eck Miller Transportation Corp.—Investigation and revocation of certificates, now assigned December 4, 1972, at Louisville, Ky., is postponed indefinitely.

MC 134847 Sub 3, Bessette Transport, Inc.—Extension-Bedford Slate, now being assigned hearing January 15, 1973 (1 day), at Boston, Mass., in a hearing room to be later designated.

MC 133095 Sub 34, Texas Continental Express, Inc., now being assigned hearing January 16, 1973 (1 day), at Boston, Mass., in a hearing room to be later designated.

MC 108587 Sub 15, Schuster's Express, Inc., now being assigned hearing January 17, 1973 (3 days), at Boston, Mass., in a hearing room to be later designated.

MC 118292 Sub 31, Ballentine Produce, Inc., now being assigned hearing January 29, 1973 (2 days), at San Francisco, Calif., in a hearing room to be later designated.

MC 116474 Sub 21, Leavitts Freight Service, Inc., now being assigned January 25, 1973 (2 days), at Portland, Oreg., in a hearing room to be later designated.

No. 35599, Southern Pacific Transportation Co., Pacific Motor Trucking Co., Bonded Draying Service, Transportation Service Co. and Aldo J. Scoffone—Investigation of Practices, MC-C-7758, Southern Pacific Transportation Co., Pacific Motor Trucking Co., Silas F. Royster doing business as, Royster Trucking Co., Bonded Draying Service, Transportation Service Co., and Aldo J. Scoffone—Investigation of Operations—now being assigned hearing January 31, 1973 (3 days), at San Francisco, Calif., in a hearing room to be later designated.

MC-41432 Sub 126, East Texas Motor Freight Lines, Inc., MC-83539 Sub 345, C & H Transportation Co., Inc., now assigned December 4, 1972; will be held in Room 5A-15, Federal Building, 1100 Commerce Street, Dallas, Tex.

MC-68100 Sub 16, D. P. Bonham Transfer, Inc., now assigned December 5, 1972, will be held in Room 5A-15, Federal Building, 1100 Commerce Street, Dallas, Tex.

MC-110525 Sub 1037, Chemical Leaman Tank Lines, Inc., now assigned December 6, 1972, will be held in Room 5A-15, Federal Building, 1100 Commerce Street, Dallas, Tex.

MC-135021 Sub 1, Texas Overland Trucking Express, Inc., now assigned December 11, 1972, will be held in Room 5B-43, Federal Building, 1100 Commerce Street, Dallas, Tex.

M-55898 Sub 48, Harry A. Decato, doing business as Decato Bros. Trucking Co., now being assigned hearing January 22, 1973 (2 days), at Boston, Mass., in a hearing room to be later designated.

MC-136750 Sub 1, New England Finishing & Furniture Haulers, Inc., now being assigned hearing January 24, 1973 (3 days), at Boston, Mass., in a hearing room to be later designated.

MC-107515 Sub 799, Refrigerated Transport Co., Inc., now being assigned hearing January 22, 1973 (2 weeks), at New York, N.Y., in a hearing room to be later designated.

[SEAL] ROBERT L. OSWALD,  
Secretary.

[FR Doc.72-19622 Filed 11-14-72; 8:50 am]

[S.O. 1112, Exception 2]

### CERTAIN RAILROAD-OWNED REFRIGERATOR CARS

#### Exception To Encourage Use by Other Railroads

It appearing, that the supplies of railroad-owned refrigerator cars of mechanical designations RP, RPL, RS, and RSB on owners' lines are adequate; that numerous other carriers have need for such cars; that elimination of empty cars bearing railroad reporting marks and having mechanical designations RP, RPL, RS, and RSB from paragraph (a) (1) (iii) will best encourage their use by other railroads.

It is ordered, That, pursuant to the authority vested in the Railroad Service Board by Service Order No. 1112, paragraph (a) (1) (xiv), empty cars bearing railroad reporting marks and having mechanical designations RP, RPL, RS, and RSB, are hereby eliminated from the car types listed in paragraph (a) (1) (iii) of Service Order No. 1112.

Effective November 7, 1972.

Issued at Washington, D.C., November 8, 1972.

RAILROAD SERVICE BOARD,  
ROBERT L. OSWALD,  
Secretary.

[FR Doc.72-19626 Filed 11-14-72; 8:51 am]

[S. O. 1112, Exception 1]

### THE GREAT WESTERN RAILWAY CO. AND UNION PACIFIC RAILROAD CO.

#### Storage of Empty Covered Hopper Cars

It appearing, that a substantial number of covered hopper cars bearing mechanical designation "LO" are assigned to the exclusive use of the Great Western Sugar Co.; that these cars are loaded at eight different loading points located on The Great Western Railway Co. or the Union Pacific Railroad Co.; that these cars are presently assigned to the shipper at Milliken, Colo., a nonloading point accessible to both railroads, for purposes of distribution; that such assignment to a central distribution point results in increased car utilization and the assignment of fewer cars than would separate assignment to each loading point.

It is ordered, That, pursuant to the authority vested in the Railroad Service Board by Service Order No. 1112, paragraph (a) (1) (xiv), The Great Western Railway Co. and the Union Pacific Railroad Co. are hereby authorized to store



at Milliken, Colo., empty covered hopper cars of mechanical designation "LO" which are assigned to the exclusive use of the Great Western Sugar Co. for loading at any of the stations named herein. Such cars, while stored at Milliken, are subject to the provisions of paragraph (a)(2)(iii) of Service Order No. 1112. When subsequently ordered from Milliken for placement for loading by Great Western Sugar Co. at any of its facilities named herein and located on the lines of the railroad designated opposite each station named, empty car storage charges shall cease, and demurrage or detention charges covering all subsequent detention shall be assessed in accordance with the applicable tariffs.

The provisions of exception to paragraph (a)(1)(ix) of Service Order No. 1112 shall not apply to empty cars ordered from Milliken to any of the stations named herein. Any such car diverted empty while stored at Milliken, or after arrival at one of the named loading points, to any other point, shall be subject to the exception to section (a)(1)(ix) of Service Order No. 1112:

Loading Points	Serving Railroad
Longmont, Colo.-----	Great Western Ry.
Loveland, Colo.-----	Do.
Eaton, Colo.-----	Do.
Windsor, Colo.-----	Do.
Johnstown, Colo.-----	Do.
Brighton, Colo.-----	Union Pacific RR.
Ovid, Colo.-----	Do.
Greeley, Colo.-----	Do.

Effective: November 7, 1972.

Issued at Washington, D.C., November 7, 1972.

RAILROAD SERVICE BOARD,  
ROBERT L. OSWALD,  
Secretary.

[FR Doc.72-19625 Filed 11-14-72;8:51 am]

[Notice 30]

## MOTOR CARRIER ALTERNATE ROUTE DEVIATION NOTICES

NOVEMBER 10, 1972.

The following letter-notices of proposals (except as otherwise specifically noted, each applicant states that there will be no significant effect on the quality of the human environment resulting from approval of its application), to operate over deviation routes for operating convenience only have been filed with the Interstate Commerce Commission under the Commission's Revised Deviation Rules—Motor Carriers of Passengers, 1969 (49 CFR 1042.2(c)(9)) and notice thereof to all interested persons is hereby given as provided in such rules (49 CFR 1042.2(c)(9)).

Protests against the use of any proposed deviation route herein described may be filed with the Interstate Commerce Commission in the manner and form provided in such rules (49 CFR 1042.2(c)(9)) at any time, but will not operate to stay commencement of the proposed operations unless filed within 30 days from the date of publication.

Successively filed letter-notices of the same carrier under the Commission's Revised Deviation Rules—Motor Carriers of Property, 1969, will be numbered consecutively for convenience in identification and protests, if any, should refer to such letter-notices by number.

### MOTOR CARRIERS OF PASSENGERS

No. MC-1515 (Deviation No. 634) (Cancels Deviation Nos. 387 and 464), GREYHOUND LINES, INC. (Eastern Division), 1400 West Third Street, Cleveland, OH 44113, filed October 25, 1972. Carrier proposes to operate as a common carrier, by motor vehicle, of passengers and their baggage, and express and newspapers in the same vehicle with passengers, over deviation routes as follows: (1) From junction Interstate Highway 94 and U.S. Highway 41, in Hammond, Ind., over Interstate Highway 94 to interchange unnumbered highway (formerly U.S. Highway 12) just southeast of Galesburg, Mich., (2) from the interchange of Interstate Highway 94 and Interstate Highway Business Loop 94, southwest of Battle Creek, Mich., over Interstate Highway 94 to the interchange of Interstate Highway 94 and Interstate Highway Business Loop 94 just east of Jackson, Mich., (3) from the Fletcher Road Interchange with Interstate Highway 94, approximately 1 mile west of Lima, Mich., over Interstate Highway 94 to interchange of U.S. Highway 23 and Interstate Highway 94 south of Ann Arbor, Mich., (4) from Gary, Ind., over city streets to interchange Interstate Highway 94, (5) from junction to U.S. Highway 20 and Indiana Highway 49 over Indiana Highway 49 to interchange Interstate Highway 94, (6) from Michigan City, Ind., over U.S. Highway 421 to junction Interstate Highway 94, (7) from Michigan City, Ind., over U.S. Highway 20 to junction Interstate Highway 94, (8) from Interchange No. 7 of the Indiana East-West Toll Road over Indiana Highway 39 to the Michigan-Indiana State line, thence over Michigan Highway 239 to interchange Interstate Highway 94, (9) from New Buffalo, Mich., over U.S. Highway 12 to interchange with Interstate Highway 94,

(10) From Benton Harbor, Mich., over Interstate Highway B.R. (Business Route) 94 to Interchange Interstate Highway 94 approximately 3 miles east of Benton Harbor, (11) from Coloma, Mich., over Berrien County Highway 706 to interchange Interstate Highway 94, (12) from Watervliet, Mich., over Michigan Highway 140 to interchange Interstate Highway 94, (13) from Paw Paw, Mich., over Michigan Highway 40 to interchange Interstate Highway 94, (14) from Oshtemo, Mich., over Ninth Street to interchange Interstate Highway 94, (15) from Kalamazoo, Mich., over Interstate Highway B.L. (Business Loop) 94 to interchange U.S. Highway 131, thence over U.S. Highway 27 to interchange Interstate Highway 94, west of Kalamazoo, (16) from Kalamazoo, Mich., over Westnedge Avenue to interchange Inter-

state Highway 94, (17) from Kalamazoo, Mich., over Interstate Highway B.L. (Business Loop) 94 to interchange Interstate Highway 94 east of Kalamazoo, (18) from Battle Creek, Mich., over Michigan Highway 66 to interchange Interstate Highway 94, (19) from Marshall, Mich., over U.S. Highway 27 to interchange Interstate Highway 94, (20) from Marshall, Mich., over Interstate Highway B.L. (Business Loop) 94 to interchange Interstate Highway 94 east of Marshall, (21) from Albion, Mich., over Interstate Highway B.L. (Business Loop) 94 to interchange Interstate Highway 94 north of Albion, (22) from junction Spring Arbor Road and Michigan Highway 60 southwest of Jackson, Mich., over Michigan Highway 60 to interchange Interstate Highway 94, (23) from Jackson, Mich., over U.S. Highway 127 to junction Interstate Highway 94, and (19) also, access and egress to Interstate Highway 94 where it junctions with regular route operations of applicant as follows:

(a) The interchange of the Indiana East-West Toll Road and Interstate Highway 94 in Gary, Ind., (b) the interchange of Interstate Highway B.L. 94 and Interstate Highway 94, 1 mile north of Stevensville, Mich., (c) the interchange of Interstate Highway B.L. 94 and Interstate Highway 94, east of Battle Creek, Mich., and (d) the interchange of Michigan Highway 99 and Interstate Highway 94, east of Albion, Mich., and return over the same routes, for operating convenience only. The notice indicates that the carrier is presently authorized to transport passengers and the same property, over a pertinent service route as follows: From Chicago, Ill., over U.S. Highway 12 via Michigan City, Ind., to New Buffalo, Mich., thence over Red Arrow Highway (formerly U.S. Highway 12) to junction Interstate Highway B.R. (Business Route) 94, just north of Stevensville, Mich., thence over Interstate Highway B.R. (Business Route) 94 through St. Joseph and Benton Harbor to junction Red Arrow Highway, thence over Red Arrow Highway (formerly U.S. Highway 12) to Coloma, Mich., thence over unnumbered highway (formerly U.S. Highway 12) via Hartford, Lawrence, and Paw Paw to junction Interstate Highway B.L. (Business Loop) 94 at the junction of U.S. Highway 131, thence over Interstate Highway B.L. (Business Loop) 94 through Kalamazoo, Mich., to junction Michigan Highway 96, thence over Michigan Highway 96 to Galesburg, Mich., thence over unnumbered highway to interchange with Interstate Highway 94, thence over Interstate Highway 94 to interchange with Interstate Highway B.L. (Business Loop) 94, just west of Battle Creek, thence over Interstate Highway B.L. (Business Loop) 94 through Battle Creek to junction Interstate Highway 94, thence over unnumbered highway to Marshall, thence over Interstate Highway B.L. (Business Loop) 94 to junction unnumbered highway east of Marshall,



Thence over unnumbered highway to Albion, thence over Michigan Highway 99, crossing Interstate Highway 94 to junction access road to Michigan Avenue, thence over access road to Michigan Avenue, thence over Michigan Avenue, via Parma to Jackson, thence over Interstate Highway B. L. (Business Loop) 94 to junction Interstate Highway 94, thence over Interstate Highway 94 to Fletcher Road Interchange, west of Lima, thence over unnumbered highway via Lima to Ann Arbor, thence over U.S. Highway 23 to junction Interstate Highway 94, thence over Interstate Highway 94 to Ypsilanti, thence over Michigan Highway 17 via Allen Park to junction Southfield Road, thence over Southfield Road to Lincoln Park, Mich., thence over South Port Road to Detroit, Mich. (also from junction U.S. Highway 12 and Indiana Highway 520, formerly unnumbered highway, approximately 1½ miles west of Michigan City, Ind., over Indiana Highway 520 to junction U.S. Highway 20; also from Michigan City, Ind., east over U.S. Highway 35 to junction U.S. Highway 20; also from Galesburg, Mich., over Michigan Highway 96 via Augusta to Battle Creek; also from Augusta over unnumbered highway to Battle Creek; also from junction Interstate Highway B. L. (Business Loop) 94 and Michigan Avenue just east of Jackson, over Michigan Avenue via Leoni and Gass Lake, Mich., to junction Interstate Highway 94 just north of Sylvan, Mich.; also from Interchange unnumbered highway and Interstate Highway 94 just north of Sylvan over unnumbered highway via Chelsea, Mich., to Fletcher Road Interchange with Interstate Highway 94; also from Ann Arbor over U.S. Highway 23 to junction Interstate Highway 94, thence over Interstate Highway 94 to Ypsilanti, thence over U.S. Highway 12 to Detroit; also from Ann Arbor over Michigan Highway 17 to Ypsilanti; also from interchange of Interstate Highway 94 and Michigan Highway 17 east of Ypsilanti over Interstate Highway 94 to junction U.S. Highway 12; and also from Allen Boulevard to Fort Street, thence over Fort Street to Detroit, Mich.), and return over the same routes.

No. MC-1515 (Deviation No. 635) (Cancels Deviation No. 535), GREY-HOUND LINES, INC. (Eastern Division), 1400 West Third Street, Cleveland, OH 44113, filed October 25, 1972. Carrier proposes to operate as a common carrier, by motor vehicle, of passengers and their baggage, and express and newspapers in the same vehicle with passengers, over a deviation route as follows: From Covington, Ky., over Interstate Highway 75 to Knoxville, Tenn., with the following access routes (1) from Richwood, Ky., over Kentucky Highway 338 to junction Interstate Highway 75, (2) from Walton, Ky., over Kentucky Highway 14-16 to junction Interstate Highway 75, (3) from Crittenden, Ky., over Kentucky Highway 491 to junction Interstate Highway 75, (4) from Dry Ridge, Ky., over Kentucky Highway 22 to junction Interstate Highway 75, (5) from Wil-

liamstown, Ky., over Kentucky Highway 36 to junction Interstate Highway 75, (6) from Corinth, Ky., over Kentucky Highway 330 to junction Interstate Highway 75, (7) from Georgetown, Ky., over U.S. Highway 62 to junction Interstate Highway 75, (8) from Lexington, Ky., over Kentucky Highway 922 to junction Interstate Highway 75, (9) from Richmond, Ky., over U.S. Highway 25 to junction Kentucky Highway 876, thence over Kentucky Highway 876 to junction Interstate Highway 75, (10) from Berea, Ky., over U.S. Highway 25 to junction Kentucky Highway 21, thence over Kentucky Highway 21 to junction Interstate Highway 75, (11) from Mount Vernon, Ky., over U.S. Highway 25 northbound to junction Interstate Highway 75, (12) from Mount Vernon, Ky., over U.S. Highway 25 southeasterly to junction Interstate Highway 75, (13) from Corbin, Ky., over U.S. Highway 25 to junction Kentucky Highway 709, thence over Kentucky Highway 709 to junction Interstate Highway 75, (14) from Corbin, Ky., over U.S. Highway 25-W to junction Interstate Highway 75, (15) from Williamsburg, Ky., over Kentucky Highway 92 to junction Interstate Highway 75, and (16) from Jellico, Tenn., over U.S. Highway 25-W southeasterly to junction Interstate Highway 75, and return over the same routes, for operating convenience only.

The notice indicates that the carrier is presently authorized to transport passengers and the same property, over pertinent service routes, as follows: (1) From Cincinnati, Ohio, over U.S. Highway 25 to Lexington, Ky. (also from Cincinnati across the Ohio River to Covington, Ky., thence over Kentucky Highway 17 to junction U.S. Highway 27, thence over U.S. Highway 27 to Lexington), and thence over U.S. Highway 27 to Chattanooga, Tenn., and (2) from Lexington, Ky., over U.S. Highway 25 via Livingston, Oakley and East Bernstadt, Ky., to Corbin, Ky., thence over U.S. Highway 25-W to Knoxville, Tenn., and return over the same route.

No. MC-13300 (Deviation No. 26), CAROLINA COACH COMPANY, 1201 South Blount Street, Raleigh, NC 27602, filed October 25, 1972. Carrier's representative: James E. Wilson, Suite 1032, Pennsylvania Building, Pennsylvania Avenue and 13th Street, NW., Washington, D.C. 20004. Carrier proposes to operate as a common carrier, by motor vehicle, of passengers and their baggage, and express and newspapers in the same vehicle with passengers, over a deviation route as follows: From Richmond, Va., over Interstate Highway 64 to junction Virginia Highway 168, thence over Virginia Highway 168 to junction Interstate Highway 64, thence over Interstate Highway 64 to Norfolk, Va., and return over the same route, for operating convenience only. The notice indicates that the carrier is presently authorized to transport passengers and the same property, over a pertinent service route as follows: From Richmond, Va., over combined U.S. Highways 1 and 301 to junc-

tion Virginia Highway 10, thence over Virginia Highway 10 to Smithfield, Va., thence over combined Virginia Highway 10 and U.S. Highway 258 to Benns Church, Va., thence over combined Virginia Highways 10 and 32 to Chuckatuck, Va., thence over Virginia Highway 125 to Driver, Va., thence over Virginia Highway 337 to Portsmouth, Va., thence over U.S. Highway 58 to Norfolk, Va., and return over the same route.

By the Commission.

[SEAL]

ROBERT L. OSWALD,  
Secretary.

[FR Doc.72-19620 Filed 11-14-72; 8:50 am]

[Notice 92]

## MOTOR CARRIER APPLICATIONS AND CERTAIN OTHER PROCEEDINGS

NOVEMBER 10, 1972.

The following publications are governed by the new Special Rule 1.247 of the Commission's rules of practice, published in the FEDERAL REGISTER, issue of December 3, 1963, which became effective January 1, 1964.<sup>1</sup>

The publications hereinafter set forth reflect the scope of the applications as filed by applicant, and may include descriptions, restrictions, or limitations which are not in a form acceptable to the Commission. Authority which ultimately may be granted as a result of the applications here noticed will not necessarily reflect the phraseology set forth in the application as filed, but also will eliminate any restrictions which are not acceptable to the Commission.

### APPLICATIONS ASSIGNED FOR ORAL HEARING

#### MOTOR CARRIERS OF PROPERTY

##### NOTICE FOR FILING PETITIONS

No. MC 107409 (Sub-No. 21) (Notice of Filing of Petition for Modification of Existing Authority), filed November 1, 1972. Petitioner: RATLIFF & RATLIFF, INC., Lexington, N.C. Petitioner's representative: William P. Jackson, Jr., 919 18th Street NW., Washington, DC 20006. Petitioner presently holds a certificate in No. MC 107409 (Sub-No. 21), authorizing, as pertinent, operation as a common carrier by motor vehicle, over irregular routes of: *Manufactured iron and steel products and articles*, on flat bed or on open-top vehicles, from the plant-site of Armco Steel Corp., at or near Ashland, Ky., to points in Virginia, Tennessee, North Carolina, South Carolina, Georgia, and Florida, with no transportation for compensation on return except as otherwise authorized. By the instant petition, petitioner seeks removal of the equipment restriction on its Sub-No. 21 authority. The modified authority sought as to transport, as a motor

<sup>1</sup> Except as otherwise specifically noted, each applicant (on applications filed after March 27, 1972) states that there will be no significant effect on the quality of the human environment resulting from approval of its application.



common carrier, over irregular routes: *Manufactured iron and steel products and articles*, from the plants of Armco Steel Corp., at or near Ashland, Ky., to points in Virginia, Tennessee, North Carolina, South Carolina, Georgia, and Florida, with no transportation for compensation on return except as otherwise authorized. Any interested person desiring to participate may file an original and six copies of his written representations, views or arguments in support of or against the petition within 30 days from the date of publication in the FEDERAL REGISTER.

No. MC 129228 (Sub-No. 1) (Notice of Filing of Petition To Add an Additional Shipper), filed October 21, 1972. Petitioner: McCABE'S EXPRESS & TRUCKING CO., LTD., 134 Garfield Avenue, Jersey City, NJ 07305. Petitioner's representative: George A. Olsen, 69 Tonnele Avenue, Jersey City, NJ 07306. Petitioner presently holds a permit in No. MC 129228 (Sub-No. 1) issued May 16, 1972, authorizing operation as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Lighting fixtures and lamps, and equipment, materials, and supplies* used in their manufacture and sale, except commodities in bulk, between Jersey City and Kearny, N.J., on the one hand, and, on the other, points in Louisiana, Minnesota, and Texas, and those points in the United States east of the Mississippi River, under a continuing contract or contracts with Lightolier, Inc., of Jersey City, N.J. By the instant petition, petitioner seeks to add Aluminum Processing Corporation of Fall River, Mass., a subsidiary of Lightolier, Inc., as an additional shipper to its authority herein stated above. Any interested person desiring to participate may file an original and six copies of his written representations, views or arguments in support of or against the petition within 30 days from the date of publication in the FEDERAL REGISTER.

#### TRANSFER APPLICATIONS TO BE ASSIGNED FOR ORAL HEARING

No. MC-FC-73782. Authority sought by transferee, BEALL'S EXPRESS, INC., 103 Apples Church Road, Thurmont, MD, to transfer to transferee operating rights of transferor, WESTERN EXPRESS, INC., 1522 South Caton Avenue, Baltimore, MD 21227. Transferee's and transferor's representative: James L. Doherty, 425 St. Paul Place, Baltimore MD 21202. Operating rights in Certificate No. MC-21244 sought to be transferred: Such articles as are purchased at auction sales, bankrupts', or sales of merchants' surplus stock in trade, except new furniture, between Baltimore, Md., on the one hand, and, on the other, New York, N.Y., and points and places in New Jersey, Delaware, Pennsylvania, Virginia, Maryland, North Carolina, and the District of Columbia.

The above-entitled transfer application under section 212(b) of the Interstate Commerce Act is to be assigned for hearing for the purpose of determining,

among other things, whether transferee, under § 1132.3 of the rules and regulations governing transfer of operating rights, is fit to acquire the rights proposed for transfer. Interested parties have 30 days from the date of this publication in which to file petitions for leave to intervene. Such petitions should state the reason or reasons for the intervention, where the petitioner wishes the hearing to be held, the number of witnesses to be presented, and the estimated time required for the presentation of evidence. The Bureau of Enforcement has been directed to participate as a party in the proceeding for the purpose of presenting evidence and otherwise developing the record.

#### APPLICATION FOR CERTIFICATE OF PERMIT WHICH ARE TO BE PROCESSED CONCURRENTLY WITH APPLICATION UNDER SECTION 5 GOVERNED BY SPECIAL RULE 240 TO THE EXTENT APPLICABLE

No. MC 127602 (Sub-No. 12) (Amendment), filed September 18, 1972, published in the FEDERAL REGISTER issue of October 4, 1972, and republished as amended, this issue. Applicant: DENVER-MIDWEST MOTOR FREIGHT, INC., 525 Jones Street, Box 156 D.T.S., Omaha, NE 68101. Applicant's representative: Earl H. Scudder, Jr., Post Office Box 82028, 605 South 14th Street, Lincoln, NE 68501. Authority sought to operate as a *common carrier*, by motor vehicle, over regular and irregular routes, transporting: *General commodities* (except commodities in bulk, household goods as defined by the Commission, commodities which because of size or weight require the use of special equipment, and classes A and B explosives). (1) Regular Routes: Serving points in Cook, Lake, McHenry, Kane, Du Page, De Kalb, Kendall, Grundy, Will, and Kankakee Counties, Ill., as off-route points in connection with carrier's existing authority; and (2) Irregular Routes: Between points in those counties named in (1) above, on the one hand, and, on the other, all points in Illinois. NOTE: Applicant states it intends to tack the authority sought with its existing authority at Chicago, Ill., to provide a through service. This application is a matter directly related to MC-F-11662, published in the FEDERAL REGISTER issue of September 27, 1972. The instant application seeks to convert the Certificate of Registration of Streater Transfer & Storage Co. under No. MC 98297 into a Certificate of Public Convenience and Necessity. The purpose of this republication is to reflect: (1) That regular and irregular operations are involved, (2) to redescribe the territorial description, and (3) to change the tacking information. If a hearing is deemed necessary, applicant requests it be held at Omaha, Nebr.

#### APPLICATIONS UNDER SECTIONS 5 AND 210(a) (b)

The following applications are governed by the Interstate Commerce Commission's special rules governing notice of filing of applications by motor carriers of property or passengers under

sections 5(a) and 210(a)(b) of the Interstate Commerce Act and certain other proceedings with respect thereto. (49 CFR 1.240).

#### MOTOR CARRIERS OF PROPERTY

No. MC-F-11683. (Correction) (WILSON FREIGHT COMPANY — PURCHASE (PORTION) — TRANSPORTATION SERVICE, INC., published in the October 18, 1972, issue of the FEDERAL REGISTER on page 22027. Prior notice should have included that transferee operates in the States of Arkansas and Michigan in addition to those shown in the publication.

No. MC-F-11687. Authority sought for purchase by Commercial Carriers, Inc., 10701 Middlebelt Road, Romulus, MI 48174, of the operating rights and property of Paul A. Mavis (a noncarrier), 7101 E. Slauson Avenue, Los Angeles, CA 90022, and for acquisition by American Commercial Lines, Inc., and in turn by Richard C. Young, both of Post Office Box 1160, Owensboro, KY 42301, and Texas Gas Transmission Corp., and in turn by Robert O. Koch, both of 3800 Frederica Street, Owensboro, KY 42301, of control of such rights and property; in No. MC-F-11685, Paul A. Mavis, sought to purchase the operating rights of Robertson Truck-A-Ways, Inc., and these rights in turn will be transferred to Commercial Carriers, Inc. Applicants' attorneys: Charles Pieroni, 400 West Sample Street, South Bend, IN 46627, Jack C. Goodman, 39 South LaSalle Street, Chicago, IL 60603, and E. Phillips Malone, 3800 Frederica Street, Owensboro, KY 42301. Operating rights sought to be transferred: *New automobiles*, in initial movements, as a *common carrier* over irregular routes, from Long Beach, Calif., to points and places in Arizona, New Mexico, Nevada, Oregon, and Utah; *new automobiles and new trucks*, in initial movement, from Maywood, Calif., and points and places within 1 mile thereof, to points and places in Arizona, Nevada, and Oregon; *new automobiles*, in secondary movements, from points and places in California, on San Francisco Bay, to points and places in California, except Long Beach, San Pedro, and Wilmington; *new automobiles and new trucks*, in secondary movements, from Phoenix, Ariz., to Los Angeles, Calif.; *new automobiles, new trucks, and new chassis*, in initial movements, in truckaway service, from San Leandro, Calif., and all points and places within 1 mile of San Leandro except points and places in Oakland, Calif., to points and places in California, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming;

*New trucks, and new chassis*, in initial movements, in driveaway service, from the above-specified origin points and places to the destination points and places described immediately above; *new trucks*, in secondary movements, in driveaway and truckaway service, from San Leandro, Calif., and points and places within 20 miles thereof, to points



and places in the States named above; *new automobiles, new trucks, and new chassis*, in secondary movements, in truckaway service, from Salt Lake City, Utah, to San Leandro, Calif., and points and places within 20 miles thereof; *automobiles*, in initial movements, in truckaway service, from the site of the plant of the Chrysler Corp., located adjacent to Maywood, Calif., to points in the Los Angeles Harbor commercial zone, as defined by the Commission, and points in Idaho and Washington; *automobiles*, in secondary movements, in truckaway service, from points in the Los Angeles Harbor commercial zone, as defined by the Commission, to points in Los Angeles County, Calif.; *new automobiles*, in secondary movements, by the truckaway method, from Phoenix, Ariz., to a defined area in California; *automobiles, trucks, and buses*, (except those which have been repossessed, embezzled, stolen, or wrecked, and except trailers), in secondary movements, in truckaway service, from points in Nebraska to points in New Mexico, Arizona, and California, between points in New Mexico, Arizona, and that part of California south of the northern boundaries of San Luis Obispo, Kern, and San Bernardino Counties, Calif.; *automobiles*, (except used automobiles, and except repossessed, embezzled, stolen, or wrecked automobiles), in secondary movements, in truckaway services, from Sacramento, Calif., to points in Arizona and New Mexico, with restriction;

*New and used motor vehicles* (except trailers), in secondary movements, in truckaway service, between points in Arizona, New Mexico, Nevada, and Utah (except shipments from Phoenix, Ariz.), with restriction, from Phoenix, Ariz., to points in Arizona, New Mexico, Nevada, and Utah; *automobiles and trucks*, in initial movements, in truckaway service, from the plant site of Chrysler Corp., in Maywood, Calif., to Farwell, Tex., and points in New Mexico, from Maywood, Calif., to points in Montana; *motor vehicles* (except trailers, trucks, imported motor vehicles, and used motor vehicles which have been repossessed, embezzled, stolen, or damaged) in secondary movements, in truckaway service, between points in Nevada and points in that part of California south of the northern boundaries of San Luis Obispo, Kern, and San Bernardino Counties, Calif., with restriction. Vendee is authorized to operate as a *common carrier* in all of the States in the United States (except Alaska and Hawaii) and the District of Columbia. Application has not been filed for temporary authority under section 210a(b).

No. MC-F-11709. Authority sought for purchase by Laidlaw Transport Limited, 65 Guise Street, Hamilton 21, ON, Canada, of the operating rights of C. J. Weber Trucking, Inc., 540 Broad Street, Tonawanda, NY 14150, and for acquisition by Laidlaw Motorways Limited, and in turn by Michael G. DeGroote, both of 65 Guise Street, Hamilton 21, ON, Can-

ada, of control of such rights through the purchase. Applicant's attorneys: David A. Sutherland and Robert S. Burk, 2001 Massachusetts Avenue NW., Washington, DC 20036, and Timothy C. Leixner, 700 Liberty Bank Building, Buffalo, N.Y. 14202. Operating rights sought to be transferred: *General commodities*, excepting those among others, Classes A and B explosives, household goods and commodities in bulk, as a *common carrier* over irregular routes, between Tonawanda, Buffalo, and Niagara Falls, N.Y. Vendee is authorized to operate as a *common carrier* in New York, Illinois, Indiana, Ohio, Pennsylvania, Michigan, New Jersey, Maryland, and Delaware. Application has been filed for temporary authority under section 210a(b).

No. MC-F-11710. Authority sought for purchase by Western Lines, Inc., Post Office Box 1145, Houston, TX 77001, of the operating rights and property of J. M. Foster, Box 247, Route No. 6, Brookhaven, MS 39601, and for acquisition by Dixie Transport Co. of Texas, Box 5447, Beaumont, TX 77706, of control of such rights and property through the purchase. Applicants' attorney: Austin L. Hatchell, 1102 Perry Brooks Building, Austin, TX 78701. Operating rights sought to be transferred: *Lumber*, as a *common carrier* over irregular routes, between points in Alabama, Georgia, Louisiana, Mississippi, and Tennessee; *cross-ties*, from points in Mississippi, to points in Alabama and Louisiana. Vendee is authorized to operate as a *common carrier* in Texas, Arkansas, Louisiana, New Mexico, Oklahoma, Tennessee, Mississippi, Kansas, Missouri, North Dakota, Nebraska, South Dakota, and Colorado; and as a *contract carrier* in Arkansas, Kansas, Oklahoma, New Mexico, Texas, Louisiana, Missouri, Nebraska, and Iowa. Application has been filed for temporary authority under section 210a(b).

No. MC-F-11711. Authority sought for purchase by Barrett Mobile Home Transport, Inc., Post Office Box 919, Moorhead, MN 56560, of the operating rights of James M. Crain, doing business as Jim Crain Mobile Home Transport, 3223 Wade Hampton Boulevard, Taylors, SC 29687, and for acquisition by John C. Barrett, River Oaks, Moorhead, Minn., of control of such rights through the purchase. Applicants' attorney and representative: Robert G. Tessar, 1819-Fourth Avenue South, Moorhead, MN 56560, and James M. Crain, 3223 Wade Hampton Boulevard, Taylors, SC 29687. Operating rights sought to be transferred: *Mobile homes*, in secondary movements, in truckaway service, as a *common carrier* over irregular routes, between points in South Carolina, on the one hand, and, on the other, points in North Carolina, Tennessee, Georgia, Alabama, and Florida. Vendee is authorized to operate as a *common carrier* in all of the States in the United States except Hawaii. Application has not been filed

for temporary authority under section 210a(b).

By the Commission.

[SEAL]

ROBERT L. OSWALD,  
Secretary.

[FR Doc.72-19621 Filed 11-14-72; 8:50 am]

[Notice 149]

## MOTOR CARRIER TEMPORARY AUTHORITY APPLICATIONS

NOVEMBER 8, 1972.

The following are notices of filing of applications<sup>1</sup> for temporary authority under section 210a(a) of the Interstate Commerce Act provided for under the new rules of Ex Parte No. MC-67 (49 CFR Part 1131) published in the FEDERAL REGISTER, issue of April 27, 1965, effective July 1, 1965. These rules provide that protests to the granting of an application must be filed with the field official named in the FEDERAL REGISTER publication, within 15 calendar days after the date of notice of the filing of the application is published in the FEDERAL REGISTER. One copy of such protests must be served on the applicant, or its authorized representative, if any, and the protests must certify that such service has been made. The protests must be specific as to the service which such protestant can and will offer, and must consist of a signed original and six copies.

A copy of the application is on file, and can be examined at the Office of the Secretary, Interstate Commerce Commission, Washington, D.C., and also in field office to which protests are to be transmitted.

### MOTOR CARRIERS OF PROPERTY

No. MC 17051 (Sub-No. 8 TA), filed October 19, 1972. Applicant: BARNET'S EXPRESS, INC., 758 Lidgerwood Avenue, Post Office Box 111, Elizabethport Station, Mailing: 07207, Elizabeth, NJ 07202. Applicant's representative: George A. Olsen, 69 Tonnele Avenue, Jersey City, NJ 07306. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Wearing apparel, equipment materials and supplies* used or useful in the manufacture and sale of wearing apparel for account of Excelled Sportswear, between Somerset, N.J., New York, N.Y., and Athens, Tenn., for 180 days. Supporting shipper: Excelled Sheepskin & Leather Coat Co., Inc., a division of U.S. Industries, Inc., 55 School Avenue, Somerset, NJ 08873. Send protests to: District Supervisor Robert E. Johnston, Bureau of Operations, Interstate Commerce Commission, 970 Broad Street, Newark, NJ 07102.

<sup>1</sup> Except as otherwise specifically noted, each applicant states that there will be no significant effect on the quality of the human environment resulting from approval of its application.



No. MC 21866 (Sub-No. 76 TA), filed October 19, 1972. Applicant: WEST MOTOR FREIGHT, INC., 740 South Reading Avenue, Boyertown, PA 19512. Applicant's representative: Alan Kahn, Suite 1920, Two Penn Center Plaza, Philadelphia, PA 19102. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *New furniture*, from the facilities of Knoll International, Inc., at or near East Greenville and Souderton, Pa., to points in the contiguous United States west of the western boundaries of Minnesota, Iowa, Missouri, Arkansas, and Texas, for 180 days. Supporting shipper: Knoll International, Inc., Water Street, Post Office Box 157, East Greenville, Pa. 18041. Attention: Earl H. Schappell, Manager, Physical Distribution. Send protests to: Ross A. Davis, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 1518 Walnut Street, Room 1600, Philadelphia, PA 19102.

No. MC 29120 (Sub-No. 145 TA), filed October 13, 1972. Applicant: ALL-AMERICAN TRANSPORT, INC., 1500 Industrial Avenue, Post Office Box 769 (57101), Sioux Falls, SD 57104. Applicant's representative: David L. Lewis (same address as above). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *General commodities*, except those of unusual value, classes A and B explosives, household goods as defined by the Commission, commodities in bulk, commodities requiring special equipment, and those injurious or contaminating to other lading, from warehouse facilities of Target Stores, Inc., located at Fridley, Minn., to Des Moines, Bettendorf, Clinton, Cedar Rapids, Ottumwa, and Ames, Iowa, and Moline, Ill., for 180 days. Supporting shipper: Target Stores, Inc., 7120 Highway 65 Northeast, Fridley, MN 55432, Jerome C. Simcoe, Distribution Manager. Send protests to: J. L. Hammond, District Supervisor, Interstate Commerce Commission, Bureau of Operations, Room 369, Federal Building, Pierre, S. Dak. 57501.

No. MC 110563 (Sub-No. 91 TA), filed October 18, 1972. Applicant: COLDWAY FOOD EXPRESS, INC., 113 North Ohio Avenue, Post Office Box 747, Ohio Building, Sidney, OH 45365. Applicant's representative: John L. Maurer (same address as above). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Meats, meat products, meat byproducts, and articles distributed by meat packinghouses*, as described in sections A and C of Appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766 (except hides and commodities in bulk), from Scottsbluff-Gering, Nebr., to points in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia, West Virginia, and the District of Columbia, for 180 days. Supporting shipper: Swift

Fresh Meats Co., Division of Swift & Co., 115 West Jackson Boulevard, Chicago, IL 60604. Send protests to: District Supervisor Keith D. Warner, Interstate Commerce Commission, Bureau of Operations, Room 313, Federal Office Building, 234 Summit Street, Toledo, OH 43604.

No. MC 115935 (Sub-No. 4 TA), filed October 18, 1972. Applicant: EXPLOSIVES TRANSPORTS, INC., 2701 South Prospect, Post Office Box 94787, Oklahoma City, OK 73109. Applicant's representative: Goldie E. Skaggs (same address as above). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Classes A and B explosives*, from the Naval Ammunition Depot, Crane, Ind., to Naval Weapons Station, Concord, Calif., and Naval Ammunition Depot, Bangor, Wash., for 180 days. Supporting shipper: Curtis L. Wagner, Jr., Chief Regulatory Law Office, Department of the Army, Office of the Judge Advocate General, Washington, D.C. 20310. Send protests to: C. L. Phillips, District Supervisor, Interstate Commerce Commission, Bureau of Operations, Room 240, Old Post Office Building, 215 Northwest Third, Oklahoma City, OK 73102.

No. MC 117119 (Sub-No. 466 TA), filed October 20, 1972. Applicant: WILLIS SHAW FROZEN EXPRESS, INC., Post Office Box 188, Elm Springs, AR 72728. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Fabricated fireplace logs*, from Orange, Va., to points in Minnesota, for 180 days. Supporting shipper: Husky Industries, Inc., 4040 Louisiana Avenue, Denver, CO 80222. Send protests to: District Supervisor William H. Land, Jr., Interstate Commerce Commission, Bureau of Operations, 2519 Federal Office Building, 700 West Capitol, Little Rock, AR 72201.

No. MC 119639 (Sub-No. 6 TA), filed October 19, 1972. Applicant: INCO EXPRESS, INC. (Washington corporation), 2201 Sixth Avenue South, Seattle, WA 98134. Applicant's representative: Joseph O. Earp, 411 Lyon Building, Seattle, WA 98104. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Cloth or fabric coated with plastic or liquid plastic*, from points in Orange County, Calif., to the boundary line between the United States and Canada at or near Blaine and Sumas, Wash., for 180 days. Supporting shipper: Fiberite West Coast Corp., 645 North Cypress, Post Office Box 738, Orange, CA 92669. Send protests to: John M. Hall, District Supervisor, Bureau of Operations, Interstate Commerce Commission, 6049 Federal Office Building, Seattle, Wash. 98104.

No. MC 124078 (Sub-No. 531 TA), filed October 19, 1972. Applicant: SCHWERTMAN TRUCKING CO. (a corporation) 611 South 28th Street, Milwaukee, WI 53215. Applicant's representative: Rich-

ard H. Prevette (same address as above). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Fly ash*, from Glasgow, W. Va., to points in North Carolina and Tennessee, for 180 days. Supporting shipper: Appalachian Power Co., Post Office Box 1986, Charleston, WV 25327 (Ronald E. Morrison, Ash Research, Sales and Development Engineer). Send protests to: District Supervisor John E. Ryden, Bureau of Operations, Interstate Commerce Commission, 135 West Wells Street, Room 807, Milwaukee, WI 53203.

No. MC 133968 (Sub-No. 3 TA), filed October 17, 1972. Applicant: WATERFORD EXCAVATING CO., INC., 622 North Cass Street, Suite 411, Post Office Box 344, 53201, Milwaukee, WI 53202. Applicant's representative: John Conlan (same address as above). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Salt*, in bulk, in dump vehicles, from Nebraska City, Nebr., to points in Iowa, for 180 days. Supporting shipper: Diamond Crystal Salt Co., St. Clair, Mich. 48079 (James J. Sheehan, Assistant Traffic Manager). Send protests to: District Supervisor John E. Ryden, Interstate Commerce Commission, Bureau of Operations, 135 West Wells Street, Room 807, Milwaukee, WI 53203.

No. MC 138111 (Sub-No. 1 TA), filed October 19, 1972. Applicant: BARRETT'S TRANSFER, INC., Post Office Box 206, Renton, WA 98055. Applicant's representative: Jack R. Davis, 1100 IBM Building, Seattle, WA 98101. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Wood cellulose, straw, fertilizer, grass seed, asphalt emulsion and machinery, equipment and supplies used in the application of erosion control material*, between points in Washington, Oregon, Idaho, Montana, and California, for 180 days. Supporting shipper: Environmental Erosion Control, 906-Fourth Street, NW, Puyallup, WA 98371. Send protests to: John M. Hall, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 6049 Federal Office Building, Seattle, WA 98104.

By the Commission.

[SEAL] ROBERT L. OSWALD,  
Secretary.

[FR Doc.72-19623 Filed 11-14-72; 8:51 am]

## NOTICE OF FILING OF MOTOR CARRIER INTRASTATE APPLICATIONS

NOVEMBER 10, 1972.

The following applications for motor common carrier authority to operate in intrastate commerce seek concurrent motor carrier authorization in interstate or foreign commerce within the limits of the intrastate authority sought, pursuant to section 206(a)(6) of the Interstate Commerce Act, as amended October 15, 1962. These applications are governed by Special Rule 1.245 of the Commission's rules of practice, published in



the **FEDERAL REGISTER**, issue of April 11, 1963, page 3533, which provides, among other things, that protests and requests for information concerning the time and place of State Commission hearings or other proceedings, any subsequent changes therein, any other related matters shall be directed to the State Commission with which the application is filed and shall not be addressed to or filed with the Interstate Commerce Commission.

Montana Docket No. (Unknown) (Amendment), filed September 27, 1972, published in the **FEDERAL REGISTER** issue of October 12, 1972, amended October 31, 1972, and republished as amended this issue. Applicant: Big Sky Distributing Co., Route 1, Box 218-A, Sidney, MT 59270. Applicant's representative: John Berger (same address as applicant). Certificate of public convenience and necessity sought to operate a freight service as follows: Transportation of posts, lumber, and processed feed in intrastate commerce between points and places in Sheridan, Roosevelt, Daniels, Valley, Garfield, Phillips, Richland, and Dawson Counties. Both intrastate and interstate authority sought. Hearing: Date, time, and place not shown. Requests for procedural information including the time for filing protests concerning this application should be addressed to the Public Service Commission, State of Montana, 1227 Eleventh Avenue, Helena, MT 59601, and should not be directed to the Interstate Commerce Commission. The purpose of this amended notice of filing is to correct the original publication.

Iowa Docket No. H-5083, filed September 6, 1972. Applicant: PRANGE, INC., 1100 Highway, Pleasantville, IA. Applicant's representative: Robert R. Rydell, 900 Savings and Loan Building, Des Moines, IA 50309. Certificate of public convenience and necessity sought to operate a freight service as follows: Transportation of *General commodities*. Between: (A) Des Moines and Indianola, except for transportation of freight between Des Moines, Indianola, and points intermediate thereto, (B) Ivy, Prairie City, Monroe, Otley, and Pella and (C) Carlisle, Pleasantville, Knoxville, Attica, Marysville, Hamilton, Bussey, Lovilia, Hagerty except locally between Des Moines, Pleasantville, and points intermediate thereto. Both intrastate and interstate authority sought. Hearing: Date, time, and place, none required. Requests for procedural information including the time for filing protests concerning this application should be addressed to the Iowa State Commerce Commission, State Capitol, Des Moines, Iowa 50319 and should not be directed to the Interstate Commerce Commission.

Tennessee Docket No. MC 5312 (Sub-No. 2), filed November 2, 1972. Applicant: S & D TRUCKING COMPANY, INC., Cherry Street, Dyersburg, Tenn. Applicant's representative: Barret Ashley, 322 Church Avenue, Post Office Box H, Dyersburg, TN 38024. Certificate of public convenience and necessity sought to operate a freight service as follows: Transportation of *General commodities*, except household goods, explosives, and commodities requiring special equipment, between Dyersburg and Trenton, to be used in conjunction with applicant's present authority and to remove the restrictions on the present authority under Certificate No. MC 5312 so as to allow interchange at Dyersburg. From Dyersburg, Tenn., to Trenton, Tenn., serving all intermediate points over U.S. Highway 51 to Newbern, over State Highway No. 77 from Newbern to Dyer and over State Highway 45-W from Dyer to Trenton and return over the same route with alternate authority from Dyersburg and Trenton over State Highway 104 and return over the same route serving all intermediate points, with authority to interchange at Trenton and all intermediate points. Applicant seeks co-extensive interstate authority. Both intrastate and interstate authority sought.

Hearing: December 11, 1972 at the Commission's Court Room, C-1 Cordell Hull Building, Nashville, Tenn., at 9:30 a.m. Requests for procedural information including the time for filing protests concerning this application should be addressed to the Tennessee Public Service Commission, Cordell Hull Building, Nashville, Tenn. 37219 and should not be directed to the Interstate Commerce Commission.

Virginia Docket No. CC-7132, filed September 15, 1972. Applicant: GROOME TRANSPORTATION, INC., Richard E. Byrd International Airport, Sandston, Va. 23150. Applicant's representative: John J. Wicker, Jr., % Wicker, Goodin & Duling, 706 Mutual Building, Richmond, VA 23219. Certificate of public convenience and necessity sought to operate a freight service as follows: Transportation of passengers (limousine type service, 1-16 pass.), *baggage, mail, and express*, having a prior or subsequent journey by aircraft. The routes used are used as follows: Start Byrd Airport, Sandston, Va., Krouse Route No. U.S. 60 to Airport Access Road to I64 West to U.S. 33, East (Staples Mill Road) U.S. Route 250 West (Broad St.) to I64 East to I95 North to George Washington Memorial Parkway to Washington National Airport to George Washington Memorial Parkway to I495 South to Dulles Airport Access Highway to Dulles International Airport, Dulles Airport Access Highway to I495 South to I95 South to I64 West to U.S. 33 East (Staples Mill Road) to U.S. 250 West (Broad St.) to

I64 East to Airport Access Road to U.S. 60 Krouse Road to Byrd Airport. Both intrastate and interstate authority sought.

Hearing: December 18, 1972, 10 a.m., Courtroom, State Corporation Commission, Blanton Building, Richmond, Va. Request for procedural information including the time for protests concerning this application should be addressed to the Commonwealth of Virginia, State Corporation Commission, Box 1197, Richmond, VA 23209 and should not be directed to the Interstate Commerce Commission.

Florida Docket No. 72614-CCT, filed November 2, 1972. Applicant: TROPICAL DISTRIBUTION INTERNATIONAL, INC., 1201 Northeast 45th Street, Oakland Park, FL 33308. Applicant's representative: Richard B. Austin, 5720 Southwest 17th Street, Miami, FL 33155. Certificate of public convenience and necessity sought to operate a freight service as follows: Transportation of *Motor vehicle parts, components and accessories* over irregular routes and schedules from, to, and between all points and places in Dade, Broward, Palm Beach, Monroe, Lee, and Collier Counties, Fla., and the City of Clewiston, Hendry County, Fla., and its commercial zone. Both intrastate and interstate authority sought.

Hearing: Date, time, and place unknown. Requests for procedural information including the time for filing protests concerning this application should be addressed to the Florida Public Service Commission, 700 South Adams Street, Tallahassee, FL 32304 and should not be directed to the Interstate Commerce Commission.

By the Commission.

[SEAL] ROBERT L. OSWALD,  
Secretary.

[FR Doc.72-19619 Filed 11-14-72; 8:50 am]

[No. MC-C-7599]

#### PETITION OF TRAVENOL LABORATORIES, INC.

Petition Regarding Investment, Protective Service, Intervenor Solution; Extension of Time for Filing Comments

NOVEMBER 6, 1972.

At the requests of the National Small Shipments Traffic Conference and of the Drug and Toilet Preparation Conference the time for filing initial statements in the above-entitled proceeding has been extended from November 6, 1972, to November 20, 1972, and reply statements are now due December 11, 1972.

ROBERT L. OSWALD,  
Secretary.

[FR Doc.72-19624 Filed 11-14-72; 8:51 am]



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# **federal register**

WEDNESDAY, NOVEMBER 15, 1972  
WASHINGTON, D.C.

Volume 37 ■ Number 221

PART II



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## **ENVIRONMENTAL PROTECTION AGENCY**



### **NEW MOTOR VEHICLES AND NEW MOTOR VEHICLE ENGINES**

**Control of Air Pollution**



# Title 40—PROTECTION OF ENVIRONMENT

## Chapter I—Environmental Protection Agency

### PART 85—CONTROL OF AIR POLLUTION FROM NEW MOTOR VEHICLES AND NEW MOTOR VEHICLE ENGINES

To facilitate the use of the motor vehicle regulations, and to eliminate confusion over the applicability of certain provisions to certain model years, all regulations applicable to new motor vehicles and new motor vehicle engines are herein republished in a new format.

Each subpart contains all the regulations applicable to a certain type of motor vehicle or motor vehicle engine, e.g., gasoline-fueled heavy duty engines. Within each subpart, general provisions are listed first, followed by regulations applicable to each successive model year. This recompilation begins with the 1973 model year, since the certification process for the 1972 model year is largely completed. Regulations applicable to the 1972 model year appear at 45 CFR Part 1201 (Supp. 1971), as amended at 36 F.R. 5342 (March 20, 1971) and at 36 F.R. 16905 (August 26, 1971).

The only substantive change contained in these regulations makes the definition of "model year", which the July 2, 1971, edition of the FEDERAL REGISTER (36 F.R. 12652) made applicable to the 1975 model year, applicable to the 1973 and 1974 model years as well. This change was prescribed by section 202 of the Clean Air Amendments of 1970 (Public Law 91-604), but was inadvertently omitted in prior publications.

Dated: November 9, 1972.

WILLIAM D. RUCKELSHAUS,  
Administrator.

#### Subpart A—Emission Regulations for New Gasoline-Fueled Light Duty Vehicles

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**AUTHORITY:** The provisions of this Part 85 issued under sections 202, 206, and 301(a) of the Clean Air Act, as amended (42 U.S.C. 1857f-1, 1857f-5, and 1857g(a)).

**Subpart A—Emission Regulations for New Gasoline-Fueled Light Duty Vehicles**

**§ 85.001 General applicability.**

(a) For the 1973 and 1974 model years, the provisions of this subpart are applicable to new gasoline-fueled light duty motor vehicles, except motorcycles and vehicles with an engine displacement of less than 50 cubic inches.

(b) For 1975 and later model years, the provisions of this subpart are applicable to new gasoline-fueled light duty motor vehicles, except motorcycles.

**§ 85.002 Definitions.**

(a) As used in this subpart, all terms not defined herein shall have the meaning given them in the Act:

(1) "Act" means Part A of title II of the Clean Air Act, 42 U.S.C. 1857 f-1 through f-7, as amended by Public Law 91-604.

(2) "Administrator" means the Administrator of the Environmental Protection Agency or his authorized representative.

(3) "Model year" means the manufacturer's annual production period (as determined by the Administrator) which includes January 1 of such calendar year: *Provided*, That if the manufacturer has no annual production period,



the term "model year" shall mean the calendar year.

(4) "Gross vehicle weight" means the manufacturer's gross weight rating for the individual vehicle.

(5) "Light duty vehicle" means any motor vehicle either designed primarily for transportation of property and rated at 6,000 pounds GVW or less or designed primarily for transportation of persons and having a capacity of 12 persons or less.

(6) "Off-road utility vehicle" means a light duty vehicle which incorporates special features for off-road operation such as four-wheel drive.

(7) "Motorcycle" means any light duty vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three wheels (including any tricycle arrangement) in contact with the ground and weighing less than 1,500 pounds.

(8) "Vehicle curb weight" means the actual or the manufacturer's estimated weight of the vehicle in operational status with all standard equipment, and weight of fuel at nominal tank capacity, and the weight of optional equipment computed in accordance with § 85.073-5(g).

(9) "Loaded vehicle weight" means the vehicle curb weight of a light duty vehicle plus 300 pounds.

(10) "System" includes any motor vehicle engine modification which controls or causes the reduction of substances emitted from motor vehicles.

(11) "Engine family" means the basic classification unit of a manufacturer's product line used for the purpose of test fleet selection and determined in accordance with § 85.073-5(a).

(12) "Engine-system combination" means an engine family-exhaust emission control system-fuel evaporative emission control system (where applicable) combination.

(13) "Fuel system" means the combination of fuel tank, fuel pump, fuel lines, and carburetor, or fuel injection components, and includes all fuel system vents and fuel evaporative emission control systems.

(14) "Crankcase emissions" means airborne substances emitted to the atmosphere from any portion of the engine crankcase ventilation or lubrication systems.

(15) "Exhaust emissions" means substances emitted to the atmosphere from any opening downstream from the exhaust port of a motor vehicle engine.

(16) "Fuel evaporative emissions" means vaporized fuel emitted into the atmosphere from the fuel system of a motor vehicle.

(17) "Hot soak loss" means fuel evaporative emissions during the 1-hour hot soak period which begins immediately after the engine is turned off.

(18) "Diurnal breathing loss" means fuel evaporative emissions as a result of the daily range in temperature to which the fuel system is exposed.

(19) "Running loss" means fuel evaporative emissions resulting from an average trip in an urban area or the simulation of such a trip.

(20) "Tank fuel volume" means the volume of fuel in the fuel tank, prescribed to be 40 percent of nominal tank capacity rounded to the nearest whole U.S. gallon.

(21) Zero (0) miles means that point after initial engine starting (not to exceed 10 miles of vehicle operation) at which adjustments are completed.

(22) "Calibrating gas" means a gas of known concentration which is used to establish the response curve of an analyzer.

(23) "Span gas" means a gas of known concentration which is used routinely to set the output level of an analyzer.

(24) "Oxides of nitrogen" means the sum of the nitric oxide and nitrogen dioxide contained in a gas sample as if the nitric oxide were in the form of nitrogen dioxide.

(25) "Useful life" means a period of use of 5 years or 50,000 miles, whichever first occurs.

#### § 85.003 Abbreviations.

The abbreviations used in this subpart have the following meanings in both capital and lowercase:

Accel.—Acceleration.  
ASTM—American Society for Testing and Materials.  
C.—Centigrade.  
C.f.h.—Cubic feet per hour.  
CO<sub>2</sub>—Carbon dioxide.  
CO—Carbon monoxide.  
Conc.—Concentration.  
C.f.m.—Cubic feet per minute.  
Cu. in.—Cubic inch(es).  
Decel.—Deceleration.  
EP—End point.  
Evap.—Evaporated.  
F.—Fahrenheit.  
Gal.—U.S. gallon(s).  
Gm.—Gram(s).  
GVW—Gross Vehicle Weight.  
HC—Hydrocarbon(s).  
Hg—Mercury.  
Hi.—High.  
HP—Horsepower.  
IBP—Initial boiling point.  
ID—Internal diameter.  
Lb.—Pound(s).  
Lb.-ft.—Pound-feet.  
Min.—Minute(s).  
Ml.—Milliliter(s).  
M.p.h.—Miles per hour.  
Mm.—Millimeter(s).  
Mv.—Millivolt(s).  
N<sub>2</sub>—Nitrogen.  
NO—Nitric oxide.  
NO<sub>2</sub>—Nitrogen dioxide.  
NO<sub>x</sub>—Oxides of nitrogen.  
No.—Number.  
Pb—Lead.  
P.p.m.—Parts per million by volume.  
P.s.i.—Pounds per square inch.  
P.s.i.g.—Pounds per square inch gauge.  
R.—Rankine.  
R.p.m.—Revolutions per minute.  
RVP—Reid vapor pressure.  
S.A.E.—Society of Automotive Engineers.  
Sec.—Second(s).  
Sp.—Speed.  
SS—Stainless steel.  
TEL—Tetraethyl lead.  
TML—Tetramethyl lead.  
V.—Volts.  
Vs.—Versus.  
WOT—Wide open throttle.  
Wt.—Weight.  
"—Feet.  
"—Inches.  
"—Degrees.  
%—Percent.

#### § 85.004 General standards: increase in emissions; unsafe conditions.

(a) (1) Every new motor vehicle manufactured for sale, sold, offered for sale, introduced or delivered for introduction into commerce, or imported into the United States for sale or resale which is subject to any of the standards prescribed in this subpart shall be covered by a certificate of conformity issued pursuant to sections 85.073-2 through 85.073-4 and 85.073-29 through 85.073-34 of this subpart.

(b) (1) Any system installed on or incorporated in a new motor vehicle to enable such vehicle to conform to standards imposed by this subpart:

(i) Shall not in its operation or function cause the emission into the ambient air of any noxious or toxic substance that would not be emitted in the operation of such vehicle without such system, except as specifically permitted by regulation; and

(ii) Shall not in its operation, function, or malfunction result in any unsafe condition endangering the motor vehicle, its occupants, or persons or property in close proximity to the vehicle.

(2) Every manufacturer of new motor vehicles subject to any of the standards imposed by this subpart shall, prior to taking any of the actions specified in section 203(a) (1) of the Act, test or cause to be tested motor vehicles in accordance with good engineering practice to ascertain that such test vehicles will meet the requirements of this section for the useful life of the vehicle.

#### § 85.005 Hearings on certification.

(a) (1) After granting a request for a hearing under § 85.073-30, the Administrator will designate a Presiding Officer for the hearing.

(2) The General Counsel will represent the Environmental Protection Agency in any hearing under this section.

(3) If a time and place for the hearing have not been fixed by the Administrator under § 85.073-30, the hearing shall be held as soon as practicable at a time and place fixed by the Administrator or by the Presiding Officer.

(b) (1) Upon his appointment pursuant to paragraph (a) of this section, the Presiding Officer will establish a hearing file. The file shall consist of the notice issued by the Administrator under § 85.073-30, together with any accompanying material, the request for a hearing and the supporting data submitted therewith and all documents relating to the request for certification, including the application for certification and all documents submitted therewith, and correspondence and other data material to the hearing.

(2) The appeal file will be available for inspection by the applicant at the office of the Presiding Officer.

(c) An applicant may appear in person, or may be represented by counsel or by any other duly authorized representative.

(d) (1) The Presiding Officer upon the request of any party, or in his discretion, may arrange for a prehearing



conference at a time and place specified by him to consider the following:

- (i) Simplification of the issues;
- (ii) Stipulations, admissions of fact, and the introduction of documents;
- (iii) Limitation of the number of expert witnesses;
- (iv) Possibility of agreement disposing of all or any of the issues in dispute;
- (v) Such other matters as may aid in the disposition of the hearing, including such additional tests as may be agreed upon by the parties.

(2) The results of the conference shall be reduced to writing by the Presiding Officer and made part of the record.

(e) (1) Hearings shall be conducted by the Presiding Officer in an informal but orderly and expeditious manner. The parties may offer oral or written evidence, subject to the exclusion by the Presiding Officer of irrelevant, immaterial, and repetitious evidence.

(2) Witnesses will not be required to testify under oath. However, the Presiding Officer shall call to the attention of witnesses that their statements may be subject to the provisions of title 18 U.S.C. 1001 which imposes penalties for knowingly making false statements or representations, or using false documents in any matter within the jurisdiction of any department or agency of the United States.

(3) Any witness may be examined or cross-examined by the Presiding Officer, the parties, or their representatives.

(4) Hearings shall be reported verbatim. Copies of transcripts of proceedings may be purchased by the applicant from the reporter.

(5) All written statements, charts, tabulations, and similar data offered in evidence at the hearing shall, upon a showing satisfactory to the Presiding Officer of their authenticity, relevancy, and materiality, be received in evidence and shall constitute a part of the record.

(6) Oral argument may be permitted in the discretion of the Presiding Officer and shall be reported as part of the record unless otherwise ordered by him.

(f) (1) The Presiding Officer shall make an initial decision which shall include written findings and conclusions and the reasons or basis therefor on all the material issues of fact, law, or discretion presented on the record. The findings, conclusions, and written decision shall be provided to the parties and made a part of the record. The initial decision shall become the decision of the Administrator without further proceedings unless there is an appeal to the Administrator or motion for review by the Administrator within 20 days of the date the initial decision was filed.

(2) On appeal from or review of the initial decision the Administrator shall have all the powers which he would have in making the initial decision including the discretion to require or allow briefs, oral argument, the taking of additional evidence or the remanding to the Presiding Officer for additional proceedings. The decision by the Administrator shall include written findings and conclusions and the reasons or basis therefor on all

the material issues of fact, law, or discretion presented on the appeal or considered in the review.

**§ 85.006 Maintenance of records; submittal of information; right of entry.**

(a) The manufacturer of any new motor vehicle subject to any of the standards prescribed in this subpart shall establish and maintain the following adequately organized and indexed records:

(1) Identification and description of all vehicles for which testing is required under this subpart.

(2) A description of all emission control systems which are installed on or incorporated in each vehicle.

(3) A description of the procedures used to test such vehicles.

(4) Test data on each emission data vehicle which will show its emissions at 0 and 4,000 miles.

(5) Test data on each durability vehicle which will show the performance of the systems installed on or incorporated in the vehicle during extended mileage as well as a record of all pertinent maintenance performed on the vehicle.

(b) The manufacturer of any new motor vehicle subject to any of the standards prescribed in this subpart shall submit to the Administrator at the time of issuance by the manufacturer copies of all instructions or explanations regarding the use, repair, adjustment, maintenance, or testing of such vehicle relevant to the control of crankcase, exhaust, or evaporative emissions, issued by the manufacturer for use by other manufacturers, assembly plants, distributors, dealers, and ultimate purchasers: *Provided*, That any material not translated into the English language need not be submitted unless specifically requested by the Administrator.

(c) The manufacturer of any new motor vehicle subject to any of the standards prescribed in this subpart shall permit officers or employees duly designated by the Administrator, upon presenting appropriate credentials and a written notice to the manufacturer:

(1) To enter, at reasonable times, any premises used during the certification procedures for purposes of monitoring tests and mileage accumulation procedures, observing maintenance procedures, and verifying correlation or calibration of test equipment, or

(2) To inspect, at reasonable times, records, files, and papers compiled by such manufacturer in accordance with paragraph (a) of this section.

A separate notice shall be given for each such inspection, but a separate notice shall not be required for each entry made during the period covered by the inspection. Each such inspection shall be commenced and completed with reasonable promptness.

**§ 85.073-1 Emission standards for 1973 model year vehicles.**

(a) (1) Exhaust emissions from 1973 model year vehicles shall not exceed:

(i) *Hydrocarbons*. 3.4 grams per vehicle mile.

(ii) *Carbon monoxide*. 39.0 grams per vehicle mile.

(iii) *Oxides of nitrogen*. 3.0 grams per vehicle mile.

(2) The standards set forth in paragraph (a) (1) of this section refer to the exhaust emitted over a driving schedule as set forth in § 85.073-9 through 85.073-27 and measured and calculated in accordance with those procedures.

(b) (1) Fuel evaporative emissions shall not exceed:

(i) *Hydrocarbons*. 2 grams per test.

(2) The standard set forth in paragraph (b) (1) of this section refers to a composite sample of the fuel evaporative emissions collected under the conditions set forth in § 85.073-9 through 85.073-27 and measured in accordance with those procedures.

(c) No crankcase emissions shall be discharged into the ambient atmosphere from any new motor vehicle subject to this subpart.

(d) Every manufacturer of new motor vehicles subject to the standards prescribed in this subpart shall, prior to taking any of the actions specified in section 203(a) (1) of the Act, test or cause to be tested motor vehicles in accordance with test procedures contained in § 85.073-9 through § 85.073-27 to ascertain that such test vehicles meet the requirements of paragraphs (a), (b), and (c) of this section, as applicable.

**§ 85.073-2 Application for certification.**

(a) An application for a certificate of conformity to the regulations applicable to any new motor vehicle shall be made to the Administrator by the manufacturer.

(b) The application shall be in writing, signed by an authorized representative of the manufacturer, and shall include the following:

(1) Identification and description of the vehicles covered by the application and a description of their emission control systems.

(2) Projected U.S. sales data sufficient to enable the Administrator to select a test fleet representative of the vehicles for which certification is requested.

(3) A description of the test equipment and fuel proposed to be used.

(4) A description of the proposed mileage accumulation procedure for durability testing.

(5) A statement of recommended maintenance and procedures necessary to assure that the vehicles covered by a certificate of conformity in operation conform to the regulations, and a description of the program for training of personnel for such maintenance, and the equipment required.

(6) At the option of the manufacturer, the proposed composition of the emission data and durability data test fleet.

**§ 85.073-3 Approval of procedure and equipment; test fleet selections.**

Based upon the information provided in the application for certification, and any other information the Administrator may require, the Administrator will approve or disapprove in whole or in part



the mileage accumulation procedure and equipment and fuel proposed by the manufacturer, and notify him in writing of such determination. Where any part of a proposal is disapproved, such notification will specify the reasons for disapproval. The Administrator will select a test fleet in accordance with § 85.073-5.

#### § 85.073-4 Required data.

The manufacturer shall perform the tests required by the applicable test procedures, and submit to the Administrator the following information:

(a) Durability data on such vehicles tested in accordance with the applicable test procedures of this subpart, and in such numbers as therein specified, which will show the performance of the systems installed on or incorporated in the vehicle for extended mileage, as well as a record of all pertinent maintenance performed on the test vehicles.

(b) Emission data on such vehicles tested in accordance with the applicable emission test procedures of this subpart and in such numbers as therein specified, which will show their emissions after 0 miles and 4,000 miles of operation.

(c) A description of tests performed to ascertain compliance with the general standards in § 85.073-1 and the data derived from such tests.

(d) A statement that the test vehicles with respect to which data are submitted have been tested in accordance with the applicable test procedures, that they meet the requirement of such tests, and that, on the basis of such tests, they conform to the requirements of the regulations in this subpart. If such statements cannot be made with respect to any vehicle tested, the vehicle shall be identified, and all pertinent test data relating thereto shall be supplied.

#### 85.073-5 Test vehicles.

(a) (1) The vehicles covered by the application for certification will be divided into groupings of vehicles whose engines are expected to have similar emission characteristics. Each group of engines with similar emission characteristics shall be defined as a separate engine family.

(2) To be classed in the same engine family, engines must be identical in all the following respects:

(i) The cylinder bore center to center dimensions.

(ii) The dimension from the centerline of the crankshaft to the centerline of the camshaft.

(iii) The dimension from the centerline of the crankshaft to the top of the cylinder block head face.

(iv) The cylinder block configuration (air-cooled or water-cooled; L-6, 90° V-8, etc.).

(v) The location of intake and exhaust valves and the valve sizes (within a 1/8-inch range on the valve head diameter).

(vi) The method of air aspiration.

(vii) The combustion cycle.

(3) Engines identical in all the respects listed in subparagraph (2) of this paragraph may be further divided into different engine families if the Admin-

istrator determines that they may be expected to have different emission characteristics. This determination will be based upon a consideration of the following features of each engine:

(i) The bore and stroke.

(ii) The surface to volume ratio of the nominally dimensioned cylinder at the top dead center position.

(iii) The intake manifold induction port size and configuration.

(iv) The exhaust manifold port size and configuration.

(v) The intake and exhaust valve sizes.

(vi) The fuel system.

(vii) The camshaft timing and ignition timing characteristics.

(4) Where engines are of a type which cannot be divided into engine families based upon the criteria listed in subparagraphs (2) and (3) of this paragraph, the Administrator will establish families for those engines based upon the features most related to their emission characteristics.

(b) Emission data vehicles:

(1) Vehicles will be chosen to be operated and tested for emission data based upon the engine family groupings. Within each engine family, the requirements of this paragraph must be met.

(2) Vehicles of each engine family will be divided into engine displacement-exhaust emission control system-evaporative emission control system combinations. A projected sales volume will be established for each combination for the 1973 model year. One vehicle of each combination will be selected in order of decreasing projected sales volume until 70 percent of the projected sales of a manufacturer's total production of vehicles of that engine family is represented, or until a maximum of four vehicles is selected. If any single combination represents over 70 percent, then two vehicles of that combination will be selected. The vehicle selected for each combination will be specified by the Administrator as to transmission type, fuel system and inertia weight class.

(3) The Administrator may select a maximum of four additional vehicles within each engine family based upon features indicating that they may have the highest emission levels of the vehicles in that engine family. In selecting these vehicles, the Administrator will consider such features as the emission control system combination, induction system characteristics, ignition system characteristics, fuel system, rated horsepower, rated torque, compression ratio, inertia weight class, transmission options and axle ratios.

(4) If the vehicles selected in accordance with subparagraphs (2) and (3) of this paragraph do not represent each engine-system combination, then one vehicle of each engine-system combination not represented will be selected by the Administrator. The vehicle selected shall be of the engine displacement with the largest projected sales volume of vehicles with the control system combination in the engine family and will be designated by the Administrator as to

transmission type, fuel system, and inertia weight class.

(c) Durability data vehicles:

(1) A durability data vehicle will be selected by the Administrator to represent each engine-system combination. The vehicle selected shall be of the engine displacement with the largest projected sales volume of vehicles with that control system combination in that engine family and will be designated by the Administrator as to transmission type, fuel system and inertia weight class.

(2) If an exhaust emission control system fuel evaporative emission control system combination is used in only one engine family, an additional vehicle using that combination in that family will be selected so that the durability data fleet shall contain at least two vehicles with each combination. The additional vehicle will be selected in the same manner as vehicles selected under subparagraph (1) of this paragraph.

(3) A manufacturer may elect to operate and test additional vehicles to represent any engine-system combination. The additional vehicles must be of the same engine displacement, transmission type, fuel system and inertia weight class as the vehicle selected for that engine-system combination in accordance with the provisions of subparagraph (1) of this paragraph. Notice of an intent to operate and test additional vehicles shall be given to the Administrator not later than 30 days following notification of the test fleet selection.

(d) For purposes of testing under § 85.073-7(g), the Administrator may require additional emission data vehicles and durability data vehicles identical in all material respects to vehicles selected in accordance with paragraphs (b) and (c) of this section: *Provided*, That the number of vehicles selected shall not increase the size of either the emission data fleet or the durability data fleet by more than 20 percent or one vehicle, whichever is greater.

(e) Any manufacturer whose projected sales of new motor vehicles subject to this subpart for the 1973 model year is less than 2,000 vehicles may request a reduction in the number of test vehicles determined in accordance with the foregoing provisions of this section. The Administrator may agree to such lesser number as he determines would meet the objectives of this procedure.

(f) In lieu of testing an emission data or durability data vehicle selected under paragraph (b) or (c) of this section, and submitting data therefor, a manufacturer may, with the prior written approval of the Administrator, submit data on a similar vehicle for which certification has previously been obtained.

(g) (1) Where it is expected that more than 33 percent of an engine family will be equipped with an optional item, the full estimated weight of that item shall be included in the curb weight computation for the entire engine family. Where it is expected that 33 percent or less of the vehicles in an engine family will be equipped with an item of optional equipment, no weight for that item



will be added in computing curb weight. Optional equipment weighing less than 3 pounds per item need not be considered.

(2) Where it is expected that more than 33 percent of an engine family will be equipped with an item of optional equipment that can reasonably be expected to influence exhaust or evaporative emissions, then such items of optional equipment shall actually be installed on all emission data and durability data vehicles for such engine family.

**§ 85.073-6 Maintenance.**

(a) (1) Maintenance on the engines and fuel systems of durability vehicles may be performed only under the following provisions:

(i) One major engine tuneup to manufacturer's specifications may be performed at 24,000 miles ( $\pm 250$  miles) of scheduled driving with the following exception: On a vehicle with an engine displacement of 150 cubic inches or less (or a rating of at least 1.20 maximum rated horsepower per cubic inch of displacement), major engine tuneups may be performed at 12,000, 24,000, and 36,000 miles ( $\pm 250$  miles) of scheduled driving. A major engine tuneup shall be restricted to the following:

- (a) Replace spark plugs.
- (b) Inspect ignition wiring and replace as required.
- (c) Replace distributor breaker points and condenser as required.
- (d) Lubricate distributor cam.
- (e) Check distributor advance and breaker point dwell angle and adjust as required.

(f) Check automatic choke for free operation and correct as required.

(g) Adjust carburetor idle speed and mixture.

(h) Adjust drive belt tension on engine accessories.

(i) Adjust valve lash if required.

(j) Check exhaust heat control valve for free operation.

(k) Check engine bolt torque and tighten as required.

(ii) Spark plugs may be changed if a persistent misfire is detected.

(iii) Normal vehicle lubrication services (engine and transmission oil change and oil filter, fuel filter, and air filter servicing) will be allowed at manufacturer's recommended intervals.

(iv) The crankcase emission control system may be serviced at 12,000-mile intervals ( $\pm 250$  miles) of scheduled driving.

(v) The fuel evaporative emission control system may be serviced at 12,000-mile intervals ( $\pm 250$  miles) of scheduled driving.

(vi) Readjustment of the engine choke mechanism or idle settings may be performed only if there is a problem of stalling at stops.

(vii) Leaks in the fuel system, engine lubrication system, and cooling system may be repaired.

(viii) Engine idle speed may be adjusted at the 4,000-mile test point.

(ix) Any other engine or fuel system maintenance or repairs will be allowed

only with the advance approval of the Administrator.

(2) Repairs to vehicle components of the durability data vehicle, other than the engine or fuel system, shall be performed only as a result of part failure or vehicle system malfunction.

(3) Allowable maintenance on emission data vehicles shall be limited to the adjustment of engine idle speed at the 4,000-mile test point, except that other maintenance or repairs may be allowed with the advance approval of the Administrator.

(4) Where the Administrator agrees under § 85.073-7 to a mileage accumulation of less than 50,000-miles for durability testing, he may modify the requirements of this paragraph.

(b) Complete emission tests (see §§ 85.073-10 through 85.073-27) shall be run before and after any vehicle maintenance which may reasonably be expected to affect emissions. These test data shall be supplied to the Administrator immediately after the tests, along with a complete record of all pertinent maintenance, including an engineering report of any malfunction diagnosis and the corrective action taken. In addition, all test data and maintenance reports shall be compiled and provided to the Administrator in accordance with § 85.073-4.

(c) If the Administrator determines that maintenance or repairs performed have resulted in a substantial change to the engine-system combination, the vehicle shall not be used as a durability data vehicle.

**§ 85.073-7 Mileage accumulation and emission measurements.**

The procedure for mileage accumulation will be the Durability Driving Schedule as specified in Appendix IV to this part. A modified procedure may also be used if approved in advance by the Administrator.

(a) Emission data vehicles: Each emission data vehicle shall be driven 4,000 miles with all emission control systems installed and operating. Emission tests shall be conducted at zero miles and 4,000 miles.

(b) Durability data vehicles: Each durability data vehicle shall be driven, with all emission control systems installed and operating, for 50,000 miles or such lesser distance as the Administrator may agree to as meeting the objectives of this procedure. Emission measurements from a cold start shall be made at zero miles and at each 4,000-mile interval.

(c) All tests required by this subpart to be conducted after 4,000 miles of driving or at any multiple of 4,000 miles may be conducted at any accumulated mileage within 250 miles of 4,000 miles or the appropriate multiple of 4,000 miles, respectively.

(d) The results of each emission test shall be supplied to the Administrator immediately after the test. Where a manufacturer conducts multiple tests at any test point or any tests between test points, data on these tests (including voided tests) shall be provided immediately to the Administrator. In addition,

all test data shall be compiled and provided to the Administrator in accordance with § 85.073-4.

(e) Whenever the manufacturer proposes to operate and test a vehicle which may be used for emission or durability data, he shall provide the zero mile test data to the Administrator and make the vehicle available for such testing under § 85.073-29 as the Administrator may require before beginning to accumulate mileage on the vehicle. Failure to comply with this requirement will invalidate all test data submitted for this vehicle.

(f) Once a manufacturer begins to operate an emission data or durability data vehicle, as indicated by compliance with paragraph (e) of this section, he shall continue to run the vehicle to 4,000 miles or 50,000 miles, respectively, and the data from the vehicle will be used in the calculations under § 85.073-28. Discontinuation of a vehicle shall be allowed only with the written consent of the Administrator.

(g) (1) The Administrator may elect to operate and test any test vehicle during all or any part of the mileage accumulation and testing procedure. In such cases, the manufacturer shall provide the vehicle(s) to the Administrator with all information necessary to conduct this testing.

(2) The test procedures in §§ 85.073-10 through 85.073-27 will be followed by the Administrator. The Administrator will test the vehicles at each test point. Maintenance may be performed by the manufacturer under such conditions as the Administrator may prescribe.

(3) The data developed by the Administrator for the engine-system combination shall be combined with any applicable data supplied by the manufacturer on other vehicles of that combination to determine the applicable deterioration factors for the combination. In the case of a significant discrepancy between data developed by the Administrator and that submitted by the manufacturer, the Administrator's data shall be used in the determination of deterioration factors.

**§ 85.073-8 Special test procedures.**

The Administrator may, on the basis of a written application therefor by a manufacturer, prescribe test procedures, other than those set forth in this subpart, for any motor vehicle which he determines is not susceptible to satisfactory testing by the procedures set forth herein.

**§ 85.073-9 Test procedures.**

The procedures described in this and subsequent sections will be the test program to determine the conformity of vehicles with the standards set forth in § 85.073-1.

(a) The test consists of prescribed sequences of fueling, parking, and operating conditions. The exhaust gases generated during vehicle operation are diluted with air and sampled continuously for subsequent analysis of specific components by prescribed analytical techniques. The fuel evaporative emissions are collected for subsequent weigh-



ing during both vehicle parking and operating events. The test applies to vehicles equipped with catalytic or direct-flame afterburners, induction system modifications, or other systems or to uncontrolled vehicles and engines.

(b) The exhaust emission test is designed to determine hydrocarbon, carbon monoxide and oxides of nitrogen mass emissions while simulating an average trip in an urban area of 7.5 miles from a cold start. The test consists of engine startup and vehicle operation on a chassis dynamometer through a specified driving schedule, as described in Appendix I to this part. A proportional part of the diluted exhaust emissions is collected continuously, for subsequent analysis, using a constant volume (variable dilution) sampler.

(c) The fuel evaporative emission test is designed to determine fuel hydrocarbon evaporative emissions to the atmosphere as a consequence of urban driving, and diurnal temperature fluctuations during parking. It is associated with a series of events representative of a motor vehicle's operation, which result in fuel vapor losses directly from the fuel tank and carburetor. Activated carbon traps are employed in collecting the vaporized fuel. The test procedure is specifically aimed at collecting and weighing:

(1) Diurnal breathing losses from the fuel tank and other parts of the fuel system when the fuel tank is subjected to a temperature increase representative of the diurnal range;

(2) Running losses from the fuel tank and carburetor resulting from a simulated trip from a cold start on a chassis dynamometer; and

(3) Hot soak losses from the fuel tank and carburetor which result when the vehicle is parked and the hot engine is turned off.

(d) All emission control systems installed on or incorporated in a new motor vehicle shall be functioning during all test procedures in this subpart.

#### § 85.073-10 Gasoline fuel specifications.

(a) Fuel having the following specifications, or substantially equivalent

Item	ASTM Designation	Regular	Premium
Pb. (organic), gm./U.S. gal.	D 526	2.1-3.2	2.1-3.2
Sulfur, wt. percent	D 1266	0.02-0.10	0.02-0.10
Hydrocarbon composition	D 1319		
Olefins, percent, max.		30	15
Aromatics, percent, max.		40	40
Saturates		Remainder	Remainder

#### § 85.073-11 Vehicle and engine preparation (fuel evaporative emissions).

(a) (1) Apply appropriate leak-proof fittings to all fuel system external vents to permit collection of effluent vapors from these vents during the course of the prescribed tests. Since the prescribed test requires the temporary plugging of the inlet pipe to the air cleaner, it will be necessary to install a probe for collecting the normal effluents from this source. Where antisurge/vent filler caps are employed on the fuel tank, plug off

specifications approved by the Administrator, shall be used in exhaust and evaporative emission testing. Where the Administrator determines that the vehicles represented by a test vehicle will be operated using fuels of a different lead content or octane rating than that prescribed in this paragraph, he may consent in writing to use of a fuel otherwise substantially equivalent to the following specifications but with a different lead content or octane rating.

Item	ASTM designation	Specifications
Octane, Research, min.	D 1556	100
Pb. (organic), gm./U.S. gal.	D 526	3.1-3.3
Distillation range	D 86	
10 percent point, ° F		75-95
50 percent point, ° F		130-155
90 percent point, ° F		200-230
EP, ° F (max.)		300-325
Sulfur, wt. percent, max.	D 1266	0.10
Phosphorus, theory		0.0
RVP, lb.	D 323	8.7-9.2
Hydrocarbon composition	D 1319	
Olefins, percent, max.		10
Aromatics, percent, max.		35
Saturates		Remainder

<sup>1</sup> For testing which is unrelated to fuel evaporative emission control, the specified range is: 8.0-9.2.

(b) Fuel having the following specifications, or substantially equivalent specifications approved by the Administrator, shall be used in mileage accumulation. The octane rating of the fuel used shall be in the range recommended by the vehicle or engine manufacturer. The Reid Vapor Pressure of the fuel used shall be characteristic of the seasonal motor fuel. Where the Administrator determines that the vehicles represented by a test vehicle will be operated using fuels of a different lead content than that prescribed in this paragraph, he may consent in writing to use of a fuel otherwise substantially equivalent to the following specifications but with a different lead content.

(c) The specifications of the fuel to be used under paragraph (b) of this section shall be reported in accordance with § 85.073-2(b) (3).

(2) The design and installation of the necessary fittings shall not disturb the normal function of the fuel system components or the normal pressure relationships in the system.

(b) (1) Inspect the fuel system carefully to insure the absence of any leaks to the atmosphere of either liquid or vapor which might affect the accuracy of the test or the performance of the control system. Corrective action, if any, shall be reported with the test results under § 85.073-4.

(2) Care should be exercised, in the application of any pressure tests, neither to purge nor load the evaporative emission control system.

(c) Prepare fuel tank for recording the temperature of the prescribed test fuel at its approximate midvolume.

(d) Provide additional fittings and adapters, as required to accommodate a fuel drain at the lowest point possible in the tank as installed on the vehicle.

#### § 85.073-12 Vehicle preconditioning (fuel evaporative emissions).

Vehicles to be tested for compliance with the fuel evaporative emissions standard of this subpart shall be preconditioned as follows:

(a) The test vehicle shall be operated under the conditions prescribed for mileage accumulation, § 85.073-7, for 1 hour immediately prior to the operations prescribed below.

(b) The fuel tank shall be drained and specified test fuel (§ 85.073-10(a)) added. The evaporative emission control system or device shall not be abnormally purged or loaded as a result of draining or fueling the tank.

(c) The test vehicle shall be placed on the dynamometer and operated over a simulated trip, according to the applicable requirements and procedures of § 85.073-14 through § 85.073-19 except that the engine need not be cold when starting the run on the dynamometer operation. During the run the ambient temperature shall be between 68° F. and 86° F.

(d) The engine and cooling fan shall be stopped upon completion of the dynamometer operation and the vehicle permitted to soak either on or off the dynamometer stand at an ambient temperature between 76° F. and 86° F. for a period of not less than 1 hour prior to the soak period prescribed in § 85.073-13 (a) (1).

#### § 85.073-13 Evaporative emission collection procedure.

The standard test procedure consists of three parts described below which shall be performed in sequence and without any interruption in the test conditions prescribed.

(a) *Diurnal breathing loss test.* (1) The test vehicle shall be allowed to "soak" in an area where the ambient temperature is maintained between 60° F. and 86° F. for a period of not less than 10 hours. (The vehicle preparation requirements of § 85.073-11 may be performed during this period.) It shall then be transferred to a soak area where the ambient temperature is maintained be-

the normal vent if it does not conveniently lend itself to the collection of vapors which emanate from it, and introduce a separate vent, with appropriate fitting, on the cap. Where the fuel tank vent line terminus is inaccessible, sever the line at a convenient point near the fuel tank and install the collection system in a closed circuit assembly with the severed ends. All fittings shall terminate in 1/8-inch ID tube sections for ready connection to the collection systems and shall be designed for minimum dead space.



tween 76° F. and 86° F. Upon admittance to the 76° F.-86° F. soak area, the prescribed fuel tank thermocouple shall be connected to the recorder and the fuel and ambient temperatures recorded at a chart speed of approximately 12 inches per hour (or equivalent record).

(2) The fuel tank of the prepared test vehicle, preconditioned according to § 85.073-12, shall be drained and recharged with the specified test fuel, § 85.073-10(a), to the prescribed "tank fuel volume," defined in § 85.002. The temperature of the fuel following the charge to the tank shall be 60° F.±2° F. Care should be exercised against abnormal loading of the evaporative emission control system or device as a result of fueling the tank.

(3) Immediately following the fuel charge to the tank, the exhaust pipe(s) and inlet pipe to the air cleaner shall be plugged and the prescribed vapor collection systems installed on all fuel system external vents. Multiple vents may be connected to a single collection trap provided that, where there is more than one external vent on a fuel system distinguishing between carburetor and tank vapors, separate collection systems shall be employed to trap the vapors from the separate sources. Every precaution shall be taken to minimize the lengths of the collection tubing employed and to avoid sharp bends across the entire system.

(4) Artificial means shall be employed to heat the fuel in the tank to 84° F.±2° F. The prescribed temperature of the fuel shall be achieved over a period of 60 minutes±10 minutes using a constant rate of heat input. After a minimum of 1 hour, following admittance to the 76° F.-86° F. soak area, the vehicle shall be moved onto the dynamometer stand for the subsequent part of the test. The fuel tank thermocouple may be temporarily disconnected to permit moving the test vehicle. Plugs shall be removed from the exhaust pipe(s) and inlet pipe to the air cleaner.

(b) *Running loss test.* (1) The vehicle shall be placed on the dynamometer and the fuel tank thermocouple reconnected. The fuel temperature and the ambient air temperature shall be recorded at a chart speed of approximately 12 inches per hour (or equivalent record).

(2) Where the only external vent(s) is located in the immediate vicinity of the carburetor air horn, such that any "running loss" emissions would be inducted into the engine, there is no requirement to collect any vapor losses during this part of the test and the vapor-loss measurement system shall be temporarily disconnected and clamped.

(3) The vehicle shall be operated on the dynamometer according to the requirements and procedures of § 85.073-14 through § 85.073-24. The engine and fan shall be turned off upon completion of the dynamometer run and the exhaust and air cleaner inlet pipes shall be replugged.

(4) Any vapor collection systems employed during this part of the test shall be left intact for their continued use during the following part. Any part of the vapor collection system disconnected

during this phase of the test shall be reconnected for the following phase.

(c) *Hot soak test.* Upon completion of the dynamometer run, the test vehicle shall be permitted to soak with hood down for a period of 1 hour at an ambient temperature between 76° F. and 86° F. This operation completes the test. The traps are disconnected and weighed according to § 84.073-21.

#### § 85.073-14 Dynamometer driving schedule.

(a) The dynamometer driving schedule to be followed consists of a non-repetitive series of idle, acceleration, cruise, and deceleration modes of various time sequences and rates. The driving schedule is defined by a smooth transition through the speed vs. time relationships listed in Appendix I. The time sequence begins upon starting the vehicle according to the startup procedure described in § 85.073-19.

(b) The speed tolerance at any given time on the dynamometer driving schedule prescribed in Appendix I or as printed on a driver's aid chart approved by the Administrator is defined by upper and lower limits. The upper limit is 2 m.p.h. higher than the highest point on the trace within 1 second of the given time. The lower limit is 2 m.p.h. lower than the lowest point on the trace within 1 second of the given time. Speed variations greater than the tolerances (such as occur when shifting manual transmission vehicles) are acceptable provided they occur for less than 2 seconds on any one occasion. Speeds lower than those prescribed are acceptable provided the vehicle is operated at maximum available power during such occurrences. Further, speed deviations from those prescribed due to stalling are acceptable provided the provisions of § 85.073-19(f) are adhered to.

#### § 85.073-15 Dynamometer procedure.

(a) The vehicle shall be tested from a cold start. Engine startup and operation over the driving schedule make a complete test run. Exhaust emissions are diluted with air to a constant volume and a portion is sampled continuously during the entire test run. The composite sample, collected in a bag, is analyzed for hydrocarbon, carbon monoxide, and oxides of nitrogen emissions. A parallel sample of the dilution air is similarly analyzed.

(b) During dynamometer operation, a fixed speed cooling fan shall be positioned so as to direct cooling air to the vehicle in an appropriate manner with the engine compartment cover open. The fan capacity shall normally not exceed 5,300 c.f.m. If, however, the manufacturer can show that during field operation the vehicle receives additional cooling, the fan capacity may be increased or additional fans used if approved in advance by the Administrator. In the case of vehicles with front engine compartments, the fan(s) shall be squarely positioned between 8 and 12 inches in front of the cooling air inlets (grill). In the case of vehicles with rear engine compartments (or if special designs make

the above impractical), the cooling fan(s) shall be placed in a position to provide sufficient air to maintain engine cooling.

(c) The vehicle shall be nearly level when tested in order to prevent abnormal fuel distribution.

(d) Flywheels, electrical or other means of simulating inertia as shown in the following table shall be used. If the equivalent inertia specified is not available on the dynamometer being used, the next higher equivalent inertia (not to exceed 250 lbs.) available shall be used.

Loaded vehicle weight, pounds	Equivalent inertia weight, pounds	Road load power at 50 m.p.h. horsepower
Up to 1,125	1,000	5.9
1,126 to 1,375	1,000	6.5
1,376 to 1,625	1,500	7.1
1,626 to 1,875	1,750	7.7
1,876 to 2,125	2,000	8.3
2,126 to 2,375	2,250	8.8
2,376 to 2,625	2,500	9.4
2,626 to 2,875	2,750	9.9
2,876 to 3,125	3,000	10.3
3,126 to 3,375	3,500	11.2
3,376 to 3,625	4,000	12.0
3,626 to 3,875	4,500	12.7
3,876 to 4,125	5,000	13.4
4,126 to 4,375	5,500	13.9
4,376 to 4,625	5,500	14.4

#### (e) Power absorption unit adjustment.

(1) The power absorption unit shall be adjusted to reproduce road load power at 50 m.p.h. true speed. The indicated road load power setting shall take into account the dynamometer friction. The relationship between road load (absorbed) power and indicated road load power for a particular dynamometer shall be determined by the procedure outlined in Appendix II or other suitable means.

(2) The road load power listed in the table above shall be used or the vehicle manufacturer may determine the road load power by the following procedure and request its use:

(i) Measuring the absolute manifold pressure of a representative vehicle, of the same equivalent inertia weight class, when operated on a level road under balanced wind conditions at a true speed of 50 m.p.h., and

(ii) Noting the dynamometer indicated road load horsepower setting required to reproduce that manifold pressure when the same vehicle is operated on the dynamometer at a true speed of 50 m.p.h. The tests on the road and on the dynamometer shall be performed with the same vehicle ambient absolute pressure (usually barometric), i.e. within ±5 mm. Hg.

(iii) The road load power shall be determined according to the procedure outlined in Appendix II and adjusted according to the following if applicable.

(3) Where it is expected that more than 33 percent of the vehicles in an engine family will be equipped with air conditioning, the road load power listed above or as determined in paragraph 2 of this subsection shall be increased by 10 percent for testing all test vehicles representing such engine family.

(f) The vehicle speed (m.p.h.) as measured from the dynamometer rolls



shall be used for all conditions. A speed vs. time recording, as evidence of dynamometer test validity, shall be supplied on request of the Administrator.

(g) Practice runs over the prescribed driving schedule may be performed to find the minimum throttle action to maintain the proper speed-time relationship.

**Note:** When using two-roll dynamometers a true speed-time trace may be obtained by minimizing the rocking of the vehicle in the rolls. The rocking of the vehicle changes the tire rolling radius on each roll. The rocking may be minimized by restraining the vehicle horizontally (or nearly so) by using a cable and winch.

(h) The drive wheel tires may be inflated up to 45 p.s.i.g. in order to prevent tire damage. The drive wheel tire pressure shall be reported with the test results.

#### § 85.073-16 Three-speed manual transmissions.

(a) All test conditions except as noted shall be run in highest gear.

(b) Cars equipped with free wheeling or overdrive units shall be tested with this unit (free wheeling or overdrive) locked out of operation.

(c) Idle shall be run with transmission in gear and with clutch disengaged (except first idle; see § 85.073-19).

(d) The vehicle shall be driven with minimum throttle movement to maintain the desired speed.

(e) Acceleration modes shall be driven smoothly with the shift speeds as recommended by the manufacturer. If the manufacturer does not recommend shift speeds, the vehicle shall be shifted from first to second gear at 15 m.p.h. and from second to third gear at 25 m.p.h. The operator shall release the accelerator pedal during the shift, and accomplish the shift with minimum closed throttle time. If the vehicle cannot accelerate at the specified rates, the vehicle shall be accelerated at WOT until the vehicle speed reaches the speed at which it should be at that time during the test.

(f) The deceleration modes shall be run with clutch engaged and without shifting gears from the previous mode, using brakes or throttle as necessary to maintain the desired speed. For those modes which decelerate to zero, the clutch shall be depressed when the speed drops below 15 m.p.h., when engine roughness is evident, or when engine stalling is imminent.

(g) Downshifting is allowed at the beginning of or during a power mode if recommended by the manufacturer or if the engine obviously is lugging.

#### § 85.073-17 Four-speed and five-speed manual transmissions.

(a) Use the same procedure as for three-speed manual transmissions for shifting from first to second gear and from second to third gear. If the manufacturer does not recommend shift speeds, the vehicle shall be shifted from third to fourth gear at 40 m.p.h. Fifth gear may be used at the manufacturer's option.

(b) If transmission ratio in first gear exceeds 5:1, follow the procedure for three- or four-speed manual transmission vehicles as if the first gear did not exist.

#### § 85.073-18 Automatic transmissions.

(a) All test conditions shall be run with the transmission in "Drive" (highest gear). Automatic stick-shift transmissions may be shifted as manual transmissions at the option of the manufacturer.

(b) Idle modes shall be run with the transmission in "Drive" and the wheels braked (except first idle; see § 85.073-19).

(c) The vehicle shall be driven with minimum throttle movement to maintain the desired speed.

(d) Acceleration modes shall be driven smoothly allowing the transmission to shift automatically through the normal sequence of gears. If the vehicle cannot accelerate at the specified rates, the vehicle shall be accelerated at WOT until the vehicle speed reaches the speed at which it should be at that time during the driving schedule.

(e) The deceleration modes shall be run in gear using brakes or throttle as necessary to maintain the desired speed.

#### § 85.073-19 Engine starting and re-starting.

(a) The engine shall be started according to the manufacturer's recommended starting procedures. The initial 20-second-idle period shall begin when the engine starts.

(b) Choke operation:

(1) Vehicles equipped with automatic chokes shall be operated according to the instructions which will be included in the manufacturer's operating or owner's manual including choke setting and "kick-down" from cold fast idle. If choke "kick-down" time is not specified, it shall be performed 13 seconds after the engine starts. The transmission shall be placed in gear 15 seconds after the engine is started. If necessary, braking may be employed to keep the drive wheels from turning.

(2) Vehicles equipped with manual chokes shall be operated according to the manufacturer's operating or owner's manual. If not specified, the choke shall be operated to maintain engine idle at  $1,100 \pm 50$  r.p.m. during the initial idle period and used where necessary during the remainder of the test to keep the engine running.

(c) The operator may use more choke, more throttle, etc., where necessary to keep the engine running.

(d) If the vehicle does not start after 10 seconds of cranking, cranking shall cease and the reason for failure to start determined. The revolution counter on the constant volume sampler (see § 85.073-24, Dynamometer test runs) shall be turned off and the sample solenoid valves placed in the "dump" position during this diagnostic period. In addition, either the positive displacement pump should be turned off or the exhaust tube disconnected from the tailpipe during the diagnostic period.

If failure to start is an operational error, the vehicle shall be rescheduled for testing from a cold start. If failure to start is caused by vehicle malfunction, corrective action of less than 30 minutes duration may be taken and the test continued. The sampling system shall be reactivated at the same time cranking is started. When the engine starts, the driving schedule timing sequence shall begin. If failure to start is caused by vehicle malfunction and the vehicle cannot be started, the test shall be voided, the vehicle removed from the dynamometer, corrective action taken, and the vehicle rescheduled for test. The reason for the malfunction (if determined) and the corrective action taken shall be reported.

(e) If the engine "false starts", the operator shall repeat the recommended starting procedure (such as resetting the choke, etc.).

(f) Stalling:

(1) If the engine stalls during an idle period, the engine shall be restarted immediately and the test continued. If the engine cannot be started soon enough to allow the vehicle to follow the next acceleration as prescribed, the driving schedule indicator shall be stopped. When the vehicle restarts, the driving schedule indicator shall be reactivated.

(2) If the engine stalls during some operating mode other than idle, the driving schedule indicator shall be stopped, the vehicle restarted, accelerated to the speed required at that point in the driving schedule and the test continued.

(3) If the vehicle will not restart within 1 minute, the test shall be voided, the vehicle removed from the dynamometer, corrective action taken, and the vehicle rescheduled for test. The reason for the malfunction (if determined) and the corrective action taken shall be reported.

#### § 85.073-20 Sampling and analytical system (exhaust emissions).

(a) *Schematic drawings.* The following figures (Figs. A73-1 and A73-2) are schematic drawings of the exhaust gas sampling and analytical systems which will be used for testing under the regulations in this part. Additional components such as instruments, valves, solenoids, pumps, and switches may be used to provide additional information and coordinate the functions of the component systems. In particular, the HC and CO instruments may be connected in series instead of in parallel.

(b) *Component description (exhaust gas sampling system).* The following components will be used in the exhaust gas sampling system for testing under the regulations in this part. See Figure A73-1. Other types of constant volume samplers may be used if shown to yield equivalent results.

(1) A dilution air filter assembly consisting of a particulate (paper) filter to remove solid matter from the dilution air and thus increase the life of the charcoal filter; a charcoal filter to reduce and stabilize the background hydrocarbon



level; and a second particulate filter to remove charcoal particles from the airstream. The filters shall be of sufficient capacity and the duct which carries the dilution air to the point where the exhaust gas is added shall be of sufficient size so that the pressure at the mixing point is less than 1 inch of water pressure below ambient when the constant volume sampler is operating at its maximum flow rate.

(2) A flexible, leak-tight connector and tube to the vehicle tailpipe. The flexible tubing shall be sized and connected in such a manner that the static pressure variations in the vehicle tailpipe(s) remain within  $\pm 1$  inch of water of the static pressure variations measured during a dynamometer driving cycle with no connections to the tailpipe(s).

(3) A heating system to preheat the heat exchanger to within  $\pm 10^\circ$  F. of its operating temperature before the test begins.

(4) A heat exchanger capable of limiting the gas mixture temperature variation during the entire test to  $\pm 10^\circ$  F. as measured at a point immediately ahead of the positive displacement pump.

(5) A positive displacement pump to pump the dilute exhaust mixture. The pump capacity (300 to 350 c.f.m. is sufficient for testing most vehicles) shall be large enough to virtually eliminate water condensation in the system. See Appendix III for flow calibration techniques.

(6) Temperature sensor (T1) with an accuracy of  $\pm 2^\circ$  F. to allow continuous recording of the temperatures of the dilute exhaust mixture entering the positive displacement pump (see § 85.073-22 (1)).

(7) Gauge (G1) with an accuracy of  $\pm 3$  mm. Hg to measure the pressure depression of the dilute exhaust mixture entering the positive displacement pump, relative to atmospheric pressure.

(8) Gauge (G2) with an accuracy of  $\pm 3$  mm. Hg to measure the pressure increase across the positive displacement pump.

(9) Sample probes (S1 and S2) pointed upstream to collect samples from the dilution airstream and the dilute exhaust mixture. Additional sample probes may be used, for example, to obtain continuous concentration traces of the dilute exhaust stream. In such case the sample flow rate, in standard cubic feet per test, must be added to the calculated dilute exhaust volume. The position of the sample probe in Figure A73-1 is pictorial only.

(10) Filters (F1 and F2) to remove particulate matter from dilution air and dilute exhaust samples.

(11) Pumps (P1 and P2) to pump the dilution air and dilute exhaust into their respective sample collection bags.

(12) Flow control valves (N1 and N2) to regulate flows to sample collection bags, at constant flow rates. The minimum sample flow rate shall be 5 c.f.h.

(13) Flowmeters (FL1 and FL2) to insure, by visual observation, that constant flow rates are maintained throughout the test.

(14) Three-way solenoid valves (V1 and V2) to direct sample streams to either their respective bags or overboard.

(15) Quick-connect leak-tight fittings (C1 and C2), with automatic shutoff on bag side, to attach sample bags to sample system.

(16) Sample collection bags for dilution air and exhaust samples of sufficient capacity so as not to impede sample flow.

(17) A revolution counter to count the revolutions of the positive displacement pump while the test is in progress and samples are being collected.

(c) *Component description (exhaust gas analytical system).* The following components will be used in the exhaust gas analytical system for testing under the regulations in this part. The analytical system provides for the determination of hydrocarbon concentrations by flame ionization detector (FID) analysis, the determination of carbon monoxide concentrations by nondispersive infrared (NDIR) analysis and the determination of oxides of nitrogen concentration by chemiluminescence (CL) analysis in dilute exhaust samples. The chemiluminescence method of analysis requires that the nitrogen dioxide present in the sample be converted to nitric oxide before analysis. See Appendix V. Other types of analyzers may be used if shown to yield equivalent results and if approved in advance by the Administrator. See Figure A73-2.

(1) Quick-connect leak-tight fitting (C3) to attach sample bags to analytical system.

(2) Filter (F3) to remove any residual particulate matter from the collected samples.

(3) Pump (P3) to transfer samples from the sample bags to the analyzers.

(4) Selector valves (V3, V4, and V5) for directing samples, span gases or zeroing gas to the analyzers.

(5) Flow control valves (N3, N4, N5, N6, N7, N8, N9, N10, and N11) to regulate the gas flow rates.

(6) Flowmeters (FL3, FL4, and FL5) to indicate gas flow rates.

(7) Manifold (M1) to collect the expelled gases from the analyzers.

(8) Pump (P4) to transfer expelled gases from the collection manifold to a vent external to the test room (optional).

(9) Analyzers to determine hydrocarbon, carbon monoxide and oxides of nitrogen concentrations.

(10) An oxides of nitrogen converter to convert any NO, present in the samples to NO before analysis.

(11) Selector valves (V6 and V7) to allow the sample, span, calibrating, or zeroing gases to bypass the converter.

(12) Recorders (R1, R2, and R3) or digital printers to provide permanent records of calibration, spanning and sample measurements; or, in those facilities where computerized data acquisition systems are incorporated, the computer facility printout may be used.

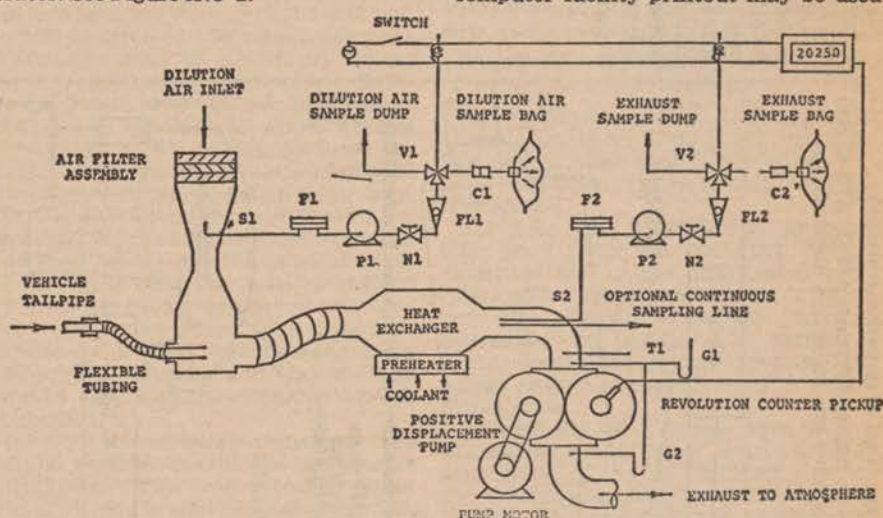


FIGURE A73-1.—Exhaust gas sampling system.

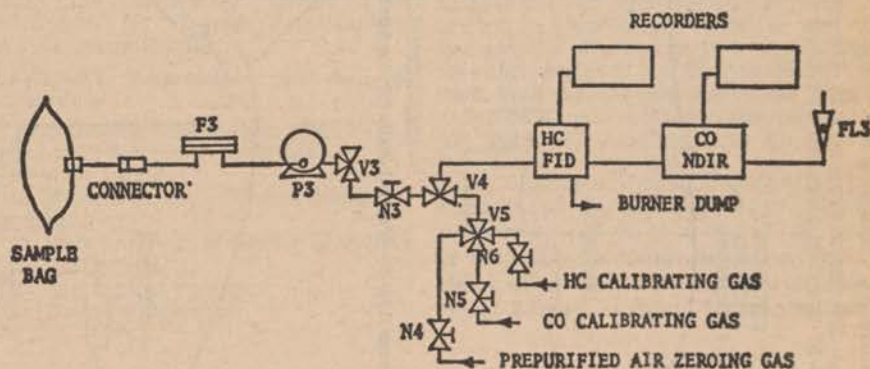


FIGURE A73-2.—Exhaust gas analytical system.



## § 85.073-21 Sampling and analytical system (fuel evaporative emissions).

(a) *Schematic drawing.* (1) The following figures (Figures A73-3, A73-4, and A73-5) are flow diagrams of typical evaporative loss collection applications.

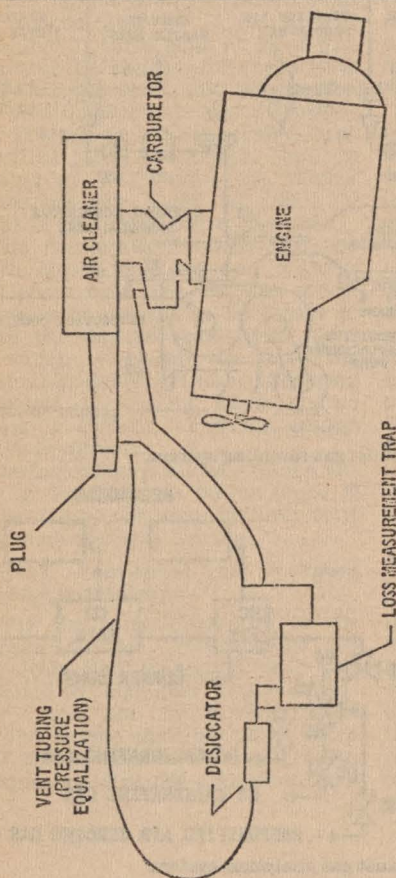


FIGURE A73-3.—Typical carburetor evaporative loss collection arrangement (schematic).

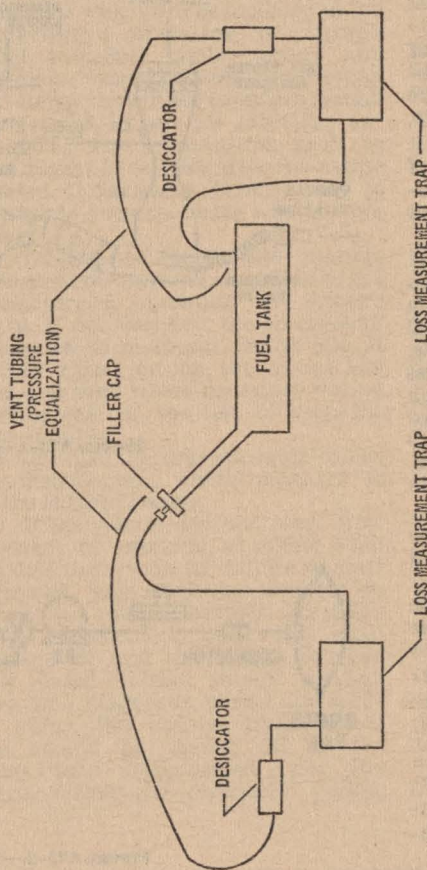


FIGURE A73-4.—Typical fuel tank evaporative loss collection arrangement (schematic).

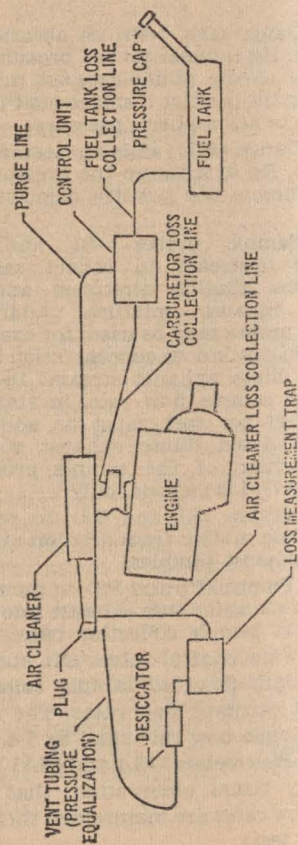


FIGURE A73-5.—Typical fuel evaporative loss collection arrangement for vehicle equipped with evaporative emission control system (schematic).

(2) Figure A73-3 represents an arrangement for collecting losses which emanate from the carburetor. Figure A73-4 depicts the means for separately collecting the vapors which emanate from the fuel tank vent line and filler cap. Figure A73-5 shows an arrangement for collecting the losses from a closed fuel system, vented to the atmosphere solely through the air cleaner, as might be the case with certain fuel evaporative emission control devices.

(3) Schematic drawings of arrangements to be employed shall be submitted in accordance with § 85.073-2(b) (3).  
(b) *Collection equipment.* The following equipment shall be used for this collection of fuel evaporative emissions. (Item quantities are determined by individual test needs.)  
(1) *Activated carbon trap.* See Figure A73-6 for specifications of one design; other configurations may be used: *Provided*, That they give demonstrably equivalent results.

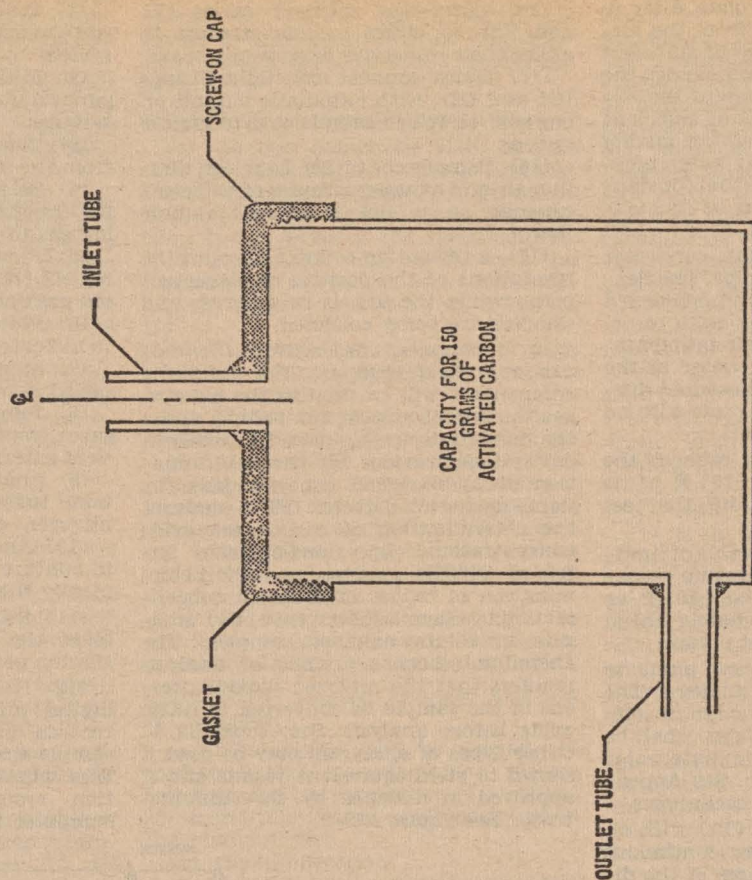


FIGURE A73-6.—Typical activated carbon trap (schematic).

(i) Canister—300±25 ml., cylindrical canister. The canister is designed to contain having a length to diameter ratio of 1.4±0.1. An inlet tube, 5/16 inch ID and 1 inch long, is sealed into the top of the canister at its geometric center. A similar outlet tube is sealed into the wall 1/4 inch from the bottom of the canister. The canister is designed to withstand an air pressure of 2 p.s.i., when sealed, without evidence of leaking when immersed in water for 30 seconds.  
(ii) Activated carbon—meeting the following specifications:



Surface area, min. (N <sub>2</sub> BET method). <sup>1</sup>	1,000 square meters per gram.
Adsorption capacity, min. (carbon tetrachloride).	60 percent, by weight.
Volatile material including adsorbed water vapor.	None.

Screen analysis size:	Percent
Less than 1.4 mm.	0
1.7-2.4 mm.	90-100
More than 3.0 mm.	0

<sup>1</sup> Brunauer, Emmett & Teller; Journal of the American Chemical Society; Vol. 60, p. 309, 1938.

The activated carbon trap is prepared for the test by attaching clamped sections of vinyl tubing to the inlet and outlet tubes of the canister. The canister is then filled with 150±10 gm. hot activated carbon which had previously been oven-dried for 3 hours at 300° F. Loss of carbon through the inlet and outlet tubes is prevented through the use of wire screens of 0.7 mm. mesh or wads of loosely packed glass wool. The canister is closed immediately after filling and the carbon is allowed to cool while the trap is vented through a drying tube via the unclamped outlet arm.

(iii) The trap is sealed and weighed after cooling and the weight, to the nearest 0.1 gram, is inscribed on the canister body. Within 12 hours of the scheduled test, the weight of the trap is checked and if it has changed by more than 0.5 gm., it is redried to constant weight. This redrying operation is performed by passing dry nitrogen, heated to 275° F., through the trap, via the inlet tube, at a rate of 1 liter per minute until checks made at 30-minute intervals do not vary by more than 0.1 percent of the gross weight. The trap and its contents are allowed to cool to room temperature, while vented through a drying tube via the outlet arm, before use.

(2) *Auxiliary collection equipment.*  
(i) Drying tube—transparent, tubular body ¾ inch ID, 6 inches long, with serrated tips and removable caps.

(ii) Desiccant—indicating variety, 8 mesh. The drying tube is attached to the outlet tube of the collection traps to prevent ambient moisture from entering the trap. It is prepared by filling the empty drying tube with fresh desiccant using loose wad of glass wool to hold the desiccant in place. The desiccant is renewed when three-quarters spent, as indicated by color change.

(iii) Collection tubing—stainless steel or aluminum, 5/16 inch ID, for connecting the collection traps to the fuel system vents.

(iv) Polyvinyl chloride (vinyl) tubing—flexible tubing, 5/16 inch ID, for sealing butt-to-butt joints.

(v) Laboratory tubing—airtight flexible tubing 5/16 inch ID, attached to the outlet end of the drying tubes to equalize collection system pressure.

(vi) Clamps—hosecock, open side, for pinching off flexible tubing.

(c) *Weighting equipment.* The balance and weights used shall be capable of de-

termining the net weight of the activated carbon trap within an accuracy of ±75 mg.

(d) *Temperature measuring equipment.* (1) Temperature recorder—multi-channel, variable speed, potentiometric, or substantially equivalent recorder with a temperature range of 50° F. to 100° F. and capable of either simultaneous or sequential recording of the ambient air and fuel temperatures within an accuracy of ±1° F.

(2) Fuel tank thermocouples—iron-constantan (type J) construction.

(3) Other types of temperature sensing systems may be provided by the manufacturer if they record the information specified in subparagraph (1) of this paragraph with the required accuracy and if they are self-contained. Type J thermocouples are required for compatibility with recording instruments used in Federal certification facilities.

(e) *Assembly and use of the activated carbon vapor collection system.* (1) The prepared activated carbon trap, dried to constant weight, cooled to the ambient temperature and sealed with clamped sections of vinyl tubing is carefully weighed to the nearest 20 milligrams and the weight recorded as the "tare weight."

(2) A drying tube is attached to the outlet tube and the clamp released, but not removed. A length of flexible tubing, for pressure equalization, is connected to the other end of the drying tube.

(3) The inlet tube of the adsorption trap and external vent(s) of the fuel system will be connected by minimal lengths of stainless steel or aluminum tubing and short sections of vinyl tubing. Butt-to-butt joints shall be made wherever possible and precautions taken against sharp bends in the connection lines, including any manifold systems employed to connect multiple vents to a single trap.

(4) The clamp on the inlet tube of the trap shall be released but not removed. Care shall be exercised to prevent heating the vapor collection trap by radiant or conductive heat from the engine.

(5) Upon completion of the collection sequence, the vinyl tubing sections on each arm of the collection trap shall be clamped tight and the collection system dismantled.

(6) The sealed vapor collection trap shall be weighed carefully to the nearest 20 milligrams. This constitutes the "gross weight," which is appropriately recorded. The difference between the "gross weight" and "tare weight" represents the "net weight" for purposes of calculating the fuel vapor losses.

#### § 85.073-22 Information to be recorded.

The following information shall be recorded with respect to each test:

- Test number.
- System or device tested (brief description).
- Date and time of day for each part of the test schedule.
- Instrument operator.
- Driver or operator.

(f) Vehicle: Make—Vehicle identification number—Model year—Transmission type—Odometer reading—Engine displacement—Engine family—Idle r.p.m.—Nominal fuel tank capacity and location on vehicle—Number of carburetors—Number of carburetor barrels—Inertia loading—Actual road load HP at 50 m.p.h. and drive wheel tire pressure.

(g) Dynamometer serial number and indicated road load power absorption at 50 m.p.h.

(h) All pertinent instrument information such as tuning—gain—serial numbers—detector numbers—range.

(i) Recorder charts: Identify zero, span, exhaust gas, and dilution air sample traces.

(j) Barometric pressure, ambient temperature and humidity and the temperature of the air in front (from 6 to 12 inches from the grill) of the radiator during the test.

(k) Fuel temperatures, as prescribed.

(l) The temperature and pressure of the mixture of exhaust and dilution air entering the positive displacement pump and the pressure increases across the pump. The temperature of the mixture shall be recorded continuously or digitally at a rate often enough to determine temperature variations, or it may be controlled to ±5° F. of the set point of the temperature control system. In the last case only the set point need be recorded.

(m) The number of revolutions of the positive displacement pump accumulated while the test is in progress and exhaust flow samples are being collected.

#### § 85.073-23 Analytical system calibration and sample handling.

(a) Calibrate the analytical assembly at least once every 30 days. Use the same flow rate as when analyzing samples.

(1) Adjust analyzers to optimize performance.

(2) Zero the hydrocarbon analyzer with zero grade air and the carbon monoxide and oxides of nitrogen analyzers with either zero grade air or nitrogen. The allowable zero gas impurity concentrations should not exceed 6 p.p.m. equivalent carbon response, 10 p.p.m. carbon monoxide and 1 p.p.m. nitric oxide.

(3) Set the CO analyzer gain to give the desired range. Select desired attenuation scale of the HC analyzer and set the sample capillary flow rate, by adjusting the back pressure regulator to give the desired range. Select the desired scale of the NO<sub>x</sub> analyzer and adjust the phototube high voltage supply or amplifier gain to give the desired range. The operating range of the analyzers shall be such that the analyzer deflection which indicates an emission level equivalent to the respective standard is in the upper two-thirds of the scale.

(4) Calibrate the HC analyzer with propane (air diluent) gases having nominal concentrations of 50 and 100 percent of full scale. Calibrate the CO analyzer with carbon monoxide (nitrogen diluent) gases having nominal concentrations



equal to 10, 25, 40, 50, 60, 70, 85, and 100 percent of full scale. Calibrate the NO<sub>x</sub> analyzer with nitric oxide (nitrogen diluent) gases having nominal concentrations equal to 50 and 100 percent of full scale. The actual concentrations should be known to within  $\pm 2$  percent of the true values.

(5) Compare values obtained on the CO analyzer with previous calibration curves. Any significant change reflects some problem in the system. Locate and correct problem, and recalibrate. Use best judgment in selecting curves for data reduction.

(6) Check the NO<sub>x</sub> to NO converter efficiency by the following procedure:

(i) Fill a sample bag (one not previously used to collect exhaust gas samples) with air (or oxygen) and NO span gas in proportions which result in a mix in the operating range of the analyzer. Provide enough oxygen for substantial conversion of NO to NO<sub>2</sub>.

(ii) Knead bag and immediately connect the bag to the sample inlet and alternately measure the NO and NO<sub>2</sub> concentration at 1-minute intervals by alternately passing the sample through the converter and the bypass (close valves N6 and N9 to minimize pump down rate of bag). After several minutes of operation, the recording of NO and NO<sub>2</sub> will resemble Figure A73-7 if the converter is efficient. Even though the amount of NO<sub>2</sub> increases with time, the total NO<sub>x</sub> (NO+NO<sub>2</sub>) remains constant. A decay of NO<sub>x</sub> with time indicates the converter is not essentially 100 percent efficient and the cause should be determined before the instrument is used.

(iii) The converter efficiency should be checked at least once weekly and preferably once daily.

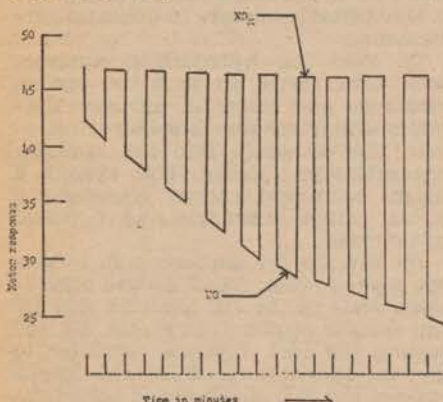


FIGURE A73-7.—Converter efficiency check response.

(b) HC, CO, and NO<sub>x</sub> measurements: Allow a minimum of 20 minutes warmup for the HC analyzer and 2 hours for the CO and NO<sub>x</sub> analyzers. (Power is normally left on infrared and chemiluminescence analyzers; but when not in use, the chopper motor of the infrared analyzer is turned off and the phototube high voltage supply of the chemiluminescence analyzer is placed in the standby position.)

The following sequence of operations should be performed in conjunction with each series of measurements:

(1) Zero the analyzers. Obtain a stable zero on each amplifier meter and recorder. Recheck after test.

(2) Introduce span gases and set the CO analyzer gain, the HC analyzer sample capillary flow rate and the NO<sub>x</sub> analyzer high voltage supply or amplifier gain to match the calibration curves. In order to avoid corrections, span and calibrate at the same flow rates used to analyze the test samples. Span gases should have concentrations equal to approximately 80 percent of full scale. If gain has shifted significantly on the CO analyzer, check tuning. If necessary, check calibration. Recheck after test. Show actual concentrations on chart.

(3) Check zeroes; repeat the procedure in subparagraphs (1) and (2) of this paragraph if required.

(4) Check flow rates and pressures.

(5) Measure HC, CO, and NO<sub>x</sub> concentrations of samples. Prevent moisture from condensing in the sample collection bag.

(6) Check zero and span points.

(c) For the purposes of this paragraph, the term "zero grade air" includes artificial "air" consisting of a blend of nitrogen and oxygen with oxygen concentrations between 18 and 21 mole percent.

#### § 85.073-24 Dynamometer test runs.

(a) The vehicle shall be allowed to stand with engine turned off for a period of not less than 12 hours before the exhaust emission test, at an ambient temperature as specified in §§ 85.073-12 and 85.073-13. The vehicle shall be stored prior to the emission tests in such a manner that precipitation (e.g., rain or dew) does not occur on the vehicle. During the run the ambient temperature shall be between 68° F. and 86° F. For exhaust emission testing which is unrelated to fuel evaporative emission control, the ambient temperature requirement during storage shall be between 60° F. and 86° F.

(b) The following steps shall be taken for each test:

(1) Place drive wheels of vehicle on dynamometer without starting engine.

(2) Start the cooling fan with the vehicle engine compartment cover open.

(3) With the sample solenoid valves in the "dump" position, connect evacuated sample collection bags to the dilute exhaust sample and the dilution air sample line connectors.

(4) Start the positive displacement pump (if not already on), the sample pumps and the temperature recorder. (The heat exchanger of the constant volume sampler should be preheated to its operating temperature before the test begins.)

(5) Adjust the sample flow rates to the desired flow rate (minimum of 5 c.f.h.).

(6) Attach the flexible exhaust tube to the vehicle tailpipe(s).

(7) Simultaneously start the revolution counter for the positive displacement pump, position the sample solenoid valves to direct the sample flows into the bags, and start cranking the engine.

(8) Fifteen seconds after the engine starts, place the transmission in gear.

(9) Twenty seconds after the engine starts, begin the initial vehicle acceleration of the driving schedule.

(10) Operate the vehicle according to the dynamometer driving schedule. (§ 85.073-14.)

(11) Five seconds after the last deceleration, simultaneously turn off the revolution counter and position the sample solenoid valve to the "dump" position.

(12) Immediately after the end of the sample period turn off the cooling fan and close the engine compartment cover.

(13) Immediately disconnect sample bags, transfer to analytical system and process samples according to § 85.073-23 as soon as practicable, and in no case longer than 10 minutes after the dynamometer run.

(14) Disconnect the exhaust tube from the vehicle tailpipe(s) and remove vehicle from dynamometer.

(15) The positive displacement pump may be turned off, if desired.

#### § 85.073-25 Chart reading.

(a) Determine the HC, CO, and NO<sub>x</sub> concentrations of the dilution air and dilute exhaust sample bags from the instrument deflection or recordings making use of appropriate calibration charts.

(b) Determine the average dilute exhaust mixture temperature from the temperature recorder trace if a recorder is used.

#### § 85.072-26 Calculations (exhaust emissions).

The final reported test results shall be computed by use of the following formulae:

(a) For light duty vehicles, excluding off-road utility vehicles:

(1) Hydrocarbon mass:

$$HC_{mass} = V_{miz} \times \text{Density}_{HC} \times \frac{HC_{conc}}{1,000,000}$$

(2) Carbon monoxide mass:

$$CO_{mass} = V_{miz} \times \text{Density}_{CO} \times \frac{CO_{conc}}{100}$$

(3) Oxides of nitrogen mass:

$$NO_{x, mass} = V_{miz} \times \text{Density}_{NO_2} \times \frac{NO_{x, conc}}{1,000,000} \times K_H$$

(b) For off-road utility vehicles:

(1)

$$HC_{mass} = V_{miz} \times \text{Density}_{HC} \times \frac{HC_{conc}}{1,000,000} \times 0.85$$

(2)

$$CO_{mass} = V_{miz} \times \text{Density}_{CO} \times \frac{CO_{conc}}{100} \times 0.85$$

(3)

$$NO_{x, mass} = V_{miz} \times \text{Density}_{NO_2} \times \frac{NO_{x, conc}}{1,000,000} \times 0.85 \times K_H$$



(c) Meaning of symbols:

$HC_{mass}$  = Hydrocarbon emissions, in grams per vehicle mile.  
 Density<sub>HC</sub> = Density of hydrocarbons in the exhaust gas, assuming an average carbon to hydrogen ratio of 1:1.85, in grams per cubic foot at 68° F. and 760 mm. Hg pressure (16.33 gm./cu. ft.).  
 $HC_{conc}$  = Hydrocarbon concentration of the dilute exhaust sample minus hydrocarbon concentration of the dilution air sample in p.p.m. carbon equivalent i.e. equivalent propane  $\times 3$ .  
 $CO_{mass}$  = Carbon monoxide emissions, in grams per vehicle mile.  
 Density<sub>CO</sub> = Density of carbon monoxide in grams per cubic foot at 68° F. and 760 mm. Hg pressure (32.97 gm./cu. ft.).  
 $CO_{conc}$  = Carbon monoxide concentration of the dilute exhaust sample minus the carbon monoxide concentration of the dilution air sample, in volume percent.  
 $NO_{x, mass}$  = Oxides of nitrogen emissions in grams per vehicle mile.  
 Density<sub>NO<sub>2</sub></sub> = Density of oxides of nitrogen in the exhaust gas assuming they are in the form of nitrogen oxide, in grams per cubic foot at 68° F. and 760 mm. Hg pressure (54.16 gm./cu. ft.).  
 $NO_{x, conc}$  = Oxides of nitrogen concentration of the dilute exhaust sample minus the oxides of nitrogen concentration of the dilution air sample, in p.p.m.  
 $V_{mix}$  = Total dilute exhaust volume in cubic feet per mile, corrected to standard conditions (528° R and 760 mm. Hg).

$$V_{mix} = K_1 \times V_p \times N \times \frac{P_B - P_i}{T_p}$$

where:

$$K_1 = \frac{528^\circ R}{760 \text{ mm. Hg} \times 7.5 \text{ miles}} = 0.09263.$$

$V_p$  = Volume of gas pumped by the positive displacement pump, in cubic feet per revolution. This volume is dependent on the pressure differential across the positive displacement pump.  
 $N$  = Number of revolutions of the positive displacement pump during the test while samples are being collected.

$P_B$  = Barometric pressure in mm. Hg.  
 $P_i$  = Pressure depression below atmosphere measured at the inlet to the positive displacement pump.  
 $T_p$  = Average temperature of dilute exhaust entering positive displacement pump during test while samples are being collected, in degrees Rankine.  
 $KH$  = Humidity correction factor.

$$KH = \frac{1}{1 - 0.0047 (H - 75)}$$

where:

$H$  = Absolute humidity in grains of water per pound of dry air.

$$H = \frac{(43.478) R_a \times P_a}{P_B - (P_a \times R_a / 100)}$$

$R_a$  = Relative humidity of the ambient air, in percent.  
 $P_a$  = Saturated vapor pressure, in mm. Hg at the ambient dry bulb temperature.

(d) Example calculation of mass emissions values:

Assume  $V_p = 0.265$  cu. ft. per revolution;  $N = 20,250$  revolutions;  $R_a = 65\%$ ;  $P_B = 754$  mm. Hg;  $P_i = 22.225$  mm. Hg;  $T_p = 550^\circ R$ ;  $HC_{conc} = 160$  p.p.m. carbon equivalent;  $CO_{conc} = 0.09\%$ ; and  $NO_{x, conc} = 70$  p.p.m.

Then:

$$V_{mix} = (0.09263) (0.265) (20,250) \frac{(754 - 22.225)}{(550)} = 659.8 \text{ cu. ft. per mile.}$$

$$H = \frac{(43.478) (65) (22.225)}{754 - (22.225 \times 65 / 100)} = 85 \text{ grains per pound of dry air.}$$

$$KH = \frac{1}{1 - 0.0047 (85 - 75)} = 1.049.$$

(1) For a 1973 light duty vehicle.

$$HC_{mass} = 659.8 \times 16.33 \times \frac{160}{1,000,000} = 1.72 \text{ grams per vehicle mile.}$$

$$NO_{x, mass} = 659.8 \times 54.16 \times \frac{70}{1,000,000} \times 1.049 = 2.62 \text{ grams per vehicle mile}$$

(2) For a 1973 off-road utility vehicle.

$$CO_{mass} = 659.8 \times 32.97 \times \frac{0.09 \times 0.85}{100} = 16.6 \text{ grams per vehicle mile.}$$

§ 85.073-27 Calculations (fuel evaporative emissions).

The net weights of the individual collection traps employed in § 85.073-13 shall be added together to determine compliance with the fuel evaporative emission standard.

§ 85.073-28 Compliance with emission standards.

(a) The exhaust and fuel evaporative emission standards in § 85.073-1 apply to the emissions of vehicles for their useful life.

(b) Since emission control efficiency decreases with mileage accumulated on the vehicle, the emission level of a vehicle which has accumulated 50,000 miles will be used as the basis for determining compliance with the standards.

(c) The procedure for determining compliance of a new light duty motor vehicle with exhaust and fuel evaporative emission standards is as follows:

(1) Separate emission deterioration factors shall be determined from the emission results of the durability data vehicles for each engine-system combination. A separate factor shall be established for the combination for exhaust HC, exhaust CO, exhaust NO<sub>x</sub>, and fuel evaporative HC.

$$\text{factor} = \frac{\text{exhaust emissions interpolated to 50,000 miles}}{\text{exhaust emissions interpolated to 4,000 miles}}$$

(iv) An evaporative emission deterioration factor shall be calculated for each combination by subtracting the evaporative emissions interpolated to 4,000 miles from the evaporative emissions interpolated to 50,000 miles.

(2) (i) The exhaust emission test results for each emission data vehicle shall be multiplied by the appropriate deterioration factor: *Provided*, That if a deterioration factor as computed in subparagraph (1) (iii) of this paragraph is less than 1, that deterioration factor shall be one for the purposes of this subparagraph.

(ii) The evaporative emission test results for each combination shall be adjusted by addition of the appropriate deterioration factor: *Provided*, That if a deterioration factor as computed in subparagraph (1) (iv) of this paragraph is less than zero, that deterioration factor shall be zero for the purposes of this subparagraph.

(3) The emissions to compare with the standard shall be the adjusted emissions of subparagraph (2) (i) and (ii) of this paragraph for each emission data vehicle.

(4) Every test vehicle of an engine family must comply with all applicable standards, as determined in subparagraph (3) of this paragraph, before any vehicle in that family may be certified.

§ 85.073-29 Testing by the Administrator.

(a) The Administrator may require that any one or more of the test vehicles be submitted to him, at such place or

(i) The applicable results to be used in determining the deterioration factors for each combination shall be:

(a) All emission data from the tests required under § 85.073-7(b), except the zero-mile tests. This shall include the official test results, as determined in § 85.073-29, for all tests conducted on all durability vehicles of the combination selected under § 85.073-5(c) (including all vehicles elected to be operated by the manufacturer under § 85.073-5(c) (3)). Where the Administrator has agreed to a mileage less than 50,000 miles in accordance with § 85.073-7(b), the data for mileages greater than that actually run will be determined by extrapolating the test data generated at lesser mileages.

(b) All emission data from the tests conducted before and after the maintenance provided in § 85.073-6(a) (1) (i).

(ii) All applicable results shall be plotted as a function of the mileage on the system, rounded to the nearest mile, and the best fit straight lines, fitted by the method of least squares, shall be drawn through these data points. The interpolated 4,000- and 50,000-mile points on this line must be within the standards provided in § 85.073-1 or the data will not be acceptable for use in calculation of a deterioration factor.

(iii) An exhaust emission deterioration factor shall be calculated for each combination as follows:

places as he may designate, for the purpose of conducting emissions tests. The Administrator may specify that he will conduct such testing at the manufacturer's facility, in which case instrumentation and equipment specified by the Administrator shall be made available by the manufacturer for test operations. Any testing conducted at a manufacturer's facility pursuant to this paragraph shall be scheduled by the manufacturer as promptly as possible.

(b) (1) Whenever the Administrator conducts a test on a test vehicle, the results of that test shall comprise the official data for the vehicle at that prescribed test point.

(2) Whenever the Administrator does not conduct a test on a test vehicle at a test point, the manufacturer's test data will be accepted as the official data for that test point: *Provided*, That if the Administrator makes a determination based on testing under paragraph (a) of this section, that there is a lack of correlation between the manufacturer's test equipment and the test equipment used by the Administrator, no manufacturer's test data will be accepted for purposes of certification until the reasons for the lack of correlation are determined and the validity of the data is established by the manufacturer.

(3) If the Administrator determines that the test data developed under paragraph (a) of this section would cause a vehicle to fail due to excessive 4,000 mile or excessive deterioration, then the following procedure shall be observed:



(i) The manufacturer may request a retest. Before the retest, the vehicle may be adjusted to manufacturer's specifications, and parts may be replaced in accordance with § 85.073-6. All work on the vehicle shall be done at such location and under such conditions as the Administrator may prescribe.

(ii) The vehicle will be retested by the Administrator and the results of this test shall comprise the official data for that prescribed test point.

(4) If sufficient durability data is not available, at the time of any emission test conducted under paragraph (a) of this section, to enable the Administrator to determine whether a test vehicle would fail, the manufacturer may request a retest in accordance with the provisions of subparagraph (3) (i) and (ii) of this paragraph. If the manufacturer does not promptly make such request, he shall be deemed to have waived the right to a retest. A request for retest must be made before the manufacturer removes the vehicle from the test premises.

#### § 85.073-30 Certification.

(a) (1) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.073-29, the Administrator determines that a test vehicle(s) conforms to the regulations of this subpart, he will issue a certificate of conformity with respect to such vehicle(s).

(2) Such certificate will be issued for such period not more than 1 year as the Administrator may determine and upon such terms as he may deem necessary to assure that any new motor vehicle covered by the certificate will meet the requirements of these regulations relating to durability and performance.

(b) (1) The Administrator will determine whether a vehicle covered by the application complies with applicable standards by observing the following relationships:

(i) A test vehicle selected under § 85.073-5(b) (2) or (4) shall represent all vehicles in the same engine family of the same engine displacement-exhaust emission control system-evaporative emission control system combination.

(ii) A test vehicle selected under § 85.073-5(b) (3) shall represent all vehicles in the same engine family of the same engine displacement-exhaust emission control system-transmission type-fuel system combination.

(iii) A test vehicle selected under § 85.073-5(c) (1) shall represent all vehicles of the same engine-system combination.

(2) The Administrator will proceed as in paragraph (a) of this section with respect to the vehicles belonging to an engine family all of which comply with applicable standards.

(3) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.073-29, the Administrator determines that one or more test vehicles of

the certification test fleet do not meet applicable standards, he will notify the manufacturer in writing, setting forth the basis for his determination. Within 30 days following receipt of the notification, the manufacturer may request a hearing on the Administrator's determination. The request shall be in writing, signed by an authorized representative of the manufacturer and shall include a statement specifying the manufacturer's objections to the Administrator's determination, and data in support of such objections. If, after a review of the request and supporting data, the Administrator finds that the request raises a substantial factual issue, he shall provide the manufacturer a hearing in accordance with § 85.005 with respect to such issue.

(4) The manufacturer may, at his option, proceed with any of the following alternatives with respect to any engine family represented by a test vehicle(s) determined not in compliance with applicable standards:

(i) Request a hearing under § 85.005, or

(ii) Delete from the application for certification the vehicles represented by the failing test vehicle. (Vehicles so deleted may be included in a later request for certification under § 85.073-32.) The Administrator will then select in place of each failing vehicle an alternate vehicle chosen in accordance with selection criteria employed in selecting the vehicle that failed, or

(iii) Modify the test vehicle and demonstrate by testing that it meets applicable standards. Another vehicle which is in all material respects the same as the first vehicle, as modified, shall then be operated and tested in accordance with applicable test procedures.

(5) If the manufacturer does not request a hearing or present the required data under subparagraph (4) of this paragraph, the Administrator will deny certification.

#### § 85.073-31 Separate certification.

Where possible a manufacturer should include in a single application for certification all vehicles for which certification is required. A manufacturer may, however, choose to apply separately for certification of part of his product line. The selection of test vehicles and the computation of test results will be determined separately for each application.

#### § 85.073-32 Addition of a vehicle after certification.

(a) If a manufacturer proposes to add to his product line a vehicle of the same engine-system combination as vehicles previously certified but which was not described in the application for certification when the test vehicle(s) representing other vehicles of that combination was certified, he shall notify the Administrator. Such notification shall be in advance of the addition unless the manufacturer elects to follow the procedure described in § 85.073-34. This notification shall include a full description of the vehicle to be added.

(b) The Administrator may require the manufacturer to perform such tests on the test vehicle(s) representing the vehicle to be added which would have been required if the vehicle had been included in the original application for certification.

(c) If, after a review of the test reports and data submitted by the manufacturer, and data derived from any testing conducted under § 85.073-29, the Administrator determines that the test vehicle(s) meets all applicable standards, the appropriate certificate will be amended accordingly. If the Administrator determines that the test vehicle(s) does not meet applicable standards, he will proceed under § 85.073-30(b).

#### § 85.073-33 Changes to a vehicle covered by certification.

(a) The manufacturer shall notify the Administrator of any change in production vehicles in respect to any of the parameters listed in § 85.073-5(a) (3), giving a full description of the change. Such notification shall be in advance of the change unless the manufacturer elects to follow the procedure described in § 85.073-34.

(b) Based upon the description of the change, and data derived from such testing as the Administrator may require or conduct, the Administrator will determine whether the vehicle, as modified, would still be covered by the certificate of conformity then in effect.

(c) If the Administrator determines that the outstanding certificate would cover the modified vehicles, he will notify the manufacturer in writing. Except as provided in § 85.073-34, the change may not be put into effect prior to the manufacturer's receiving this notification. If the Administrator determines that the modified vehicles would not be covered by the certificate then in effect, then the modified vehicles shall be treated as additions to the product line subject to § 85.073-32.

#### § 85.073-34 Alternative procedure for notification of additions and changes.

(a) A manufacturer may, in lieu of notifying the Administrator in advance of an addition of a vehicle under § 85.073-32 or a change in a vehicle under § 85.073-33, notify him concurrently with the making of the change if the manufacturer believes the addition or change will not require any testing under the appropriate section. Upon notification to the Administrator, the manufacturer may proceed to put the addition or change into effect.

(b) The manufacturer may continue to produce vehicles as described in the notification to the Administrator for a maximum of 30 days, unless the Administrator grants an extension in writing. This period may be shortened by a notification in accordance with paragraph (c) of this section.

(c) If the Administrator determines, based upon a description of the addition or change, that no test data will be required, he will notify the manufacturer in writing of the acceptability of the ad-



dition or change. If the Administrator determines that test data will be required, he will notify the manufacturer to rescind the change within 5 days of receipt of the notification. The Administrator will then proceed as in § 85.073-32 (b) and (c), or § 85.073-33 (b) and (c) as appropriate.

(d) Election to produce vehicles under this section will be deemed to be a consent to recall all vehicles which the Administrator determines under § 85.073-32(c) do not meet applicable standards, and to cause such nonconformity to be remedied at no expense to the owner.

#### § 85.073-35 Labeling.

(a) (1) The manufacturer of any light duty motor vehicle subject to the standards prescribed in § 85.073-1 shall, at the time of manufacture, affix a permanent, legible label, of the type and in the manner described below, containing the information hereinafter provided, to all production models of such vehicles available for sale to the public and covered by a certificate of conformity under § 85.073-30(a).

(2) A plastic or metal label shall be welded, riveted, or otherwise permanently attached in a readily visible position in the engine compartment.

(3) The label shall be affixed by the vehicle manufacturer, who has been issued the certificate of conformity for such vehicle, in such a manner that it cannot be removed without destroying or defacing the label, and shall not be affixed to any equipment which is easily detached from such vehicle.

(4) The label shall contain the following information lettered in the English language in block letters and numerals, which shall be of a color that contrasts with the background of the label:

(i) The label heading: Vehicle Emission Control Information;

(ii) Full corporate name and trademark of manufacturer;

(iii) Engine displacement (in cubic inches) and engine family identification;

(iv) Engine tuneup specifications and adjustments, as recommended by the manufacturer, including idle speed, ignition timing, and the idle air-fuel mixture setting procedure and value (e.g. idle CO, idle air-fuel ratio, idle speed drop). These specifications should indicate the proper transmission position during tuneup and what accessories (e.g., air-conditioner), if any should be in operation;

(v) The statement: "This Vehicle Conforms to U.S.E.P.A. Regulations Applicable to 1973 Model Year New Motor Vehicles."

(b) The provisions of this section shall not prevent a manufacturer from also reciting on the label that such vehicle conforms to any applicable State emission standards for new motor vehicles or any other information that such manufacturer deems necessary for, or useful to, the proper operation and satisfactory maintenance of the vehicle.

#### § 85.073-36 Submission of vehicle identification numbers.

(a) The manufacturer of any light duty motor vehicle covered by a certificate of conformity under § 85.073-30(a) shall, not later than 60 days after its manufacture, submit to the Administrator the vehicle identification number of such vehicle: *Provided*, That this requirement shall not apply with respect to any vehicle manufactured within any State, as defined in section 302(d) of the Act.

(b) The requirements of this section may be waived with respect to any manufacturer who provides information satisfactory to the Administrator which will enable the Administrator to identify those vehicles which are covered by a certificate of conformity.

#### § 85.073-37 Production vehicles.

(a) Any manufacturer obtaining certification under this subpart shall supply to the Administrator, upon his request, a reasonable number of production vehicles selected by the Administrator which are representative of the engines, emission control systems, fuel systems, and transmissions offered and typical of production models available for sale under the certificate. These vehicles shall be supplied for testing at such time and place and for such reasonable periods as the Administrator may require.

(b) Any manufacturer obtaining certification under this subpart shall notify the Administrator, on a quarterly basis, of the number of vehicles of each engine family - engine displacement - exhaust emission control system-fuel system-transmission type-inertia weight class combination produced for sale in the United States during the preceding quarter. A manufacturer may elect to provide this information every 60 days instead of quarterly, to combine it with the notification required under § 85.073-36.

(c) All light duty vehicles covered by a certificate of conformity under § 85.073-30(a) shall be adjusted by the manufacturer to the ignition timing specification detailed in § 85.073-35(a) (4) (iv).

#### § 85.073-38 Maintenance instructions.

(a) The manufacturer shall furnish or cause to be furnished to the ultimate purchaser of each new motor vehicle subject to the standards prescribed in § 85.073-1, written instructions for the maintenance and use of the vehicle by the ultimate purchaser as may be reasonable and necessary to assure the proper functioning of emission control systems.

(1) Such instructions shall be provided for those vehicle and engine components listed in Appendix VI to this part (and for any other components) to the extent that maintenance of these components is necessary to assure the proper functioning of emission control systems.

(2) Such instructions shall be in clear, and to the extent practicable, nontechnical language.

(b) The maintenance instructions required by this section shall contain a general description of the documentation which the manufacturer will require from the ultimate purchaser or any subsequent purchaser as evidence of compliance with the instructions.

#### § 85.073-39 Submission of maintenance instructions.

(a) The manufacturer shall provide to the Administrator, no later than the time of the submission required by § 85.073-4, a copy of the maintenance instructions which the manufacturer proposes to supply to the ultimate purchaser in accordance with § 85.073-38(a). The Administrator will review such instructions to determine whether they are reasonable and necessary to assure the proper functioning of the vehicle's emission control systems. The Administrator will notify the manufacturer of his determination whether such instructions are reasonable and necessary to assure the proper functioning of the emission control systems.

(b) Any revision to the maintenance instructions which will affect emissions shall be supplied to the Administrator at least 30 days before being supplied to the ultimate purchaser unless the Administrator consents to a lesser period of time.

#### § 85.074-1 Emission standards for 1974 model year vehicles.

The standards and test procedures set forth in § 85.073 remain applicable for the 1974 model year.

#### § 85.075-1 Emission standards for 1975 model year vehicles.

(a) (1) Exhaust emissions from 1975 model year vehicles shall not exceed:

(i) *Hydrocarbons*. 0.41 gram per vehicle mile.

(ii) *Carbon monoxide*. 3.4 grams per vehicle mile.

(iii) *Oxides of nitrogen*. 3.1 grams per vehicle mile.

(2) The standards set forth in paragraph (a) (1) of this section refer to the exhaust emitted over a driving schedule as set forth in § 85.075-9 through § 85.075-27 and measured and calculated in accordance with those procedures.

(b) (1) Fuel evaporative emissions shall not exceed:

(i) *Hydrocarbons*—2 grams per test.

(2) The standard set forth in paragraph (b) (1) of this section refers to a composite sample of the fuel evaporative emissions collected under the conditions set forth in § 85.075-9 through § 85.075-27 and measured in accordance with those procedures.

(c) No crankcase emissions shall be discharged into the ambient atmosphere from any new motor vehicle subject to this subpart.

(d) Every manufacturer of new motor vehicles subject to the standards prescribed in this subpart shall, prior to taking any of the actions specified in section 203 (a) (1) of the Act, test or cause to be tested motor vehicles in accordance



with test procedures contained in § 85.075-9 through § 85.075-27 to ascertain that such test vehicles meet the requirements of paragraphs (a), (b), and (c) of this section, as applicable.

#### § 85.075-2 Application for certification.

(a) An application for a certificate of conformity to the regulations applicable to any new motor vehicle shall be made to the Administrator by the manufacturer.

(b) The application shall be in writing, signed by an authorized representative of the manufacturer, and shall include the following:

(1) Identification and description of the vehicles covered by the application and a description of their emission control systems.

(2) Projected U.S. sales data sufficient to enable the Administrator to select a test fleet representative of the vehicles for which certification is requested.

(3) A description of the test equipment and fuel proposed to be used.

(4) A description of the proposed mileage accumulation procedure for durability testing.

(5) A statement of recommended maintenance and procedures necessary to assure that the vehicles covered by a certificate of conformity in operation conform to the regulations, and a description of the program for training of personnel for such maintenance, and the equipment required.

(6) At the option of the manufacturer, the proposed composition of the emission data and durability data test fleet.

#### § 85.075-3 Approval of procedure and equipment; test fleet selections.

Based upon the information provided in the application for certification, and any other information the Administrator may require, the Administrator will approve or disapprove in whole or in part the mileage accumulation procedure and equipment and fuel proposed by the manufacturer, and notify him in writing of such determination. Where any part of a proposal is disapproved, such notification will specify the reasons for disapproval. The Administrator will select a test fleet in accordance with § 85.075-5.

#### § 85.075-4 Required data.

The manufacturer shall perform the tests required by the applicable test procedures, and submit to the Administrator the following information:

(a) Durability data on such vehicles tested in accordance with the applicable test procedures of this subpart, and in such numbers as therein specified, which will show the performance of the systems installed on or incorporated in the vehicle for extended mileage, as well as a record of all pertinent maintenance performed on the test vehicles.

(b) Emission data on such vehicles tested in accordance with the applicable emission test procedures of this subpart and in such numbers as therein specified, which will show their emissions after zero miles and 4,000 miles of operation.

(c) A description of tests performed

to ascertain compliance with the general standards in § 85.075-1 and the data derived from such tests.

(d) A statement that the test vehicles with respect to which data are submitted have been tested in accordance with the applicable test procedures, that they meet the requirement of such tests, and that, on the basis of such tests, they conform to the requirements of the regulations in this subpart. If such statements cannot be made with respect to any vehicle tested, the vehicle shall be identified, and all pertinent test data relating thereto shall be supplied.

#### § 85.075-5 Test vehicles.

(a) (1) The vehicles covered by the application for certification will be divided into groupings of vehicles whose engines are expected to have similar emission characteristics. Each group of engines with similar emission characteristics shall be defined as a separate engine family.

(2) To be classed in the same engine family, engines must be identical in all the following respects:

(i) The cylinder bore center-to-center dimensions.

(ii) The dimension from the centerline of the crankshaft to the centerline of the camshaft.

(iii) The dimension from the centerline of the crankshaft to the top of the cylinder block head face.

(iv) The cylinder block configuration (air cooled or water cooled; L-6, 90° V-8, etc.).

(v) The location of intake and exhaust valves and the valve sizes (within a  $\frac{1}{8}$ -inch range on the valve head diameter).

(vi) The method of air aspiration.

(vii) The combustion cycle.

(3) Engines identical in all the respects listed in subparagraph (2) of this paragraph may be further divided into different engine families if the Administrator determines that they may be expected to have different emission characteristics. This determination will be based upon a consideration of the following features of each engine:

(i) The bore and stroke.

(ii) The surface-to-volume ratio of the nominally dimensioned cylinder at the top dead center position.

(iii) The intake manifold induction port size and configuration.

(iv) The exhaust manifold port size and configuration.

(v) The intake and exhaust valve sizes.

(vi) The fuel system.

(vii) The camshaft timing and ignition timing characteristics.

(4) Where engines are of a type which cannot be divided into engine families based upon the criteria listed in subparagraphs (2) and (3) of this paragraph, the Administrator will establish families for those engines based upon the features most related to their emission characteristics.

(b) Emission data vehicles:

(1) Vehicles will be chosen to be operated and tested for emission data based upon the engine family groupings.

Within each engine family, the requirements of this paragraph must be met.

(2) Vehicles of each engine family will be divided into engine displacement-exhaust emission control system-evaporative emission control system combinations. A projected sales volume will be established for each combination for the 1975 model year. One vehicle of each combination will be selected in order of decreasing projected sales volume until 70 percent of the projected sales of a manufacturer's total production of vehicles of that engine family is represented, or until a maximum of four vehicles is selected. If any single combination represents over 70 percent, then two vehicles of that combination will be selected. The vehicle selected for each combination will be specified by the Administrator as to transmission type, fuel system, and inertia weight class.

(3) The Administrator may select a maximum of four additional vehicles within each engine family based upon features indicating that they may have the highest emission levels of the vehicles in that engine family. In selecting these vehicles, the Administrator will consider such features as the emission control system combination, induction system characteristics, ignition system characteristics, fuel system, rated horsepower, rated torque, compression ratio, inertia weight class, transmission options, and axle ratios.

(4) If the vehicles selected in accordance with subparagraphs (2) and (3) of this paragraph do not represent each engine-system combination, then one vehicle of each engine-system combination not represented will be selected by the Administrator. The vehicle selected shall be of the engine displacement with the largest projected sales volume of vehicles with the control system combination in the engine family and will be designated by the Administrator as to transmission type, fuel system, and inertia weight class.

(c) Durability data vehicles:

(1) A durability data vehicle will be selected by the Administrator to represent each engine-system combination. The vehicle selected shall be of the engine displacement with the largest projected sales volume of vehicles with that control-system combination in that engine family and will be designated by the Administrator as to transmission type, fuel system, and inertia weight class.

(2) If an exhaust emission control system-fuel evaporative emission control system combination is used in only one engine family, an additional vehicle using that combination in that family will be selected so that the durability data fleet shall contain at least two vehicles with each combination. The additional vehicle will be selected in the same manner as vehicles selected under subparagraph (1) of this paragraph.

(3) A manufacturer may elect to operate and test additional vehicles to represent any engine-system combination. The additional vehicles must be of the same engine displacement, transmission type, fuel system, and inertia weight



class as the vehicle selected for that engine-system combination in accordance with the provisions of subparagraph (1) of this paragraph. Notice of an intent to operate and test additional vehicles shall be given to the Administrator not later than 30 days following notification of the test fleet selection.

(d) For purposes of testing under § 85.075-7(g), the Administrator may require additional emission data vehicles and durability data vehicles identical in all material respects to vehicles selected in accordance with paragraphs (b) and (c) of this section: *Provided*, That the number of vehicles selected shall not increase the size of either the emission data fleet or the durability data fleet by more than 20 percent or one vehicle, whichever is greater.

(e) Any manufacturer whose projected sales of new motor vehicles subject to this subpart for the 1975 model year is less than 2,000 vehicles may request a reduction in the number of test vehicles determined in accordance with the foregoing provisions of this section. The Administrator may agree to such lesser number as he determines would meet the objectives of this procedure.

(f) In lieu of testing an emission data or durability data vehicle selected under paragraph (b) or (c) of this section, and submitting data therefor, a manufacturer may, with the prior written approval of the Administrator, submit data on a similar vehicle for which certification has previously been obtained.

(g) (1) Where it is expected that more than 33 percent of an engine family will be equipped with an optional item, the full estimated weight of that item shall be included in the curb weight computation for the entire engine family. Where it is expected that 33 percent or less of the vehicles in an engine family will be equipped with an item of optional equipment, no weight for that item will be added in computing curb weight. Optional equipment weighing less than 3 pounds per item need not be considered.

(2) Where it is expected that more than 33 percent of an engine family will be equipped with an item of optional equipment that can reasonably be expected to influence exhaust or evaporative emissions, then such items of optional equipment shall actually be installed on all emission data and durability data vehicles for such engine family.

#### § 85.075-6 Maintenance.

(a) (1) Maintenance on the engines and fuel systems of durability vehicles may be performed only under the following provisions:

(i) One major engine tuneup to manufacturer's specifications may be performed at 24,000 miles ( $\pm 250$  miles) of scheduled driving with the following exception: On a vehicle with an engine displacement of 150 cubic inches or less (or a rating of at least 1.20 maximum rated horsepower per cubic inch of displacement), major engine tuneups may be performed at 12,000, 24,000 and 36,000 miles ( $\pm 250$  miles) of scheduled driving.

A major engine tuneup shall be restricted to the following:

- (a) Replace spark plugs.
- (b) Inspect ignition wiring and replace as required.
- (c) Replace distributor breaker points and condenser as required.
- (d) Lubricate distributor cam.
- (e) Check distributor advance and breaker point dwell angle and adjust as required.
- (f) Check automatic choke for free operation and correct as required.
- (g) Adjust carburetor idle speed and mixture.
- (h) Adjust drive belt tension on engine accessories.
- (i) Adjust valve lash if required.
- (j) Check exhaust heat control valve for free operation.
- (k) Check engine bolt torque and tighten as required.
- (l) Spark plugs may be changed if a persistent misfire is detected.
- (m) Normal vehicle lubrication services (engine and transmission oil change and oil filter, fuel filter, and air filter servicing) will be allowed at manufacturer's recommended intervals.
- (n) The crankcase emission control system may be serviced at 12,000-mile intervals ( $\pm 250$  miles) of scheduled driving.
- (o) The fuel evaporative emission control system may be serviced at 12,000-mile intervals ( $\pm 250$  miles) of scheduled driving.
- (p) Readjustment of the engine choke mechanism or idle settings may be performed only if there is a problem of stalling at stops.
- (q) Leaks in the fuel system, engine lubrication system and cooling system may be repaired.
- (r) Engine idle speed may be adjusted at the 4,000-mile test point.
- (s) Any other engine or fuel system maintenance or repairs will be allowed only with the advance approval of the Administrator.

(2) Repairs to vehicle components of the durability data vehicle, other than the engine or fuel system, shall be performed only as a result of part failure or vehicle system malfunction.

(3) Allowable maintenance on emission data vehicles shall be limited to the adjustment of engine idle speed at the 4,000-mile test point.

(4) Where the Administrator agrees under § 85.075-7 to a mileage accumulation of less than 50,000 miles for durability testing, he may modify the requirements of this paragraph.

(b) Complete emission tests (see § 85.075-10 through § 85.075-27) shall be run before and after any vehicle maintenance which may reasonably be expected to affect emissions. These test data shall be supplied to the Administrator immediately after the tests, along with a complete record of all pertinent maintenance, including an engineering report of any malfunction diagnosis and the corrective action taken. In addition, all test data and maintenance reports shall be compiled and provided to the Administrator in accordance with § 85.075-4.

(c) If the Administrator determines that maintenance or repairs performed have resulted in a substantial change to the engine-system combination, the vehicle shall not be used as a durability data vehicle.

§ 85.075-7 Mileage accumulation and emission measurements.

The procedure for mileage accumulation will be the Durability Driving Schedule as specified in Appendix IV to this part. A modified procedure may also be used if approved in advance by the Administrator.

(a) Emission data vehicles: Each emission data vehicle shall be driven 4,000 miles with all emission control systems installed and operating. Emission tests shall be conducted at zero miles and 4,000 miles.

(b) Durability data vehicles: Each durability data vehicle shall be driven, with all emission control systems installed and operating, for 50,000 miles or such lesser distance as the Administrator may agree to as meeting the objectives of this procedure. Emission measurements from a cold start shall be made at zero miles and at each 4,000-mile interval.

(c) All tests required by this subpart to be conducted after 4,000 miles of driving or at any multiple of 4,000 miles may be conducted at any accumulated mileage within 250 miles of 4,000 miles or the appropriate multiple of 4,000 miles, respectively.

(d) The results of each emission test shall be supplied to the Administrator immediately after the test. Where a manufacturer conducts multiple tests at any test point or any tests between test points, data on these tests (including voided tests) shall be provided immediately to the Administrator. In addition, all test data shall be compiled and provided to the Administrator in accordance with § 85.075-4.

(e) Whenever the manufacturer proposes to operate and test a vehicle which may be used for emission or durability data, he shall provide the zero mile test data to the Administrator and make the vehicle available for such testing under § 85.075-29 as the Administrator may require before beginning to accumulate mileage on the vehicle. Failure to comply with this requirement will invalidate all test data submitted for this vehicle.

(f) Once a manufacturer begins to operate an emission data or durability data vehicle, as indicated by compliance with paragraph (e) of this section, he shall continue to run the vehicle to 4,000 miles or 50,000 miles, respectively, and the data from the vehicle will be used in the calculations under § 85.075-28. Discontinuation of a vehicle shall be allowed only with the written consent of the Administrator.

(g) (1) The Administrator may elect to operate and test any test vehicle during all or any part of the mileage accumulation and testing procedure. In such cases, the manufacturer shall provide the vehicle(s) to the Administrator with all information necessary to conduct this testing.

(2) Repairs to vehicle components of the durability data vehicle, other than the engine or fuel system, shall be performed only as a result of part failure or vehicle system malfunction.

(3) Allowable maintenance on emission data vehicles shall be limited to the adjustment of engine idle speed at the 4,000-mile test point.

(4) Where the Administrator agrees under § 85.075-7 to a mileage accumulation of less than 50,000 miles for durability testing, he may modify the requirements of this paragraph.

(b) Complete emission tests (see § 85.075-10 through § 85.075-27) shall be run before and after any vehicle maintenance which may reasonably be expected to affect emissions. These test data shall be supplied to the Administrator immediately after the tests, along with a complete record of all pertinent maintenance, including an engineering report of any malfunction diagnosis and the corrective action taken. In addition, all test data and maintenance reports shall be compiled and provided to the Administrator in accordance with § 85.075-4.

(c) If the Administrator determines that maintenance or repairs performed have resulted in a substantial change to the engine-system combination, the vehicle shall not be used as a durability data vehicle.

§ 85.075-7 Mileage accumulation and emission measurements.

The procedure for mileage accumulation will be the Durability Driving Schedule as specified in Appendix IV to this part. A modified procedure may also be used if approved in advance by the Administrator.

(a) Emission data vehicles: Each emission data vehicle shall be driven 4,000 miles with all emission control systems installed and operating. Emission tests shall be conducted at zero miles and 4,000 miles.

(b) Durability data vehicles: Each durability data vehicle shall be driven, with all emission control systems installed and operating, for 50,000 miles or such lesser distance as the Administrator may agree to as meeting the objectives of this procedure. Emission measurements from a cold start shall be made at zero miles and at each 4,000-mile interval.

(c) All tests required by this subpart to be conducted after 4,000 miles of driving or at any multiple of 4,000 miles may be conducted at any accumulated mileage within 250 miles of 4,000 miles or the appropriate multiple of 4,000 miles, respectively.

(d) The results of each emission test shall be supplied to the Administrator immediately after the test. Where a manufacturer conducts multiple tests at any test point or any tests between test points, data on these tests (including voided tests) shall be provided immediately to the Administrator. In addition, all test data shall be compiled and provided to the Administrator in accordance with § 85.075-4.

(e) Whenever the manufacturer proposes to operate and test a vehicle which may be used for emission or durability data, he shall provide the zero mile test data to the Administrator and make the vehicle available for such testing under § 85.075-29 as the Administrator may require before beginning to accumulate mileage on the vehicle. Failure to comply with this requirement will invalidate all test data submitted for this vehicle.

(f) Once a manufacturer begins to operate an emission data or durability data vehicle, as indicated by compliance with paragraph (e) of this section, he shall continue to run the vehicle to 4,000 miles or 50,000 miles, respectively, and the data from the vehicle will be used in the calculations under § 85.075-28. Discontinuation of a vehicle shall be allowed only with the written consent of the Administrator.

(g) (1) The Administrator may elect to operate and test any test vehicle during all or any part of the mileage accumulation and testing procedure. In such cases, the manufacturer shall provide the vehicle(s) to the Administrator with all information necessary to conduct this testing.

(2) Repairs to vehicle components of the durability data vehicle, other than the engine or fuel system, shall be performed only as a result of part failure or vehicle system malfunction.

(3) Allowable maintenance on emission data vehicles shall be limited to the adjustment of engine idle speed at the 4,000-mile test point.

(4) Where the Administrator agrees under § 85.075-7 to a mileage accumulation of less than 50,000 miles for durability testing, he may modify the requirements of this paragraph.



(2) The test procedures in §§ 85.075-10 through 85.075-27 will be followed by the Administrator. The Administrator will test the vehicles at each test point. Maintenance may be performed by the manufacturer under such conditions as the Administrator may prescribe.

(3) The data developed by the Administrator for the engine-system combination shall be combined with any applicable data supplied by the manufacturer on other vehicles of that combination to determine the applicable deterioration factors for the combination. In the case of a significant discrepancy between data developed by the Administrator and that submitted by the manufacturer, the Administrator's data shall be used in the determination of deterioration factors.

#### § 85.075-8 Special test procedures.

The Administrator may, on the basis of a written application therefor by a manufacturer, prescribe test procedures, other than those set forth in this subpart, for any motor vehicle which he determines is not susceptible to satisfactory testing by the procedures set forth herein.

#### § 85.075-9 Test procedures.

The procedures described in this and subsequent sections will be the test program to determine the conformity of vehicles with the standards set forth in § 85.075-1.

(a) The test consists of prescribed sequences of fueling, parking, and operating conditions. The exhaust gases generated during vehicle operation are diluted with air and sampled continuously for subsequent analysis of specific components by prescribed analytical techniques. The fuel evaporative emissions are collected for subsequent weighing during both vehicle parking and operating events. The test applies to vehicles equipped with catalytic or direct-flame afterburners, induction system modifications, or other systems or to uncontrolled vehicles and engines.

(b) The exhaust emission test is designed to determine hydrocarbon, carbon monoxide, and oxides of nitrogen mass emissions while simulating an average trip in an urban area of 7.5 miles. The test consists of engine startups and vehicle operation on a chassis dynamometer through a specified driving schedule, as described in Appendix I to this part. A proportional part of the diluted exhaust emissions is collected continuously, for subsequent analysis, using a constant volume (variable dilution) sampler.

(c) The fuel evaporative emission test is designed to determine fuel hydrocarbon evaporative emissions to the atmosphere as a consequence of urban driving, and diurnal temperature fluctuations during parking. It is associated with a series of events representative of a motor vehicle's operation, which result in fuel vapor losses directly from the fuel tank and carburetor. Activated carbon traps are employed in collecting the vaporized fuel. The test procedure is specifically aimed at collecting and weighing:

(1) Diurnal breathing losses from the fuel tank and other parts of the fuel system when the fuel tank is subjected to a temperature increase representative of the diurnal range;

(2) Running losses from the fuel tank and carburetor resulting from a simulated trip on a chassis dynamometer; and

(3) Hot soak losses from the fuel tank and carburetor which result when the vehicle is parked and the hot engine is turned off.

(d) All emission control systems installed on or incorporated in a new motor vehicle shall be functioning during all test procedures in this subpart.

#### § 85.075-10 Gasoline specifications.

(a) Fuel having the following specifications or substantially equivalent specifications approved by the Administrator, shall be used in exhaust and evaporative emission testing. The lead content and octane rating of the fuel shall be in the range recommended by the vehicle or engine manufacturer.

Item	ASTM designation	Specifications
Distillation range.....	D 86	
IBP, ° F.....		75-95
10 percent point, ° F.....		120-135
50 percent point, ° F.....		200-230
90 percent point, ° F.....		300-325
EP, ° F (max.).....		415
Sulfur, wt. percent, max.....	D 1266	0.10
Phosphorus, theory.....		0.0
RVP, lb.....	D 323	8.7-9.2
Hydrocarbon composition.....	D 1319	
Olefins, percent, max.....		10
Aromatics, percent, max.....		35
Saturates.....		Remainder

<sup>1</sup> For testing which is unrelated to fuel evaporative emission control, the specified range is 8.0-9.2.

(b) Fuels representative of commercial fuels which will generally be available through retail outlets shall be used in mileage accumulation. The lead content and octane rating of the fuel used shall be in the range recommended by the vehicle or engine manufacturer. The Reid vapor pressure of the fuel used shall be characteristic of the motor fuel during the season during which the mileage accumulation takes place.

(c) The specification range of the fuels to be used under paragraph (b) of this section shall be reported in accordance with § 85.075-2(b)(3).

#### § 85.075-11 Vehicle and engine preparation (fuel evaporative emissions).

(a) (1) Apply approximate leak-proof fittings to all fuel system external vents to permit collection of effluent vapors from these vents during the course of the prescribed tests. Since the prescribed test requires the temporary plugging of the inlet pipe to the air cleaner, it will be necessary to install a probe for collecting the normal effluents from this source. Where antisurge/vent filler caps are employed on the fuel tank, plug off the normal vent if it does not conveniently lend itself to the collection of vapors which emanate from it, and introduce a separate vent, with appropriate fitting, on the cap. Where the fuel tank

vent line terminus is inaccessible, sever the line at a convenient point near the fuel tank and install the collection system in a closed circuit assembly with the severed ends. All fittings shall terminate in 1/16-inch ID tube sections for ready connection to the collection systems and shall be designed for minimum dead space.

(2) The design and installation of the necessary fittings shall not disturb the normal function of the fuel system components or the normal pressure relationships in the system.

(b) (1) Inspect the fuel system carefully to insure the absence of any leaks to the atmosphere of either liquid or vapor which might affect the accuracy of the test or the performance of the control system. Corrective action, if any, shall be reported with the test results under § 85.075-4.

(2) Care should be exercised, in the application of any pressure tests, neither to purge nor load the evaporative emission control system.

(c) Prepare fuel tank for recording the temperature of the prescribed test fuel at its approximate midvolume.

(d) Provide additional fittings and adapters, as required, to accommodate a fuel drain at the lowest point possible in the tank as installed on the vehicle.

#### § 85.075-12 Vehicle preconditioning (fuel evaporative emissions).

Vehicles to be tested for compliance with the fuel evaporative emissions standard of this subpart shall be preconditioned as follows:

(a) The test vehicle shall be operated under the conditions prescribed for mileage accumulation, § 85.075-7, for 1 hour immediately prior to the operations prescribed below.

(b) The fuel tank shall be drained and specified test fuel (§ 85.075-10(a)) added. The evaporative emission control system or device shall not be abnormally purged or loaded as a result of draining or fueling the tank.

(c) The test vehicle shall be placed on the dynamometer and operated over a simulated trip, according to the applicable requirements and procedures of §§ 85.075-14 through 85.075-19 except that the engine need not be cold when starting the run on the dynamometer and only a single trip of 7.5 miles shall be run. During the run the ambient temperature shall be between 68° F. and 86° F.

(d) The engine and cooling fan shall be stopped upon completion of the dynamometer operation and the vehicle permitted to soak either on or off the dynamometer stand at an ambient temperature between 76° F. and 86° F. for a period of not less than 1 hour prior to the soak period prescribed in § 85.075-13(a)(1).

#### § 85.075-13 Evaporative emission collection procedure.

The standard test procedure consists of three parts described below which shall be performed in sequence and without any interruption in the test conditions prescribed.



(a) *Diurnal breathing loss test.* (1) The test vehicle shall be allowed to "soak" in an area where the ambient temperature is maintained between 60° F. and 86° F. for a period of not less than 10 hours. (The vehicle preparation requirements of § 85.075-11 may be performed during this period.) It shall then be transferred to a soak area where the ambient temperature is maintained between 76° F. and 86° F. Upon admittance to the 76° F.-86° F. soak area, the prescribed fuel tank thermocouple shall be connected to the recorder and the fuel and ambient temperatures recorded at a chart speed of approximately 12 inches per hour (or equivalent record).

(2) The fuel tank of the prepared test vehicle, preconditioned according to § 85.075-12, shall be drained and recharged with the specified test fuel, § 85.075-10(a), to the prescribed "tank fuel volume," defined in § 85.002. The temperature of the fuel following the charge to the tank shall be 60° F. ± 2° F. Care should be exercised against abnormal loading of the evaporative emission control system or device as a result of fueling the tank.

(3) Immediately following the fuel charge to the tank, the exhaust pipe(s) and inlet pipe to the air cleaner shall be plugged and the prescribed vapor collection systems installed on all fuel system external vents. Multiple vents may be connected to a single collection trap provided that, where there is more than one external vent on a fuel system distinguishing between carburetor and tank vapors, separate collection systems shall be employed to trap the vapors from the separate sources. Every precaution shall be taken to minimize the lengths of the collection tubing employed and to avoid sharp bends across the entire system.

(4) Artificial means shall be employed to heat the fuel in the tank to 84° F. ± 2° F. The prescribed temperature of the fuel shall be achieved over a period of 60 minutes ± 10 minutes using a constant rate of heat input. After a minimum of 1 hour, following admittance to the 76° F.-86° F. soak area, the vehicle shall be moved onto the dynamometer stand for the subsequent part of the test. The fuel tank thermocouple may be temporarily disconnected to permit moving the test vehicle. Plugs shall be removed from the exhaust pipe(s) and inlet pipe to the air cleaner.

(b) *Running loss test.* (1) The vehicle shall be placed on the dynamometer and the fuel tank thermocouple reconnected. The fuel temperature and the ambient air temperature shall be recorded at a chart speed of approximately 12 inches per hour (or equivalent record).

(2) Where an external vent is located such that any "running loss" emissions would be inducted into the engine, the vapor loss measurement system shall be temporarily disconnected from that vent and clamped. Vapor losses from this vent need not be measured during this part of the test.

(3) The vehicle shall be operated on the dynamometer according to the requirements and procedures of §§ 85.075-14 through 85.075-24. The engine and

fan shall be turned off upon completion of the dynamometer run and the exhaust and air cleaner inlet pipes shall be reconnected.

(4) Vapor losses need not be measured during the 10-minute soak or 505-second "hot" start test. Any vapor loss collection system used during the cold start shall be temporarily disconnected and clamped. At the end of the hot start test, the vapor collection systems shall be reconnected for the following phase.

(c) *Hot soak test.* Upon completion of the dynamometer run, the test vehicle shall be permitted to soak with hood down for a period of 1 hour at an ambient temperature between 76° F. and 86° F. This operation completes the test. The traps are disconnected and weighed according to § 85.075-21.

#### § 85.075-14 Dynamometer driving schedule.

(a) The dynamometer driving schedule to be followed consists of a non-repetitive series of idle, acceleration, cruise, and deceleration modes of various time sequences and rates. The driving schedule is defined by a smooth transition through the speed vs. time relationships listed in Appendix I. The time sequence begins upon starting the vehicle according to the startup procedure described in § 85.075-19.

(b) A speed tolerance of ± 2 m.p.h. and a time tolerance of ± 1 second (or an algebraic combination of the two) from either the speed-time relationship prescribed in Appendix I or as printed on a driver's aid chart approved by the Administrator are acceptable. Speed tolerances greater than 2 m.p.h. (such as occur when shifting manual transmission vehicles) are acceptable provided they occur for less than 2 seconds on any one occasion. Speeds lower than those prescribed may be acceptable provided that the vehicle is operated at maximum available power during such occurrences. Further, speed deviations from those prescribed due to stalling are acceptable provided the provisions of § 85.075-19(f) are adhered to.

#### § 85.075-15 Dynamometer procedure.

(a) The dynamometer run consists of two tests, a "cold" start test after a minimum 12-hour soak according to the provisions of §§ 85.075-12 and 85.075-13 and a "hot" start test with a 10-minute soak between the two tests. Engine startup, operation over the driving schedule, and engine shutdown make a complete cold start test. Engine startup and operation over the first 505 seconds of the driving schedule complete the hot start test. The exhaust emissions are diluted with air to a constant volume and a portion is sampled continuously during each test. The composite samples collected in bags are analyzed for hydrocarbons, carbon monoxide, carbon dioxide, and oxides of nitrogen. A parallel sample of the dilution air is similarly analyzed for hydrocarbon, carbon monoxide, and oxides of nitrogen.

(b) During dynamometer operation, a fixed speed cooling fan shall be positioned so as to direct cooling air to the

vehicle in an appropriate manner with the engine compartment cover open. The fan capacity shall normally not exceed 5,300 c.f.m. If, however, the manufacturer can show that during field operation the vehicle receives additional cooling, the fan capacity may be increased or additional fans used if approved in advance by the Administrator. In the case of vehicles with front engine compartments, the fan(s) shall be squarely positioned between 8 and 12 inches in front of the cooling air inlets (grill). In the case of vehicles with rear engine compartments (or if special designs make the above impractical), the cooling fan(s) shall be placed in a position to provide sufficient air to maintain engine cooling.

(c) The vehicle shall be nearly level when tested in order to prevent abnormal fuel distribution.

(d) Flywheels, electrical or other means of simulating inertia as shown in the following table shall be used. If the equivalent inertia specified is not available on the dynamometer being used, the next higher equivalent inertia (not to exceed 250 lbs.) available shall be used.

Loaded vehicle weight, pounds	Equivalent inertia weight, pounds	Road load power @ 50 m.p.h., horsepower
Up to 1,125	1,000	5.9
1,126 to 1,375	1,000	6.5
1,376 to 1,625	1,500	7.1
1,626 to 1,875	1,750	7.7
1,876 to 2,125	2,000	8.3
2,126 to 2,375	2,250	8.8
2,376 to 2,625	2,500	9.4
2,626 to 2,875	2,750	9.9
2,876 to 3,125	3,000	10.3
3,126 to 3,375	3,500	11.2
3,376 to 3,625	4,000	12.0
3,626 to 3,875	4,500	12.7
3,876 to 4,125	5,000	13.4
4,126 to 4,375	5,500	13.9
4,376 to 4,625	5,500	14.4

#### (e) Power absorption unit adjustment.

(1) The power absorption unit shall be adjusted to reproduce road load power at 50 m.p.h. true speed. The indicated road load power setting shall take into account the dynamometer friction. The relationship between road load (absorbed) power and indicated road load power for a particular dynamometer shall be determined by the procedure outlined in Appendix II or other suitable means.

(2) The road load power listed in the table above shall be used or the vehicle manufacturer may determine the road load power by the following procedure and request its use:

(i) Measuring the absolute manifold pressure of a representative vehicle, of the same equivalent inertia weight class, when operated on a level road under balanced wind conditions at a true speed of 50 m.p.h., and

(ii) Noting the dynamometer indicated road load horsepower setting required to reproduce that manifold pressure when the same vehicle is operated on the dynamometer at a true speed of 50 m.p.h. The tests on the road and on the dynamometer shall be performed with the same vehicle ambient absolute pressure (usually barometric), i.e. within ± 5 mm. Hg.



(iii) The road load power shall be determined according to the procedure outlined in Appendix II and adjusted according to the following if applicable.

(3) Where it is expected that more than 33 percent of the vehicles in an engine family will be equipped with air conditioning, the road load power listed above or as determined in paragraph 2 of this subsection shall be increased by 10 percent for testing all test vehicles representing such engine family.

(f) The vehicle speed (m.p.h.) as measured from the dynamometer rolls shall be used for all conditions. A speed vs. time recording, as evidence of dynamometer test validity, shall be supplied on request of the Administrator.

(g) Practice runs over the prescribed driving schedule may be performed to find the minimum throttle action to maintain the proper speed-time relationship.

**NOTE:** When using two-roll dynamometers a truer speed-time trace may be obtained by minimizing the rocking of the vehicle in the rolls. The rocking of the vehicle changes the tire rolling radius on each roll. The rocking may be minimized by restraining the vehicle horizontally (or nearly so) by using a cable and winch.

(h) The drive wheel tires may be inflated up to 45 p.s.i.g. in order to prevent tire damage. The drive wheel tire pressure shall be reported with the test results.

(i) If the dynamometer has not been operated during the 2-hour period immediately preceding the test it shall be warmed up for 15 minutes by operating it at 30 m.p.h. using a nontest vehicle.

#### § 85.075-16 Three-speed manual transmissions.

(a) All test conditions except as noted shall be run in highest gear.

(b) Cars equipped with free wheeling or overdrive units shall be tested with this unit (free wheeling or overdrive) locked out of operation.

(c) Idle shall be run with transmission in gear and with clutch disengaged (except first idle; see § 85.075-19).

(d) The vehicle shall be driven with minimum throttle movement to maintain the desired speed.

(e) Acceleration modes shall be driven smoothly with the shift speeds as recommended by the manufacturer. If the manufacturer does not recommend shift speeds, the vehicle shall be shifted from first to second gear at 15 m.p.h. and from second to third gear at 25 m.p.h. The operator shall release the accelerator pedal during the shift, and accomplish the shift with minimum closed throttle time. If the vehicle cannot accelerate at the specified rates, the vehicle shall be accelerated at WOT until the vehicle speed reaches the speed at which it should be at that time during the test.

(f) The deceleration modes shall be run with clutch engaged and without shifting gears from the previous mode, using brakes or throttle as necessary to maintain the desired speed. For those modes which decelerate to zero, the clutch shall be depressed when the speed drops below 15 m.p.h., when engine

roughness is evident, or when engine stalling is imminent.

(g) Downshifting is allowed at the beginning of or during a power mode if recommended by the manufacturer or if the engine obviously is lugging.

#### § 85.075-17 Four-speed and five-speed manual transmissions.

(a) Use the same procedure as for three-speed manual transmissions for shifting from first to second gear and from second to third gear. If the manufacturer does not recommend shift speeds, the vehicle shall be shifted from third to fourth gear at 40 m.p.h. Fifth gear may be used at the manufacturer's option.

(b) If transmission ratio in first gear exceeds 5:1, follow the procedure for three- or four-speed manual transmission vehicles as if the first gear did not exist.

#### § 85.075-18 Automatic transmissions.

(a) All test conditions shall be run with the transmission in "Drive" (highest gear). Automatic stick-shift transmissions may be shifted as manual transmissions at the option of the manufacturer.

(b) Idle modes shall be run with the transmission in "Drive" and the wheels braked (except first idle; see § 85.075-19).

(c) The vehicle shall be driven with minimum throttle movement to maintain the desired speed.

(d) Acceleration modes shall be driven smoothly allowing the transmission to shift automatically through the normal sequence of gears. If the vehicle cannot accelerate at the specified rates, the vehicle shall be accelerated at WOT until the vehicle speed reaches the speed at which it should be at that time during the driving schedule.

(e) The deceleration modes shall be run in gear using brakes or throttle as necessary to maintain the desired speed.

#### § 85.075-19 Engine starting and re-starting.

(a) The engine shall be started according to the manufacturer's recommended starting procedures. The initial 20-second-idle period shall begin when the engine starts.

(b) Choke operation:

(1) Vehicles equipped with automatic chokes shall be operated according to the manufacturer's operating or owner's manual including choke setting and "kick-down" from cold fast idle. If choke "kick-down" time is not specified, it shall be performed 13 seconds after the engine starts. The transmission shall be placed in gear 15 seconds after the engine is started. If necessary, braking may be employed to keep the drive wheels from turning.

(2) Vehicles equipped with manual chokes shall be operated according to the instructions which will be included in the manufacturer's operating or owner's manual. If not specified, the choke shall be operated to maintain engine idle at  $1,100 \pm 50$  r.p.m. during the initial idle period and used where necessary during the remainder of the test to keep the engine running.

(c) The operator may use more choke,

more throttle, etc., where necessary to keep the engine running.

(d) If the manufacturer's operating or owner's manual does not specify a warm engine starting procedure, the engine (automatic and manual choke engines) shall be started by depressing the acceleration pedal about half way and cranking the engine until it starts.

(e) If the vehicle does not start after 10 seconds of cranking, cranking shall cease and the reason for failure to start determined. The revolution counter on the constant volume sampler (see § 85.075-24, Dynamometer test runs) shall be turned off and the sample solenoid valves placed in the "dump" position during this diagnostic period. In addition, either the positive displacement pump should be turned off or the exhaust tube disconnected from the tailpipe during the diagnostic period. If failure to start is an operational error, the vehicle shall be rescheduled for testing from a cold start. If failure to start is caused by vehicle malfunction, corrective action of less than 30 minutes duration may be taken and the test continued. The sampling system shall be reactivated at the same time cranking is started. When the engine starts, the driving schedule timing sequence shall begin. If failure to start is caused by vehicle malfunction and the vehicle cannot be started, the test shall be voided, the vehicle removed from the dynamometer, corrective action taken, and the vehicle rescheduled for test. The reason for the malfunction (if determined) and the corrective action taken shall be reported.

(e) If the engine "false starts", the operator shall repeat the recommended starting procedure (such as resetting the choke, etc.).

(f) Stalling:

(1) If the engine stalls during an idle period, the engine shall be restarted immediately and the test continued. If the engine cannot be started soon enough to allow the vehicle to follow the next acceleration as prescribed, the driving schedule indicator shall be stopped. When the vehicle restarts the driving schedule indicator shall be reactivated.

(2) If the engine stalls during some operating mode other than idle, the driving schedule indicator shall be stopped, the vehicle restarted, accelerated to the speed required at that point in the driving schedule and the test continued.

(3) If the vehicle will not restart within 1 minute, the test shall be voided, the vehicle removed from the dynamometer, corrective action taken, and the vehicle rescheduled for test. The reason for the malfunction (if determined) and the corrective action taken shall be reported.

#### § 85.075-20 Sampling and analytical system (exhaust emissions).

(a) Schematic drawings. The following figures (Figs. A75-1 and A75-2) are schematic drawings of the exhaust gas sampling and analytical systems which will be used for testing under the regulations in this part. Additional components such as instruments, valves, solenoids, pumps, and switches may be used



to provide additional information and coordinate the functions of the component systems.

(b) *Component description (exhaust gas sampling system).* The following components will be used in the exhaust gas sampling system for testing under the regulations in this part. See Figure A75-1. Other types of constant volume samplers may be used if shown to yield equivalent results.

(1) A dilution air filter assembly consisting of a particulate (paper) filter to remove solid matter from the dilution air and thus increase the life of the charcoal filter; a charcoal filter to reduce and stabilize the background hydrocarbon level; and a second particulate filter to remove charcoal particles from the air stream. The filters shall be of sufficient capacity and the duct which carries the dilution air to the point where the exhaust gas is added shall be of sufficient size so that the pressure at the mixing point is less than 1 inch of water pressure below ambient when the constant volume sampler is operating at its maximum flow rate.

(2) A flexible, leak-tight connector and tube to the vehicle tailpipe. The flexible tubing shall be sized and connected in such a manner that the static pressure variations in the vehicle tailpipe(s) remain within  $\pm 1$  inch of water of the static pressure variations measured during a dynamometer driving cycle with no connections to the tailpipe(s).

(3) A heating system to preheat the heat exchanger to within  $\pm 10^\circ$  F. of its operating temperature before the test begins.

(4) A heat exchanger capable of limiting the gas mixture temperature variation during the entire test to  $\pm 10^\circ$  F. as measured at a point immediately ahead of the positive displacement pump.

(5) A positive displacement pump to pump the dilute exhaust mixture. The pump capacity (300 to 350 c.f.m. is sufficient for testing most vehicles) shall be large enough to virtually eliminate water condensation in the system. See Appendix III for flow calibration techniques.

(6) Temperature sensor (T1) with an accuracy of  $\pm 2^\circ$  F. to allow continuous recording of the temperature of the dilute exhaust mixture entering the positive displacement pump. (See § 85.075-22) (1).

(7) Gauge (G1) with an accuracy of  $\pm 3$  mm. Hg to measure the pressure depression of the dilute exhaust mixture entering the positive displacement pump, relative to atmospheric pressure.

(8) Gauge (G2) with an accuracy of  $\pm 3$  mm. Hg to measure the pressure increase across the positive displacement pump.

(9) Sample probes (S1 and S2) pointed upstream to collect samples from the dilution air stream and the dilute exhaust mixture. Additional sample probes may be used, for example, to obtain continuous concentration traces of the dilute exhaust stream. In such case the sample flow rate, in standard cubic feet per test phase, must be added to the calculated dilute exhaust volume. The position of the sample probe in Figure A75-1 is pictorial only.

(10) Filters (F1 and F2) to remove particulate matter from dilution air and dilute exhaust samples.

(11) Pumps (P1 and P2) to pump the dilution air and dilute exhaust into their respective sample collection bags.

(12) Flow control valves (N1 and N2) to regulate flows to sample collection bags, at constant flow rates. The minimum sample flow rate shall be 10 c.f.h.

(13) Flowmeters (FL1 and FL2) to insure, by visual observation, that constant flow rates are maintained throughout the test.

(14) Three-way solenoid valves (V1, V2, V3, and V4) to direct sample streams to either their respective bags or overboard.

(15) Quick-connect, leak-tight fittings (C1, C2, C3, and C4) with automatic shutoff on bag side to attach sample bags to sample system.

(16) Sample collection bags for dilution air and exhaust samples of sufficient capacity so as not to impede sample flow.

(17) Revolution counters to count the revolutions of the positive displacement pump while each test phase is in progress and samples are being collected.

(c) *Component description (exhaust gas analytical system).* The following components will be used in the exhaust gas analytical system for testing under the regulations in this part. The analytical system provides for the determination of hydrocarbon concentrations by flame ionization detector (FID) analysis, the determination of carbon monoxide and carbon dioxide concentrations by nondispersive infrared (NDIR) analysis and the determination of oxides of nitrogen concentrations by chemiluminescence (CL) analysis in dilute exhaust samples. The chemiluminescence method of analysis requires that the nitrogen dioxide present in the sample be converted to nitric oxide before analysis. See Appendix V. Other types of analyzers may be used if shown to yield equivalent results and if approved in advance by the Administrator. See Figure A75-2.

(1) Quick-connect leak-tight fitting (C4) to attach sample bags to analytical system.

(2) Filter (F3) to remove any residual particulate matter from the collected sample.

(3) Pump (P3) to transfer samples from the sample bags to the analyzers.

(4) Selector valves (V4, V5, V6, V7, and V8) for directing samples, span gases or zeroing gases to the analyzers.

(5) Flow control valves (N3, N4, N5, N6, N7, N8, N9, N10, N11, N12, and N13) to regulate the gas flow rates.

(6) Flowmeters (FL3, FL4, and FL5) to indicate gas flow rates.

(7) Manifold (M1) to collect the expelled gases from the analyzers.

(8) Pump (P4) to transfer expelled gases from the collection manifold to a vent external to the test room (optional).

(9) Analyzers to determine hydrocarbon, carbon monoxide, carbon dioxide and oxides of nitrogen concentrations.

(10) An oxide of nitrogen converter to convert any  $\text{NO}_2$  present in the samples to  $\text{NO}$  before analysis.

(11) Selector valves (V9 and V10) to allow the sample, span, calibrating or zeroing gases to bypass the converter.

(12) Water trap (T1) to partially remove water and a valve (V11) to allow the trap to be drained.

(13) Sample conditioning columns to remove remainder of water (WR1 and WR2 containing indicating  $\text{CaSO}_4$ , or indicating silica gel) and carbon dioxide (CDR1 and CDR2 containing ascarite) from the  $\text{CO}$  analysis stream.

(14) Selector valves (V12 and V13) to permit switching from exhausted absorbing columns to fresh columns.

(15) Water bubbler (W1) to allow saturation of the  $\text{CO}_2$  span gas to check efficiency of absorbing columns.

(16) Recorders (R1, R2, R3, and R4) or digital printers to provide permanent records of calibration, spanning and sample measurements; or in those facilities where computerized data acquisition systems are incorporated, the computer facility printout may be used.

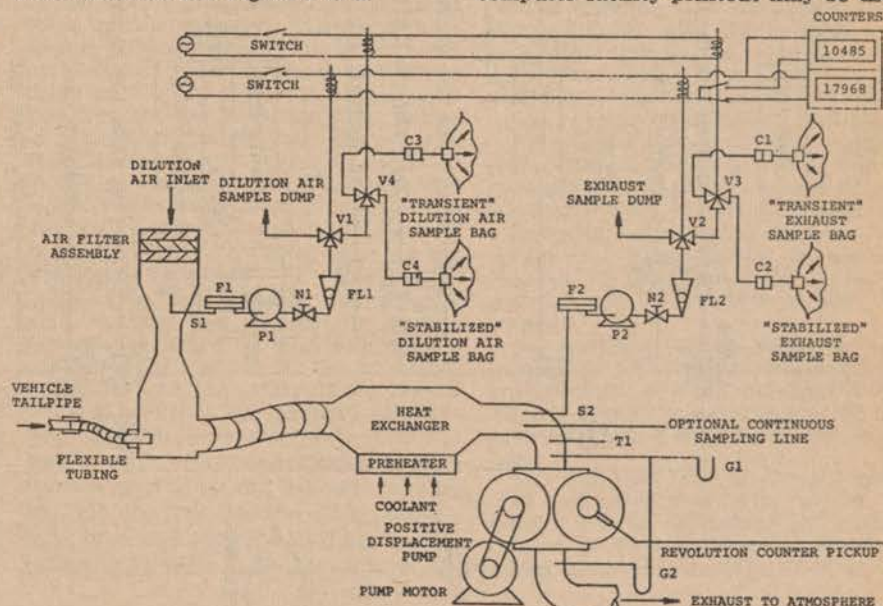


FIGURE A75-1.—Exhaust gas sampling system.



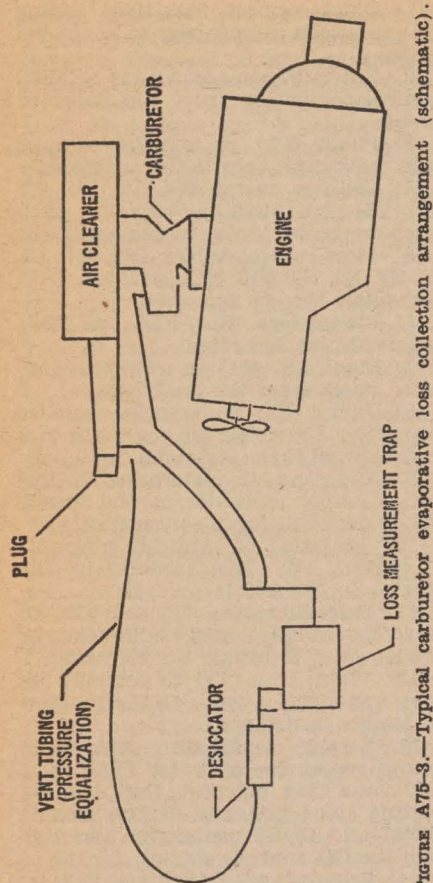


Figure A75-3.—Typical carburetor evaporative loss collection arrangement (schematic).

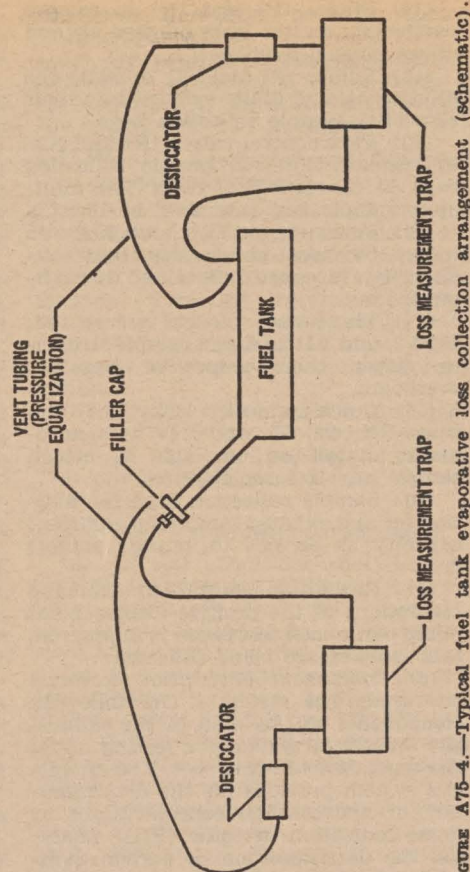


Figure A75-4.—Typical fuel tank evaporative loss collection arrangement (schematic).

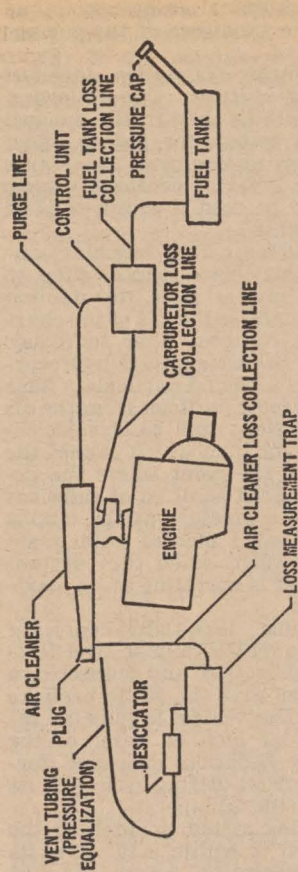


Figure A75-5.—Typical fuel evaporative loss collection arrangement for vehicle equipped with evaporative emission control system (schematic).

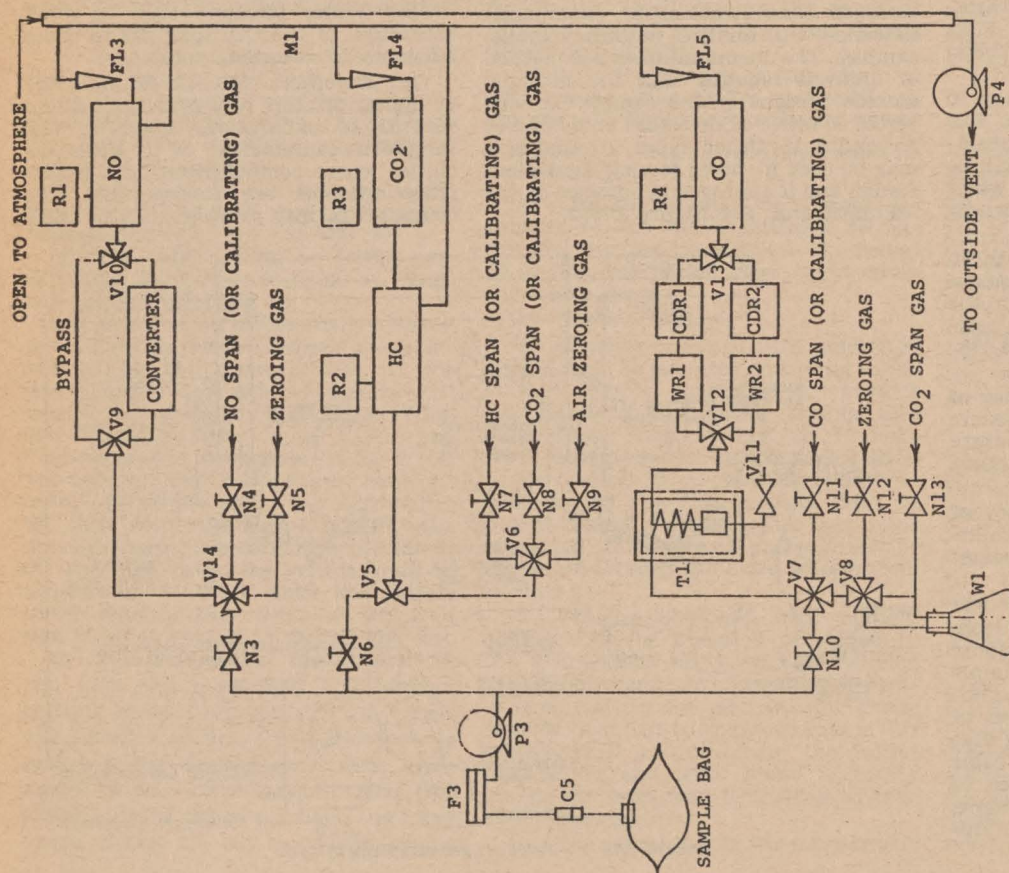


Figure A75-2.—Exhaust gas analytical system.

§ 85.075-21 Sampling and analytical system (fuel evaporative emissions). and A75-5) are flow diagrams of typical evaporative loss collection applications.

(a) Schematic drawing. (1) The fol-



(2) Figure A75-3 represents an arrangement for collecting losses which emanate from the carburetor. Figure A75-4 depicts the means for separately collecting the vapors which emanate from the fuel tank vent line and filler cap. Figure A75-5 shows an arrangement for collecting the losses from a closed fuel system, vented to the atmosphere solely through the air cleaner, as might be the case with certain fuel evaporative emission control devices.

(3) Schematic drawings of arrange-

ments to be employed shall be submitted in accordance with § 85.075-2(b)(3).

(b) *Collection equipment.* The following equipment shall be used for this collection of fuel evaporative emissions. (Item quantities are determined by individual test needs.)

(1) *Activated carbon trap.* See Figure A75-6 for specifications of one design; other configurations may be used: *Provided*, That they give demonstrably equivalent results.

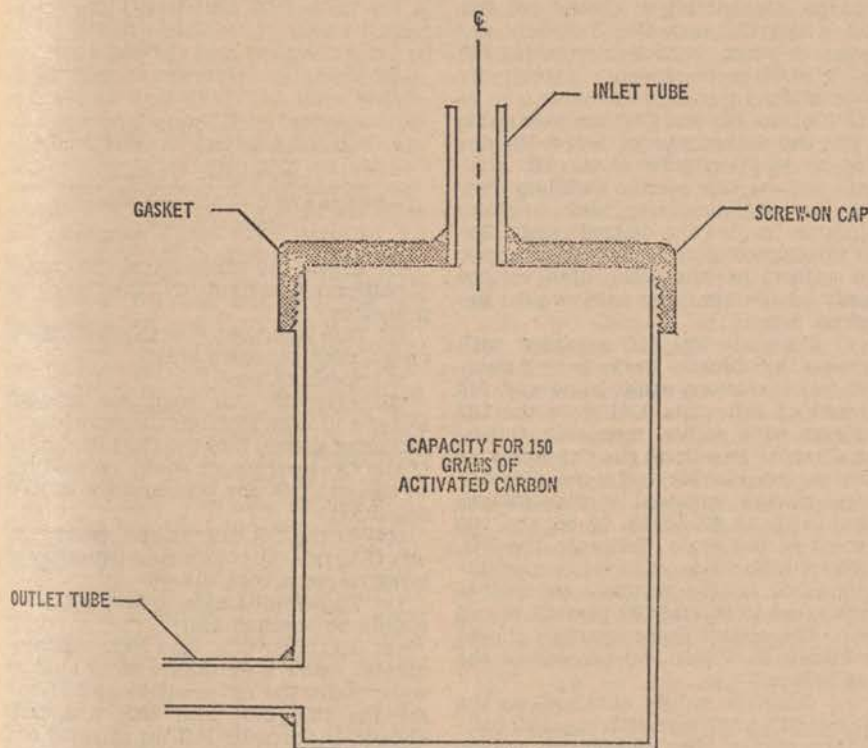


FIGURE A75-6.—Typical activated carbon trap (schematic).

(i) *Canister*—300±25 ml., cylindrical container having a length to diameter ratio of 1.4±0.1. An inlet tube, 1/16 inch ID and 1 inch long is sealed into the top of the canister, at its geometric center. A similar outlet tube is sealed into the wall 1/4 inch from the bottom of the canister. The canister is designed to withstand an air pressure of 2 p.s.i., when sealed, without evidence of leaking when immersed in water for 30 seconds.

(ii) *Activated carbon*—meeting the following specifications:

Surface area, min. (N <sub>2</sub> BET method), <sup>1</sup>	1,000 square meters per gram.
Adsorption capacity, min. (carbon tetrachloride)	60 percent, by weight.
Volatile material including adsorbed water vapor.	None.
Screen analysis size:	Percent
Less than 1.4 mm.	0
1.7-2.4 mm.	90-100
More than 3.0 mm.	0

<sup>1</sup> Brunauer, Emmett & Teller: Journal of the American Chemical Society, Vol. 60, p. 309, 1938.

The activated carbon trap is prepared for the test by attaching clamped sections of vinyl tubing to the inlet and outlet tubes of the canister. The canister is then filled with 150±10 gm. hot activated carbon which had previously been oven-dried for 3 hours at 300° F. Loss of carbon through the inlet and outlet tubes is prevented through the use of wire screens of 0.7 mm. mesh or wads of loosely packed glass wool. The canister is closed immediately after filling and the carbon is allowed to cool while the trap is vented through a drying tube via the unclamped outlet arm.

(iii) The trap is sealed and weighed after cooling and the weight, to the nearest 0.1 gram, is inscribed on the canister body. Within 12 hours of the scheduled test, the weight of the trap is checked and if it has changed by more than 0.5 gm., it is redried to constant weight. This redrying operation is performed by passing dry nitrogen, heated to 275° F., through the trap, via the inlet tube, at a rate of 1 liter per minute until checks made at 30-minute intervals

do not vary by more than 0.1 percent of the gross weight. The trap and its contents are allowed to cool to room temperature, while vented through a drying tube via the outlet arm, before use.

(2) *Auxiliary collection equipment.* (i) *Drying tube*—transparent, tubular body 3/4 inch ID, 6 inches long, with serrated tips and removable caps.

(ii) *Desiccant*—indicating variety, 8 mesh. The drying tube is attached to the outlet tube of the collection traps to prevent ambient moisture from entering the trap. It is prepared by filling the empty drying tube with fresh desiccant using loose wad of glass wool to hold the desiccant in place. The desiccant is renewed when three-quarters spent, as indicated by color change.

(iii) *Collection tubing*—stainless steel or aluminum, 1/16 inch ID, for connecting the collection traps to the fuel system vents.

(iv) *Polyvinyl chloride (vinyl) tubing*—flexible tubing, 1/16 inch ID, for sealing butt-to-butt joints.

(v) *Laboratory tubing*—air tight flexible tubing 1/16 inch ID, attached to the outlet end of the drying tubes to equalize collection system pressure.

(vi) *Clamps*—hosecock, openside, for pinching off flexible tubing.

(c) *Weighing equipment.* The balance and weights used shall be capable of determining the net weight of the activated carbon trap within an accuracy of ±75 mg.

(d) *Temperature measuring equipment.* (1) *Temperature recorder*—multi-channel, variable speed, potentiometric, or substantially equivalent, recorder with a temperature range of 50° F. to 100° F. and capable of either simultaneous or sequential recording of the ambient air and fuel temperatures within an accuracy of ±1° F.

(2) *Fuel tank thermocouples*—iron-constantan (type J) construction.

(3) Other types of temperature sensing systems may be provided by the manufacturer if they record the information specified in subparagraph (1) of this paragraph with the required accuracy and if they are self-contained. Type J thermocouples are required for compatibility with recording instruments used in Federal certification facilities.

(e) *Assembly and use of the activated carbon vapor collection system.* (1) The prepared activated carbon trap, dried to constant weight, cooled to the ambient temperature and sealed with clamped sections of vinyl tubing is carefully weighed to the nearest 20 milligrams and the weight recorded as the "tare weight."

(2) A drying tube is attached to the outlet tube and the clamp released, but not removed. A length of flexible tubing, for pressure equalization, is connected to the other end of the drying tube.

(3) The inlet tube of the adsorption trap and external vent(s) of the fuel system will be connected by minimal lengths of stainless steel or aluminum tubing and short sections of vinyl tub-



ing. Butt-to-butt joints shall be made wherever possible and precautions taken against sharp bends in the connection lines, including any manifold systems employed to connect multiple vents to a single trap.

(4) The clamp on the inlet tube of the trap shall be released but not removed. Care shall be exercised to prevent heating the vapor collection trap by radiant or conductive heat from the engine.

(5) Upon completion of the collection sequence, the vinyl tubing sections on each arm of the collection trap shall be clamped tight and the collection system dismantled.

(6) The sealed vapor collection trap shall be weighed carefully to the nearest 20 milligrams. This constitutes the "gross weight," which is appropriately recorded. The difference between the "gross weight" and "tare weight" represents the "net weight" for purposes of calculating the fuel vapor losses.

#### § 85.075-22 Information to be recorded.

The following information shall be recorded with respect to each test:

- Test number.
- System or device tested (brief description).
- Date and time of day for each part of the test schedule.
- Instrument operator.
- Driver or operator.
- Vehicle: Make—Vehicle Identification number—Model year—Transmission type—Odometer reading—Engine displacement—Engine family—Idle r.p.m.—Nominal fuel tank capacity and location on vehicle—Number of carburetors—Number of carburetor barrels—Inertia loading—Actual road load HP. at 50 m.p.h. and drive wheel tire pressure.
- Dynamometer serial number and indicated road load power absorption at 50 m.p.h.
- All pertinent instrument information such as tuning—gain—serial numbers—detector numbers—range.
- Recorder charts: Identify zero, span, exhaust gas, and dilution air sample traces.
- Barometric pressure, ambient temperature and humidity and the temperature of the air in front (from 6 to 12 inches from the grill) of the radiator during the test.
- Fuel temperatures, as prescribed.
- The temperature and pressure of the mixture of exhaust and dilution air entering the positive displacement pump and the pressure increases across the pump. The temperature of the mixture shall be recorded continuously or digitally at a rate often enough to determine temperature variations, or it may be controlled to  $\pm 5^\circ \text{F.}$  of the set point of the temperature control system. In the last case only the set point need be recorded.
- The number of revolutions of the positive displacement pump accumulated while the test is in progress and exhaust flow samples are being collected.
- The humidity of the dilution air.

#### § 85.075-23 Analytical system calibration and sample handling.

(a) Calibrate the analytical assembly at least once every 30 days. Use the same flow rate as when analyzing samples.

(1) Adjust analyzers to optimize performance.

(2) Zero the hydrocarbon analyzer with zero grade air and the carbon monoxide, carbon dioxide, and oxides of nitrogen analyzers with zero grade nitrogen. The allowable zero gas impurity concentrations should not exceed 1 p.p.m. equivalent carbon response, 1 p.p.m. carbon monoxide, 300 p.p.m. (0.03 mole percent) carbon dioxide, and 0.1 p.p.m. nitric oxide.

(3) Set the CO and CO<sub>2</sub> analyzer gains to give the desired ranges. Select the desired attenuation scale of the HC analyzer and set the sample capillary flow rate, by adjusting the back pressure regulator, to give the desired range. Select the desired scale of the NO<sub>x</sub> analyzer and adjust the phototube high voltage supply or the amplifier gain to give the desired range.

(4) Calibrate the HC analyzer with propane (air diluent) gases having nominal concentrations equal to 50 and 100 percent of full scale. Calibrate the CO analyzer with carbon monoxide (nitrogen diluent) gases and the CO<sub>2</sub> analyzer with carbon dioxide (nitrogen diluent) gases having nominal concentrations equal to 10, 25, 40, 50, 60, 70, 85, and 100 percent of full scale. Calibrate the NO<sub>x</sub> analyzer with nitric oxide (nitrogen diluent) gases having nominal concentrations equal to 50 and 100 percent of full scale. The actual concentrations should be known to within  $\pm 2$  percent of the true values.

(5) Compare values obtained on the CO and CO<sub>2</sub> analyzers with previous calibration curves. Any significant change reflects some problem in the system. Locate and correct problem, and recalibrate. Use best judgment in selecting curves for data reduction.

(6) Check the NO<sub>x</sub> to NO converter efficiency by the following procedure:

(i) Fill a new (not previously used to collect exhaust gas samples) sample bag with air (or oxygen) and NO span gas in proportions which result in a mix in the operating range of the analyzer. Provide enough oxygen for substantial conversion of NO to NO<sub>2</sub>.

(ii) Knead bag and immediately connect the bag to the sample inlet and alternately measure the NO and NO<sub>2</sub> concentration at 1-minute intervals by alternately passing the sample through the converter and the bypass (close valves N6 and N10 to minimize pump down rate of bag). After several minutes of operation, the recording of NO and NO<sub>2</sub> will resemble Figure A75-7 if the converter is efficient. Even though the amount of NO<sub>2</sub> increases with time, the total NO<sub>x</sub> (NO+NO<sub>2</sub>) remains constant. A decay of NO<sub>2</sub> with time indicates the converter is not essentially 100 percent efficient and the cause should be determined before the instrument is used.

(iii) The converter efficiency should be checked at least once weekly and preferably once daily.

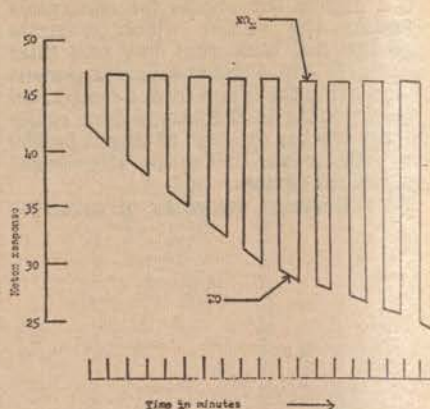


FIGURE A75-7.—Converter efficiency check response.

(7) Check the efficiency of the sample conditioning system by the following procedure:

(i) Zero and span the CO instrument on its most sensitive scale.

(ii) Recheck zero.

(iii) Bubble CO<sub>2</sub> span gas through water and then through the sample conditioning system into the CO instrument. If the CO instrument shows no response to the wet CO<sub>2</sub>, the columns are in good condition.

(iv) If the CO instrument responds to wet CO<sub>2</sub>, replace columns as necessary to bring response back to zero.

(v) The conditioning system efficiency should be checked daily.

(b) HC, CO, CO<sub>2</sub>, and NO<sub>x</sub> measurements: Allow a minimum of 20 minutes warmup for the HC analyzer and 2 hours for the CO, CO<sub>2</sub>, and NO<sub>x</sub> analyzers. (Power is normally left on infrared and chemiluminescence analyzers; but when not in use, the chopper motors of the infrared analyzers are turned off and the phototube high voltage supply of the chemiluminescence analyzer is placed in the standby position.) The following sequence of operations should be performed in conjunction with each series of measurements:

(1) Zero the analyzers. Obtain a stable zero on each amplifier meter and recorder. Recheck after tests.

(2) Introduce span gases and set the CO and CO<sub>2</sub> analyzer gains, the HC analyzer sample capillary flow rate and the NO<sub>x</sub> analyzer high voltage supply or amplifier gain to match the calibration curves. In order to avoid corrections, span and calibrate at the same flow rates used to analyze the test samples. Span gases should have concentrations equal to approximately 80 percent of full scale. If gain has shifted significantly on the CO or CO<sub>2</sub> analyzers, check tuning. If necessary, check calibration. Recheck after test. Show actual concentrations on chart.

(3) Check zeroes; repeat the procedure in subparagraphs (1) and (2) of this paragraph if required.

(4) Check flow rates and pressures.



(5) Measure HC, CO, CO<sub>2</sub>, and NO<sub>x</sub> concentrations of samples. Care should be exercised to prevent moisture from condensing in the sample collection bag.

(6) Check zero and span points.

(c) For the purposes of this section, the term "zero grade air" includes artificial "air" consisting of a blend of nitrogen and oxygen with oxygen concentrations between 18 and 21 mole percent.

#### § 85.075-24 Dynamometer test runs.

(a) The vehicle shall be allowed to stand with the engine turned off for a period of not less than 12 hours before the cold start exhaust emission test, at an ambient temperature as specified in §§ 85.075-12 and 85.075-13. The vehicle shall be stored prior to the emission tests in such a manner that precipitation (e.g. rain or dew) does not occur on the vehicle. The complete dynamometer test consists of a cold start drive of 7.5 miles and simulates a hot start drive of 7.5 miles. The vehicle is allowed to stand on the dynamometer during the 10-minute time period between the cold and hot start tests. The cold start test is divided into two periods. The first period, representing the cold start "transient" phase, terminates at the end of the deceleration which is scheduled to occur at 505 seconds of the driving schedule. The second period, representing the "stabilized" phase, consists of the remainder of the driving schedule including engine shut-down. The hot start test similarly consists of two periods. The first period, representing the hot start "transient" phase, terminates at the same point in the driving schedule as the first phase of the cold start test. The second period of the hot start test, "stabilized" phase, is assumed to be identical to the second period of the cold start test. Therefore, the hot start test terminates after the first period (505 seconds) is run. During the tests the ambient temperature shall be between 68° F. and 86° F.

(b) The following steps shall be taken for each test:

(1) Place drive wheels of vehicle on dynamometer without starting engine.

(2) Open the vehicle engine compartment cover and start the cooling fan.

(3) With the sample solenoid valves in the "dump" position connect evacuated sample collection bags to the two dilute exhaust sample connectors and to the two dilution air sample line connectors.

(4) Start the positive displacement pump (if not already on), the sample pumps, and the temperature recorder. (The heat exchanger of the constant volume sampler should be preheated to its operating temperature before the test begins.)

(5) Adjust the sample flow rates to the desired flow rate (minimum of 10 c.f.h.) and set the revolution counters to zero.

(6) Attach the flexible exhaust tube to the vehicle tailpipe(s).

(7) Simultaneously start the revolution counter for the positive displacement pump, position the sample solenoid valves to direct the sample flow into the

"transient" exhaust sample bag and the "transient" dilution air sample bag, and start cranking the engine.

(8) Fifteen seconds after the engine starts, place the transmission in gear.

(9) Twenty seconds after the engine starts, begin the initial vehicle acceleration of the driving schedule.

(10) Operate the vehicle according to the dynamometer driving schedule (§ 85.075-14).

(11) At the end of the deceleration which is scheduled to occur at 505 seconds, simultaneously switch the sample flows from the "transient" bags to the "stabilized" bags, switch off revolution counter No. 1 and start counter No. 2. As soon as possible and in no case longer than 20 minutes after the end of this portion of the test disconnect the "transient" exhaust and dilution air sample bags, transfer them to the analytical system and process the samples according to § 85.075-23.

(12) Immediately after the end of the sample period turn off the cooling fan and close the engine compartment cover.

(13) Five seconds after the engine stops running, simultaneously turn off revolution counter No. 2 and position the sample solenoid valves to the "dump" position. As soon as possible and in no case longer than 20 minutes after the end of this portion of the test disconnect the "stabilized" exhaust and dilution air sample bags, transfer them to the analytical system and process the samples according to § 85.075-23.

(14) Immediately after the end of the sample period, disconnect the exhaust tube from the tailpipe(s), turn off the cooling fan and close the engine compartment cover.

(15) Turn off the positive displacement pump.

(16) Repeat the steps in subparagraphs (2) through (10) of this paragraph for the hot start test except only one evacuated sample bag is required for sampling exhaust gas and one for dilution air. The step in subparagraph (7) of this paragraph shall begin between 9 and 11 minutes after the end of the sample period for the cold start test.

(17) At the end of the deceleration which is scheduled to occur at 505 seconds, simultaneously turn off the No. 1 revolution counter and position the sample solenoid valve to the "dump" position. (Engine shutdown is not part of the hot start test sample period.)

(18) As soon as possible and in no case longer than 20 minutes after the end of this portion of the test disconnect the hot start "transient" exhaust and dilution air sample bags, transfer them to the analytical system and process the samples according to § 85.075-23.

(19) Disconnect the exhaust tube from the vehicle tailpipe(s) and remove vehicle from dynamometer.

(20) The positive displacement pump may be turned off, if desired.

#### § 85.075-25 Chart reading.

(a) Determine the HC, CO, CO<sub>2</sub> and NO<sub>x</sub> concentrations of the dilution air

and dilute exhaust sample bags from the instrument deflections or recordings making use of appropriate calibration charts.

(b) Determine the average dilute exhaust mixture temperatures from the temperature recorder trace if a recorder is used.

#### § 85.075-26 Calculations (exhaust emissions).

The final reported test results shall be computed by use of the following formulae:

(a) For light duty vehicles:

$$Y_{wm} = (0.43 Y_{ct} + 0.57 Y_{ht} + Y_s) / 7.5$$

where:

$Y_{wm}$  = Weighted mass emissions of each pollutant, i.e. HC, CO, or NO<sub>x</sub>, in grams per vehicle mile.

$Y_{ct}$  = Mass emissions as calculated from the "transient" phase of the cold start test, in grams per test phase.

$Y_{ht}$  = Mass emissions as calculated from the "transient" phase of the hot start test, in grams per test phase.

$Y_s$  = Mass emissions as calculated from the "stabilized" phase of the cold start test, in grams per test phase.

(b) The mass of each pollutant for each phase of both the cold start test and the hot start test is determined from the following:

(1) Hydrocarbon Mass:

$$HC_{mass} = V_{mix} \times \text{Density}_{HC} \times \frac{HC_{conc}}{1,000,000}$$

(2) Oxides of nitrogen Mass:

$$NO_{xmass} = V_{mix} \times \text{Density}_{NO_x} \times \frac{NO_{xconc}}{1,000,000} \times K_H$$

(3) Carbon monoxide Mass:

$$CO_{mass} = V_{mix} \times \text{Density}_{CO} \times \frac{CO_{conc}}{1,000,000}$$

(c) Meaning of symbols:

$HC_{mass}$  = Hydrocarbon emissions, in grams per test phase.

$\text{Density}_{HC}$  = Density of hydrocarbons in the exhaust gas, assuming an average carbon to hydrogen ratio of 1:1.85, in grams per cubic foot at 68° F. and 760 mm. Hg pressure (16.33 gm./cu. ft.).

$HC_{conc}$  = Hydrocarbon concentration of the dilute exhaust sample corrected for background, in p.p.m. carbon equivalent, i.e. equivalent propane  $\times 3$ .

$$HC_{conc} = HC_e - HC_d(1 - 1/DF)$$

where:

$HC_e$  = Hydrocarbon concentrations of the dilute exhaust sample as measured, in p.p.m. carbon equivalent.

$HC_d$  = Hydrocarbon concentration of the dilution air as measured in p.p.m. carbon equivalent.

$NO_{xmass}$  = Oxides of nitrogen emissions, in grams per test phase.

$\text{Density}_{NO_x}$  = Density of oxides of nitrogen in the exhaust gas, assuming they are in the form of nitrogen dioxide, in grams per cubic foot at 68° F. and 760 mm. Hg pressure (54.16 gm./cu. ft.).

$NO_{xconc}$  = Oxides of nitrogen concentration of the dilute exhaust sample corrected for background, in p.p.m.

$$NO_{xconc} = NO_{xe} - NO_{xd}(1 - 1/DF)$$



where:

$NO_x$  = Oxides of nitrogen concentration of the dilute exhaust sample as measured, in p.p.m.

$NO_{x,d}$  = Oxides of nitrogen concentration of the dilution air as measured, in p.p.m.

$CO_{mass}$  = Carbon monoxide emissions, in grams per test phase.

Density $_{CO}$  = Density of carbon monoxide in grams per cubic foot at 68° F. and 760 mm. Hg pressure (32.97 gm./cu. ft.).

$CO_{conc}$  = Carbon monoxide concentration of the dilute exhaust sample corrected for background, water vapor and  $CO_2$  extraction, in p.p.m.

$CO_{conc} = CO_e - CO_d(1 - 1/DF)$

where:

$CO_e$  = Carbon monoxide concentration of the dilute exhaust sample volume corrected for water vapor and carbon dioxide extraction, in p.p.m. The calculation assumes the carbon to hydrogen ratio of the fuel is 1:1.85.

$CO_e = (1 - 0.01925 CO_{x,e} - 0.00323 R) CO_{em}$

where:

$CO_{em}$  = Carbon monoxide concentration of the dilute exhaust sample as measured in p.p.m.

$CO_{x,e}$  = Carbon dioxide concentration of the dilute exhaust sample, in mole percent.

$R$  = Relative humidity of the dilution air, in percent.

$CO_d$  = Carbon monoxide concentration of the dilution air corrected for water vapor extraction, in p.p.m.

$CO_d = (1 - 0.000323 R) CO_{dm}$

where:

$CO_{dm}$  = Carbon monoxide concentration of the dilution air sample as measured, in p.p.m.

$$DF = \frac{13.4}{CO_{x,e} + (HC_e + CO_e) \times 10^{-4}}$$

$V_{mix}$  = Total dilute exhaust volume in cubic feet per test phase corrected to standard conditions (528° R and 760 mm. Hg).

$$V_{mix} = V_e \times N \left( \frac{P_B - P_i}{760 \text{ mm. Hg}} \right) \left( \frac{528^\circ R}{T_p} \right)$$

where:

$V_e$  = Volume of gas pumped by the positive displacement pump, in cubic feet per revolution. This volume is dependent on the pressure differential across the positive displacement pump.

$N$  = Number of revolutions of the positive displacement pump during the test phase while samples are being collected.

$P_B$  = Barometric pressure in mm. Hg.

$P_i$  = Pressure depression below atmosphere measured at the inlet to the positive displacement pump.

$T_p$  = Average temperature of dilute exhaust entering positive displacement pump during test while samples are being collected, in degrees Rankine.

$K_H$  = Humidity correction factor.

$$K_H = \frac{1}{1 - 0.0047 (H - 75)}$$

where:

$H$  = Absolute humidity in grains of water per pound of dry air.

$$H = \frac{(43.478) R_a \times P_d}{P_B - P_d \times R_a / 100}$$

$R_a$  = Relative humidity of the ambient air, in percent.

$P_d$  = Saturated vapor pressure, in mm. Hg at the ambient dry bulb temperature.

(d) Example calculation of mass emission values:

(1) For the "transient" phase of the cold start test assume  $V_e = 0.29344$  cu. ft. per revolution;  $N = 10,485$ ;  $R = 48.0\%$ ;  $R_a = 48.2\%$ ;  $P_B = 762$  mm. Hg;  $P_d = 22.225$

$$V_{mix} = \frac{(0.29344)(10,485)(762 - 70)(528)}{(760)(570)} = 2595.0 \text{ cu. ft. per test phase.}$$

$$H = \frac{(43.478)(48.2)(22.225)}{762 - (22.225 \times 48.2/100)}$$

$$K_H = \frac{1}{1 - 0.0047(48 - 75)} = 0.9424.$$

$$CO_e = (1 - 0.01925(1.43) - 0.000323(48)) 306.0 = 293.4 \text{ p.p.m.}$$

$$CO_d = (1 - 0.000323(48)) 15.3 = 15.1 \text{ p.p.m.}$$

$$DF = \frac{13.4}{1.43 + (105.8 + 293.4) \times 10^{-4}} = 9.116.$$

$$HC_{conc} = 105.8 - 12.1(1 - 1/9.116) = 95.03.$$

$$HC_{mass} = (2595)(16.33)(95.03/1,000,000) = 4.027 \text{ grams per test phase.}$$

$$NO_{x,conc} = 11.2 - 0.8(1 - 1/9.116) = 10.49.$$

$$NO_{x,mass} = (2595)(54.16)(10.49/1,000,000)(0.9424) = 1.389 \text{ grams per test phase.}$$

$$CO_{conc} = 293.4 - 15.1(1 - 1/9.116) = 280.$$

$$CO_{mass} = (2595)(32.97)(280/1,000,000) = 23.96 \text{ grams per test phase.}$$

(2) For the "stabilized" portion of the cold start test assume that similar calculations resulted in  $HC_{mass} = 0.62$  grams per test phase;  $NO_{x,mass} = 1.27$  grams per test phase; and  $CO_{mass} = 5.98$  grams per test phase.

(3) For the "transient" portion of the

$$HC_{wm} = ((0.43)(4.027) + (0.57)(0.51) + 0.62)/7.5 = 0.352 \text{ gram per vehicle mile.}$$

$$NO_{x,wm} = ((0.43)(1.389) + (0.57)(1.38) + 1.27)/7.5 = 0.354 \text{ gram per vehicle mile.}$$

$$CO_{wm} = ((0.43)(23.96) + (0.57)(5.01) + 5.98)/7.5 = 2.55 \text{ grams per vehicle mile.}$$

#### § 85.075-27 Calculations (fuel evaporative emissions).

The net weights of the individual collection traps employed in § 85.075-13 shall be added together to determine compliance with the fuel evaporative emission standard.

#### § 85.075-28 Compliance with emission standards.

(a) The exhaust and fuel evaporative emission standards in § 85.075-1 apply to the emissions of vehicles for their useful life.

(b) Since emission control efficiency decreases with mileage accumulated on the vehicle, the emission level of a vehicle which has accumulated 50,000 miles will be used as the basis for determining compliance with the standards.

(c) The procedure for determining compliance of a new light duty motor vehicle with exhaust and fuel evaporative emission standards is as follows:

(i) Separate emission deterioration factors shall be determined from the emissions results of the durability data vehicles for each engine-system combination. A separate factor shall be established for the combination for exhaust HC, exhaust CO, exhaust  $NO_x$ , and fuel evaporative HC.

(i) The applicable results to be used

$$\text{factor} = \frac{\text{exhaust emissions interpolated to 50,000 miles}}{\text{exhaust emissions interpolated to 4,000 miles}}$$

(iv) An evaporative emission deterioration factor shall be calculated for each combination by subtracting the evaporative emissions interpolated to 4,000 miles from the evaporative emissions interpolated to 50,000 miles.

mm. Hg;  $P_i = 70$  mm. Hg;  $T_p = 570^\circ R$ ;  $HC_e = 105.8$  p.p.m. carbon equivalent;  $NO_{x,e} = 11.2$  p.p.m.;  $CO_{em} = 306.6$  p.p.m.;  $CO_{x,e} = 1.43\%$ ;  $HC_d = 12.1$  p.p.m.;  $NO_{d,e} = 0.8$  p.p.m.;  $CO_{dm} = 15.3$  p.p.m. Then:

hot start test assume that similar calculations resulted in  $HC_{mass} = 0.51$  grams per test phase;  $NO_{x,mass} = 1.38$  grams per test phase; and  $CO_{mass} = 5.01$  grams per test phase.

(4) For a 1975 light duty vehicle:

in determining the deterioration factors for each combination shall be:

(a) All emission data from the tests required under § 85.075-7(b), except the zero mile tests. This shall include the official test results, as determined in § 85.075-29, for all tests conducted on all durability vehicles of the combination selected under § 85.075-5(c) (including all vehicles elected to be operated by the manufacturer under § 85.075-5(c)(3)). Where the Administrator has agreed to a mileage less than 50,000 miles in accordance with § 85.075-7(b), the data for mileages greater than that actually run will be determined by extrapolating the test data generated at lesser mileages.

(b) All emission data from the tests conducted before and after the maintenance provided in § 85.075-6(a)(1)(i).

(ii) All applicable results shall be plotted as a function of the mileage on the system, rounded to the nearest mile, and the best fit straight lines, fitted by the method of least squares, shall be drawn through these data points. The interpolated 4,000- and 50,000-mile points on this line must be within the standards provided in § 85.075-1 or the data will not be acceptable for use in calculation of a deterioration factor.

(iii) An exhaust emission deterioration factor shall be calculated for each combination as follows:

(2) (i) The exhaust emission test results for each emission data vehicle shall be multiplied by the appropriate deterioration factor: *Provided*, That if a deterioration factor as computed in subparagraph (1) (iii) of this paragraph is



less than one, that deterioration factor shall be one for the purposes of this subparagraph.

(ii) The evaporative emission test results for each combination shall be adjusted by addition of the appropriate deterioration factor: *Provided*, That if a deterioration factor as computed in subparagraph (1)(iv) of this paragraph is less than zero, that deterioration factor shall be zero for the purposes of this subparagraph.

(3) The emissions to compare with the standard shall be the adjusted emissions of subparagraph (2) (i) and (ii) of this paragraph for each emission data vehicle.

(4) Every test vehicle of an engine family must comply with all applicable standards, as determined in subparagraph (3) of this paragraph, before any vehicle in that family may be certified.

**§ 85.075-29 Testing by the Administrator.**

(a) The Administrator may require that any one or more of the test vehicles be submitted to him, at such place or places as he may designate, for the purpose of conducting emissions tests. The Administrator may specify that he will conduct such testing at the manufacturer's facility, in which case instrumentation and equipment specified by the Administrator shall be made available by the manufacturer for test operations. Any testing conducted at a manufacturer's facility pursuant to this paragraph shall be scheduled by the manufacturer as promptly as possible.

(b)(1) Whenever the Administrator conducts a test on a test vehicle, the results of that test shall comprise the official data for the vehicle at that prescribed test point.

(2) Whenever the Administrator does not conduct a test on a test vehicle at a test point, the manufacturer's test data will be accepted as the official data for that test point: *Provided*, That if the Administrator makes a determination based on testing under paragraph (a) of this section, that there is a lack of correlation between the manufacturer's test equipment and the test equipment used by the Administrator, no manufacturer's test data will be accepted for purposes of certification until the reasons for the lack of correlation are determined and the validity of the data is established by the manufacturer.

(3) If the Administrator determines that the test data developed under paragraph (a) of this section would cause a vehicle to fail due to excessive 4,000-mile or excessive deterioration, then the following procedure shall be observed:

(i) The manufacturer may request a retest. Before the retest, the vehicle may be adjusted to manufacturer's specifications, and parts may be replaced in accordance with § 85.075-6. All work on the vehicle shall be done at such location and under such conditions as the Administrator may prescribe.

(ii) The vehicle will be retested by the Administrator and the results of this test shall comprise the official data for that prescribed test point.

(4) If sufficient durability data is not available, at the time of any emission test conducted under paragraph (a) of this section, to enable the Administrator to determine whether a test vehicle would fail, the manufacturer may request a retest in accordance with the provisions of subparagraph (3) (i) and (ii) of this paragraph. If the manufacturer does not promptly make such request, he shall be deemed to have waived the right to a retest. A request for retest must be made before the manufacturer removes the vehicle from the test premises.

**§ 85.075-30 Certification.**

(a) (1) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.075-29, the Administrator determines that a test vehicle(s) conforms to the regulations of this subpart, he will issue a certificate of conformity with respect to such vehicle(s).

(2) Such certificate will be issued for such period not more than 1 year as the Administrator may determine and upon such terms as he may deem necessary to assure that any new motor vehicle covered by the certificate will meet the requirements of these regulations relating to durability and performance.

(b)(1) The Administrator will determine whether a vehicle covered by the application complies with applicable standards by observing the following relationships:

(i) A test vehicle selected under § 85.075-5(b)(2) or (4), shall represent all vehicles in the same engine family of the same engine displacement-exhaust emission control system-evaporative emission control system combination.

(ii) A test vehicle selected under § 85.075-5(b)(3), shall represent all vehicles in the same engine family of the same engine displacement-exhaust emission control system-transmission type-fuel system combination.

(iii) A test vehicle selected under § 85.075-5(c)(1), shall represent all vehicles of the same engine-system combination.

(2) The Administrator will proceed as in paragraph (a) of this section with respect to the vehicles belonging to an engine family all of which comply with applicable standards.

(3) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.075-29, the Administrator determines that one or more test vehicles of the certification test fleet do not meet applicable standards, he will notify the manufacturer in writing, setting forth the basis for his determination. Within 30 days following receipt of the notification, the manufacturer may request a hearing on the Administrator's determination. The request shall be in writing, signed by an authorized representative of the manufacturer and shall include a statement specifying the manufacturer's objections to the Administrator's determination, and data in support of such objections. If, after a review of the request and supporting data, the Administrator

finds that the request raises a substantial factual issue, he shall provide the manufacturer a hearing in accordance with § 85.005 with respect to such issue.

(4) The manufacturer may, at his option, proceed with any of the following alternatives with respect to any engine family represented by a test vehicle(s) determined not in compliance with applicable standards:

(i) Request a hearing under § 85.005, or

(ii) Delete from the application for certification the vehicles represented by the failing test vehicle. (Vehicles so deleted may be included in a later request for certification under § 85.075-32.) The Administrator will then select in place of each failing vehicle an alternate vehicle chosen in accordance with selection criteria employed in selecting the vehicle that failed, or

(iii) Modify the test vehicle and demonstrate by testing that it meets applicable standards. Another vehicle which is in all material respects the same as the first vehicle, as modified, shall then be operated and tested in accordance with applicable test procedures.

(5) If the manufacturer does not request a hearing or present the required data under subparagraph (4) of this paragraph, the Administrator will deny certification.

**§ 85.075-31 Separate certification.**

Where possible a manufacturer should include in a single application for certification all vehicles for which certification is required. A manufacturer may, however, choose to apply separately for certification of part of his product line. The selection of test vehicles and the computation of test results will be determined separately for each application.

**§ 85.075-32 Addition of a vehicle after certification.**

(a) If a manufacturer proposes to add to his product line a vehicle of the same engine-system combination as vehicles previously certified but which was not described in the application for certification when the test vehicle(s) representing other vehicles of that combination was certified, he shall notify the Administrator. Such notification shall be in advance of the addition unless the manufacturer elects to follow the procedure described in § 85.075-34. This notification shall include a full description of the vehicle to be added.

(b) The Administrator may require the manufacturer to perform such tests on the test vehicle(s) representing the vehicle to be added which would have been required if the vehicle had been included in the original application for certification.

(c) If, after a review of the test reports and data submitted by the manufacturer, and data derived from any testing conducted under § 85.075-29, the Administrator determines that the test vehicle(s) meets all applicable standards, the appropriate certificate will be amended accordingly. If the Administrator determines that the test vehicle(s)



does not meet applicable standards, he will proceed under § 85.075-30(b).

**§ 85.075-33 Changes to a vehicle covered by certification.**

(a) The manufacturer shall notify the Administrator of any change in production vehicles in respect to any of the parameters listed in § 85.075-5(a)(3), giving a full description of the change. Such notification shall be in advance of the change unless the manufacturer elects to follow the procedure described in § 85.075-34.

(b) Based upon the description of the change, and data derived from such testing as the Administrator may require or conduct, the Administrator will determine whether the vehicle, as modified, would still be covered by the certificate of conformity then in effect.

(c) If the Administrator determines that the outstanding certificate would cover the modified vehicles, he will notify the manufacturer in writing. Except as provided in § 85.075-34 the change may not be put into effect prior to the manufacturer's receiving this notification. If the Administrator determines that the modified vehicles would not be covered by the certificate then in effect, then the modified vehicles shall be treated as additions to the product line subject to § 85.075-32.

**§ 85.075-34 Alternative procedure for notification of additions and changes.**

(a) A manufacturer may, in lieu of notifying the Administrator in advance of an addition of a vehicle under § 85.075-32 or a change in a vehicle under § 85.075-33, notify him concurrently with the making of the change if the manufacturer believes the addition or change will not require any testing under the appropriate section. Upon notification to the Administrator, the manufacturer may proceed to put the addition or change into effect.

(b) The manufacturer may continue to produce vehicles as described in the notification to the Administrator for a maximum of 30 days, unless the Administrator grants an extension in writing. This period may be shortened by a notification in accordance with paragraph (c) of this section.

(c) If the Administrator determines, based upon a description of the addition or change, that no test data will be required, he will notify the manufacturer in writing of the acceptability of the addition or change. If the Administrator determines that test data will be required, he will notify the manufacturer to rescind the change within 5 days of receipt of the notification. The Administrator will then proceed as in § 85.075-32 (b) and (c), or § 85.075-33 (b) and (c) as appropriate.

(d) Election to produce vehicles under this section will be deemed to be a consent to recall all vehicles which the Administrator determined under § 85.075-32(c) do not meet applicable standards, and to cause such nonconformity to be remedied at no expense to the owner.

**§ 85.075-35 Labeling.**

(a) (1) The manufacturer of any light duty motor vehicle subject to the standards prescribed in § 85.075-1 shall, at the time of manufacture, affix a permanent, legible label, of the type and in the manner described below, containing the information hereinafter provided, to all production models of such vehicles available for sale to the public and covered by a certificate of conformity under § 85.075-30(a).

(2) A plastic or metal label shall be welded, riveted, or otherwise permanently attached in a readily visible position in the engine compartment.

(3) The label shall be affixed by the vehicle manufacturer, who has been issued the certificate of conformity for such vehicle, in such a manner that it cannot be removed without destroying or defacing the label, and shall not be affixed to any equipment which is easily detached from such vehicle.

(4) The label shall contain the following information lettered in the English language in block letters and numerals, which shall be of a color that contrasts with the background of the label:

(i) The label heading: Vehicle Emission Control Information;

(ii) Full corporate name and trademark of manufacturer;

(iii) Engine displacement (in cubic inches) and engine family identification;

(iv) Engine tuneup specifications and adjustments, as recommended by the manufacturer, including idle speed, ignition timing, and the idle air-fuel mixture setting procedure and value (e.g. idle CO, idle air-fuel ratio, idle speed drop). These specifications should indicate the proper transmission position during tuneup and what accessories (e.g., air-conditioner), if any, should be in operation;

(v) The statement: "This Vehicle Conforms to U.S.E.P.A. Regulations Applicable to 1975 Model Year New Motor Vehicles."

(b) The provisions of this section shall not prevent a manufacturer from also reciting on the label that such vehicle or engine conforms to any applicable State emission standards for new motor vehicles or any other information that such manufacturer deems necessary for, or useful to, the proper operation and satisfactory maintenance of the vehicle.

**§ 85.075-36 Submission of vehicle identification numbers.**

(a) The manufacturer of any light duty motor vehicle covered by a certificate of conformity under § 85.075-30(a) shall, not later than 60 days after its manufacture, submit to the Administrator the vehicle identification number of such vehicle: *Provided*, That this requirement shall not apply with respect to any vehicle manufactured within any State, as defined in section 302(d) of the Act.

(b) The requirements of this section may be waived with respect to any manufacturer who provides information satisfactory to the Administrator which will

enable the Administrator to identify those vehicles which are covered by a certificate of conformity.

**§ 85.075-37 Production vehicles.**

(a) Any manufacturer obtaining certification under this subpart shall supply to the Administrator, upon his request, a reasonable number of production vehicles selected by the Administrator which are representative of the engines, emission control systems, fuel systems, and transmissions offered and typical of production models available for sale under the certificate. These vehicles shall be supplied for testing at such time and place and for such reasonable periods as the Administrator may require.

(b) Any manufacturer obtaining certification under this subpart shall notify the Administrator, on a quarterly basis, of the number of vehicles of each engine family-engine displacement-exhaust emission control system-fuel system-transmission type-inertia weight class combination produced for sale in the United States during the preceding quarter. A manufacturer may elect to provide this information every 60 days instead or quarterly, to combine it with the notification required under § 85.075-36.

(c) All light duty vehicles covered by a certificate of conformity under § 85.075-30(a) shall be adjusted by the manufacturer to the ignition timing specification detailed in § 85.072-35(a)(4)(iv).

**§ 85.075-38 Maintenance instructions.**

(a) The manufacturer shall furnish or cause to be furnished to the ultimate purchaser of each new motor vehicle subject to the standards prescribed in § 85.075-1, written instructions for the maintenance and use of the vehicle by the ultimate purchaser as may be reasonable and necessary to assure the proper functioning of emission control systems.

(1) Such instructions shall be provided for those vehicle and engine components listed in Appendix VI to this part (and for any other components) to the extent that maintenance of these components is necessary to assure the proper functioning of emission control systems.

(2) Such instructions shall be in clear, and to the extent practicable, nontechnical language.

(b) The maintenance instructions required by this section shall contain a general description of the documentation which the manufacturer will require from the ultimate purchaser or any subsequent purchaser as evidence of compliance with the instructions.

**§ 85.075-39 Submission of maintenance instructions.**

(a) The manufacturer shall provide to the Administrator, no later than the time of the submission required by § 85.075-4, a copy of the maintenance instructions which the manufacturer proposes to supply to the ultimate purchaser in accordance with § 85.075-38(a). The Administrator will review such instructions.



tions to determine whether they are reasonable and necessary to assure the proper functioning of the vehicle's emission control systems. The Administrator will notify the manufacturer of his determination whether such instructions are reasonable and necessary to assure the proper functioning of the emission control systems.

(b) Any revision to the maintenance instructions which will affect emissions shall be supplied to the Administrator at least 30 days before being supplied to the ultimate purchaser unless the Administrator consents to a lesser period of time.

**§ 85.076-1 Emission standards for 1976 model year vehicles.**

With the exception of the nitrogen oxides exhaust emission standard, the standards and test procedures set forth in § 85.075 remain applicable for the 1976 model year. Exhaust emissions from 1976 model year vehicles shall not exceed:

- (a) *Hydrocarbons*. 0.41 gram per vehicle mile.
- (b) *Carbon monoxide*. 3.4 grams per vehicle mile.
- (c) *Oxides of nitrogen*. 0.40 gram per vehicle mile.

**Subparts B-G [Reserved]**

**Subpart H—Emission Regulations for New Gasoline-Fueled Heavy Duty Engines**

**§ 85.701 General applicability.**

The provisions of this subpart are applicable to new gasoline-fueled heavy duty engines beginning with the 1973 model year.

**§ 85.702 Definitions.**

(a) As used in this subpart, all terms not defined herein shall have the meaning given them in the Act:

(1) "Act" means Part A of Title II of the Clean Air Act, 42 U.S.C. 1857f-1 through f-7, as amended by Public Law 91-604.

(2) "Administrator" means the Administrator of the Environmental Protection Agency or his authorized representative.

(3) "Model year" means the manufacturer's annual production period (as determined by the Administrator) which includes January 1 of such calendar year: *Provided*, That if the manufacturer has no annual production period, the term "model year" shall mean the calendar year.

(4) "Gross vehicle weight" means the manufacturer's gross weight rating for the individual vehicle.

(5) "Heavy duty vehicle" means any motor vehicle either designed primarily for transportation of property and rated at more than 6,000 pounds GVW or designed primarily for transportation of persons and having a capacity of more than 12 persons.

(6) "Heavy duty engine" means any engine which the engine manufacturer could reasonably expect to be used for motive power in a heavy duty vehicle.

(7) "System" includes any motor vehicle engine modification which controls or causes the reduction of substances emitted from motor vehicle engines.

(8) "Engine family" means the basic classification unit of a manufacturer's product line used for the purpose of test fleet selection and determined in accordance with § 85.773-5(a).

(9) "Engine-system combination" means an engine family-exhaust emission control system-fuel evaporative emission control system (where applicable) combination.

(10) "Fuel system" means the combination of fuel tank, fuel pump, fuel lines, and carburetor, or fuel injection components, and includes all fuel system vents and fuel evaporative emission control systems.

(11) "Crankcase emissions" means airborne substances emitted to the atmosphere from any portion of the engine crankcase ventilation or lubrication systems.

(12) "Exhaust emissions" means substances emitted to the atmosphere from any opening downstream from the exhaust port of a motor vehicle engine.

(13) Zero (0) hours means that point after normal assembly line operations and adjustments and before one additional operating hour has been accumulated.

(14) "Calibrating gas" means a gas of known concentration which is used to establish the response curve of an analyzer.

(15) "Span gas" means a gas of known concentration which is used routinely to set the output level of an analyzer.

(16) "Oxides of Nitrogen" means the sum of the nitric oxide and nitrogen dioxide contained in a gas sample as if the nitric oxide were in the form of nitrogen dioxide.

(17) "Useful life" means a period of use of 5 years or of 50,000 miles of vehicle operation or 1,500 hours of engine operation (or an equivalent period of 1,500 hours of dynamometer operation), whichever first occurs.

**§ 85.703 Abbreviations.**

The abbreviations used in this subpart have the following meanings in both capital and lowercase:

- ASTM—American Society for Testing and Materials.
- BHP—Brake horsepower.
- BSCO—Brake specific carbon monoxide.
- BSHC—Brake specific hydrocarbons.
- BSNO<sub>x</sub>—Brake specific oxides of nitrogen.
- C.—Centigrade.
- C.f.h.—Cubic feet per hour.
- CO<sub>2</sub>—Carbon dioxide.
- CO—Carbon monoxide.
- Conc.—Concentration.
- CT—Closed Throttle.
- C.f.m.—Cubic feet per minute.
- EP—End point.
- F.—Fahrenheit.
- FL—Full load.
- Gal.—U.S. Gallon(s).
- Gm.—Gram(s).
- GVW—Gross vehicle weight.
- H<sub>2</sub>O—Water.
- HC—Hydrocarbon(s).
- Hg—Mercury.
- IBP—Initial boiling point.

- Max.—Maximum.
- Min.—Minimum.
- N<sub>2</sub>—Nitrogen.
- NDIR—Nondispersive infrared.
- NO—Nitric oxide.
- NO<sub>2</sub>—Nitrogen dioxide.
- NO<sub>x</sub>—Oxides of nitrogen.
- Pb.—Lead.
- P.p.m.—Parts per million by volume.
- PTA—Parts throttle accel.
- PTD—Part throttle decel.
- R.p.m.—Revolutions per minute.
- RVP—Reid vapor pressure.
- Sec.—Second(s).
- WOT—Wide open throttle.
- "—Inches.
- °—Degrees.
- Σ—Summation.

**§ 85.704 General standards: Increase in emissions; unsafe conditions.**

(a) (1) Every new motor vehicle engine manufactured for sale, sold, offered for sale, introduced or delivered for introduction into commerce, or imported into the United States for sale or resale which is subject to any of the standards prescribed in this subpart shall be covered by a certificate of conformity issued pursuant to § 85.773-2 through § 85.773-4 and § 85.773-29 through § 85.773-34 of this subpart.

(2) No heavy duty vehicle manufacturer shall take any of the actions specified in section 203(a)(1) of the Act with respect to any gasoline-fueled heavy duty vehicle which uses an engine which has not been certified as meeting applicable standards. Such manufacturer shall provide to the Administrator prior to the beginning of each model year a statement signed by an authorized representative which includes the following information:

(i) A description of the vehicles which will be produced subject to this section;

(ii) Identification of the engines used in the vehicles;

(iii) Projected sales data on each vehicle engine combination;

(iv) A statement that the engines will not be modified by the vehicle manufacturer or a detailed specification of any changes which will be made. Changes made solely for the purpose of mounting an engine in a vehicle need not be included.

(b) (1) Any system installed on or incorporated in a new motor vehicle engine to enable such vehicle to conform to standards imposed by this subpart:

(i) Shall not in its operation or function cause the emission into the ambient air of any noxious or toxic substance that would not be emitted in the operation of such engine without such system, except as specifically permitted by regulation; and

(ii) Shall not in its operation, function, or malfunction result in any unsafe condition endangering the motor vehicle, its occupants, or persons or property in close proximity to the vehicle.

(2) Every manufacturer of new motor vehicle engines subject to any of the standards imposed by this subpart shall, prior to taking any of the actions specified in section 203(a)(1) of the Act, test or cause to be tested motor vehicle engines in accordance with good engineering practice to ascertain that such



test engines will meet the requirements of this section for the useful life of the engine.

#### § 85.705 Hearings on certification.

(a) (1) After granting a request for a hearing under § 85.773-30, the Administrator will designate a Presiding Officer for the hearing.

(2) The General Counsel will represent the Environmental Protection Agency in any hearing under this section.

(3) If a time and place for the hearing have not been fixed by the Administrator under § 85.773-30, the hearing shall be held as soon as practicable at a time and place fixed by the Administrator or by the Presiding Officer.

(b) (1) Upon his appointment pursuant to paragraph (a) of this section, the Presiding Officer will establish a hearing file. The file shall consist of the notice issued by the Administrator under § 85.773-30, together with any accompanying material, the request for a hearing and the supporting data submitted therewith and all documents relating to the request for certification, including the application for certification and all documents submitted therewith, and correspondence and other data material to the hearing.

(2) The appeal file will be available for inspection by the applicant at the office of the Presiding Officer.

(c) An applicant may appear in person, or may be represented by counsel or by any other duly authorized representative.

(d) (1) The Presiding Officer upon the request of any party, or in his discretion, may arrange for a prehearing conference at a time and place specified by him to consider the following:

- (i) Simplification of the issues;
- (ii) Stipulations, admissions of fact, and the introduction of documents;
- (iii) Limitation of the number of expert witnesses;
- (iv) Possibility of agreement disposing of all or any of the issues in dispute;
- (v) Such other matters as may aid in the disposition of the hearing, including such additional tests as may be agreed upon by the parties.

(2) The results of the conference shall be reduced to writing by the Presiding Officer and made part of the record.

(e) (1) Hearings shall be conducted by the Presiding Officer in an informal but orderly and expeditious manner. The parties may offer oral or written evidence, subject to the exclusion by the Presiding Officer of irrelevant, immaterial, and repetitious evidence.

(2) Witnesses will not be required to testify under oath. However, the Presiding Officer shall call to the attention of witnesses that their statements may be subject to the provisions of title 18 U.S.C. 1001 which imposes penalties for knowingly making false statements or representations, or using false documents in any matter within the jurisdiction of any department or agency of the United States.

(3) Any witness may be examined or cross-examined by the Presiding Officer, the parties, or their representatives.

(4) Hearings shall be reported verbatim. Copies of transcripts of proceedings may be purchased by the applicant from the reporter.

(5) All written statements, charts, tabulations, and similar data offered in evidence at the hearing shall, upon a showing satisfactory to the Presiding Officer of their authenticity, relevancy, and materiality, be received in evidence and shall constitute a part of the record.

(6) Oral argument may be permitted in the discretion of the Presiding Officer and shall be reported as part of the record unless otherwise ordered by him.

(f) (1) The Presiding Officer shall make an initial decision which shall include written findings and conclusions and the reasons or basis therefor on all the material issues of fact, law or discretion presented on the record. The findings, conclusions, and written decision shall be provided to the parties and made a part of the record. The initial decision shall become the decision of the Administrator without further proceedings unless there is an appeal to the Administrator or motion for review by the Administrator within 20 days of the date the initial decision was filed.

(2) On appeal from or review of the initial decision the Administrator shall have all the powers which he would have in making the initial decision including the discretion to require or allow briefs, oral argument, the taking of additional evidence or the remanding to the Presiding Officer for additional proceedings. The decision by the Administrator shall include written findings and conclusions and the reasons or basis therefor on all the material issues of fact, law, or discretion presented on the appeal or considered in the review.

#### § 85.706 Maintenance of records; submittal of information; right of entry.

(a) The manufacturer of any new motor vehicle engine subject to any of the standards prescribed in this subpart shall establish and maintain the following adequately organized and indexed records:

(1) Identification and description of all engines for which testing is required under this subpart.

(2) A description of all emission control systems which are installed on or incorporated in each engine.

(3) A description of the procedures used to test such engines.

(4) Test data on each emission data engine which will show its emissions at zero and 125 hours.

(5) Test data on each durability engine which will show the performance of the systems installed on or incorporated in the engine during extended operation, as well as a record of all pertinent maintenance performed on the engine.

(b) The manufacturer of any new motor vehicle engine subject to any of the standards prescribed in this subpart shall submit to the Administrator at the time of issuance by the manufacturer copies of all instructions or explanations regarding the use, repair, adjustment,

maintenance, or testing of such engine relevant to the control of crankcase or exhaust emissions, issued by the manufacturer for use by other manufacturers, assembly plants, distributors, dealers, and ultimate purchasers: *Provided*, That any material not translated into the English language need not be submitted unless specifically requested by the Administrator.

(c) The manufacturer of any new motor vehicle engine subject to any of the standards prescribed in this subpart shall permit officers or employees duly designated by the Administrator, upon presenting appropriate credentials and a written notice to the manufacturer:

(1) To enter, at reasonable times, any premises used during the certification procedure for purposes of monitoring tests and service accumulation procedures, observing maintenance procedures, and verifying correlation or calibration of test equipment, or

(2) To inspect, at reasonable times, records, files, and papers compiled by such manufacturer in accordance with paragraph (a) of this section.

A separate notice shall be given for each such inspection, but a separate notice shall not be required for each entry made during the period covered by the inspection. Each such inspection shall be commenced and completed with reasonable promptness.

#### § 85.773-1 Emission standards for 1973 model year engines.

(a) (1) Exhaust emissions from new gasoline-fueled heavy duty engines shall not exceed:

- (i) Hydrocarbons—275 p.p.m.
- (ii) Carbon monoxide—1.5 percent by volume.

(2) The standards set forth in paragraph (a)(1) of this section refer to a composite sample representing the operating cycles set forth in § 85.773-9 through § 85.773-18 and measured in accordance with those procedures.

(b) [Reserved]

(c) No crankcase emissions shall be discharged into the ambient atmosphere from any new motor vehicle engine subject to this subpart.

(d) Every manufacturer of new motor vehicle engines subject to the standards prescribed in this subpart shall, prior to taking any of the actions specified in section 203(a)(1) of the Act, test or cause to be tested motor vehicle engines in accordance with test procedures prescribed in § 85.773-9 through § 85.773-18 to ascertain that such test engines meet the requirements of paragraphs (a) and (c) of this section. If, pursuant to § 85.773-30(a), the Administrator issues a certificate of conformity for the class or classes of motor vehicle engines represented by such test engines, any new motor vehicle engine which is in all material respects of substantially the same construction as such test engines shall be deemed to be in conformity with the requirements of paragraphs (a) and (c) of this section.



**§ 85.773-2 Application for certification.**

(a) An application for a certificate of conformity to the regulations applicable to any new motor vehicle engine shall be made to the Administrator by the manufacturer.

(b) The application shall be in writing, signed by an authorized representative of the manufacturer, and shall include the following:

(1) Identification and description of the engines covered by the application and a description of their emission control systems.

(2) Projected U.S. sales data sufficient to enable the Administrator to select a test fleet representative of the engines for which certification is requested.

(3) A description of the test equipment and fuel proposed to be used.

(4) A description of the proposed service accumulation procedure for durability testing.

(5) A statement of recommended maintenance and procedures necessary to assure that the engines covered by a certificate of conformity in operation conform to the regulations, and a description of the program for training of personnel for such maintenance, and the equipment required.

(6) At the option of the manufacturer, the proposed composition of the emission data and durability data test fleet.

**§ 85.773-3 Approval of procedure and equipment; test fleet selections.**

Based upon the information provided in the application for certification, and any other information the Administrator may require, the Administrator will approve or disapprove in whole or in part the service accumulation procedure and equipment and fuel proposed by the manufacturer, and notify him in writing of such determination. Where any part of a proposal is disapproved, such notification will specify the reasons for disapproval. The Administrator will select a test fleet in accordance with § 85.773-5.

**§ 85.773-4 Required data.**

The manufacturer shall perform the tests required by the applicable test procedures, and submit to the Administrator the following information:

(a) Durability data on such engines tested in accordance with the applicable test procedures of this subpart, and in such numbers as therein specified, which will show the performance of the systems installed on or incorporated in the engine for extended operation, as well as a record of all pertinent maintenance performed on the test engines.

(b) Emission data on such engines tested in accordance with the applicable emission test procedures of this subpart and in such numbers as therein specified, which will show their emissions after 0 hours and 125 hours of operations.

(c) A description of tests performed to ascertain compliance with the general standards in § 85.773-1 and the data derived from such tests.

(d) A statement that the test engines with respect to which data are submitted have been tested in accordance with the

applicable test procedures, that they meet the requirement of such tests, and that, on the basis of such tests, they conform to the requirements of the regulations in this subpart. If such statements cannot be made with respect to any engine tested, the engine shall be identified, and all pertinent test data relating thereto shall be supplied.

**§ 85.773-5 Test engines.**

(a) The engines covered by the application for certification will be divided into engine families based upon the criteria outlined in § 85.073-5(a).

(b) Emission data engines:

(1) Engines will be chosen to be run for emission data based upon the engine family groupings. Within each engine family, the requirements of this paragraph must be met.

(2) Engines of each engine family will be divided into engine displacement-exhaust emission control system combinations. A projected sales volume will be established for each combination for the model year for which certification is sought. One engine of each combination will be selected in order of decreasing projected sales volume until 70 percent of the projected sales of a manufacturer's total production of engines of that family is represented, or until a maximum of four engines is selected. The engines selected for each combination will be specified by the Administrator as to fuel system.

(3) The Administrator may select a maximum of two additional engines within each engine family based upon features indicating that they may have the highest emission levels of the engines in that engine family. In selecting these engines, the Administrator will consider such features as the exhaust emission control system, induction system characteristics, ignition system characteristics, fuel system, rated horsepower, rated torque, and compression ratio.

(4) If the engines selected in accordance with subparagraphs (2) and (3) of this paragraph do not represent each engine-system combination, then one engine of each engine-system combination not represented shall be selected by the Administrator. The engine selected shall be of the displacement with the largest projected sales volume of engines with the exhaust emission control system in the family and will be designated by the Administrator as to fuel system.

(c) Durability data engines:

(1) A durability data engine will be selected by the Administrator to represent each engine-system combination. The engine selected shall be of the displacement with the largest projected sales volume of engines with that exhaust emission control system in that engine family and will be designated by the Administrator as to fuel system.

(2) If an exhaust emission control system is used in only one engine family, an additional engine using that control system in that family will be selected so that the durability data fleet shall contain at least two engines with each control system. The additional engine will be selected in the same manner as engines

selected under subparagraph (1) of this paragraph.

(3) A manufacturer may elect to operate and test additional engines to represent any engine-system combination. The additional engines must be of the same engine displacement and fuel system as the engine selected for that combination in accordance with the provisions of subparagraph (1) of this paragraph. Notice of an intent to run additional engines shall be given to the Administrator not later than 30 days following notification of the test fleet selection.

(4) Any manufacturer whose projected sales of new motor vehicle engines subject to this subpart for the 1973 model year is less than 700 engines may request a reduction in the number of test engines determined in accordance with the foregoing provisions of this section. The Administrator may agree to such lesser number as he determines will meet the objectives of this procedure.

(e) In lieu of testing an emission data or durability data engine selected under paragraph (b) or (c) of this section and submitting data therefor, a manufacturer may, with the prior written approval of the Administrator, submit data on a similar engine for which certification has previously been obtained.

**§ 85.773-6 Maintenance.**

(a) (1) Maintenance on the engines and fuel systems of durability engines may be performed only under the following provisions:

(i) Two major engine tuneups to manufacturer's specifications may be performed at 500 and 1,000 hours ( $\pm 8$  hours) of scheduled dynamometer operation with the following exception: On engines with a displacement of 200 cubic inches or less, a major engine tuneup may be performed at 375, 750, and 1,125 hours ( $\pm 8$  hours) of scheduled dynamometer operation. A major engine tuneup shall be restricted to the following:

- (a) Replace spark plugs.
- (b) Inspect ignition wiring and replace as required.
- (c) Replace distributor breaker points and condenser as required.
- (d) Lubricate distributor cam.
- (e) Check distributor advance and breaker point dwell angle and adjust as required.
- (f) Check automatic choke for free operation and correct as required.
- (g) Adjust carburetor idle speed and mixture.
- (h) Adjust drive belt tension on engine accessories.
- (i) Adjust valve lash if required.
- (j) Check exhaust heat control valve for free operation.
- (k) Check engine bolt torque and tighten as required.
- (l) Spark plugs may be changed if a persistent misfire is detected.
- (m) Normal services (engine oil change, and oil filter, fuel filter and air filter servicing) will be allowed at manufacturer's recommended intervals.
- (n) The crankcase emission control system may be serviced at 375-hour in-



tervals ( $\pm 8$  hours) of dynamometer operation.

(v) Readjustment of the engine choke mechanism or idle settings may be performed only if there is a problem of stalling at idle.

(vi) Leaks in the fuel system, engine lubrication system and cooling system may be repaired.

(vii) Engine idle speed may be adjusted at the 125-hour test point.

(viii) Any other engine or fuel system maintenance or repairs will be allowed only with the advance approval of the Administrator.

(2) Allowable maintenance on emission data engines shall be limited to the adjustment of engine idle speed at the 125-hour test point, except that other maintenance or repairs may be allowed with the advance approval of the Administrator.

(b) Complete emission tests (see § 85.773-10 through § 85.773-18) shall be run before and after any engine maintenance which may reasonably be expected to affect emissions. These test data shall be supplied to the Administrator immediately after the tests, along with a complete record of all pertinent maintenance, including an engineering report of any malfunction diagnosis and the corrective action taken. In addition, all test data and maintenance reports shall be compiled and provided to the Administrator in accordance with § 85.773-4.

(c) If the Administrator determines that maintenance or repairs have resulted in a substantial change to the engine-system combination, the engine shall not be used as a durability data engine.

#### § 85.773-7 Service accumulation and emission measurements.

The engine dynamometer service accumulation schedule will consist of several operating conditions which give the same percentage of time at various manifold vacuums and the modes as specified in the emission test cycle. The average speed shall be between 1,650 and 1,700 r.p.m. with some operation at 3,200 r.p.m. or governed speed, whichever is lower. Maximum cycle time shall be 15 minutes. A cycle approved in advance by the Administrator shall be used.

(a) Emission data engines: Each emission data engine shall be operated for 125 hours with all emission control systems installed and operating. Emission tests shall be conducted at zero and 125 hours.

(b) Durability data engines: Each durability data engine shall be operated, with all emission control systems installed and operating, for 1,500 hours. Emission measurements, as prescribed, shall be made at zero hours and at each 125-hour interval.

(c) All tests required by this subpart to be conducted after 125 hours of operation or at any multiple of 125 hours may be conducted at any accumulated number of hours within 8 hours of 125

hours or the appropriate multiple of 125 hours, respectively.

(d) The results of each emission test shall be supplied to the Administrator immediately after the test. In addition, all test data shall be compiled and provided to the Administrator in accordance with § 85.773-4.

(e) Whenever the manufacturer proposes to operate and test an engine which may be used for emission or durability data, he shall provide the zero-hour test data to the Administrator and make the engine available for such testing under § 85.773-29 as the Administrator may require, before beginning to accumulate hours on the engine. Failure to comply with this requirement will invalidate all test data later submitted for this engine.

(f) Once a manufacturer begins to operate an emission data or durability data engine, as indicated by compliance with paragraph (e) of this section, he shall continue to run the engine to 125 hours or 1,500 hours, respectively, and the data from the engine will be used in the calculations under § 85.773-19. Discontinuation of an engine shall be allowed only with the prior written consent of the Administrator.

#### § 85.773-8 Special test procedures.

The Administrator may, on the basis of a written application therefor by a manufacturer, prescribe test procedures, other than those set forth in this subpart, for any motor vehicle engine which he determines is not susceptible to satisfactory testing by the procedures set forth herein.

#### § 85.773-9 Test procedures.

The procedures described in this and subsequent sections will be the test program to determine the conformity of engines with the standards set forth in § 85.773-1.

(a) The test consists of prescribed sequences of engine operating conditions to be conducted on an engine dynamometer. The exhaust gases generated during engine operation are sampled continuously for specific component analysis through the analytical train. The test is applicable to engines equipped with catalytic or direct-flame afterburners, induction system modifications, or other systems, or to uncontrolled engines.

(b) The exhaust emission test is designed to determine hydrocarbon and carbon monoxide concentrations during a truck driving pattern in a metropolitan area as simulated on an engine dynamometer. The test consists of two warm-up cycles and two hot cycles. The average concentrations for the warmup cycles and the hot cycles are combined to yield the reported values.

(c) When an engine is tested for exhaust emissions or is operated for durability testing on an engine dynamometer the complete engine shall be used with all accessories which might reasonably be expected to influence emissions to the atmosphere installed and functioning.

(d) All emission control systems installed on or incorporated in a new motor vehicle engine shall be functioning during all test procedures in this subpart.

#### § 85.773-10 Gasoline fuel specifications.

(a) Fuel having the following specifications or substantially equivalent specifications approved by the Administrator shall be used in exhaust emission testing. Where the Administrator determines that the engines represented by a test engine will be operated using fuels of a different lead content or octane rating than that prescribed in this paragraph, he may consent in writing to use of a fuel otherwise substantially equivalent to the following specifications but with a different lead content or octane rating.

Item	ASTM designation	Specifications
Octane, Research, min.	D 1556	100
Pb. (organic), gm./U.S. gal.	D 526	3.1-3.3
Distillation range	D 86	
IBP, °F		75-95
10 percent point, °F		120-135
50 percent point, °F		200-230
90 percent point, °F		300-325
EP, °F. (max.)		415
Sulfur, wt. percent max.	D 1266	0.10
Phosphorus, theory		0.0
RVP, lb.	D 323	8.7-9.2
Hydrocarbon composition	D 1319	
Olefins, percent, max.		10
Aromatics, percent, max.		35
Saturates		Remainder

(b) Fuel having the following specifications, or substantially equivalent specifications approved by the Administrator shall be used in service accumulation. The octane rating of the fuel used shall be in the range recommended by the engine manufacturer. The Reid vapor pressure of the fuel used shall be characteristic of the seasonal motor fuel. Where the Administrator determines that the engines represented by a test engine will be operated using fuels of a different lead content than that prescribed in this paragraph, he may consent in writing to use of a fuel otherwise substantially equivalent to the following specifications but with a different lead content.

Item	ASTM Designation	Regular	Premium
Pb. (organic), gm./U.S.	D 526	2.1-3.2	2.1-3.2
Sulfur, wt. percent	D 1266	0.02-0.10	0.02-0.10
Hydrocarbon composition	D 1319		
Olefins, percent, max.		30	15
Aromatics, percent, max.		40	40
Saturates		Remainder	Remainder

(c) The specifications of the fuel to be used under paragraph (b) of this section shall be reported in accordance with § 85.773-2(b)(3).

#### § 85.773-11 Dynamometer operation cycle and equipment.

(a) (1) The following nine-mode cycle shall be followed in dynamometer operation tests of gasoline-fueled heavy duty engines.



Sequence No.	Mode	Manifold vacuum	Time in Mode-Secs.	Cumulative Time-Secs.	Weighting factors
1.	Idle		70	70	0.036
2.	Cruise	16" Hg.	23	93	.089
3.	PTA	10" Hg.	44	137	.257
4.	Cruise	16" Hg.	23	160	.089
5.	PTD	19" Hg.	17	177	.047
6.	Cruise	16" Hg.	23	200	.089
7.	FL	3" Hg.	34	234	.283
8.	Cruise	16" Hg.	23	257	.089
9.	CT		43	300	.021

(2) The engine dynamometer shall be operated at a constant speed of 2,000 r.p.m.  $\pm 100$  r.p.m. (exception: representative engine speed for a given displacement engine as determined by its application, but not less than 1,800 r.p.m. nor greater than 2,500 r.p.m.).

(3) The idle operating mode shall be carried out at the manufacturer's recommended engine speed. The CT operating mode shall be carried out at the same engine speed as in subparagraph (2) of this paragraph.

(b) The following equipment shall be used for dynamometer tests.

(1) An engine dynamometer capable of maintaining constant speed  $\pm 100$  r.p.m. from full throttle to closed throttle motoring.

(2) A chassis-type exhaust system or substantially equivalent exhaust system, shall be used.

(3) A radiator typical of that used with the engine in a vehicle, or other means of engine cooling which will maintain the engine operating temperatures at approximately the same temperature

as would the radiator, shall be used. An auxiliary fixed speed fan may be used to maintain engine cooling during sustained operation on the dynamometer.

#### § 85.773-12 Dynamometer procedures.

An initial 5-minute idle, two warmup cycles, and two hot cycles constitute a complete dynamometer run. Idle modes may be run at the beginning and end of each test, thus eliminating the need to change speed between cycles. One idle mode preceding the first cycle and one following the fourth cycle is sufficient. The results of the first idle shall be used for calculation of the second cycle emissions and the fourth idle results shall be used for calculation of the third cycle emissions.

#### § 85.773-13 Sampling and analytical system for measuring exhaust emissions.

(a) *Schematic drawing.* The following (fig. H773-1) is a schematic drawing of the exhaust gas sampling and analytical system which shall be used for testing under the regulations in this subpart.

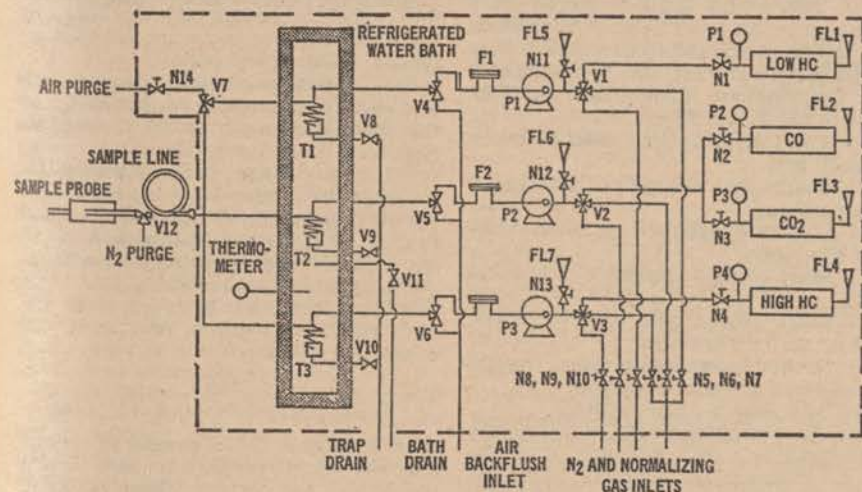


FIGURE H773-1.—Flow schematic of exhaust gas analysis system employed in Federal facilities.

(b) *Component description.* The following components shall be used in sampling and analytical systems for testing under the regulations in this part.

(1) Flowmeters FL1, FL2, FL3, and FL4 indicate the sample flow rate through the analyzers.

(2) Low range hydrocarbon analyzer.

(3) Carbon monoxide analyzer.

(4) Carbon dioxide analyzer.

(5) High range hydrocarbon analyzer.

(6) Pressure gauges P1, P2, and P3 indicate the analyzer sample pressure.

(7) Needle valves N1, N2, N3, and N4

regulate sample flow rate to the analyzers.

(8) Needle valves N5, N6, N7, N8, N9, and N10 regulate the flow rates of N<sub>2</sub> and normalizing gases to the analyzers.

(9) Ball valves V1, V2, and V3 for directing either sample or calibration gases to the analyzers.

(10) Needle valves N11, N12, and N13 regulate the sample flow rate through the bypass network.

(11) Flowmeters FL5, FL6, and FL7 indicate the flow rate through the bypass system.

(12) Pumps P1, P2, and P3 for pulling sample from source.

(13) Filters F1, F2, and F3 remove contaminants from sample prior to analysis.

(14) Ball valves V4, V5, and V6 for directing sample to the analyzer or directing air in the reverse direction as a backflush.

(15) Toggle valves V8, V9, V10, and V11 for draining condensate traps and refrigerated bath.

(16) Traps T1, T2, and T3 for condensing water vapor and cooling exhaust sample.

(17) Ball valve V7 for diverting air to low HC analyzer during periods of high hydrocarbon response.

(18) Needle valve N14 for regulating air flow to low hydrocarbon analyzer during purge conditions.

(19) Thermometer for indicating bath temperature.

(20) Refrigerated water bath for condensing water vapor and cooling exhaust sample.

(21) Sample line from vehicle to analysis system.

(22) Sample probe to extract exhaust gas sample downstream of muffler.

(23) Ball valve V12 for directing N<sub>2</sub> to hydrocarbon analyzers.

(c) *Hang up reduction.* Stringent methods to reduce hang up may be employed. All methods must be approved in advance by the Administrator.

#### § 85.773-14 Information to be recorded on charts.

The following information shall be recorded with respect to each test:

(a) Test number.

(b) System tested (brief description).

(c) Date and time of day for each part of the test schedule.

(d) Instrument operator.

(e) Driver or operator.

(f) Engine make—identification number—date of manufacture—number of hours—engine displacement—engine family—idle r.p.m.—number of carburetors—number of carburetor venturis.

(g) All pertinent instrument information such as tuning—gain—serial numbers—detector numbers—range.

(h) Recorder charts: Identify zero, span, exhaust gas sample traces.

(i) Barometric pressure, intake air temperature, and humidity and, as applicable, the temperature of the air in front of the radiator during the test.

(j) A continuous trace of intake manifold vacuum and engine r.p.m., recorded on the same chart with an automatic marker indicating 1-second intervals.

#### § 85.773-15 Calibration and instrument checks.

(a) The instrument assembly shall be calibrated at least once every 30 days, using the same flow rate as when sampling exhaust and proceeding as follows:

(1) Tune analyzers.

(2) Zero on nitrogen: Check each cylinder of N<sub>2</sub> for contamination with hydrocarbons. Set the instrument gain to



give the desired range. Normal operating ranges are as follows:

Low-range hydrocarbon analyzer.	0 to 1,000 p.p.m. hexane equivalent.
High-range hydrocarbon analyzer.	0 to 10,000 p.p.m. hexane equivalent.
CO analyzer.	0 to 10 percent CO.
CO <sub>2</sub> analyzer.	0 to 16 percent CO <sub>2</sub> .

(3) Calibrate with the following normalizing gases. Flow rates should be set at 10 c.f.h. on the hydrocarbon analyzers and 5 c.f.h. on the carbon monoxide and carbon dioxide analyzers. The concentrations given indicate nominal concentrations, and actual concentrations should be known to within  $\pm 2$  percent of true value. Prepurified N<sub>2</sub> is used as the diluent.

Low range HC analyzer		High range HC analyzer		CO and CO <sub>2</sub> analyzers Blend of CO and CO <sub>2</sub> containing:	
Hexane equivalent <sup>1</sup>	Hexane equivalent	Mole percent CO	Plus	Mole percent CO <sub>2</sub>	
100 p.p.m.	600 p.p.m.	0.5		16.0	
200 p.p.m.	1,000 p.p.m.	1.0		15.0	
300 p.p.m.	1,500 p.p.m.	2.0		14.0	
400 p.p.m.	2,500 p.p.m.	3.0		13.0	
600 p.p.m.	4,000 p.p.m.	4.0		12.0	
800 p.p.m.	6,000 p.p.m.	6.0		10.0	
1,000 p.p.m.	8,000 p.p.m.	8.0		8.0	
	10,000 p.p.m.	10.0		6.0	

<sup>1</sup> The hexane equivalent of propane, when used as the normalizing gas for calibrating nondispersive infrared analyzers, is prescribed to be 0.52 (Propane Concentration  $\times 0.52$  = Hexane Equivalent Concentration).

Minimum storage temperature of the cylinders shall be 60° F.; minimum use temperature shall be 68° F.

(4) Compare values with previous curves. Any significant change reflects some problem in the system. Locate and correct problem, and recalibrate. Use best judgment in selecting curve for data reduction.

(5) Check response of hydrocarbon analyzer to 100 percent CO<sub>2</sub>. If response is greater than 0.5 percent full scale, refill filter cells with 100 percent CO<sub>2</sub> and recheck. Note any remaining response on chart. If response still exceeds 0.5 percent, replace detector.

(6) Check response of hydrocarbon analyzers to nitrogen saturated with water at ambient temperature. Record ambient temperature. If the low-range instrument response exceeds 5 percent of full scale with saturated nitrogen at 75° F., replace the detector. If the high-range response exceeds 0.5 percent of full scale, check detector on low-range instrument, then reject if response exceeds 5 percent of full scale at 75° F.

(b) The following daily instrument check shall be performed, allowing a minimum of 2 hours warmup for infrared analyzers. (Power is normally left on continuously; but, when instruments are not in use, chopper motor is turned off.):

(1) Zero on clean nitrogen introduced at analyzer inlet. Obtain a stable zero on the amplifier meter and recorder. Recheck after test.

(2) Introduce normalizing gas and set gain to match calibration curve. In order to avoid a correction for sample cell pressure, normalize and calibrate at the same flow rates used for exhaust sampling. Normalizing or span gases: (See paragraph (a) (3) of this section for allowable variation.)

Low-range hydrocarbon analyzer.	1,000 p.p.m. hexane equivalent in prepurified N <sub>2</sub> .
High-range hydrocarbon analyzer.	10,000 p.p.m. hexane equivalent in prepurified N <sub>2</sub> .
CO analyzer.	10 percent CO in prepurified N <sub>2</sub> .
CO <sub>2</sub> analyzer.	12 to 16 percent CO <sub>2</sub> in prepurified N <sub>2</sub> .

If gain has shifted significantly, check tuning. If necessary, check calibration. Recheck after test. Record actual concentrations on chart.

(3) Check nitrogen zero, repeat the procedure in subparagraphs (1) and (2) of this paragraph if required.

(4) Check flow rates and pressures.

#### § 85.773-16 Dynamometer test run.

(a) The engine shall be allowed to stand with engine turned off for at least 1 hour before the exhaust emission test at an ambient temperature of 60° F. to 86° F. The engine shall be stored prior to the emission tests in such a manner that it is not exposed to precipitation or condensation. During the dynamometer run, the ambient temperature shall be between 68° F. and 86° F.

(b) The following steps shall be taken for each test:

(1) Mount test engine on the engine dynamometer.

(2) Calibrate exhaust emission analyzer assembly.

(3) Start cooling system, if it is to be used.

(4) Start engine and idle at 1,000-1,200 r.p.m. for 5 minutes.

(5) Obtain normal idle speed, record it, and start exhaust sampling.

(6) Run four 9-mode cycles.

(c) Upon completion of the test, purge the sample line with nitrogen to establish a constant hydrocarbon "hangup" level. The hydrocarbon concentration shall drop to 5 percent of scale in 10 seconds, and 3 percent of scale in 3 minutes, or the test is invalid. Check calibration of exhaust emission instruments. A drift in excess of  $\pm 2$  percent of scale in the calibration of any one of the exhaust emission analyzers will invalidate the test results.

#### § 85.773-17 Chart reading.

The recorder response for measuring exhaust gas concentrations always lags the engine's operation because of a variable exhaust system delay and a fixed sample system delay. Therefore, the concentrations for each mode will not be located on the charts at a point corresponding to the exact time of the mode.

For each warmup or hot cycle to be evaluated, proceed as follows:

(a) Determine whether the cycle was run in accordance with the specified cycle timing by observing either chart pips, speed trace, manifold vacuum trace, or concentration traces. Deviation by more than 2 seconds from the specified time for the closed throttle mode (sequence 9) or deviation of more than  $\pm 0.2$ " Hg. from the specified mode vacuums during the last 10 seconds of a mode will invalidate the data.

(b) Time correlate the hydrocarbon, carbon monoxide, and carbon dioxide charts. Determine the location on the chart of concentrations corresponding to each mode. Determine and compensate for trace abnormalities.

(c) For all open throttle (3", 10", 16", and 19" Hg.) and idle modes, integrate the last 3 seconds of the HC, CO and CO<sub>2</sub> traces.

(d) The values recorded for the initial idle mode are used for both warmup cycles 1 and 2. The final idle mode values are applied to hot cycles 3 and 4.

(e) Integrate the complete HC, CO, and CO<sub>2</sub> traces during this 43-second closed throttle mode of each cycle.

(f) Direct computer analysis of analyzer output may be utilized provided that the analysis is sufficiently similar to the above procedures to result in comparable data results.

#### § 85.773-18 Calculations.

The final reported test results shall be derived through the following steps:

(a) Determine composite hydrocarbon and carbon monoxide concentrations for the first and second cycles. Average the results of these two cycles.

(b) Determine composite hydrocarbon and carbon monoxide concentrations for the third and fourth cycles. Average the results of these two cycles.

(c) Combine the results of paragraphs (a) and (b) of this section according to the formula:  $0.35(a) + 0.65(b)$ . Since hydrocarbon, carbon monoxide, and carbon dioxide are all measured with essentially the same moisture content, no moisture correction is required to convert the results to a dry basis. The correction factor:

$$14.5$$

$$\% \text{ CO}_2 + (0.5) \% \text{ CO} + (1.8 \times 6) \% \text{ HC}$$

shall be applied to the measured concentrations of hydrocarbon and carbon monoxide to correct these observed values for dilution of the exhaust.

#### §§ 85.773-19—85.773-27 [Reserved]

#### § 85.773-28 Compliance with emission standards.

(a) The exhaust emission standards in § 85.773-1 apply to the emissions of engines for their useful life.

(b) Since emission control efficiency decreases with the accumulation of hours on the engine, the emission level of an engine which has accumulated 1,500 hours of dynamometer operation will be used as the basis for determining compliance with the standards.

(c) The procedure for determining compliance of a new engine with exhaust emission standards is as follows:



(1) Separate emission deterioration factors shall be determined from the emission results of the durability data engines for each engine-system combination. Separate factors shall be established for HC and CO for each combination.

(i) The applicable results to be used in determining the deterioration factors for each combination shall be:

(a) All emission data from the tests required under § 85.773-7(b), except the zero-hour tests. This shall include the official test results, as determined in § 85.773-29, for all tests conducted on all durability engines of the combination selected under § 85.773-5(c) (including all engines elected to be operated by the manufacturer under § 85.773-5(c)(3)).

$$\text{factor} = \frac{\text{exhaust emissions interpolated to 1,500 hours}}{\text{exhaust emissions interpolated to 125 hours}}$$

(2) The exhaust emission test results for each emission data engine shall be multiplied by the appropriate deterioration factor: *Provided*, That if a deterioration factor as computed in subparagraph (1) of this paragraph is less than one, that deterioration factor shall be one for the purposes of this subparagraph.

(3) The emissions to compare with the standard shall be the adjusted emissions of subparagraph (2) of this paragraph for each emission data engine.

(4) Every test engine of an engine family must comply with all applicable standards, as determined in subparagraph (3) of this paragraph, before any engine in that family will be certified.

#### § 85.773-29 Testing by the Administrator.

(a) The Administrator may require that any one or more of the test engines be submitted to him, at such place or places as he may designate, for the purpose of conducting emissions tests. The Administrator may specify that he will conduct such testing at the manufacturer's facility, in which case instrumentation and equipment specified by the Administrator shall be made available by the manufacturer for test operations. Any testing conducted at a manufacturer's facility pursuant to this paragraph shall be scheduled by the manufacturer as promptly as possible.

(b) (1) Whenever the Administrator conducts a test on a test engine, the results of that test shall comprise the official data for the engine at that prescribed test point.

(2) Whenever the Administrator does not conduct a test on a test engine at a test point, the manufacturer's test data will be accepted as the official data for that test point: *Provided*, That if the Administrator makes a determination based on testing under paragraph (a) of this section, that there is a lack of correlation between the manufacturer's test equipment and the test equipment used by the Administrator, no manufacturer's test data will be accepted for purposes of certification until the reasons for the lack of correlation are determined and the validity of the data is established by the manufacturer.

(b) All emission data from the tests conducted before and after the maintenance provided in § 85.773-6(a)(1)(i).

(ii) All applicable results shall be plotted as a function of the hours on the system, rounded to the nearest hour, and the best fit straight lines, fitted by the method of least squares, shall be drawn through these data points. The interpolated 125- and 1,500-hour points on this line must be within the standard provided in § 85.773-1 or the data shall not be used in calculation of a deterioration factor.

(iii) An exhaust emission deterioration factor shall be calculated for each combination as follows:

(3) If the Administrator determines that the test data developed under paragraph (a) of this section would cause an engine to fail due to excessive 125-hour emissions or excessive deterioration, then the following procedure shall be observed:

(i) The manufacturer may request a retest. Before the retest, the engine may be adjusted to manufacturer's specifications, and parts may be replaced in accordance with § 85.773-6. All work on the engine shall be done at such location and under such conditions as the Administrator may prescribe.

(ii) The engine will be retested by the Administrator and the results of this test shall comprise the official data for that prescribed test point.

(4) If sufficient durability data is not available, at the time of any emission test conducted under paragraph (a) of this section, to enable the Administrator to determine whether a test engine would fail, the manufacturer may request a retest in accordance with the provisions of subparagraph (3) (i) and (ii) of this paragraph. If the manufacturer does not promptly make such request, he shall be deemed to have waived the right to a retest. A request for retest must be made before the manufacturer removes the engine from the test premises.

#### § 85.773-30 Certification.

(a) (1) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.773-29, the Administrator determines that a test engine(s) conforms to the regulations of this subpart, he will issue a certificate of conformity with respect to such engine(s).

(2) Such certificate will be issued for such period not more than 1 year as the Administrator may determine and upon such terms as he may deem necessary to assure that any new motor vehicle engine covered by the certificate will meet the requirements of these regulations relating to durability and performance.

(b) (1) The Administrator will determine whether an engine covered by the application complies with applicable

standards by observing the following relationships:

(i) A test engine selected under § 85.773-5(b)(2) or (4) shall represent all engines in the same engine family of the same engine displacement-exhaust emission control system combination.

(ii) A test engine selected under § 85.773-5(b)(3), shall represent all engines in the same engine family of the same engine displacement-exhaust emission control system-transmission type-fuel system combination.

(iii) A test engine selected under § 85.773-5(c)(1) shall represent all engines of the same engine-system combination.

(2) The Administrator will proceed as in paragraph (a) of this section with respect to the engines belonging to an engine family all of which comply with applicable standards.

(3) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.773-29, the Administrator determines that one or more test engines of the certification test fleet do not meet applicable standards, he will notify the manufacturer in writing, setting forth the basis for his determination. Within 30 days following receipt of the notification, the manufacturer may request a hearing on the Administrator's determination. The request shall be in writing, signed by an authorized representative of the manufacturer and shall include a statement specifying the manufacturer's objections to the Administrator's determination, and data in support of such objections. If, after a review of the request and supporting data, the Administrator finds that the request raises a substantial factual issue, he shall provide the manufacturer a hearing in accordance with § 85.705 with respect to such issue.

(4) The manufacturer may, at his option, proceed with any of the following alternatives with respect to any engine family represented by a test engine(s) determined not in compliance with applicable standards:

(i) Request a hearing under § 85.705, or

(ii) Delete from the application for certification the engines represented by the failing test engine. (Engines so deleted may be included in a later request for certification under § 85.773-32.) The Administrator will then select in place of each failing engine an alternate engine chosen in accordance with selection criteria employed in selecting the engine that failed, or

(iii) Modify the test engine and demonstrate by testing that it meets applicable standards. Another engine which is in all material respects the same as the first engine, as modified, shall then be operated and tested in accordance with applicable test procedures.

(5) If the manufacturer does not request a hearing or present the required data under subparagraph (4) of this paragraph, the Administrator will deny certification.



**§ 85.773-31 Separate certification.**

Where possible a manufacturer should include in a single application for certification all engines for which certification is required. A manufacturer may, however, choose to apply separately for certification of part of his product line. The selection of test engines and the computation of test results will be determined separately for each application.

**§ 85.773-32 Addition of an engine after certification.**

(a) If a manufacturer proposes to add to his product line an engine of the same engine-system combination as engines previously certified but which was not described in the application for certification when the test engine(s) representing other engines of that combination was certified, he shall notify the Administrator. Such notification shall be in advance of the addition unless the manufacturer elects to follow the procedure described in § 85.773-34. This notification shall include a full description of the engine to be added.

(b) The Administrator may require the manufacturer to perform such tests on the test engine(s) representing the engine to be added which would have been required if the engine had been included in the original application for certification.

(c) If, after a review of the test reports and data submitted by the manufacturer, and data derived from any testing conducted under § 85.773-29, the Administrator determines that the test engine(s) meets all applicable standards, the appropriate certificate will be amended accordingly. If the Administrator determines that the test engine(s) does not meet applicable standards, he will proceed under § 85.773-30(b).

**§ 85.773-33 Changes to an engine covered by certification.**

(a) The manufacturer shall notify the Administrator of any change in production engines in respect to any of the parameters listed in § 85.073-5(a)(3), giving a full description of the change. Such notification shall be in advance of the change unless the manufacturer elects to follow the procedure described in § 85.773-34.

(b) Based upon the description of the change, and data derived from such testing as the Administrator may require or conduct, the Administrator will determine whether the engine, as modified, would still be covered by the certificate of conformity then in effect.

(c) If the Administrator determines that the outstanding certificate would cover the modified engines, he will notify the manufacturer in writing. Except as provided in § 85.773-34, the change may not be put into effect prior to the manufacturer's receiving this notification. If the Administrator determines that the modified engines would not be covered by the certificate then in effect, then the modified engines shall be treated as additions to the product line subject to § 85.773-32.

**§ 85.773-34 Alternative procedure for notification of additions and changes.**

(a) A manufacturer may, in lieu of notifying the Administrator in advance of an addition of an engine under § 85.773-32 or a change in an engine under § 85.773-33, notify him concurrently with the making of the change if the manufacturer believes the addition or change will not require any testing under the appropriate section. Upon notification to the Administrator, the manufacturer may proceed to put the addition or change into effect.

(b) The manufacturer may continue to produce engines as described in the notification to the Administrator for a maximum of 30 days, unless the Administrator grants an extension in writing. This period may be shortened by a notification in accordance with paragraph (c) of this section.

(c) If the Administrator determines, based upon a description of the addition or change, that no test data will be required, he will notify the manufacturer in writing of the acceptability of the addition or change. If the Administrator determines that test data will be required, he will notify the manufacturer to rescind the change within 5 days of receipt of the notification. The Administrator will then proceed as in § 85.773-32 (b) and (c), or § 85.773-33 (b) and (c) as appropriate.

(d) Election to produce engines under this section will be deemed to be a consent to recall all engines which the Administrator determines under § 85.773-32(c) do not meet applicable standards, and to cause such nonconformity to be remedied at no expense to the owner.

**§ 85.773-35 Labeling.**

(a) The manufacturer of any heavy duty gasoline-fueled engine subject to the standards prescribed in § 85.773-1 shall, at the time of manufacture, affix a permanent, legible plastic or metal label, containing the information hereinafter provided to all production models of such engines available for sale to the public, and covered by a certificate of conformity under § 85.773-30(a). The label shall be affixed at such a location that it will be readily accessible for inspection after the engine is installed in a vehicle and shall read as follows:

**ENGINE EMISSION CERTIFICATION**

This engine is, in all material respects, of substantially the same construction as test engines certified by the U.S. Environmental Protection Agency as conforming to Federal regulations pertaining to crankcase and exhaust emissions.

Engine family identification and engine displacement (in cubic inches) \_\_\_\_\_  
Date of manufacture \_\_\_\_\_  
(Month and year)

Name of manufacturer \_\_\_\_\_  
(The information applicable to each engine is to be inserted on the appropriate line.)

(b) The provisions of this section shall not prevent a manufacturer from also reciting on the label that such engine conforms to any applicable State emis-

sion standards for new motor vehicle engines or any other information that such manufacturer deems necessary for, or useful to, the proper operation and satisfactory maintenance of the engine.

**§ 85.773-36 [Reserved]****§ 85.773-37 Production engines.**

(a) Any manufacturer obtaining certification under this subpart shall supply to the Administrator, upon his request, a reasonable number of production engines selected by the Administrator which are representative of the engines, emission control systems, fuel systems, and transmissions offered and typical of production models available for sale under the certificate. These engines shall be supplied for testing at such time and place and for such reasonable periods as the Administrator may require. Engines supplied under this paragraph may be required to be mounted in chassis and appropriately equipped for operation on a chassis dynamometer.

(b) Any manufacturer obtaining certification under this subpart shall notify the Administrator, on a quarterly basis, of the number of engines of each engine family-engine displacement-exhaust emission control system-fuel system combination produced for sale in the United States during the preceding quarter.

**§ 85.773-38 Maintenance instructions.**

(a) The manufacturer shall furnish or cause to be furnished to the ultimate purchaser of each new motor vehicle engine subject to the standards prescribed in § 85.773-1, written instructions for the maintenance and use of the engine by the ultimate purchaser as may be reasonable and necessary to assure the proper functioning of emission control systems.

(1) Such instructions shall be provided for those engine components listed in Appendix VI to this part (and for any other components) to the extent that maintenance of these components is necessary to assure the proper functioning of emission control systems.

(2) Such instructions shall be in clear, and to the extent practicable, nontechnical language.

(b) The maintenance instructions required by this section shall contain a general description of the documentation which the manufacturer will require from the ultimate purchaser or any subsequent purchaser as evidence of compliance with the instructions.

**§ 85.773-39 Submission of maintenance instructions.**

(a) The manufacturer shall provide to the Administrator, no later than the time of the submission required by § 85.773-4, a copy of the maintenance instructions which the manufacturer proposes to supply to the ultimate purchaser in accordance with § 85.773-38 (a). The Administrator will review such instructions to determine whether they are reasonable and necessary to assure the proper functioning of the engine's



emission control systems. The Administrator will notify the manufacturer of his determination whether such instructions are reasonable and necessary to assure the proper functioning of the emission control systems.

(b) Any revision to the maintenance instructions which will affect emissions shall be supplied to the Administrator at least 30 days before being supplied to the ultimate purchaser unless the Administrator consents to a lesser period of time.

**§ 85.774-1 Emission standards for 1974 model year engines.**

(a)(1) Exhaust emissions from new gasoline-fueled heavy duty engines shall not exceed:

(i) *Hydrocarbons plus oxides of nitrogen (as NO<sub>x</sub>)*. 16 grams per brake horsepower hour.

(ii) *Carbon monoxide*. 40 grams per brake horsepower hour.

(2) The standards set forth in paragraph (a)(1) of this section refer to a composite sample representing the operating cycle set forth in § 85.774-9 through § 85.774-18 and measured in accordance with those procedures.

(b) [Reserved]

(c) No crankcase emissions shall be discharged into the ambient atmosphere from any new motor vehicle engine subject to this subpart.

(d) Every manufacturer of new motor vehicle engines subject to the standards prescribed in this subpart shall, prior to taking any of the actions specified in section 203(a)(1) of the Act, test or cause to be tested motor vehicle engines in accordance with test procedures prescribed in § 85.774-9 through § 85.774-18 to ascertain that such test engines meet the requirements of paragraphs (a) and (c) of this section.

**§ 85.774-2 Application for certification.**

(a) An application for a certificate of conformity to the regulations applicable to any new motor vehicle engine shall be made to the Administrator by the manufacturer.

(b) The application shall be in writing, signed by an authorized representative of the manufacturer, and shall include the following:

(1) Identification and description of the engines covered by the application and a description of their emission control systems.

(2) Projected U.S. sales data sufficient to enable the Administrator to select a test fleet representative of the engines for which certification is requested.

(3) A description of the test equipment and fuel proposed to be used.

(4) A description of the proposed service accumulation procedure for durability testing.

(5) A statement of recommended maintenance and procedures necessary to assure that the engines covered by a certificate of conformity in operation conform to the regulations, and a description of the program for training of personnel for such maintenance, and the equipment required.

(6) At the option of the manufacturer, the proposed composition of the emission data and durability data test fleet.

**§ 85.774-3 Approval of procedure and equipment; test fleet selections.**

Based upon the information provided in the application for certification, and any other information the Administrator may require, the Administrator will approve or disapprove in whole or in part the service accumulation procedure and equipment and fuel proposed by the manufacturer, and notify him in writing of such determination. Where any part of a proposal is disapproved, such notification will specify the reasons for disapproval. The Administrator will select a test fleet in accordance with § 85.774-5.

**§ 85.774-4 Required data.**

The manufacturer shall perform the tests required by the applicable test procedures, and submit to the Administrator the following information:

(a) Durability data on such engines tested in accordance with the applicable test procedures of this subpart, and in such numbers as therein specified, which will show the performance of the systems installed on or incorporated in the engine for extended operation, as well as a record of all pertinent maintenance performed on the test engines.

(b) Emission data on such engines tested in accordance with the applicable emission test procedures of this subpart and in such numbers as therein specified, which will show their emissions after 0 hours, and 125 hours of operation.

(c) A description of tests performed to ascertain compliance with the general standards in § 85.774-1 and the data derived from such tests.

(d) A statement that the test engines with respect to which data are submitted have been tested in accordance with the applicable test procedures, that they meet the requirement of such tests, and that, on the basis of such tests, they conform to the requirements of the regulations in this subpart. If such statements cannot be made with respect to any engine tested, the engine shall be identified, and all pertinent test data relating thereto shall be supplied.

**§ 85.774-5 Test engines.**

(a) The engines covered by the application for certification will be divided into engine families based upon the criteria outlined in § 85.073-5(a).

(b) Emission data engines:

(1) Engines will be chosen to be run for emission data based upon the engine family groupings. Within each engine family, the requirements of this paragraph must be met.

(2) Engines of each engine family will be divided into engine displacement-exhaust emission control system combinations. A projected sales volume will be established for each combination for the 1974 model year. One engine of each combination will be selected in order of decreasing projected sales volume until 70 percent of the projected sales of a manufacturer's total production of en-

gines of that family is represented, or until a maximum of four engines is selected. The engines selected for each combination will be specified by the Administrator as to fuel system.

(3) The Administrator may select a maximum of two additional engines within each engine family based upon features indicating that they may have the highest emission levels of the engines in that engine family. In selecting these engines, the Administrator will consider such features as the exhaust emission control system, induction system characteristics, ignition system characteristics, fuel system, rated horsepower, rated torque, and compression ratio.

(4) If the engines selected in accordance with subparagraphs (2) and (3) of this paragraph do not represent each engine-system combination, then one engine of each engine-system combination not represented shall be selected by the Administrator. The engine selected shall be of the displacement with the largest projected sales volume of engines with the exhaust emission control system in the family and will be designated by the Administrator as to fuel system.

(c) Durability data engines:

(1) A durability data engine will be selected by the Administrator to represent each engine-system combination. The engine selected shall be of the displacement with the largest projected sales volume of engines with that exhaust emission control system in that engine family and will be designated by the Administrator as to fuel system.

(2) If an exhaust emission control system is used in only one engine family, an additional engine using that control system in that family will be selected so that the durability data fleet shall contain at least two engines with each control system. The additional engine will be selected in the same manner as engines selected under subparagraph (1) of this paragraph.

(3) A manufacturer may elect to operate and test additional engines to represent any engine-system combination. The additional engines must be of the same engine displacement and fuel system as the engine selected for that combination in accordance with the provisions of subparagraph (1) of this paragraph. Notice of an intent to run additional engines shall be given to the Administrator not later than 30 days following notification of the test fleet selection.

(d) Any manufacturer whose projected sales of new motor vehicle engines subject to this subpart for the 1974 model year is less than 700 engines may request a reduction in the number of test engines determined in accordance with the foregoing provisions of this section. The Administrator may agree to such lesser number as he determines will meet the objectives of this procedure.

(e) In lieu of testing an emission data or durability data engine selected under paragraph (b) or (c) of this section and submitting data therefor, a manufacturer may, with the prior written approval of the Administrator, submit



data on a similar engine for which certification has previously been obtained.

(f) For purposes of testing under § 85.774-7(g), the Administrator may require additional emission data engines and durability data engines identical in all material respects to engines selected in accordance with paragraphs (b) and (c) of this section: *Provided*, That the number of engines selected shall not increase the size of either the emission data fleet or the durability data fleet by more than 20 percent or one engine, whichever is greater.

#### § 85.774-6 Maintenance.

(a) (1) Maintenance on the engines and fuel systems of durability engines may be performed only under the following provisions:

(i) Two major engine tuneups to manufacturer's specifications may be performed at 500 and 1,000 hours ( $\pm 8$  hours) of scheduled dynamometer operation with the following exception: On engines with a displacement of 200 cubic inches or less, a major engine tuneup may be performed at 75, 750, and 1,125 hours ( $\pm 8$  hours) of scheduled dynamometer operation. A major engine tuneup shall be restricted to the following:

- (a) Replace spark plugs.
- (b) Inspect ignition wiring and replace as required.
- (c) Replace distributor breaker points and condenser as required.
- (d) Lubricate distributor cam.
- (e) Check distributor advance and breaker point dwell angle and adjust as required.
- (f) Check automatic choke for free operation and correct as required.
- (g) Adjust carburetor idle speed and mixture.
- (h) Adjust drive belt tension on engine accessories.
- (i) Adjust valve lash if required.
- (j) Check exhaust heat control valve for free operation.
- (k) Check engine bolt torque and tighten as required.
- (ii) Spark plugs may be changed if a persistent misfire is detected.
- (iii) Normal services (engine oil change, and oil filter, fuel filter, and air filter servicing) will be allowed at manufacturer's recommended intervals.
- (iv) The crankcase emission control system may be serviced at 375 hour intervals ( $\pm 8$  hours) of dynamometer operation.
- (v) Readjustment of the engine choke mechanism or idle settings may be performed only if there is a problem of stalling at idle.
- (vi) Leaks in the fuel system, engine lubrication system and cooling system may be repaired.
- (vii) Engine idle speed may be adjusted at the 125-hour test point.
- (viii) Any other engine or fuel system maintenance or repairs will be allowed only with the advance approval of the Administrator.

(2) Allowable maintenance on emission data engines shall be limited to the adjustment of engine idle speed at the 125-hour test point, except that other maintenance or repairs may be allowed

with the advance approval of the Administrator.

(b) Complete emission tests (see § 85.774-10 through § 85.774-18) shall be run before and after any engine maintenance which may reasonably be expected to affect emissions. These test data shall be supplied to the Administrator immediately after the tests, along with a complete record of all pertinent maintenance, including an engineering report of any malfunction diagnosis and the corrective action taken. In addition, all test data and maintenance reports shall be compiled and provided to the Administrator in accordance with § 85.774-4.

(c) If the Administrator determines that maintenance or repairs have resulted in a substantial change to the engine-system combination, the engine shall not be used as a durability data engine.

#### § 85.774-7 Service accumulation and emission measurements.

The engine dynamometer service accumulation schedule will consist of several operating conditions which give the same percentage of time at various manifold vacuums and the modes as specified in the emission test cycle. The average speed shall be between 1,650 and 1,700 r.p.m. Subject to the requirements as to average speed, there must be operation at speeds in excess of 3,200 r.p.m. (but not in excess of governed speed for governed engines or rated speed for non-governed engines) for a cumulative maximum of 0.5 percent of the actual cycle time, excluding time in transient conditions. Maximum cycle time shall be 15 minutes. A cycle approved in advance by the Administrator shall be used.

(a) Emission data engines: Each emission data engine shall be operated for 125 hours with all emission control systems installed and operating. Emission tests shall be conducted at zero and 125 hours. Evaporative emission controls need not be connected provided normal operating conditions are maintained in the engine induction system.

(b) Durability data engines: Each durability data engine shall be operated, with all emission control systems installed and operating, for 1,500 hours. Emission measurements, as prescribed, shall be made at zero hours and at each 125-hour interval. Evaporative emission controls need not be connected provided normal operating conditions are maintained in the induction systems.

(c) All tests required by this subpart to be conducted after 125 hours of operation or at any multiple of 125 hours may be conducted at any accumulated number of hours within 8 hours of 125 hours or the appropriate multiple of 125 hours, respectively.

(d) The results of each emission test shall be supplied to the Administrator immediately after the test. In addition, all test data shall be compiled and provided to the Administrator in accordance with § 85.774-4.

(e) Whenever the manufacturer proposes to operate and test an engine which may be used for emission or durability data, he shall provide the zero-hour test

data to the Administrator and make the engine available for such testing under § 85.774-29 as the Administrator may require, before beginning to accumulate hours on the engine. Failure to comply with this requirement will invalidate all test data later submitted for this engine.

(f) Once a manufacturer begins to operate an emission data or durability data engine, as indicated by compliance with paragraph (e) of this section, he shall continue to run the engine to 125 hours or 1,500 hours, respectively, and the data from the engine will be used in the calculations under § 85.774-19. Discontinuation of an engine shall be allowed only with the prior written consent of the Administrator.

(g) (1) The Administrator may elect to operate and test any test engine during all or any part of the service accumulation and testing procedure. In such cases, the manufacturer shall provide the engine(s) to the Administrator with all information necessary to conduct the testing.

(2) The test procedures (§ 85.770-10 through § 85.774-18) will be followed by the Administrator. The Administrator will test the engines at each test point. Maintenance may be performed by the manufacturer under such conditions as the Administrator may prescribe.

(3) The data developed by the Administrator for the engine-system combination shall be combined with any applicable data supplied by the manufacturer on other engines of that combination to determine the applicable deterioration factors for the combination. In the case of a significant discrepancy between data developed by the Administrator and that submitted by the manufacturer, the Administrator's data shall be used in the determination of deterioration factors.

#### § 85.774-8 Special test procedures.

The Administrator may, on the basis of a written application therefor by a manufacturer, prescribe test procedures, other than those set forth in this subpart, for any motor vehicle engine which he determines is not susceptible to satisfactory testing by the procedures set forth herein.

#### § 85.774-9 Test procedures.

The procedures described in this and subsequent sections will be the test program to determine the conformity of engines with the standards set forth in § 85.774-1.

(a) The test consists of prescribed sequences of engine operating conditions to be conducted on an engine dynamometer. The exhaust gases generated during engine operation are sampled continuously for specific component analysis through the analytical train. The test is applicable to engines equipped with catalytic or direct-flame afterburners, induction system modifications, or other systems, or to uncontrolled engines.

(b) The exhaust emission test is designed to determine hydrocarbon, carbon monoxide, and oxides of nitrogen concentrations during a truck driving pattern in a metropolitan area as simulated on an engine dynamometer. The test



consists of two warmup cycles and two hot cycles. The average concentrations for the warmup cycles and the hot cycles are combined to yield the reported values.

(c) When an engine is tested for exhaust emissions or is operated for durability testing on an engine dynamometer, the complete engine shall be used with all accessories which might reasonably be expected to influence emissions to the atmosphere installed and functioning. Evaporative emission controls need not be connected provided normal operating conditions are maintained in the engine induction system.

# § 85.774-10 Gasoline fuel specifications.

(a) Fuel having the following specifications or substantially equivalent specifications approved by the Administrator shall be used in exhaust emission testing. Where the Administrator determines that the engines represented by a test engine will be operated using fuels of a different lead content or octane rating than that prescribed in this paragraph, he may consent in writing to use of a fuel otherwise substantially equivalent to the following specifications but with a different lead content or octane rating.

Item	ASTM designation	Specifications
Octane, Research, min	D 1556	100
Pb. (organic), gm./U.S. gal	D 526	3.1-3.3
Distillation range	D 86	
1BP, °F		75-95
10 percent point, °F		120-135
50 percent point, °F		200-230
90 percent point, °F		300-325
EP, °F (max.)		415
Sulfur, wt. percent max	D 1266	0.10
Phosphorus, theory		0.0
RVP lb.	D 333	8.7-9.7
Hydrocarbon composition	D 1319	
Olefins, percent, max		10
Aromatics, percent, max		35
Saturates		Remainder

(b) Fuel having the following specifications, or substantially equivalent specifications approved by the Administrator shall be used in service accumulation. The octane rating of the fuel used shall be in the range recommended by the engine manufacturer. The Reid Vapor Pressure of the fuel used shall be characteristic of the seasonal motor fuel. Where the Administrator determines that the engines represented by a test engine will be operated using fuels of a different lead content than that prescribed in this paragraph, he may consent in writing to use of a fuel otherwise substantially equivalent to the following specifications but with a different lead content.

Item	ASTM Designation	Regular	Premium
Pb. (organic), gm./U.S. gal.	D 526	2.1-3.2	2.1-3.2
Sulfur, wt. percent	D 1266	0.02-0.10	0.02-0.10
Hydrocarbon composition	D 1319		
Olefins, percent max		30	15
Aromatics, percent, max		40	40
Saturates		Remainder	Remainder

(c) The specifications of the fuel to be used under paragraph (b) of this section shall be reported in accordance with § 85.774-2(b)(3).

# § 85.774-11 Dynamometer operation cycle and equipment.

(a) (1) The following nine-mode cycle shall be followed in dynamometer operation tests of gasoline-fueled heavy duty engines.

Sequence No.	Mode	Manifold vacuum	Time in Mode-Secs.	Cumulative Time-Secs.	Weighting factors
1	Idle		70	70	0.232
2	Cruise	16" Hg	23	93	.077
3	PTA	10" Hg	44	137	.147
4	Cruise	16" Hg	23	160	.077
5	PTD	19" Hg	17	177	.057
6	Cruise	16" Hg	23	200	.077
7	FL	3" Hg	34	234	.113
8	Cruise	16" Hg	23	257	.077
9	CT		43	300	.143

(2) The engine dynamometer shall be operated at a constant speed of 2,000 r.p.m.±100 r.p.m. (exception: representative engine speed for a given displacement engine as determined by its application, but not less than 1,800 r.p.m. nor greater than 2,500 r.p.m.).

(3) The idle operating mode shall be carried out at the manufacturer's recommended engine speed. The CT operating mode shall be carried out at the same engine speed as in subparagraph (2) of this paragraph.

(4) If the specified manifold vacuum can not be reached during the PTD mode, the engine shall be operated at closed throttle during that mode. If the specified manifold vacuum can not be reached during the FL mode, the engine shall be operated at wide open throttle during that mode.

(b) The following equipment shall be used for dynamometer tests.

(1) An engine dynamometer capable of maintaining constant speed±100 r.p.m. from full throttle to closed throttle motoring.

(2) A chassis-type exhaust system or substantially equivalent exhaust system shall be used.

(3) A radiator typical of that used with the engine in a vehicle, or other

means of engine cooling which will maintain the engine operating temperatures at approximately the same temperature as would the radiator, shall be used. An auxiliary fixed speed fan may be used to maintain engine cooling during sustained operation on the dynamometer.

# § 85.774-12 Dynamometer procedures.

An initial 5-minute idle, two warmup cycles, and two hot cycles constitute a complete dynamometer run. Idle modes may be run at the beginning and end of each test, thus eliminating the need to change speed between cycles. One idle mode preceding the first cycle and one following the fourth cycle is sufficient. The results of the first idle shall be used for calculation of the second cycle emissions and the fourth idle results shall be used for calculation of the third cycle emissions.

# § 85.774-13 Sampling and analytical system for measuring exhaust emissions.

(a) Schematic drawing. The following (fig. H774-1) is a schematic drawing of the exhaust gas sampling and analytical system which shall be used for testing under the regulations in this subpart.

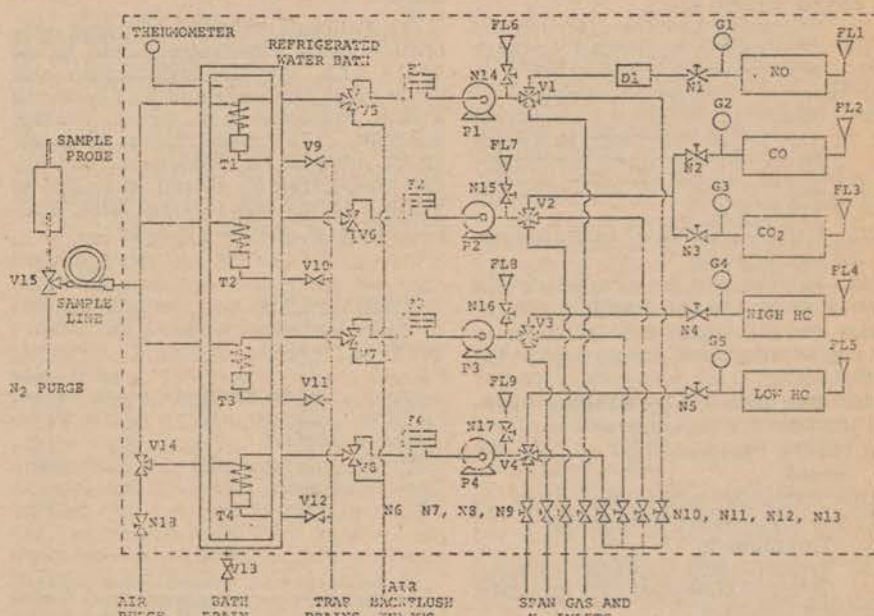


FIGURE H774-1.—Flow schematic of exhaust gas analysis system employed in Federal facilities.



(b) *Component description.* The following components shall be used in sampling and analytical systems for testing under the regulations in this part.

(1) Flowmeters FL1, FL2, FL3, FL4, and FL5 for indicating the sample flow rate through the analyzers.

(2) Nitric oxide NDIR analyzer.

(3) Carbon monoxide NDIR analyzer.

(4) Carbon dioxide NDIR analyzer.

(5) High-range hydrocarbon NDIR analyzer.

(6) Low-range hydrocarbon NDIR analyzer.

(7) Pressure gauges G1, G2, G3, G4, and G5 for indicating the analyzer sample pressure.

(8) Needle valves N1, N2, N3, N4, and N5 for regulating the sample flow rate to the analyzers.

(9) Drier D1 for removing water vapor from the sample.

(10) Needle valves N6, N7, N8, N9, N10, N11, N12, and N13 for regulating the flow rates of N<sub>2</sub> and span gases to the analyzers.

(11) Ball valves V1, V2, V3, and V4 for directing either sample or span gases to the analyzers.

(12) Needle valves N14, N15, N16, and through the bypass system.

(13) Flowmeters FL6, FL7, FL8, and FL9 for indicating the flow rate through the bypass system.

(14) Pumps P1, P2, P3, and P4 for forcing the sample through the analyzers.

(15) Filters F1, F2, F3, and F4 for removing contaminants from sample prior N17 for regulating the sample flow rate to analysis.

(16) Ball valves V5, V6, V7, and V8 for directing sample gas to the analyzers or for backflushing the sampling system with air or nitrogen.

(17) Toggle valves V9, V10, V11, V12, and V13 for draining the condensate traps and the refrigerated bath.

(18) Traps T1, T2, T3, and T4 for separating condensed water vapor from the cooled sample gases.

(19) Ball valve V14 for diverting air to the low-range hydrocarbon analyzer during periods of high hydrocarbon concentrations in the exhaust sample.

(20) Needle valve N18 for regulating the air flow to the low-range hydrocarbon analyzer during purge conditions.

(21) Thermometer for indicating the bath temperature.

(22) Refrigerated water bath for cooling the sample gases.

(23) Sample line for connecting the analysis system to the sample probe.

(24) Sample probe for extracting a sample of the exhaust downstream of the muffler.

(25) Ball valve V15 for directing nitrogen through the sampling system.

#### § 85.774-14 Information to be recorded.

The following information shall be recorded with respect to each test:

- Test number.
- System tested (brief description).
- Date and time of day for each part of the test schedule.
- Instrument Operator.
- Driver or Operator.

(f) Engine Make—identification number—date of manufacture—number of hours—engine displacement—engine family—idle r.p.m.—number carburetors—number of carburetor venturis.

(g) All pertinent instrument information such as tuning—gain—serial numbers—detector numbers—range.

(h) Barometric pressure, intake air temperature and humidity and, as applicable, the temperature of the air in front of the radiator during the test.

(i) Brake horsepower and fuel consumption.

(j) Analyzer responses, continuously recorded with zero, span and sample traces identified on each chart.

(k) Intake manifold vacuum and engine r.p.m. continuously recorded on the same chart with an automatic marker indicating one second intervals. Chart paper preprinted with one second intervals may be used in lieu of the automatic marker provided the use of the correct chart speed is verified on the chart for each test run.

#### § 85.774-15 Calibration and instrument checks.

(a) The instrument assembly shall be calibrated at least once every 30 days, using the same flow rate as when sampling exhaust and proceeding as follows:

- Tune analyzers.
- Zero the analyzers with zero grade air or nitrogen. The allowable zero gas impurity concentrations should not exceed 10 p.p.m. equivalent carbon response, 10 p.p.m. carbon monoxide and 1 p.p.m. nitric oxide. Set the instrument gain to give the desired range. Normal operating ranges are as follows:

Low-range hydrocarbon analyzer.	0-1,000 p.p.m. hexane equivalent.
High-range hydrocarbon analyzer.	0-10,000 p.p.m. hexane equivalent.
CO analyzer.	0-10 percent CO.
CO <sub>2</sub> analyzer.	0-16 percent CO.
NO analyzer.	0-4,000 p.p.m. NO.

Lower operating ranges may be used as required.

(3) Calibrate with the following calibration gases. Flow rates should be set at 10 c.f.h. on the hydrocarbon and nitric oxide analyzers and 5 c.f.h. on the carbon monoxide and carbon dioxide analyzers. The concentrations given indicate nominal concentrations, and actual concentrations should be known to within  $\pm 2$  percent of true value. Purified N<sub>2</sub> is used as the diluent.

Low range HC analyzer—Hexane equivalent <sup>1</sup>	High range HC analyzer—Hexane equivalent	NO analyzer—NO	CO and CO <sub>2</sub> analyzers—Blend of CO and CO <sub>2</sub> containing—	CO plus CO <sub>2</sub>
p.p.m.	p.p.m.	p.p.m.		Mole percent
100	600	250	0.5	16.0
200	1,000	500	1.0	15.0
300	1,500	750	2.0	14.0
400	2,500	1,000	3.0	13.0
600	4,000	1,500	4.0	12.0
800	6,000	2,000	6.0	10.0
1,000	8,000	2,500	8.0	8.0
	10,000	3,000	10.0	6.0
		3,500		
		4,000		

<sup>1</sup> The hexane equivalent of propane, when used as the normalizing gas for calibrating nondispersive infrared analyzers, is prescribed to be 0.52 (propane concentration  $\times 0.52$  = hexane equivalent concentration). Minimum storage temperature of the cylinders shall be 60° F.; minimum use temperature shall be 68° F.

(4) Compare values with previous curves. Any significant change reflects some problem in the system. Locate and correct problem, and recalibrate. Use best judgment in selecting curve for data reduction.

(5) Check response of hydrocarbon analyzer to 100 percent CO<sub>2</sub>. If response is greater than 0.5 percent full scale, refill filter cells with 100 percent CO<sub>2</sub> and recheck. Note any remaining response on chart. If response still exceeds 0.5 percent, replace detector.

(6) Check response of hydrocarbon analyzers to nitrogen saturated with water at ambient temperature. Record ambient temperature. If the low-range instrument response exceeds 5 percent of full scale with saturated nitrogen at 75° F., replace the detector. If the high-range response exceeds 0.5 percent of full scale, check detector on low-range instrument, then reject if response exceeds 5 percent of full scale at 75° F.

(b) The following daily instrument check shall be performed, allowing a minimum of 2 hours warmup for infrared analyzers. (Power is normally left on continuously; but, when instruments are not in use, chopper motor is turned off.)

(1) Zero on clean nitrogen introduced at analyzer inlet. Obtain a stable zero on the amplifier meter and recorder. Recheck after test.

(2) Introduce the span gas and set the analyzer gain to match the response to the value indicated by the calibration curve. In order to avoid a correction for sample cell pressure, use the same flow rate as that used to calibrate the analyzer. The span gas should produce a signal from 80 to 100 percent of the full scale response. The concentration of the span gas should be known within  $\pm 2$  percent of the actual gain. If gain has shifted by more than 3 percent of scale, check tuning. If necessary, check calibration. Recheck after test. Record actual concentrations on chart.

(3) Check nitrogen zero, repeat the procedure in subparagraphs (1) and (2) of this paragraph if required.

(4) Check flow rates and pressures.

#### § 85.774-16 Dynamometer test run.

(a) The engine shall be allowed to stand with engine turned off for at least 1 hour before the exhaust emission test at an ambient temperature of 60° F. to 86° F. The engine shall be stored prior to the emission tests in such a manner that it is not exposed to precipitation or condensation. During the dynamometer run, the ambient temperature shall be between 68° F. and 86° F.

(b) The following steps shall be taken for each test:

(1) Mount test engine on the engine dynamometer.

(2) Calibrate exhaust emission analyzer assembly.

(3) Check the condition of the drier in the nitric oxide analyzer sampling line. Replace the drying agent if necessary.

(4) Insert the sample line at least 2 feet into the tailpipe. When this is not possible, a tailpipe extension should be used.



(5) Start cooling system, if it is to be used.

(6) Start engine and idle at 1,000 to 1,200 r.p.m. for 5 minutes.

(7) Obtain normal idle speed, record it and start exhaust sampling.

(8) Run four 9-mode cycles.

(c) Upon completion of the test, purge the sample line with nitrogen to establish a constant hydrocarbon "hangup" level. The hydrocarbon concentration shall drop to 5 percent of scale in 10 seconds, and 3 percent of scale in 3 minutes, or the test is invalid. Check calibration of exhaust emission instruments. A drift in excess of  $\pm 2$  percent of scale in the calibration of any one of the exhaust emission analyzers will invalidate the test results.

#### § 85.774-17 Chart reading.

The recorder response for measuring exhaust gas concentrations always lags the engine's operation because of a variable exhaust system delay and a fixed sample system delay. Therefore, the concentrations for each mode will not be located on the charts at a point corresponding to the exact time of the mode. For each warmup or hot cycle to be evaluated, proceed as follows:

(a) Determine whether the cycle was run in accordance with the specified cycle timing by observing either chart pips, speed trace, manifold vacuum trace, or concentration traces. Deviation by more than 2 seconds from the specified time for the CT mode, or deviation of more than 0.3" Hg during the cruise and PTD modes, or more than 0.2" Hg during the PTA and FL modes, from the specified mode vacuums during the last 10 seconds of a mode will invalidate the data.

(b) Time correlate the hydrocarbon, carbon monoxide, carbon dioxide, and nitric oxide charts. Determine the location on the chart of concentrations corresponding to each mode. Determine and compensate for trace abnormalities.

(c) For all open throttle (3 inches, 10 inches, 16 inches, and 19 inches Hg) and idle modes, average the last 3 seconds of the HC, CO, CO<sub>2</sub> and NO traces.

(d) The values recorded for the initial idle mode are used for both warmup cycles 1 and 2. The final idle mode values are applied to hot cycles 3 and 4.

(e) Average the complete HC, CO, CO<sub>2</sub> and NO traces during the 43-second closed throttle mode of each cycle.

(f) Direct computer analysis of analyzer output may be utilized provided that the analysis is sufficiently similar to the above procedures to result in comparable data results.

#### § 85.774-18 Calculations.

The final reported test results shall be derived through the following steps:

(a) Determine total carbon (TC) equivalent concentration in accordance with the following:

$$TC = \%CO_2 + \%CO + (1.8 \times 6) \%HC$$

(b) Calculate the mass emission for HC (HC<sub>mass</sub>), CO (CO<sub>mass</sub>), and NO<sub>x</sub> (NO<sub>xmass</sub>) in grams per hour for each mode as follows:

$$(1) HC_{mass} = 10.8 \times 10^{-4} \times HC_{conc} (p.p.m.) \times \frac{\text{Fuel consumption (gms./hr.)}}{TC}$$

$$(2) CO_{mass} = 2.02 \times CO_{conc} (\%) \times \frac{\text{Fuel consumption (gms./hr.)}}{TC}$$

$$(3) NO_{xmass} = 3.32 \times 10^{-4} \times NO_{conc} (p.p.m.) \times \frac{\text{Fuel consumption (gms./hr.)}}{TC}$$

(c) Multiply the HC<sub>mass</sub>, CO<sub>mass</sub>, and NO<sub>xmass</sub> values for each mode by the appropriate weighting factors.

(d) Multiply the measured brake horsepower values for each mode by the appropriate weighting factors. (Negative values are not used.)

(e) Calculate the brake specific emissions for HC, CO, and NO<sub>x</sub> for each cycle as follows:

$$(1) BSHC = \frac{\sum (HC_{mass} \times WF)}{\sum (\text{Measured BHP} \times WF)}$$

$$(2) BSCO = \frac{\sum (CO_{mass} \times WF)}{\sum (\text{Measured BHP} \times WF)}$$

$$(3) BSNO_x = \frac{\sum (NO_{xmass} \times WF)}{\sum (\text{Measured BHP} \times WF)}$$

(f) Average the composite BSHC, BSCO, BSNO<sub>x</sub> emissions of the first and second cycles.

(g) Average the composite BSHC, BSCO, and BSNO<sub>x</sub> emissions of the third and fourth cycles.

(h) Combine the results of (f) and (g) according to the formula:  $0.35 \times \text{composite of (f)} + 0.65 \times \text{composite of (g)}$ .

(i) Correct the BSNO<sub>x</sub> value for the humidity at test conditions by multiplying by conversion factor "K" where:

$$K = 0.634 + 0.00654H - 0.0000222H^2$$

H = Humidity at test conditions, grain H<sub>2</sub>O/lb. dry air.

#### §§ 85.774-19—85.774-27 [Reserved]

#### § 85.774-28 Compliance with emission standards.

(a) The exhaust emission standards in § 85.774-1 apply to the emissions of engines for their useful life.

(b) Since emission control efficiency decreases with the accumulation of hours on the engine, the emission level of an engine which has accumulated 1,500 hours of dynamometer operation will be used as the basis for determining compliance with the standards.

(c) The procedure for determining compliance of a new engine with exhaust emission standards is as follows:

(1) Separate emission deterioration factors shall be determined from the emission results of the durability data engines for each engine-system combination. Separate factors shall be established for CO and for the combined emissions of HC and NO<sub>x</sub>.

(i) The applicable results to be used in determining the deterioration factors for each combination shall be:

(a) All emission data from the tests required under § 85.774-7(b), except the zero-hour tests. This shall include the official test results, as determined in § 85.774-29, for all tests conducted on all durability engines of the combination selected under § 85.774-5(c) (including all engines elected to be operated by the manufacturer under § 85.774-5(c)(3)).

(b) All emission data from the tests conducted before and after maintenance provided in § 85.774-6(a)(1)(i).

(ii) All applicable results shall be plotted as a function of the hours on the system, rounded to the nearest hour, and the best fit straight lines, fitted by the method of least squares, shall be drawn through these data points. The interpolated 125- and 1,500-hour points on this line must be within the standard provided in § 85.774-1 or the data shall not be used in calculation of a deterioration factor.

(iii) An exhaust emission deterioration factor shall be calculated for each combination as follows:

Factor = Exhaust emissions interpolated to 1,500 hours minus the exhaust emissions interpolated to 125 hours.

(2) The appropriate deterioration factor shall be added to the exhaust emission test results for each emission data engine: *Provided*, That if a deterioration factor as computed in subparagraph (1) of this paragraph is negative, that deterioration factor shall be zero when comparing adjusted emissions to the standards.

(3) The emissions to compare with the standard shall be the adjusted emissions of subparagraph (2) of this paragraph for each emission data engine.

(4) Every test engine of an engine family must comply with all applicable standards, as determined in subparagraph (3) of this paragraph, before any engine in that family will be certified.

#### § 85.774-29 Testing by the Administrator.

(a) The Administrator may require that any one or more of the test engines be submitted to him, at such place or places as he may designate, for the purpose of conducting emissions tests. The Administrator may specify that he will conduct such testing at the manufacturer's facility, in which case instrumentation and equipment specified by the Administrator shall be made available by the manufacturer for test operations. Any testing conducted at a manufacturer's facility pursuant to this paragraph shall be scheduled by the manufacturer as promptly as possible.

(b)(1) Whenever the Administrator conducts a test on a test engine, the results of that test shall comprise the official data for the engine at that prescribed test point.

(2) Whenever the Administrator does not conduct a test on a test engine at a test point, the manufacturer's test data will be accepted as the official data for that test point: *Provided*, That if the Administrator makes a determination based on testing under paragraph (a) of this section, that there is a lack of cor-



relation between the manufacturer's test equipment and the test equipment used by the Administrator, no manufacturer's test data will be accepted for purposes of certification until the reasons for the lack of correlation are determined and the validity of the data is established by the manufacturer.

(3) If the Administrator determines that the test data developed under paragraph (a) of this section would cause an engine to fail due to excessive 125-hour emissions or excessive deterioration, then the following procedure shall be observed:

(i) The manufacturer may request a retest. Before the retest, the engine may be adjusted to manufacturer's specifications, and parts may be replaced in accordance with § 85.774-6. All work on the engine shall be done at such location and under such conditions at the Administrator may prescribe.

(ii) The engine will be retested by the Administrator and the results of this test shall comprise the official data for that prescribed test point.

(4) If sufficient durability data is not available, at the time of any emission test conducted under paragraph (a) of this section, to enable the Administrator to determine whether a test engine would fail, the manufacturer may request a retest in accordance with the provisions of subparagraph (3) (i) and (ii) of this paragraph. If the manufacturer does not promptly make such request, he shall be deemed to have waived the right to a retest. A request for retest must be made before the manufacturer removes the engine from the test premises.

#### § 85.774-30 Certification.

(a) (1) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.774-29, the Administrator determines that a test engine(s) conforms to the regulations of this subpart, he will issue a certificate of conformity with respect to such engine(s).

(2) Such certificate will be issued for such period not more than 1 year as the Administrator may determine and upon such terms as he may deem necessary to assure that any new motor vehicle engine covered by the certificate will meet the requirements of these regulations relating to durability and performance.

(b) (1) The Administrator will determine whether an engine covered by the application complies with applicable standards by observing the following relationships:

(i) A test engine selected under § 85.774-5(b) (2) and (4), shall represent all engines in the same engine family of the same engine displacement-exhaust emission control system combination.

(ii) A test engine selected under § 85.774-5(b) (3), shall represent all engines in the same engine family of the same engine displacement-exhaust emission control system-transmission type-fuel system combination.

(iii) A test engine selected under § 85.774-5(c) (1), shall represent all en-

gines of the same engine-system combination.

(2) The Administrator will proceed as in paragraph (a) of this section with respect to the engines belonging to an engine family all of which comply with applicable standards.

(3) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.774-29, the Administrator determines that one or more test engines of the certification test fleet do not meet applicable standards, he will notify the manufacturer in writing, setting forth the basis for his determination. Within 30 days following receipt of the notification, the manufacturer may request a hearing on the Administrator's determination. The request shall be in writing, signed by an authorized representative of the manufacturer and shall include a statement specifying the manufacturer's objections to the Administrator's determination, and data in support of such objections. If, after a review of the request and supporting data, the Administrator finds that the request raises a substantial factual issue, he shall provide the manufacturer a hearing in accordance with § 85.705 with respect to such issue.

(4) The manufacturer may, at his option, proceed with any of the following alternatives with respect to any engine family represented by a test engine(s) determined not in compliance with applicable standards:

(i) Request a hearing under § 85.705, or

(ii) Delete from the application for certification the engines represented by the failing test engine. (Engines so deleted may be included in a later request for certification under § 85.774-32.) The Administrator will then select in place of each failing engine an alternate engine chosen in accordance with selection criteria employed in selecting the engine that failed, or

(iii) Modify the test engine and demonstrate by testing that it meets applicable standards. Another engine which is in all material respects the same as the first engine, as modified, shall then be operated and tested in accordance with applicable test procedures.

(5) If the manufacturer does not request a hearing or present the required data under subparagraph (4) of this paragraph, the Administrator will deny certification.

#### § 85.774-31 Separate certification.

Where possible a manufacturer should include in a single application for certification all engines for which certification is required. A manufacturer may, however, choose to apply separately for certification of part of his product line. The selection of test engines and the computation of test results will be determined separately for each application.

#### § 85.774-32 Addition of an engine after certification.

(a) If a manufacturer proposes to add to his product line an engine of the same

engine-system combination as engines previously certified but which was not described in the application for certification when the test engine(s) representing other engines of that combination was certified, he shall notify the Administrator. Such notification shall be in advance of the addition unless the manufacturer elects to follow the procedure described in § 85.774-34. This notification shall include a full description of the engine to be added.

(b) The Administrator may require the manufacturer to perform such tests on the engine(s) representing the engine to be added which would have been required if the engine had been included in the original application for certification.

(c) If, after a review of the test reports and data submitted by the manufacturer, and data derived from any testing conducted under § 85.774-29, the Administrator determines that the test engine(s) meets all applicable standards, the appropriate certificate will be amended accordingly. If the Administrator determines that the test engine(s) does not meet applicable standards, he will proceed under § 85.774-30(b).

#### § 85.774-33 Changes to an engine covered by certification.

(a) The manufacturer shall notify the Administrator of any change in production engines in respect to any of the parameters listed in § 85.073-5(a)(3), giving a full description of the change. Such notification shall be in advance of the change unless the manufacturer elects to follow the procedure described in § 85.774-34.

(b) Based upon the description of the change, and data derived from such testing as the Administrator may require or conduct, the Administrator will determine whether the engine, as modified, would still be covered by the certificate of conformity then in effect.

(c) If the Administrator determines that the outstanding certificate would cover the modified engines, he will notify the manufacturer in writing. Except as provided in § 85.774-34, the change may not be put into effect prior to the manufacturer's receiving this notification. If the Administrator determines that the modified engines would not be covered by the certificate then in effect, then the modified engines shall be treated as additions to the product line subject to § 85.774-32.

#### § 85.774-34 Alternative procedure for notification of additions and changes.

(a) A manufacturer may, in lieu of notifying the Administrator in advance of an addition of an engine under § 85.774-32 or a change in an engine under § 85.774-33, notify him concurrently with the making of the change if the manufacturer believes the addition or change will not require any testing under the appropriate section. Upon notification to the Administrator, the manufacturer may proceed to put the addition or change into effect.

(b) The manufacturer may continue to produce engines as described in the



notification to the Administrator for a maximum of 30 days, unless the Administrator grants an extension in writing. This period may be shortened by a notification in accordance with paragraph (c) of this section.

(c) If the Administrator determines, based upon a description of the addition or change, that no test data will be required, he will notify the manufacturer in writing of the acceptability of the addition or change. If the Administrator determines that test data will be required, he will notify the manufacturer to rescind the change within 5 days of receipt of the notification. The Administrator will then proceed as in § 85.774-32 (b) and (c), or § 85.774-33 (b) and (c) as appropriate.

(d) Election to produce engines under this section will be deemed to be a consent to recall all engines which the Administrator determines under § 85.774-32(c) do not meet applicable standards, and to cause such nonconformity to be remedied at no expense to the owner.

**§ 85.774-35 Labeling.**

(a) (1) The manufacturer of any heavy duty gasoline-fueled engine subject to the standards prescribed in § 85.744-1 shall, at the time of manufacture, affix a permanent, legible label, of the type and in the manner described below, containing the information hereinafter provided, to all production models of such engines available for sale to the public and covered by a certificate of conformity under § 85.774-30(a).

(2) The plastic or metal label shall be welded, bonded, or otherwise permanently attached to the engine in a position in which it will be readily visible after installation in the vehicle.

(3) The label shall be attached to an engine part necessary for normal engine operation and not normally requiring replacement during engine life.

(4) The label shall contain the following information lettered in the English language in block letters and numerals which shall be of a color that contrasts with the background of the label:

(i) The label heading: Engine Exhaust Emission Control Information;

(ii) Full corporate name and trademark of manufacturer;

(iii) Engine displacement (in cubic inches) and engine family identification;

(iv) Date of engine manufacture (month and year);

(v) Engine tuneup specifications and adjustments as recommended by the manufacturer, including idle speed, ignition timing, and the idle air-fuel mixture setting procedure and value (e.g., idle CO, idle air-fuel ratio, idle speed drop) and valve lash. These specifications should indicate the proper transmission position during tuneup and what accessories (e.g., air conditioner), if any, should be in operation;

(vi) The statement: "This Engine Conforms to U.S. Environmental Protection Agency Regulations Applicable to 1974 Model Year Gasoline-Fueled Heavy Duty Engines."

(b) The provisions of this section shall not prevent a manufacturer from also reciting on the label that such engine conforms to any applicable State emission standards for new motor vehicle engines or any other information that such manufacturer deems necessary for, or useful to, the proper operation and satisfactory maintenance of the vehicle or engine.

(c) The label may be made up of one or more pieces provided that all pieces are permanently attached to the same engine part.

**§ 85.774-36 [Reserved]**

**§ 85.774-37 Production engines.**

(a) Any manufacturer obtaining certification under this subpart shall supply to the Administrator, upon his request, a reasonable number of production engines selected by the Administrator which are representative of the engines, emission control systems, fuel systems, and transmissions offered and typical of production models available for sale under the certificate. These engines shall be supplied for testing at such time and place and for such reasonable periods as the Administrator may require. Engines supplied under this paragraph may be required to be mounted in chassis and appropriately equipped for operation on a chassis dynamometer.

(b) Any manufacturer obtaining certification under this subpart shall notify the Administrator, on a quarterly basis, of the number of engines of each engine family - engine displacement - exhaust emission control system-fuel system combination produced for sale in the United States during the preceding quarter.

**§ 85.774-38 Maintenance instructions.**

(a) The manufacturer shall furnish or cause to be furnished to the ultimate purchaser of each new motor vehicle engine subject to the standards prescribed in § 85.774-1, written instructions for the maintenance and use of the engine by the ultimate purchaser as may be reasonable and necessary to assure the proper functioning of emission control systems.

(1) Such instructions shall be provided for those engine components listed in Appendix VI to this part (and for any other components) to the extent that maintenance of these components is necessary to assure the proper functioning of emission control systems.

(2) Such instructions shall be in clear, and to the extent practicable, nontechnical language.

(b) The maintenance instructions required by this section shall contain a general description of the documentation which the manufacturer will require from the ultimate purchaser or any subsequent purchaser as evidence of compliance with the instructions.

**§ 85.774-39 Submission of maintenance instructions.**

(a) The manufacturer shall provide to the Administrator, no later than the time of the submission required by

§ 85.774-4, a copy of the maintenance instructions which the manufacturer proposes to supply to the ultimate purchaser in accordance with § 85.774-38(a). The Administrator will review such instructions to determine whether they are reasonable and necessary to assure the proper functioning of the engine's emission control systems. The Administrator will notify the manufacturer of his determination whether such instructions are reasonable and necessary to assure the proper functioning of the emission control systems.

(b) Any revision to the maintenance instructions which will affect emissions shall be supplied to the Administrator at least 30 days before being supplied to the ultimate purchaser unless the Administrator consents to a lesser period of time.

**Subpart I—Engine Smoke Exhaust Emission Regulations for New Diesel Heavy Duty Engines**

**§ 85.801 General applicability.**

The provisions of this subpart are applicable to new diesel heavy duty engines beginning with the 1973 model year.

**§ 85.802 Definitions.**

(a) As used in this subpart, all terms not defined herein shall have the meaning given them in the Act:

(1) "Act" means Part A of title II of the Clean Air Act, 42 U.S.C. 1857 f-1 through f-7, as amended by Public Law 91-604.

(2) "Administrator" means the Administrator of the Environmental Protection Agency or his authorized representative.

(3) "Model year" means the manufacturer's annual production period (as determined by the Administrator) which includes January 1 of such calendar year: *Provided*, That if the manufacturer has no annual production period, the term "model year" shall mean the calendar year.

(4) "Gross vehicle weight" means the manufacturer's gross weight rating for the individual vehicle.

(5) "Heavy duty vehicle" means any motor vehicle either designed primarily for transportation of property and rated at more than 6,000 pounds GVW or designed primarily for transportation of persons and having a capacity of more than 12 persons.

(6) "Heavy duty engine" means any engine which the engine manufacturer could reasonably expect to be used for motive power in a heavy duty vehicle.

(7) "System" includes any motor vehicle engine modification which controls or causes the reduction of substances emitted from motor vehicle engines.

(8) "Engine family" means the basic classification unit of a manufacturer's product line used for the purpose of test fleet selection and determined in accordance with § 85.873-5(a).

(9) "Engine-system combination" means an engine family-exhaust emis-



sion control system—fuel evaporative emission control system (where applicable) combination.

(10) "Fuel system" means the combination of fuel tank, fuel pump, fuel lines, and carburetor, or fuel injection components, and includes all fuel system vents and fuel evaporative emission control systems.

(11) "Crankcase emissions" means airborne substances emitted to the atmosphere from any portion of the engine crankcase ventilation or lubrication systems.

(12) "Exhaust emissions" means substances emitted to the atmosphere from any opening downstream from the exhaust port of a motor vehicle engine.

(13) "Smoke" means the matter in exhaust emissions which obscures the transmission of light.

(14) "Maximum rated horsepower" means the maximum brake horsepower output of an engine as stated by the manufacturer in his sales and service literature and his application for certification under § 85.873-2.

(15) "Rated speed" means the speed at which the manufacturer specifies the maximum rated horsepower of an engine.

(16) "Maximum rated torque" means the maximum torque produced by an engine as stated by the manufacturer in his sales and service literature and his application for certification under § 85.873-2.

(17) "Opacity" means the fraction of a beam of light, expressed in percent, which fails to penetrate a plume of smoke.

(18) Zero (0) hours means that point after initial engine starting (not to exceed 1 hour of engine operation) at which adjustments are completed [definition applicable to the 1973 model year].

(19) Zero (0) hours means that point after normal assembly line operations and adjustments and before 1 additional operating hour has been accumulated [definition applicable beginning with the 1974 model year].

(20) "Useful life" means a period of use of 5 years or 100,000 miles of vehicle operation or 3,000 hours of engine operation (or an equivalent period of 1,000 hours of dynamometer operation), whichever first occurs.

(21) "Peak torque speed" means the speed at which an engine develops maximum torque.

(22) "Military engine" means any engine manufactured solely for the Department of Defense to meet military specifications.

#### § 85.803 Abbreviations.

The abbreviations used in this subpart have the following meanings in both capital and lowercase:

- API—American Petroleum Institute.
- ASTM—American Society for Testing and Materials.
- EP—End point.
- F—Fahrenheit.
- Hg—Mercury.
- IBP—Initial boiling point.
- Min.—Minimum.
- °—Degrees.

#### § 85.804 General standards: increase in emissions; unsafe conditions.

(a) (1) Every new motor vehicle engine manufactured for sale, sold, offered for sale, introduced, or delivered for introduction into commerce, or imported into the United States for sale or resale which is subject to any of the standards prescribed in this subpart shall be covered by a certificate of conformity issued pursuant to § 85.873-2 through § 85.873-4 and § 85.873-29 through § 85.873-34 of this subpart.

(2) No heavy duty vehicle manufacturer shall take any of the actions specified in section 203(a) (1) of the Act with respect to any diesel-powered heavy duty vehicle which uses an engine which has not been certified as meeting applicable standards. Such manufacturer shall provide to the Administrator prior to the beginning of each model year a statement signed by an authorized representative which includes the following information:

- (i) A description of the vehicles which will be produced subject to this section;
- (ii) Identification of the engines used in the vehicles;
- (iii) Projected sales data on each vehicle-engine combination;
- (iv) A statement that the engines will not be modified by the vehicle manufacturer or a detailed specification of any changes which will be made. Changes made solely for the purpose of mounting an engine in a vehicle need not be included.

(b) (1) Any system installed on or incorporated in a new motor vehicle engine to enable such vehicle to conform to standards imposed by this subpart:

(i) Shall not in its operation or function cause the emission into the ambient air of any noxious or toxic substance that would not be emitted in the operation of such engine without such system, except as specifically permitted by regulation; and

(ii) Shall not in its operation, function, or malfunction result in any unsafe condition endangering the motor vehicle, its occupants, or persons or property in close proximity to the vehicle.

(2) Every manufacturer of new motor vehicle engines subject to any of the standards imposed by this subpart shall, prior to taking any of the actions specified in section 203(a) (1) of the Act, test or cause to be tested motor vehicle engines in accordance with good engineering practice to ascertain that such test engines will meet the requirements of this section for the useful life of the engine.

#### § 85.805 Hearings on certification.

(a) (1) After granting a request for a hearing under § 85.873-30, the Administrator will designate a Presiding Officer for the hearing.

(2) The General Counsel will represent the Environmental Protection Agency in any hearing under this section.

(3) If a time and place for the hearing have not been fixed by the Administrator under § 85.873-30, the hearing shall be held as soon as practicable at a time and

place fixed by the Administrator or by the Presiding Officer.

(b) (1) Upon his appointment pursuant to paragraph (a) of this section, the Presiding Officer will establish a hearing file. The file shall consist of the notice issued by the Administrator under § 85.873-30, together with any accompanying material, the request for a hearing and the supporting data submitted therewith and all documents relating to the request for certification, including the application for certification and all documents submitted therewith, and correspondence and other data material to the hearing.

(2) The appeal file will be available for inspection by the applicant at the office of the Presiding Officer.

(c) An applicant may appear in person, or may be represented by counsel or by any other duly authorized representative.

(d) (1) The Presiding Officer, upon the request of any party or in his discretion, may arrange for a prehearing conference at a time and place specified by him to consider the following:

- (i) Simplification of the issues;
- (ii) Stipulations, admissions of fact, and the introduction of documents;
- (iii) Limitation of the number of expert witnesses;
- (iv) Possibility of agreement disposing of all or any of the issues in dispute;
- (v) Such other matters as may aid in the disposition of the hearing, including such additional tests as may be agreed upon by the parties.

(2) The results of the conference shall be reduced to writing by the Presiding Officer and made part of the record.

(e) (1) Hearings shall be conducted by the Presiding Officer in an informal but orderly and expeditious manner. The parties may offer oral or written evidence, subject to the exclusion by the Presiding Officer of irrelevant, immaterial, and repetitious evidence.

(2) Witnesses will not be required to testify under oath. However, the Presiding Officer shall call to the attention of witnesses that their statements may be subject to the provisions of title 18 U.S.C. 1001 which imposes penalties for knowingly making false statements or representations, or using false documents in any matter within the jurisdiction of any department or agency of the United States.

(3) Any witness may be examined or cross-examined by the Presiding Officer, the parties, or their representatives.

(4) Hearings shall be reported verbatim. Copies of transcripts of proceedings may be purchased by the applicant from the reporter.

(5) All written statements, charts, tabulations, and similar data offered in evidence at the hearing shall, upon a showing satisfactory to the Presiding Officer of their authenticity, relevancy, and materiality, be received in evidence and shall constitute a part of the record.

(6) Oral argument may be permitted in the discretion of the Presiding Officer and shall be reported as part of the record unless otherwise ordered by him.



(f) (1) The Presiding Officer shall make an initial decision which shall include written findings and conclusions and the reasons or basis therefor on all the material issues of fact, law, or discretion presented on the record. The findings, conclusions, and written decision shall be provided to the parties and made a part of the record. The initial decision shall become the decision of the Administrator without further proceedings unless there is an appeal to the Administrator or motion for review by the Administrator within 20 days of the date the initial decision was filed.

(2) On appeal from or review of the initial decision the Administrator shall have all the powers which he would have in making the initial decision including the discretion to require or allow briefs, oral argument, the taking of additional evidence, or the remanding to the Presiding Officer for additional proceedings. The decision by the Administrator shall include written findings and conclusions and the reasons or basis therefor on all the material issues of fact, law, or discretion presented on the appeal or considered in the review.

**§ 85.806 Maintenance of records; submittal of information; right of entry.**

(a) The manufacturer of any new motor vehicle engine subject to any of the standards prescribed in this subpart shall establish and maintain the following adequately organized and indexed records:

(1) Identification and description of all engines for which testing is required under this subpart.

(2) A description of all emission control systems which are installed on or incorporated in each engine.

(3) A description of the procedures used to test such engines.

(4) Test data on each emission data engine which will show its emissions at 0 and 125 hours.

(5) Test data on each durability engine which will show the performance of the systems installed on or incorporated in the engine during extended operation, as well as a record of all pertinent maintenance performed on the engine.

(b) The manufacturer of any new motor vehicle engine subject to any of the standards prescribed in this subpart shall submit to the Administrator at the time of issuance by the manufacturer copies of all instructions or explanations regarding the use, repair, adjustment, maintenance, or testing of such engine relevant to the control of exhaust emissions, issued by the manufacturer for use by other manufacturers, assembly plants, distributors, dealers, and ultimate purchasers: *Provided*, That any material not translated into the English language need not be submitted unless specifically requested by the Administrator.

(c) The manufacturer of any new motor vehicle engine subject to any of the standards prescribed in this subpart shall permit officers or employees duly designated by the Administrator, upon presenting appropriate credentials and a written notice to the manufacturer:

(1) To enter, at reasonable times, any premises used during the certification procedure for purposes of monitoring tests and service accumulation procedures, observing maintenance procedures, and verifying correlation or calibration of test equipment, or

(2) To inspect, at reasonable times, records, files, and papers compiled by such manufacturer in accordance with paragraph (a) of this section.

A separate notice shall be given for each such inspection, but a separate notice shall not be required for each entry made during the period covered by the inspection. Each such inspection shall be commenced and completed with reasonable promptness.

**§ 85.873 Smoke exhaust emission standards for 1973 model year engines.**

(a) (1) The opacity of smoke emissions from new diesel engines subject to this subpart shall not exceed:

(i) 40 percent during the engine acceleration mode.

(ii) 20 percent during the engine lugging mode.

(2) The standards set forth in paragraph (a)(1) of this section refer to exhaust smoke emissions generated under the conditions set forth in § 85.873-9 through § 85.873-18 and measured and calculated in accordance with those procedures.

(b) [Reserved]

(c) [Reserved]

(d) Every manufacturer of new motor vehicle engines subject to the standards prescribed in this subpart shall, prior to taking any of the actions specified in section 203(a)(1) of the Act, test or cause to be tested motor vehicle engines in accordance with test procedures prescribed in § 85.873-9 through § 85.873-18, to ascertain that such test engines meet the requirements of paragraph (a) of this section. If, pursuant to § 85.873-30 (a), the Administrator issues a certificate of conformity for the class or classes of motor vehicle engines represented by such test engines, any motor vehicle engine which is in all material respects of substantially the same construction as such test engines shall be deemed to be in conformity with the requirements of paragraph (a) of this section.

**§ 85.873-2 Application for certification.**

(a) An application for a certificate of conformity to the regulations applicable to any new motor vehicle engine shall be made to the Administrator by the manufacturer.

(b) The application shall be in writing, signed by an authorized representative of the manufacturer, and shall include the following:

(1) Identification and description of the engines covered by the application and a description of their emission control systems.

(2) Projected U.S. sales data sufficient to enable the Administrator to select a test fleet representative of the engines for which certification is requested.

(3) A description of the test equipment and fuel proposed to be used.

(4) A description of the proposed service accumulation procedure for durability testing.

(5) A statement of recommended maintenance and procedures necessary to assure that the engines covered by a certificate of conformity in operation conform to the regulations, and a description of the program for training of personnel for such maintenance, and the equipment required.

(6) At the option of the manufacturer, the proposed composition of the emission data and durability data test fleet.

**§ 85.873-3 Approval of procedure and equipment; test fleet selections.**

Based upon the information provided in the application for certification, and any other information the Administrator may require, the Administrator will approve or disapprove in whole or in part the service accumulation procedure and equipment and fuel proposed by the manufacturer, and notify him in writing of such determination. Where any part of a proposal is disapproved, such notification will specify the reasons for disapproval. The Administrator will select a test fleet in accordance with § 85.873-5.

**§ 85.873-4 Required data.**

The manufacturer shall perform the tests required by the applicable test procedures, and submit to the Administrator the following information:

(a) Durability data on such engines tested in accordance with the applicable test procedures of this subpart, and in such numbers as therein specified, which will show the performance of the systems installed on or incorporated in the engine for extended operation, as well as a record of all pertinent maintenance performed on the test engines.

(b) Emission data on such engines tested in accordance with the applicable emission test procedures of this subpart and in such numbers as therein specified, which will show their emissions after 0 hours and 125 hours of operation.

(c) A description of tests performed to ascertain compliance with the general standards in § 85.873-1 and the data derived from such tests.

(d) A statement that the test engines with respect to which data are submitted have been tested in accordance with the applicable test procedures, that they meet the requirement of such tests, and that, on the basis of such tests, they conform to the requirements of the regulations in this subpart. If such statements cannot be made with respect to any engine tested, the engine shall be identified, and all pertinent test data relating thereto shall be supplied.

**§ 85.873-5 Test engines.**

(a) The engines covered by the application for certification will be divided into engine families based upon the criteria outlined in § 85.873-5(a).



## (b) Emission data engines:

(1) Engines will be chosen to be run for emission data based upon engine family groupings. Within each engine family, the requirements of this paragraph must be met.

(2) Engines of each engine family will be divided into groups based upon exhaust emission control system. Two engines of each engine-system combination shall be run for smoke emission data as prescribed in § 85.872-7(a). Within each combination, the engines that feature the highest fuel feed per stroke, primarily at the speed of maximum rated torque and secondarily at rated speed, will be selected. In the case where more than one engine in an engine-system combination have the highest fuel feed per stroke, the engine with the highest maximum rated torque will be selected. If there are military engines with higher fuel rates than other engines in the same engine-system combination, then two military engines with the highest fuel feed per stroke shall be also selected.

## (c) Durability data engines:

(1) One engine from each engine-system combination shall be tested as prescribed in § 85.872-7(b). Within each combination, the engine which features the highest fuel feed per stroke, primarily at rated speed and secondarily at the speed of maximum rated torque, will be selected for durability testing. In the case where more than one engine in an engine-system combination have the highest fuel feed per stroke, the engine with the highest maximum rated horsepower will be selected for durability testing. If an engine-system combination includes both military and nonmilitary engines, then the nonmilitary engine with the highest maximum rated horsepower will be selected for durability testing.

(2) A manufacturer may select to operate and test additional engines to represent any engine-system combination. The additional engines must be of the same model and fuel system as the engine selected in accordance with the provisions of subparagraph (1) of this paragraph. Notice of an intent to test additional engines shall be given to the Administrator not later than 30 days following notification of the test fleet selection. Deterioration factors calculated for each engine-system combination shall be applied separately to military and nonmilitary engines within the same engine-system combination.

(d) Any manufacturer whose projected sales of new motor vehicle engines subject to this subpart for the 1973 model year is less than 200 engines may request a reduction in the number of test engines determined in accordance with the foregoing provisions of this section. The Administrator may agree to such lesser number as he determines would meet the objectives of this procedure.

(e) In lieu of testing an emission data or durability data engine selected under paragraph (b) or (c) of this section and submitting data therefor, a manufacturer may, with the prior written ap-

proval of the Administrator, submit data on a similar engine for which certification has previously been obtained.

## § 85.873-6 Maintenance.

(a) (1) Maintenance on the engines and fuel systems of durability engines may be performed only under the following provisions:

(i) One major engine servicing to manufacturer's specifications may be performed at 500 hours ( $\pm 8$  hours) of dynamometer operation. A major engine servicing shall be restricted to the following:

- (a) Adjust low idle speed.
- (b) Adjust valve lash if required.
- (c) Adjust injector timing.
- (d) Adjust governor.
- (e) Clean and service injector tips.
- (ii) Injectors may be changed if a persistent misfire is detected.

(iii) Normal engine lubrication services (engine oil change and oil filter, fuel filter, and air filter servicing and adjustment of drive belt tension and engine bolt torque, as required) will be allowed at manufacturer's recommended intervals.

(iv) Readjustment of the engine fuel rates may be performed only if there is a problem of dropping below 95 percent of maximum rated horsepower at 95 to 100 percent rated speed.

(v) Leaks in the fuel system, engine lubrication system and cooling system may be repaired.

(vi) Engine low idle speed may be adjusted at the 125-hour test point.

(vii) Any other engine or fuel system maintenance or repair will be allowed only with the advance approval of the Administrator.

(2) Allowable maintenance on emission data engines shall be limited to the adjustment of engine low idle speed at the 125-hour test point, except that other maintenance or repair may be allowed with the advance approval of the Administrator.

(b) Complete emission tests (see § 85.873-10 through § 85.873-18) shall be run before and after any engine maintenance which may reasonably be expected to affect emissions. These test data shall be supplied to the Administrator immediately after the tests, along with a complete record of all pertinent maintenance, including an engineering report of any malfunction diagnosis and the corrective action taken. In addition, all test data and maintenance reports shall be compiled and provided to the Administrator in accordance with § 85.873-4.

(c) If the Administrator determines that maintenance or repairs performed have resulted in a substantial change to the engine-system combination, the engine shall not be used as a durability data engine.

## § 85.873-7 Service accumulation and emission measurements.

Service accumulation shall be accomplished by operation of an engine on a dynamometer.

(a) Emission data engines: Each engine shall be operated on a dynamom-

eter for 125 hours with the dynamometer and engine adjusted so that the engine is operating at 95 to 100 percent of rated speed and at least 95 percent of maximum rated horsepower. During such operation, the engine shall be run at the exhaust back pressure specified in § 85.873-12(c) and the air inlet restriction specified in § 85.873-12(d) except that the tolerances shall be  $\pm 0.5$  inches of Hg and  $\pm 3$  inches of water respectively. Exhaust smoke tests shall be conducted at zero and 125 hours of operation.

(b) Durability data engines: Each engine shall be operated on a dynamometer for 1,000 hours with the dynamometer and engine adjusted so that the engine is operating at 95 to 100 percent of rated speed and at least 95 percent of maximum rated horsepower. During such operation, the engine shall be run at the exhaust back pressure specified in § 85.873-12(c) and the air inlet restriction specified in § 85.873-12(d) except that the tolerance shall be  $\pm 0.5$  inches of Hg and  $\pm 3$  inches of water respectively. Exhaust smoke measurements shall be made at zero hours and at each 125 hours of operation. All results except the zero hour results shall be used to establish the deterioration factors (see § 85.873-19).

(c) All tests required by this subpart to be conducted after 125 hours of dynamometer operation or at any multiple of 125 hours may be conducted at any accumulated hours within 8 hours of 125 hours or the appropriate multiple of 125 hours, respectively.

(d) The results of each emission test shall be supplied to the Administrator immediately after the test. In addition all test data shall be compiled and provided to the Administrator in accordance with § 85.873-4.

(e) Whenever the manufacturer proposes to operate and test an engine which may be used for emission or durability data, he shall provide the zero hour test data to the Administrator and make the engine available for such testing under § 85.873-29 as the Administrator may require before beginning to accumulate hours on the engine. Failure to comply with this requirement shall invalidate all test data submitted for this engine.

(f) Once a manufacturer begins to operate an emission data or durability data engine, as indicated by compliance with paragraph (e) of this section, he shall continue to run the engine to 125 hours or 1,000 hours, respectively, and the data from the engine shall be used in the calculations under § 85.873-19. Discontinuation of an engine shall be allowed only with the prior written consent of the Administrator.

## § 85.873-8 Special test procedures.

The Administrator may, on the basis of a written application therefor by a manufacturer, prescribe test procedures, other than those set forth in this subpart, for any motor vehicle engine which he determines is not susceptible to satisfactory testing by the procedures set forth herein.



§ 85.873-9 Test procedures.

The procedures described in this and subsequent sections will be the test program to determine the conformity of engines with the standards set forth in § 85.873-1.

(a) The test consists of a prescribed sequence of engine operating conditions on an engine dynamometer with continuous examination of the exhaust gases. The test is applicable equally to controlled engines equipped with means for preventing, controlling, or eliminating smoke emissions and to uncontrolled engines.

(b) The test is designed to determine the opacity of smoke in exhaust emissions during those engine operating conditions which tend to promote smoke from diesel-powered vehicles.

(c) The test procedure begins with a warm engine which is then run through preloading and preconditioning operations. After an idling period, the engine is operated through acceleration and lugging modes during which smoke emission measurements are made to compare with

the standards. The engine is then returned to the idle condition and the acceleration and lugging modes are repeated. Three sequences of acceleration and lugging constitute the full set of operating conditions for smoke emission measurement.

(d) All emission control systems installed on or incorporated in a new motor vehicle engine shall be functioning during all test procedures in this subpart.

§ 85.873-10 Diesel fuel specifications.

(a) The diesel fuels employed shall be clean and bright, with pour and cloud points adequate for operability. The fuels may contain nonmetallic additives as follows: cetane improver, metal deactivator, antioxidant, dehazer, antirust, pour depressant, dye, and dispersant.

(b) Fuel meeting the following specifications, or substantially equivalent specifications approved by the Administrator, shall be used in exhaust emission testing. The grade of fuel recommended by the engine manufacturer, commercially designated as "Type 1-D" or "Type 2-D", shall be used.

Item	ASTM test method No.	Type 1-D	Type 2-D
Cetane	D 613		
Distillation range	D 86	48-54	42-50
IBP, ° F			
10 percent point, ° F		330-390	340-400
50 percent point, ° F		370-430	400-460
90 percent point, ° F		410-480	470-540
EP, ° F		460-520	550-610
Gravity, ° API		500-560	580-660
Total sulfur, percent	D 287	40-44	33-37
Hydrocarbon composition	D 129 or D 2622	0.05-0.20	0.2-0.5
Aromatics, percent	D 1319		
Paraffins, Naphthenes, Olefins		8-15	27 (Min.)
Flash point, ° F (Min.)		Remainder	Remainder
Flash point, ° F (Min.)	D 93	230	130
Viscosity, centistokes	D 445	1.6-2.0	2.0-3.2

(c) Fuel meeting the following specifications, or substantially equivalent specifications approved by the Administrator, shall be used in service accumulation. The grade of fuel recommended by the engine manufacturer, commercially designated as "Type 1-D" or "Type 2-D", shall be used.

Item	ASTM test method No.	Type 1-D	Type 2-D
Cetane	D 613		
Distillation range	D 86	48-54	42-55
IBP, ° F			
10 percent point, ° F		330-390	340-410
50 percent point, ° F		370-430	400-470
90 percent point, ° F		410-480	470-540
EP, ° F		460-520	550-610
Gravity, ° API		500-560	580-660
Total sulfur, percent	D 287	40-44	33-40
Hydrocarbon composition	D 129 or D 2622	0.05-0.20	0.2-0.5
Flash point, ° F (Min.)	D 48	120	130
Viscosity, centistokes	D 445	1.6-2.0	2.0-3.2

(d) The type fuel, including additive and other specifications, used under paragraphs (b) and (c) of this section shall be reported in accordance with § 85.873-2(b) (3).

§ 85.873-11 Dynamometer operation cycle for smoke emission tests.

(a) The following sequence of operations shall be performed during engine dynamometer testing of smoke emissions, starting with the dynamometer preloading determined and the engine preconditioned (§ 85.873-16(c)).

(1) *Idle mode.* The engine is caused to idle for 5 to 5.5 minutes at the manufacturer's recommended low idle speed. The dynamometer controls shall be set to

provide minimum load by turning the load switch to the "off" position or by adjusting the controls to the minimum load position.

(2) *Acceleration mode.* (i) The engine speed shall be increased to 200±50 r.p.m. above the manufacturer's recommended low idle speed within 3 seconds.

(ii) The engine shall be accelerated at full-throttle against the inertia of the engine and dynamometer or alternately against a preselected dynamometer load such that the engine speed reaches 85 to 90 percent of rated speed in 5±1.5 seconds.

(iii) When the engine reaches the speed required in subdivision (ii) of this subparagraph, the throttle shall be

moved rapidly to the closed position and the preselected load required to perform the acceleration in subdivision (iv) of this subparagraph shall be applied. The engine speed shall be reduced to the speed of maximum rated torque or 60 percent of rated speed (whichever is higher), within ±50 r.p.m. Smoke emissions during this transitional mode are not used in determining smoke emissions to compare with the standard.

(iv) The throttle shall be moved rapidly to the full-throttle position and the engine accelerated against the preselected dynamometer load such that the engine speed reaches 95 to 100 percent of rated speed in 10±2 seconds.

(3) *Lugging mode.* (i) Proceeding from the acceleration mode, the dynamometer controls shall be adjusted to permit the engine to develop maximum horsepower at rated speed. Smoke emissions during this transitional mode are not used in determining smoke emissions to compare with the standard.

(ii) Without changing the throttle position, the dynamometer controls shall be adjusted gradually to slow the engine to the speed of maximum torque or to 60 percent of rated speed, whichever is higher. This engine lugging operation shall be performed smoothly over a period of 35±5 seconds. The rate of slowing of the engine shall be linear, within ±100 r.p.m.

(4) *Engine unloading.* After completion of the lugging mode in subparagraph (3) (ii) of this paragraph, the dynamometer and engine shall be returned to the idle condition described in subparagraph (1) of this paragraph.

(b) The procedures described in paragraph (a) (1) through (4) of this section shall be repeated until the entire cycle has been run three times.

§ 85.873-12 Dynamometer and engine equipment.

The following equipment shall be used for smoke emission testing of engines on engine dynamometers.

(a) An engine dynamometer with adequate characteristics to perform the test cycle described in § 85.873-10.

(b) An engine cooling system having sufficient capacity to maintain the engine at normal operating temperatures during conduct of the prescribed engine tests.

(c) A noninsulated exhaust system extending 12±2 feet from the exhaust manifold of the engine and presenting an exhaust back pressure within ±0.2 inches Hg. of the upper limit at maximum rated horsepower, as established by the engine manufacturer in his sales and service literature for vehicle application. A conventional automotive muffler of a size and type commonly used with the engine being tested shall be employed in the exhaust system during smoke emission testing. The terminal 2 feet of the exhaust pipe shall be of circular cross section and be free of elbows and bends. The end of the pipe shall be cut off squarely. The terminal 2 feet of the exhaust pipe shall



have a diameter in accordance with the engine being tested, as specified below:

Maximum rated horsepower	Exhaust pipe size
Less than 101	2"
101 to 200	3"
201 to 300	4"
301 or more	5"

(d) An engine air inlet system presenting an air inlet restriction within  $\pm 1$  inch of water of the upper limit for

the engine operating condition which results in maximum air flow, as established by the engine manufacturer in his sales and service literature, for the engine being tested.

#### § 85.873-13 Smoke measurement system.

(a) *Schematic drawing.* The following figure (fig. 1873-1) is a schematic drawing of the optical system of the light extinction meter.

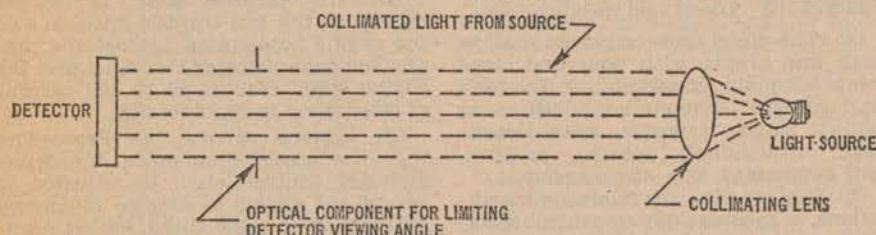


FIGURE 1873-1.—EPA smokemeter optical system (schematic).

(b) *Equipment.* The following equipment shall be used in the system:

(1) *Adapter*—the smokemeter optical unit may be mounted on a fixed or movable frame. The normal unrestricted shape of the exhaust plume shall not be modified by the adapter, the meter, or any ventilation system used to remove the exhaust from the test site.

(2) *Smokemeter* (light extinction meter)—continuous recording, full-flow light obscuration meter. It shall be positioned near the end of the exhaust pipe so that a built-in light beam traverses the exhaust smoke plume which issues from the pipe at right angles to the axis of the plume. The light source is an incandescent lamp operated at a constant voltage of not less than 15 percent of the manufacturer's specified voltage. The lamp output is collimated to a beam with a nominal diameter of 1.125 inches. The angle of divergence of the collimated beam shall be within 4° included angle. A light detector, directly opposed to the light source, measures the amount of light blocked by the smoke in the exhaust. The detector sensitivity is restricted to the visual range and comparable to that of the human eye. A collimating tube with apertures equal to the beam diameter is attached to the detector. It restricts the viewing angle of the detector to within 16° included angle. An amplified signal corresponding to the amount of light blocked is recorded continuously on a remote recorder. An air curtain across the light source and detector window assemblies may be used to minimize deposition of smoke particles on those surfaces provided that it does not measurably affect the opacity of the plume. The meter consists of two units, an optical unit, and a remote control unit. Light extinction meters employing substantially identical measurement principles and producing substantially equivalent results but which employ other electronic and optical techniques may be used only after having been approved in advance by the Administrator.

(3) *Recorder*—a continuous recorder, with variable chart speed over a minimal range of 0.5 to 8.0 inches per minute (or

equivalent) and an automatic marker indicating 1-second intervals shall be used for continuously recording the transient conditions of exhaust gas opacity, engine r.p.m. and torque. The recorder scale for opacity shall be linear and calibrated to read from 0 to 100 percent opacity full scale. The opacity trace shall have a resolution within 1 percent opacity. The recorder scale for engine r.p.m. and the recorder scale for observed engine torque shall be linear and shall have full scale calibration such as to facilitate chart reading. The r.p.m. trace shall have a resolution within 30 r.p.m. The torque trace shall have a resolution within 10 lb.-ft. Any means other than strip chart recorder may be used provided it produces a permanent visual data record of quality equal to or better than that described above.

(4) The recorder used with the smokemeter shall be capable of full-scale deflection in 0.5 second or less. The smokemeter-recorder combination may be damped so that signals with a frequency higher than 10 cycles per second are attenuated. A separate low-pass electronic filter with the following performance characteristics may be installed between the smokemeter and the recorder to achieve the high-frequency attenuation.

(i) 3 decibel point—10 cycles per second.

(ii) Insertion loss—zero  $\pm 0.5$  decibels.

(iii) Selectivity—12 decibels per octave above 10 cycles per second.

(iv) Attenuation—27 decibels down at 40 cycles per second minimum.

(c) *Assembling equipment.* (1) The optical unit of the smokemeter shall be mounted radially to the exhaust pipe so that the measurement will be made at right angles to the axis of the exhaust plume. The distance from the optical centerline to the exhaust pipe outlet shall be 1.0 to 1.5 pipe diameters but never less than 4 inches. The full flow of the exhaust stream shall be centered between the source and detector apertures (or windows and lenses) and on the axis of the light beam.

(2) Power shall be supplied to the control unit of the smokemeter in time (at

least 15 minutes prior to testing) to allow for stabilization.

#### § 85.873-14 Information to be recorded.

The following information shall be recorded with respect to each test:

- (a) Test number.
- (b) Date and time of day.
- (c) Instrument operator.
- (d) Engine operator.

(e) *Engine Identification numbers*—Date of manufacture—Number of hours of operation accumulated on engine—Engine Family—Exhaust pipe diameter—Fuel Injector type—Maximum measured fuel rate at maximum measured torque and horsepower—Air aspiration system—Low idle r.p.m.—Maximum governed r.p.m.—Maximum measured horsepower at r.p.m.—Maximum measured torque at r.p.m.—Exhaust system back pressure—Air inlet restriction.

(f) *Smokemeter*: Number—Zero control setting—Calibration control setting—Gain.

(g) *Recorder chart*: Identify zero traces—Calibration traces—Idle traces—Acceleration and lug-down test traces—Start and finish of each test.

(h) Ambient temperature in dynamometer testing room.

(i) Engine intake air temperature and humidity.

(j) Barometric pressure.

(k) Observed engine torque.

#### § 85.873-15 Instrument checks.

(a) The smokemeter shall be checked according to the following procedure prior to each test:

(1) The optical surfaces of the optical section shall be checked to verify that they are clean and free of foreign material and fingerprints.

(2) The zero control shall be adjusted under conditions of "no smoke" to give a recorder trace of zero.

(3) Calibrated neutral density filters having approximately 20 percent and 40 percent opacity shall be employed to check the linearity of the instrument. The filter(s) shall be inserted in the light path perpendicular to the axis of the beam and adjacent to the opening from which the beam of light from the light source emanates, and the recorder response shall be noted. The nominal opacity value of the filter will be confirmed by the Administrator. Deviations in excess of 1 percent of the nominal opacity shall be corrected.

(b) The instruments for measuring and recording engine r.p.m., engine torque, air inlet restrictions, exhaust system back pressure, etc., which are used in the tests prescribed herein shall be calibrated from time to time in accordance with good technical practice.

#### § 85.873-16 Test run.

(a) The temperature of the air supplied to the engine shall be between 68° F. and 86° F. The observed barometric pressure shall be between 28.5 inches and 31 inches Hg. Higher air temperature or lower barometric pressure may be used, if desired, but no allowance will be made for possible increased



smoke emissions because of such conditions.

(b) The governor and fuel system shall have been adjusted to provide engine performance at the levels specified by the engine manufacturer for maximum rated horsepower and maximum rated torque. These specifications shall be reported in accordance with § 85.873-2 (b) (3).

(c) The following steps shall be taken for each test:

(1) Start cooling system.  
(2) Starting with a warmed engine, determine by experimentation the dynamometer inertia and dynamometer load required to perform the acceleration in the dynamometer cycle for smoke emission tests (§ 85.873-11(a)(2)). In a manner appropriate for the dynamometer and controls being used, arrange to conduct the acceleration mode.

(3) Install smoke meter optical unit and connect it to the recorder. Connect the engine r.p.m. and torque sensing devices to the recorder.

(4) Turn on purge air to the optical unit of the smoke meter, if purge air is used.

(5) Check and record zero and span settings of the smoke meter recorder at a chart speed of approximately 1 inch per minute. (The optical unit shall be retracted from its position about the exhaust stream if the engine is left running.)

(6) Precondition the engine by operating it for 10 minutes at maximum rated horsepower.

(7) Proceed with the sequence of smoke emission measurements on the engine dynamometer as prescribed in § 85.873-11.

(8) During the test sequence of § 85.873-11, continuously record smoke measurements, engine r.p.m. and torque at a chart speed of approximately 1 inch per minute minimum during the idle mode and transitional modes and 8 inches per minute minimum during the acceleration and lugging modes.

(9) Turn off engine.

(10) Check zero and reset if necessary and check span of the smoke meter recorder by inserting neutral density filters. If either zero or span drift is in excess of 2 percent opacity, the test results shall be invalidated.

#### § 85.873-17 Chart reading.

(a) The following procedures shall be employed in reading the smoke meter recorder chart.

(1) Locate the acceleration mode (§ 85.873-11(a)(2)) and the lugging mode (§ 85.873-11(a)(3)) on the chart. Divide each mode into 1/2-second intervals beginning at the start of each mode. Determine the average smoke reading during each 1/2-second interval except those recorded during the transitional portions of the acceleration mode (§ 85.873-11(a)(2)(iii)) and the lugging mode (§ 85.873-11(a)(3)(i)).

(2) Locate and record the 15 highest 1/2-second readings during the acceleration mode of each dynamometer cycle.

(3) Locate and record the five highest

1/2-second readings during the lugging mode of each dynamometer cycle.

#### § 85.873-18 Calculations.

(a) Average the 45 readings in § 85.873-17(a)(2) and designate the value as "a."

(b) Average the 15 readings in § 85.873-17(a)(3) and designate the value as "b."

#### §§ 85.873-19—85.873-27 [Reserved]

#### § 85.873-28 Compliance with emission standards.

(a) The emission standards in § 85.873-1 apply to the emissions of engines for their useful life.

(b) Since emission control efficiency decreases with the accumulation of hours on the engine, the emission level of an engine which has accumulated 1,000 hours of dynamometer operation will be used as the basis for determining compliance with the standards.

(c) The procedure for determining compliance with exhaust smoke emission standards in heavy duty diesel engines is as follows:

(1) Emission deterioration factors for the acceleration mode (designated as "A") and the lugging mode (designated as "B") shall be established separately for each engine-system combination.

(i) The applicable results to be used in determining the deterioration factors for each combination shall be:

(a) All emission data from the tests required under § 85.873-7(b), except the zero hour tests. This shall include the official test results, as determined in § 85.873-29, for all tests conducted on all durability engines of the combination selected under § 85.873-5(c) (including all engines elected to be operated by the manufacturer under § 85.873-5(c)(2)).

(b) All emission data from the tests conducted before and after the maintenance provided in § 85.873-6(a)(1)(i).

(ii) All applicable results shall be plotted as a function of the hours on the system, rounded to the nearest hour, and the best fit straight line, fitted by the method of least squares, shall be drawn through these data points. The interpolated 125- and 1,000-hour points on this line must be within the standard provided in § 85.873-1 or the data shall not be used in calculation of a deterioration factor.

(iii) The deterioration factors will be calculated as follows:

A—Percent opacity "a," interpolated to 1,000 hours, minus percent opacity "a," interpolated to 125 hours.

B—Percent opacity "b," interpolated to 1,000 hours, minus percent opacity "b," interpolated to 125 hours.

(2) The "percent opacity" values to compare with the standards shall be the opacity values "a" and "b" for each emission data engine within an engine-system combination to which are added the respective factors "A" and "B" of subparagraph (1) of this paragraph for that engine-system combination: *Provided*, That if a deterioration factor as computed in subparagraph (1) of this paragraph is less than zero, that deterioration

factor shall be zero for the purposes of this subparagraph.

(3) Every test engine of an engine family must comply with all applicable standards, as determined in subparagraph (2) of this paragraph, before any engine in that family will be certified.

#### § 85.873-29 Testing by the Administrator.

(a) The Administrator may require that any one or more of the test engines be submitted to him, at such place or places as he may designate, for the purpose of conducting emissions tests. The Administrator may specify that he will conduct such testing at the manufacturer's facility, in which case instrumentation and equipment specified by the Administrator shall be made available by the manufacturer for test operations. Any testing conducted at a manufacturer's facility pursuant to this paragraph shall be scheduled by the manufacturer as promptly as possible.

(b) (1) Whenever the Administrator conducts a test on a test engine, the results of that test shall comprise the official data for the engine at that prescribed test point.

(2) Whenever the Administrator does not conduct a test on a test engine at a test point, the manufacturer's test data will be accepted as the official data for that test point: *Provided*, That if the Administrator makes a determination based on testing under paragraph (a) of this section, that there is a lack of correlation between the manufacturer's test equipment and the test equipment used by the Administrator, no manufacturer's test data will be accepted for purposes of certification until the reasons for the lack of correlation are determined and the validity of the data is established by the manufacturer.

(3) If the Administrator determines that the test data developed under paragraph (a) of this section would cause an engine to fail due to excessive 125-hour emissions or excessive deterioration, then the following procedure shall be observed:

(i) The manufacturer may request a retest. Before the retest, the engine may be adjusted to manufacturer's specifications, and parts may be replaced in accordance with § 85.873-6. All work on the engine shall be done at such location and under such conditions as the Administrator may prescribe.

(ii) The engine will be retested by the Administrator and the results of this test shall comprise the official data for that prescribed test point.

(4) If sufficient durability data is not available, at the time of any emission test conducted under paragraph (a) of this section, to enable the Administrator to determine whether a test engine would fail, the manufacturer may request a retest in accordance with the provisions of subparagraph (3) (i) and (ii) of this paragraph. If the manufacturer does not promptly make such request, he shall be deemed to have waived the right to a retest. A request for retest must be made before the manufacturer removes the engine from the test premises.



**§ 85.873-30 Certification.**

(a) (1) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.873-29, the Administrator determines that a test engine(s) conforms to the regulations of this subpart, he will issue a certificate of conformity with respect to such engine(s).

(2) Such certificate will be issued for such period not more than 1 year as the Administrator may determine and upon such terms as he may deem necessary to assure that any new motor vehicle engine covered by the certificate will meet the requirements of these regulations relating to durability and performance.

(b) (1) The Administrator will determine whether an engine covered by the application complies with applicable standards by observing the following relationships:

(i) A test engine selected under § 85.873-5(b) (2) or (4) shall represent all engines in the same engine family of the same engine displacement-exhaust emission control system combination.

(ii) [Reserved]

(iii) A test engine selected under § 85.873-5(c) (1) shall represent all engines of the same engine-system combination.

(2) The Administrator will proceed as in paragraph (a) of this section with respect to the engines belonging to an engine family all of which comply with applicable standards.

(3) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.873-29, the Administrator determines that one or more test engines of the certification test fleet do not meet applicable standards, he will notify the manufacturer in writing, setting forth the basis for his determination. Within 30 days following receipt of the notification, the manufacturer may request a hearing on the Administrator's determination. The request shall be in writing, signed by an authorized representative of the manufacturer and shall include a statement specifying the manufacturer's objections to the Administrator's determination and data in support of such objections. If, after a review of the request and supporting data, the Administrator finds that the request raises a substantial factual issue, he shall provide the manufacturer a hearing in accordance with § 85.805 with respect to such issue.

(4) The manufacturer may, at his option, proceed with any of the following alternatives with respect to any engine family represented by a test engine(s) determined not in compliance with applicable standards:

(i) Request a hearing under § 85.805, or

(ii) Delete from the application for certification, the engines represented by the failing test engine. (Engines so deleted may be included in a later request for certification under § 85.873-32.) The Administrator will then select in place of

each failing engine an alternate engine chosen in accordance with selection criteria employed in selecting the engine that failed, or

(iii) Modify the test engine and demonstrate by testing that it meets applicable standards. Another engine which is in all material respects the same as the first engine, as modified, shall then be operated and tested in accordance with applicable test procedures.

(5) If the manufacturer does not request a hearing or present the required data under subparagraph (4) of this paragraph, the Administrator will deny certification.

**§ 85.873-31 Separate certification.**

Where possible a manufacturer should include in a single application for certification all engines for which certification is required. A manufacturer may, however, choose to apply separately for certification of part of his product line. The selection of test engines and the computation of test results will be determined separately for each application.

**§ 85.873-32 Addition of an engine after certification.**

(a) If a manufacturer proposes to add to his product line an engine of the same engine-system combination as engines previously certified but which was not described in the application for certification when the test engine(s) representing other engines of that combination was certified, he shall notify the Administrator. Such notification shall be in advance of the addition unless the manufacturer elects to follow the procedure described in § 85.873-34. This notification shall include a full description of the engine to be added.

(b) The Administrator may require the manufacturer to perform such tests on the test engine(s) representing the engine to be added which would have been required if the engine had been included in the original application for certification.

(c) If, after a review of the test reports and data submitted by the manufacturer, and data derived from any testing conducted under § 85.873-29, the Administrator determines that the test engine(s) meets all applicable standards, the appropriate certificate will be amended accordingly. If the Administrator determines that the test engine(s) does not meet applicable standards, he will proceed under § 85.873-30(b).

**§ 85.873-33 Changes to an engine covered by certification.**

(a) The manufacturer shall notify the Administrator of any change in production engines in respect to any of the parameters listed in § 85.073-5(a) (3), giving a full description of the change. Such notification shall be in advance of the change unless the manufacturer elects to follow the procedure described in § 85.873-34.

(b) Based upon the description of the change, and data derived from such testing as the Administrator may require or conduct, the Administrator will determine whether the engine, as modified,

would still be covered by the certificate of conformity then in effect.

(c) If the Administrator determines that the outstanding certificate would cover the modified engines, he will notify the manufacturer in writing. Except as provided in § 85.873-34, the change may not be put into effect prior to the manufacturer's receiving this notification. If the Administrator determines that the modified engines would not be covered by the certificate then in effect, then the modified engines shall be treated as additions to the product line subject to § 85.873-32.

**§ 85.873-34 Alternative procedure for notification of additions and changes.**

(a) A manufacturer may, in lieu of notifying the Administrator in advance of an addition of an engine under § 85.873-32 or a change in an engine under § 85.873-33, notify him concurrently with the making of the change if the manufacturer believes the addition or change will not require any testing under the appropriate section. Upon notification to the Administrator, the manufacturer may proceed to put the addition or change into effect.

(b) The manufacturer may continue to produce engines as described in the notification to the Administrator for a maximum of 30 days, unless the Administrator grants an extension in writing. This period may be shortened by a notification in accordance with paragraph (c) of this section.

(c) If the Administrator determines, based upon a description of the addition or change, that no test data will be required, he will notify the manufacturer in writing of the acceptability of the addition or change. If the Administrator determines that test data will be required, he will notify the manufacturer to rescind the change within 5 days of receipt of the notification. The Administrator will then proceed as in § 85.873-32(b) and (c), or § 85.873-33(b) and (c), as appropriate.

(d) Election to produce engines under this section will be deemed to be a consent to recall all engines which the Administrator determines under § 85.873-32 (c) do not meet applicable standards, and to cause such nonconformity to be remedied at no expense to the owner.

**§ 85.873-35 Labeling.**

(a) The manufacturer of any heavy duty diesel engine subject to the standard prescribed in § 85.873-1 shall, at the time of manufacture, affix a permanent, legible plastic or metal label containing the information hereinafter provided to all production models of such engines available for sale to the public, and covered by a certificate of conformity under § 85.873-30(a). The label shall be affixed at such a location that it will be readily accessible for inspection after the engine is installed in a vehicle and shall read as follows:

**ENGINE SMOKE EMISSION CERTIFICATION**

This engine is, in all material respects, of substantially the same construction as test engines certified by the U.S. Environmental Protection Agency as conforming to Federal



regulations pertaining to exhaust smoke emission.

Engine family identification and model ----

Date of manufacture ----  
(Month and year)

Name of manufacturer ----

(The information applicable to each engine is to be inserted on the appropriate line.)

(b) The provisions of this section shall not prevent a manufacturer from also reciting on the label that such engine conforms to any applicable State emission standards for new motor vehicle engines or any other information that such manufacturer deems necessary for, or useful to, the proper operation and satisfactory maintenance of the engine.

#### § 85.873-36 [Reserved]

#### § 85.873-37 Production engines.

(a) Any manufacturer obtaining certification under this subpart shall supply to the Administrator, upon his request, a reasonable number of production engines selected by the Administrator which are representative of the engines, emission control systems, fuel systems, and transmissions offered and typical of production models available for sale under the certificate. These engines shall be supplied for testing at such time and place and for such reasonable periods as the Administrator may require. Engines supplied under this paragraph may be required to be mounted in chassis and appropriately equipped for operation on a chassis dynamometer.

(b) Any manufacturer obtaining certification under this subpart shall notify the Administrator, on a quarterly basis, of the number of engines of each engine family-engine displacement-exhaust emission control system-fuel system combination produced for sale in the United States during the preceding quarter.

#### § 85.873-38 Maintenance instructions.

(a) The manufacturer shall furnish or cause to be furnished to the ultimate purchaser of each new engine subject to the standard prescribed in § 85.873-1, written instructions for the maintenance and use of the engine by the ultimate purchaser as may be reasonable and necessary to assure the proper functioning of emission control systems.

(1) Such instructions shall be provided for those engine components listed in Appendix VI to this part (and for any other components) to the extent that maintenance of these components is necessary to assure the proper functioning of emission control systems.

(2) Such instructions shall be in clear, and to the extent practicable, nontechnical language.

(b) The maintenance instructions required by this section shall contain a general description of the documentation which the manufacturer will require from the ultimate purchaser or any subsequent purchaser as evidence of compliance with the instructions.

#### § 85.873-39 Submission of maintenance instructions.

(a) The manufacturer shall provide to the Administrator, no later than the time of the submission required by § 85.873-4, a copy of the maintenance instructions which the manufacturer proposes to supply to the ultimate purchaser in accordance with § 85.873-38(a). The Administrator will review such instructions to determine whether they are reasonable and necessary to assure the proper functioning of the engine's emission control systems. The Administrator will notify the manufacturer of his determination whether such instructions are reasonable and necessary to assure the proper functioning of the emission control systems.

(b) Any revision to the maintenance instructions which will affect emissions shall be supplied to the Administrator at least 30 days before being supplied to the ultimate purchaser unless the Administrator consents to a lesser period of time.

#### § 85.874-1 Smoke exhaust emission standards for 1974 model year engines.

(a) (1) The opacity of smoke emissions from new diesel engines subject to this subpart shall not exceed:

(i) 20 percent during the engine acceleration mode.

(ii) 15 percent during the engine lugging mode.

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

(2) The standards set forth in paragraph (a)(1) of this section refer to exhaust smoke emissions generated under the conditions set forth in § 85.874-9 through § 85.874-18 and measured and calculated in accordance with those procedures.

(b) [Reserved]

(c) [Reserved]

(d) Every manufacturer of new motor vehicle engines subject to the standards prescribed in this subpart shall, prior to taking any of the actions specified in section 203(a)(1) of the Act, test or cause to be tested motor vehicle engines in accordance with test procedures prescribed in § 85.874-9 through § 85.874-18, to ascertain that such test engines meet the requirements of paragraph (a) of this section.

#### § 85.874-2 Application for certification.

(a) An application for a certificate of conformity to the regulations applicable to any new motor vehicle engine shall be made to the Administrator by the manufacturer.

(b) The application shall be in writing, signed by an authorized representative of the manufacturer, and shall include the following:

(1) Identification and description of the engines covered by the application and a description of their emission control systems.

(2) Projected U.S. sales data sufficient to enable the Administrator to select a

test fleet representative of the engines for which certification is requested.

(3) A description of the test equipment and fuel proposed to be used.

(4) A description of the proposed service accumulation procedure for durability testing.

(5) A statement of recommended maintenance and procedures necessary to assure that the engines covered by a certificate of conformity in operation conform to the regulations, and a description of the program for training of personnel for such maintenance, and the equipment required.

(6) At the option of the manufacturer, the proposed composition of the emission data and durability data test fleet.

#### § 85.874-3 Approval of procedure and equipment; test fleet selections.

Based upon the information provided in the application for certification, and any other information the Administrator may require, the Administrator will approve or disapprove in whole or in part the service accumulation procedure and equipment and fuel proposed by the manufacturer, and notify him in writing of such determination. Where any part of a proposal is disapproved, such notification will specify the reasons for disapproval. The Administrator will select a test fleet in accordance with § 85.874-5.

#### § 85.874-4 Required data.

The manufacturer shall perform the tests required by the applicable test procedures, and submit to the Administrator the following information:

(a) Durability data on such engines tested in accordance with the applicable test procedures of this subpart, and in such numbers as therein specified, which will show the performance of the systems installed on or incorporated in the engine for extended operation, as well as a record of all pertinent maintenance performed on the test engines.

(b) Emission data on such engines tested in accordance with the applicable emission test procedures of this subpart and in such numbers as therein specified, which will show their emissions after 0 hours and 125 hours of operation.

(c) A description of tests performed to ascertain compliance with the general standards in § 85.874-1 and the data derived from such tests.

(d) A statement that the test engines with respect to which data are submitted have been tested in accordance with the applicable test procedures, that they meet the requirement of such tests, and that, on the basis of such tests, they conform to the requirements of the regulations in this subpart. If such statements cannot be made with respect to any engine tested, the engine shall be identified, and all pertinent test data relating thereto shall be supplied.

#### § 85.874-5 Test engines.

(a) The engines covered by the application for certification will be divided



into engine families based upon the criteria outlined in § 85.073-5(a).

(b) Emission data engines:

(1) Engines will be chosen to be run for emission data based upon engine family groupings. Within each engine family, the requirements of this paragraph must be met.

(2) Engines of each engine family will be divided into groups based upon exhaust emission control system. Two engines of each engine-system combination shall be run for smoke emission data as prescribed in § 85.874-7(a). Within each combination, the engines that feature the highest fuel feed per stroke, primarily at the speed of maximum rated torque and secondarily at rated speed, will be selected. In the case where more than one engine in an engine-system combination have the highest fuel feed per stroke, the engine with the highest maximum rated torque will be selected. If there are military engines with higher fuel rates than other engines in the same engine system combination, then two military engines with the highest fuel feed per stroke shall be also selected.

(c) Durability data engines:

(1) One engine from each engine-system combination shall be tested as prescribed in § 85.874-7(b). Within each combination, the engine which features the highest fuel feed per stroke, primarily at rated speed and secondarily at the speed of maximum rated torque, will be selected for durability testing. In the case where more than one engine in an engine-system combination has the highest fuel feed per stroke, the engine with the highest maximum rated horsepower will be selected for durability testing. If an engine system combination includes both military and nonmilitary engines, then the nonmilitary engine with the highest maximum rated horsepower will be selected for durability testing.

(2) A manufacturer may elect to operate and test additional engines to represent any engine-system combination. The additional engines must be of the same model and fuel system as the engine selected in accordance with the provisions of subparagraph (1) of this paragraph. Notice of an intent to test additional engines shall be given to the Administrator not later than 30 days following notification of the test fleet selection. Deterioration factors calculated for each engine-system combination shall be applied separately to military and nonmilitary engines within the same engine system combination.

(d) Any manufacturer whose projected sales of new motor vehicle engines subject to this subpart for the 1974 model year is less than 200 engines may request a reduction in the number of test engines determined in accordance with the foregoing provisions of this section. The Administrator may agree to such lesser number as he determines would meet the objectives of this procedure.

(e) In lieu of testing an emission data or durability data engine selected under paragraph (b) or (c) of this section and submitting data therefor, a manufacturer may, with the prior written ap-

proval of the Administrator, submit data on a similar engine for which certification has previously been obtained.

(f) For purposes of testing under § 85.874-7(g), the Administrator may require additional emission data engines and durability data engines identical in all material respects to engines selected in accordance with paragraphs (b) and (c) of this section: *Provided*, That the number of engines selected shall not increase the size of either the emission data fleet or the durability data fleet by more than 20 percent or one engine, whichever is greater.

§ 85.874-6 Maintenance.

(a) (1) Maintenance on the engines and fuel systems of durability engines may be performed only under the following provisions:

(i) One major engine servicing to manufacturer's specifications may be performed at 500 hours ( $\pm 8$  hours) of dynamometer operation. A major engine servicing shall be restricted to the following:

- (a) Adjust low idle speed.
- (b) Adjust valve lash if required.
- (c) Adjust injector timing.
- (d) Adjust governor.
- (e) Clean and service injector tips.

(ii) Injectors may be changed if a persistent misfire is detected.

(iii) Normal engine lubrication services (engine oil change and oil filter, fuel filter, and air filter servicing and adjustment of drive belt tension and engine bolt torque, as required) will be allowed at manufacturer's recommended intervals.

(iv) Readjustment of the engine fuel rates may be performed only if there is a problem of dropping below 95 percent of maximum rated horsepower at 95-100 percent rated speed.

(v) Leaks in the fuel system, engine lubrication system and cooling system may be repaired.

(vi) Engine low-idle speed may be adjusted at the 125-hour test point.

(vii) Any other engine or fuel system maintenance or repair will be allowed only with the advance approval of the Administrator.

(2) Allowable maintenance on emission data engines shall be limited to the adjustment of engine low idle speed at the 125-hour test point, except that other maintenance or repair may be allowed with the advance approval of the Administrator.

(b) Complete emission tests (see §§ 85.874-10 through 85.874-18) shall be run before and after any engine maintenance which may reasonably be expected to affect emissions. These test data shall be supplied to the Administrator immediately after the tests, along with a complete record of all pertinent maintenance, including an engineering report of any malfunction diagnosis and the corrective action taken. In addition, all test data and maintenance reports shall be compiled and provided to the Administrator in accordance with § 85.874-4.

(c) If the Administrator determines that maintenance or repairs performed have resulted in a substantial change to the engine-system combination, the engine shall not be used as a durability data engine.

§ 85.874-7 Service accumulation and emission measurements.

Service accumulation shall be accomplished by operation of an engine on a dynamometer.

(a) Emission data engines: Each engine shall be operated on a dynamometer for 125 hours with the dynamometer and engine adjusted so that the engine is operating at 95-100 percent of rated speed and at least 95 percent of maximum rated horsepower. During such operation, the engine shall be run at the exhaust back pressure specified in § 85.874-12(c) and the air inlet restriction specified in § 85.874-12(d) except that the tolerances shall be  $\pm 0.5$  inch of Hg and  $\pm 3$  inches of water respectively. Exhaust emission tests shall be conducted at zero and 125 hours of operation.

(b) Durability data engines: Each engine shall be operated on a dynamometer for 1,000 hours with the dynamometer and engine adjusted so that the engine is operating at 95-100 percent of rated speed and at least 95 percent of maximum rated horsepower. During such operation, the engine shall be run at the exhaust back pressure specified in § 85.874-12(c) and the air inlet restriction specified in § 85.874-12(d) except that the tolerances shall be  $\pm 0.5$  inch of Hg and  $\pm 3$  inches of water respectively. Exhaust emission measurements shall be made at zero hours and at each 125 hours of operation. All results except the zero-hour results shall be used to establish the deterioration factors (see § 85.874-19).

(c) A break-in procedure, not to exceed 20 hours, may be run if approved in writing in advance by the Administrator. This procedure would be run after the zero-hour test; and the hours accumulated would not be counted as part of the service accumulation.

(d) All tests required by this subpart to be conducted after 125 hours of dynamometer operation or at any multiple of 125 hours may be conducted at any accumulated hours within 8 hours of 125 hours or the appropriate multiple of 125 hours, respectively.

(e) The results of each emission test shall be supplied to the Administrator immediately after the test. In addition, all test data shall be compiled and provided to the Administrator in accordance with § 85.874-4.

(f) Whenever the manufacturer proposes to operate and test an engine which may be used for emission or durability data, he shall provide the zero-hour test data to the Administrator and make the engine available for such testing under § 85.874-29 as the Administrator may require before beginning to accumulate hours on the engine. Failure to comply with this requirement shall invalidate all test data submitted for this engine.



(g) Once a manufacturer begins to operate an emission data or durability data engine, as indicated by compliance with paragraph (e) of this section, he shall continue to run the engine to 125 hours or 1,000 hours, respectively, and the data from the engine shall be used in the calculations under § 85.874-19. Discontinuation of an engine shall be allowed only with the prior written consent of the Administrator.

(h) (1) The Administrator may elect to operate and test any test engine during all or any part of the service accumulation and testing procedure. In such cases, the manufacturer shall provide the engine(s) to the Administrator with all information necessary to conduct the testing.

(2) The test procedures (§ 85.874-9 through § 85.874-18) will be followed by the Administrator. The Administrator will test the engines at each test point. Maintenance may be performed by the manufacturer under such conditions as the Administrator may prescribe.

(3) The data developed by the Administrator for the engine-system combination shall be combined with any applicable data supplied by the manufacturer on other engines of that combination to determine the applicable deterioration factors for the combination. In the case of a significant discrepancy between data developed by the Administrator and that submitted by the manufacturer, the Administrator's data shall be used in the determination of deterioration factors.

(i) All emission control systems installed on or incorporated in a new motor vehicle engine shall be functioning during all test procedures in this subpart.

#### § 85.874-8 Special test procedures.

The Administrator may, on the basis of a written application therefor by a manufacturer, prescribe test procedures, other than those set forth in this subpart, for any motor vehicle engine which he determines is not susceptible to satisfactory testing by the procedures set forth herein.

#### § 85.874-9 Test procedures.

The procedures described in this and subsequent sections will be the test program to determine the conformity of engines with the standard set forth in § 85.874-1.

(a) The test consists of a prescribed sequence of engine operating conditions on an engine dynamometer with continuous examination of the exhaust gases. The test is applicable equally to controlled engines equipped with means for preventing, controlling, or eliminating smoke emissions and to uncontrolled engines.

(b) The test is designed to determine the opacity of smoke in exhaust emissions during those engine operating conditions which tend to promote smoke from diesel-powered vehicles.

(c) The test procedure begins with a warm engine which is then run through

preloading and preconditioning operations. After an idling period, the engine is operated through acceleration and lugging modes during which smoke emission measurements are made to compare with the standards. The engine is then returned to the idle condition and the acceleration and lugging modes are repeated. Three sequences of acceleration and lugging constitute the full set of operating conditions for smoke emission measurement.

(d) All emission control systems installed on or incorporated in a new motor vehicle engine shall be functioning during all test procedures in this subpart.

Item	ASTM test method No.	Type 1-D	Type 2-D
Cetane.....	D 613.....	48-54	42-50
Distillation range.....	D 86.....		
IBP, ° F.....		330-390	340-400
10 percent point, ° F.....		370-430	400-460
50 percent point, ° F.....		410-480	470-540
90 percent point, ° F.....		460-520	550-610
EP, ° F.....		500-560	580-660
Gravity, ° API.....	D 287.....	40-44	33-37
Total sulfur, percent.....	D 129 or D 2622.....	0.05-0.20	0.2-0.5
Hydrocarbon composition.....	D 1319.....		
Aromatics, percent.....		8-15	27 (Min.)
Paraffins, Naphthenes, Olefins.....		Remainder	Remainder
Flash point, ° F (Min.).....	D 93.....	120	130
Viscosity, centistokes.....	D 445.....	1.6-2.0	2.0-3.2

(c) Fuel meeting the following specifications, or substantially equivalent specifications approved by the Administrator, shall be used in service accumulation. The grade of fuel recommended by the engine manufacturer, commercially designated as "Type 1-D" or "Type 2-D," shall be used.

Item	ASTM test method No.	Type 1-D	Type 2-D
Cetane.....	D 613.....	48-54	42-55
Distillation range.....	D 86.....		
IBP, ° F.....		330-390	340-410
10 percent point, ° F.....		370-430	400-470
50 percent point, ° F.....		410-480	470-540
90 percent point, ° F.....		460-520	550-610
EP, ° F.....		500-560	580-660
Gravity, ° API.....	D 287.....	40-44	33-40
Total sulfur, percent.....	D 129 or D 2622.....	0.05-0.20	0.2-0.5
Flash point, ° F (Min.).....	D 93.....	120	130
Viscosity, centistokes.....	D 445.....	1.6-2.0	2.0-3.2

(d) The type fuel, including additive and other specifications, used under paragraphs (b) and (c) of this section shall be reported in accordance with § 85.874-2(b)(3).

#### § 85.874-11 Dynamometer operation cycle for smoke emission tests.

(a) The following sequence of operations shall be performed during engine dynamometer testing of smoke emissions, starting with the dynamometer preloading determined and the engine preconditioned (§ 85.874-16(c)).

(1) *Idle mode.* The engine is caused to idle for 5 to 5.5 minutes at the manufacturer's recommended low idle speed. The dynamometer controls shall be set to provide minimum load by turning the load switch to the "off" position or by adjusting the controls to the minimum load position.

(2) *Acceleration mode.* (i) The engine speed shall be increased to 200±50 r.p.m. above the manufacturer's recommended low idle speed within 3 seconds.

(ii) The engine shall be accelerated at

#### § 85.874-10 Diesel fuel specifications.

(a) The diesel fuels employed shall be clean and bright, with pour and cloud points adequate for operability. The fuels may contain nonmetallic additives as follows: cetane improver, metal deactivator, antioxidant, dehazer, antirust, pour depressant, dye, and dispersant.

(b) Fuel meeting the following specifications, or substantially equivalent specifications approved by the Administrator, shall be used in exhaust emission testing. The grade of fuel recommended by the engine manufacturer, commercially designated as "Type 1-D" or "Type 2-D," shall be used.

full-throttle against the inertia of the engine and dynamometer or alternately against a preselected dynamometer load such that the engine speed reaches 85 to 90 percent of rated speed in 5±1.5 seconds. This acceleration shall be linear within ±100 r.p.m.

(iii) When the engine reaches the speed required in subdivision (ii) of this subparagraph, the throttle shall be moved rapidly to the closed position and the preselected load required to perform the acceleration in subdivision (iv) of this subparagraph shall be applied. The engine speed shall be reduced to the speed of maximum rated torque or 60 percent of rated speed (whichever is higher), within ±50 r.p.m. Smoke emissions during this transitional mode are not used in determining smoke emissions to compare with the standard.

(iv) The throttle shall be moved rapidly to the full-throttle position and the engine accelerated against the preselected dynamometer load such that the engine speed reaches 95 to 100 percent of rated speed in 10±2 seconds.



(3) *Lugging mode.* (i) Proceeding from the acceleration mode, the dynamometer controls shall be adjusted to permit the engine to develop maximum horsepower at rated speed. Smoke emissions during this transitional mode are not used in determining smoke emissions to compare with the standard.

(ii) Without changing the throttle position, the dynamometer controls shall be adjusted gradually to slow the engine to the speed of maximum torque or to 60 percent of rated speed, whichever is higher. This engine lugging operation shall be performed smoothly over a period of  $35 \pm 5$  seconds. The rate of slowing of the engine shall be linear, within  $\pm 100$  r.p.m.

(4) *Engine unloading.* After completion of the lugging mode in subparagraph (3) (ii) of this paragraph, the dynamometer and engine shall be returned to the idle condition described in subparagraph (1) of this paragraph.

(b) The procedures described in paragraph (a) (1) through (4) of this section shall be repeated until the entire cycle has been run three times.

#### § 85.874-12 Dynamometer and engine equipment.

The following equipment shall be used for smoke emission testing of engines on engine dynamometers.

(a) An engine dynamometer with adequate characteristics to perform the test cycle described in § 85.874-10.

(b) An engine cooling system having sufficient capacity to maintain the engine at normal operating temperatures during conduct of the prescribed engine tests.

(c) A noninsulated exhaust system extending  $15 \pm 5$  feet from the exhaust manifold, or the crossover junction in the case of Vee engines, and presenting an exhaust back pressure within  $\pm 0.2$  inch Hg. of the upper limit at maximum rated horsepower, as established by the engine manufacturer in his sales and service literature for vehicle application. A conventional automotive muffler of a size and type commonly used with the engine being tested shall be employed in the exhaust system during smoke emission testing. The terminal 2 feet of the exhaust pipe shall be circular cross section and be free of elbows and bends. The end of the pipe shall be cut off squarely. The terminal 2 feet of the exhaust pipe shall have a diameter in accordance with the engine being tested, as specified below:

Maximum rated horsepower:	Exhaust pipe diameter (inches)
Less than 101	2
101-200	3
201-300	4
301 or more	5

(d) An engine air inlet system presenting an air inlet restriction within  $\pm 1$  inch of water of the upper limit for the engine operating condition which results in maximum air flow, as established by the engine manufacturer in his sales and service literature, for the engine being tested.

#### § 85.874-13 Smoke measurement system.

(a) *Schematic drawing.* The following figure (fig. I874-1) is a schematic drawing of the optical system of the light extinction meter.

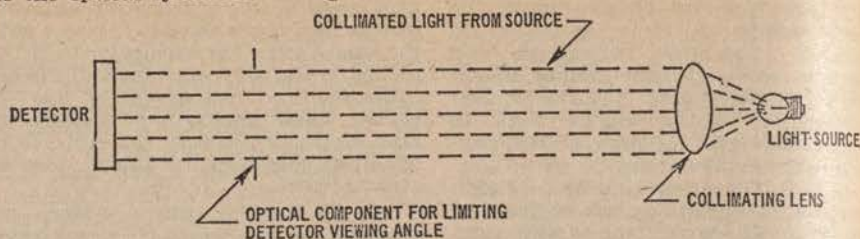


FIGURE I874-1.—EPA smokemeter optical system (schematic).

(b) *Equipment.* The following equipment shall be used in the system:

(1) Adapter—the smokemeter optical unit may be mounted on a fixed or movable frame. The normal unrestricted shape of the exhaust plume shall not be modified by the adapter, the meter, or any ventilation system used to remove the exhaust from the test site.

(2) Smokemeter (light extinction meter)—continuous recording, full-flow light obscuration meter. It shall be positioned near the end of the exhaust pipe so that a built-in light beam traverses the exhaust smoke plume which issues from the pipe at right angles to the axis of the plume. The light source is an incandescent lamp operated at a constant voltage of not less than 15 percent of the manufacturer's specified voltage. The lamp output is collimated to a beam with a nominal diameter of 1.125 inches. The angle of divergence of the collimated beam shall be within  $4^\circ$  included angle. A light detector, directly opposed to the light source, measures the amount of light blocked by the smoke in the exhaust. The detector sensitivity is restricted to the visual range and comparable to that of the human eye. A collimating tube with apertures equal to the beam diameter is attached to the detector. It restricts the viewing angle of the detector to within  $16^\circ$  included angle. An amplified signal corresponding to the amount of light blocked is recorded continuously on a remote recorder. An air curtain across the light source and detector window assemblies may be used to minimize deposition of smoke particles on those surfaces provided that it does not measurably affect the opacity of the plume. The meter consists of two units, an optical unit and a remote control unit. Light extinction meters employing substantially identical measurement principles and producing substantially equivalent results but which employ other electronic and optical techniques may be used only after having been approved in advance by the Administrator.

(3) Recorder—a continuous recorder, with variable chart speed over a minimal range of 0.5 to 8.0 inches per minute (or equivalent) and an automatic marker indicating 1-second intervals shall be used for continuously recording the transient conditions of exhaust gas opacity, engine r.p.m. and torque. The recorder scale for opacity shall be linear and calibrated to read from 0 to 100 percent opacity full scale. The opacity trace shall have a resolution within 1 percent opacity. The recorder scale for engine r.p.m. and the

recorder scale for observed engine torque shall be linear and shall have full scale calibration such as to facilitate chart reading. The r.p.m. trace shall have a resolution within 30 r.p.m. The torque trace shall have a resolution within 10 lb.-ft. Any means other than strip chart recorder may be used provided it produces a permanent visual data record of quality equal to or better than that described above.

(4) The recorder used with the smokemeter shall be capable of full-scale deflection in 0.5 second or less. The smokemeter-recorder combination may be damped so that signals with a frequency higher than 10 cycles per second are attenuated. A separate low-pass electronic filter with the following performance characteristics may be installed between the smokemeter and the recorder to achieve the high-frequency attenuation.

(i) 3 decibel point—10 cycles per second.

(ii) Insertion loss—zero  $\pm 0.5$  decibels.

(iii) Selectivity—12 decibels per octave above 10 cycles per second.

(iv) Attenuation—27 decibels down at 40 cycles per second minimum.

(c) *Assembling equipment.* (1) The optical unit of the smokemeter shall be mounted radially to the exhaust pipe so that the measurement will be made at right angles to the axis of the exhaust plume. The distance from the optical centerline to the exhaust pipe outlet shall be  $5 \pm 1$  inch. The full flow of the exhaust stream shall be centered between the source and detector apertures (or windows and lenses) and on the axis of the light beam.

(2) Power shall be supplied to the control unit of the smokemeter in time to allow at least 15 minutes for stabilization prior to testing.

#### § 85.874-14 Information to be recorded.

The following information shall be recorded with respect to each test:

(a) Test number.

(b) Date and time of day.

(c) Instrument operator.

(d) Engine operator.

(e) Engine Identification numbers—

Date of manufacture—Number of hours of operation accumulated on engine—Engine family—Exhaust pipe diameter—Fuel injector type—Maximum measured fuel rate at maximum measured torque and horsepower—Air aspiration system—Low idle r.p.m.—Maximum governed r.p.m.—Maximum measured horsepower at r.p.m.—Maximum



measured torque at r.p.m.—Exhaust system back pressure—Air inlet restriction.  
(f) Smokemeter: Number—Zero control setting—Calibration control setting—Gain.

(g) Recorder chart: Identify zero traces—Calibration traces—Idle traces—Acceleration and lug-down test traces—Start and finish of each test.

(h) Ambient temperature in dynamometer testing room.

(i) Engine intake air temperature and humidity.

(j) Barometric pressure.

(k) Observed engine torque.

#### § 85.874-15 Instrument checks.

(a) The smokemeter shall be checked according to the following procedure prior to each test:

(1) The optical surfaces of the optical section shall be checked to verify that they are clean and free of foreign material and fingerprints.

(2) The zero control shall be adjusted under conditions of "no smoke" to give a recorder trace of zero.

(3) Calibrated neutral density filters having approximately 10, 20, and 40 percent opacity shall be employed to check the linearity of the instrument. The filter(s) shall be inserted in the light path perpendicular to the axis of the beam and adjacent to the opening from which the beam of light from the light source emanates, and the recorder response shall be noted. The nominal opacity value of the filter will be confirmed by the Administrator. Deviations in excess of 1 percent of the nominal opacity shall be corrected.

#### § 85.874-16 Test run.

(a) The temperature of the air supplied to the engine shall be between 68° F. and 86° F. The observed barometric pressure shall be between 28.5 inches and 31 inches Hg. Higher air temperature or lower barometric pressure may be used, if desired, but no allowance will be made for possible increased smoke emissions because of such conditions.

(b) The governor and fuel system shall have been adjusted to provide engine performance at the levels specified by the engine manufacturer for maximum rated horsepower and maximum rated torque. These specifications shall be reported in accordance with § 85.874-2 (b) (3).

(c) The following steps shall be taken for each test:

(1) Start cooling system.

(2) Starting with a warmed engine, determine by experimentation the dynamometer inertia and dynamometer load required to perform the acceleration in the dynamometer cycle for smoke emission tests (§ 85.874-11(a) (2)). In a manner appropriate for the dynamometer and controls being used, arrange to conduct the acceleration mode.

(3) Install smokemeter optical unit and connect it to the recorder. Connect the engine r.p.m. and torque sensing devices to the recorder.

(4) Turn on purge air to the optical unit of the smokemeter, if purge air is used.

(5) Check and record zero and span settings of the smokemeter recorder at a chart speed of approximately 1 inch per minute. (The optical unit shall be retracted from its position about the exhaust stream if the engine is left running.)

(6) Precondition the engine by operating it for 10 minutes at maximum rated horsepower.

(7) Proceed with the sequence of smoke emission measurements on the engine dynamometer as prescribed in § 85.874-11.

(8) During the test sequence of § 85.874-11, continuously record smoke measurements, engine r.p.m. and torque at a chart speed of 1 inch per minute minimum during the idle mode and transitional modes and 8 inches per minute minimum during the acceleration and lugging modes. The smokemeter zero and full scale recorder deflections may be rechecked during the idle mode of each test sequence. If either zero or full scale drift is in excess of 2 percent opacity, the smokemeter controls must be readjusted and the test must be repeated.

(9) Turn off engine.

(10) Check zero and reset if necessary and check span of the smokemeter recorder by inserting neutral density filters. If either zero or span drift is in excess of 2 percent opacity, the test results shall be invalidated.

#### § 85.874-17 Chart reading.

(a) The following procedure shall be employed in reading the smokemeter recorder chart.

(1) Locate the acceleration mode (§ 85.874-11(a) (2)) and the lugging mode (§ 85.874-11(a) (3)) on the chart. Divide each mode into 1/2-second intervals beginning at the start of each mode. Determine the average smoke reading during each 1/2-second interval except those recorded during the transitional portions of the acceleration mode (§ 85.874-11(a) (2) (iii)) and the lugging mode (§ 85.874-11(a) (3) (i)).

(2) Locate and record the 15 highest 1/2-second readings during the acceleration mode of each dynamometer cycle.

(3) Locate and record the five highest 1/2-second readings during the lugging mode of each dynamometer cycle.

(4) Examine the average 1/2-second values which were determined in paragraphs (2) and (3) above and record the three highest values for each dynamometer cycle.

#### § 85.874-18 Calculations.

(a) Average the 45 readings in § 85.874-17(a) (2) and designate the value as "a".

(b) Average the 15 readings in § 85.874-17(a) (3) and designate the value as "b".

(c) Average the nine readings in § 85.874-17(a) (4) and designate the value as "c".

#### §§ 85.874-19—85.874-27 [Reserved]

#### § 85.874-28 Compliance with emission standards.

(a) The emission standards in § 85.874-1 apply to the emissions of engines for their useful life.

(b) Since emission control efficiency decreases with the accumulation of hours on the engine, the emission level of an engine which has accumulated 1,000 hours of dynamometer operation will be used as the basis for determining compliance with the standards.

(c) The procedure for determining compliance with exhaust smoke emission standards in heavy duty diesel engines is as follows:

(1) Emission deterioration factors for the acceleration mode (designated as "A"), the lugging mode (designated as "B"), and the peak opacity (designated as "C") shall be established separately for each engine-system combination.

(i) The applicable results to be used in determining the deterioration factors for each combination shall be:

(a) All emission data from the tests required under § 85.874-7(b), except the zero-hour tests. This shall include the official test results, as determined in § 85.874-29, for all tests conducted on all durability engines of the combination selected under § 85.874-5(c) (including all engines selected to be operated by the manufacturer under § 85.874-5(c) (2)).

(b) All emission data from the tests conducted before and after the maintenance provided in § 85.874-6(a) (1) (i).

(ii) All applicable results shall be plotted as a function of the hours on the system, rounded to the nearest hour, and the best fit-straight line, fitted by the method of least squares, shall be drawn through these data points. The interpolated 125- and 1,000-hour points on this line must be within the standard provided in § 85.874-1 or the data shall not be used in calculation of a deterioration factor.

(iii) The deterioration factors will be calculated as follows:

A—Percent opacity "a," interpolated to 1,000 hours, minus percent opacity "a," interpolated to 125 hours.

B—Percent opacity "b," interpolated to 1,000 hours, minus percent opacity "b," interpolated to 125 hours.

C—Percent opacity "c," interpolated to 1,000 hours, minus percent opacity "c," interpolated to 125 hours.

(2) The "percent opacity" values to compare with the standards shall be the opacity values "a," "b," and "c" for each emission data engine within an engine-system combination to which are added the respective factors "A," "B," and "C" of subparagraph (1) of this paragraph for that engine-system combination: *Provided*, That if a deterioration factor as computed in subparagraph (1) of this paragraph is less than zero, that deterioration factor shall be zero for the purposes of this subparagraph.

(2) Every test engine of an engine family must comply with all applicable standards, as determined in subparagraph (2) of this paragraph, before any engine in that family will be certified.



### § 85.874-29 Testing by the Administrator.

(a) The Administrator may require that any one or more of the test engines be submitted to him, at such place or places as he may designate, for the purpose of conducting emissions tests. The Administrator may specify that he will conduct such testing at the manufacturer's facility, in which case instrumentation and equipment specified by the Administrator shall be made available by the manufacturer for test operations. Any testing conducted at a manufacturer's facility pursuant to this paragraph shall be scheduled by the manufacturer as promptly as possible.

(b) (1) Whenever the Administrator conducts a test on a test engine, the results of that test shall comprise the official data for the engine at that prescribed test point.

(2) Whenever the Administrator does not conduct a test on a test engine at a test point, the manufacturer's test data will be accepted as the official data for that test point: *Provided*, That if the Administrator makes a determination based on testing under paragraph (a) of this section, that there is a lack of correlation between the manufacturer's test equipment and the test equipment used by the Administrator, no manufacturer's test data will be accepted for purposes of certification until the reasons for the lack of correlation are determined and the validity of the data is established by the manufacturer.

(3) If the Administrator determines that the test data developed under paragraph (a) of this section would cause an engine to fail due to excessive 125-hour emissions or excessive deterioration, then the following procedure shall be observed:

(i) The manufacturer may request a retest. Before the retest, the engine may be adjusted to manufacturer's specifications, and parts may be replaced in accordance with § 85.874-6. All work on the engine shall be done at such location and under such conditions as the Administrator may prescribe.

(ii) The engine will be retested by the Administrator and the results of this test shall comprise the official data for that prescribed test point.

(4) If sufficient durability data is not available, at the time of any emission test conducted under paragraph (a) of this section, to enable the Administrator to determine whether a test engine would fail, the manufacturer may request a retest in accordance with the provisions of subparagraph (3) (i) and (ii) of this paragraph. If the manufacturer does not promptly make such request, he shall be deemed to have waived the right to a retest. A request for retest must be made before the manufacturer removes the engine from the test premises.

### § 85.874-30 Certification.

(a) (1) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.874-29, the Administrator deter-

mines that a test engine(s) conforms to the regulations of this subpart, he will issue a certificate of conformity with respect to such engine(s).

(2) Such certificate will be issued for such period not more than 1 year as the Administrator may determine and upon such terms as he may deem necessary to assure that any new motor engine covered by the certificate will meet the requirements of these regulations relating to durability and performance.

(b) (1) The Administrator will determine whether an engine covered by the application complies with applicable standards by observing the following relationships:

(i) A test engine selected under § 85.874-5(b) (2) or (4) shall represent all engines in the same engine family of the same engine displacement-exhaust emission control system combination.

(ii) [Reserved]

(iii) A test engine selected under § 85.874-5(c) (1) shall represent all engines of the same engine-system combination.

(2) The Administrator will proceed as in paragraph (a) of this section with respect to the engines belonging to an engine family all of which comply with applicable standards.

(3) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.874-29, the Administrator determines that one or more test engines of the certification test fleet do not meet applicable standards, he will notify the manufacturer in writing, setting forth the basis for his determination. Within 30 days following receipt of the notification, the manufacturer may request a hearing on the Administrator's determination. The request shall be in writing, signed by an authorized representative of the manufacturer, and shall include a statement specifying the manufacturer's objections to the Administrator's determination, and data in support of such objections. If, after a review of the request and supporting data, the Administrator finds that the request raises a substantial factual issue, he shall provide the manufacturer a hearing in accordance with § 85.805 with respect to such issue.

(4) The manufacturer may, at his option, proceed with any of the following alternatives with respect to any engine family represented by a test engine(s) determined not in compliance with applicable standards:

(i) Request a hearing under § 85.805, or

(ii) Delete from the application for certification the engines represented by the failing test engine. (Engines so deleted may be included in a later request for certification under § 85.874-32.) The Administrator will then select in place of each failing engine an alternate engine chosen in accordance with selection criteria employed in selecting the engine that failed, or

(iii) Modify the test engine and demonstrate by testing that it meets applicable standards. Another engine which is in all material respects the same as the first engine, as modified, shall then be operated and tested in accordance with applicable test procedures.

(5) If the manufacturer does not request a hearing or present the required data under subparagraph (4) of this paragraph, the Administrator will deny certification.

### § 85.874-31 Separate certification.

Where possible, a manufacturer should include in a single application for certification all engines for which certification is required. A manufacturer may, however, choose to apply separately for certification of part of his product line. The selection of test engines and the computation of test results will be determined separately for each application.

### § 85.874-32 Addition of an engine after certification.

(a) If a manufacturer proposes to add to his product line an engine of the same engine-system combination as engines previously certified but which was not described in the application for certification when the test engine(s) representing other engines of that combination was certified, he shall notify the Administrator. Such notification shall be in advance of the addition unless the manufacturer elects to follow the procedure described in § 85.874-34. This notification shall include a full description of the engine to be added.

(b) The Administrator may require the manufacturer to perform such tests on the test engine(s) representing the engine to be added which would have been required if the engine had been included in the original application for certification.

(c) If, after a review of the test reports and data submitted by the manufacturer, and data derived from any testing conducted under § 85.874-29, the Administrator determines that the test engine(s) meets all applicable standards, the appropriate certificate will be amended accordingly. If the Administrator determines that the test engine(s) does not meet applicable standards, he will proceed under § 85.874-30(b).

### § 85.874-33 Changes to an engine covered by certification.

(a) The manufacturer shall notify the Administrator of any change in production engines in respect to any of the parameters listed in § 85.073-5(a) (3), giving a full description of the change. Such notification shall be in advance of the change unless the manufacturer elects to follow the procedure described in § 85.874-34.

(b) Based upon the description of the change, and data derived from such testing as the Administrator may require or conduct, the Administrator will determine whether the engine, as modified,



would still be covered by the certificate of conformity then in effect.

(c) If the Administrator determines that the outstanding certificate would cover the modified engines, he will notify the manufacturer in writing. Except as provided in § 85.874-34, the change may not be put into effect prior to the manufacturer's receiving this notification. If the Administrator determines that the modified engines would not be covered by the certificate then in effect, then the modified engines shall be treated as additions to the product line subject to § 85.874-32.

**§ 85.874-34 Alternative procedure for notification of additions and changes.**

(a) A manufacturer may, in lieu of notifying the Administrator in advance of an addition of an engine under § 85.874-32 or a change in an engine under § 85.874-33, notify him concurrently with the making of the change if the manufacturer believes the addition or change will not require any testing under the appropriate section. Upon notification to the Administrator, the manufacturer may proceed to put the addition or change into effect.

(b) The manufacturer may continue to produce engines as described in the notification to the Administrator for a maximum of 30 days, unless the Administrator grants an extension in writing. This period may be shortened by a notification in accordance with paragraph (c) of this section.

(c) If the Administrator determines, based upon a description of the addition or change, that no test data will be required, he will notify the manufacturer in writing of the acceptability of the addition or change. If the Administrator determines that test data will be required, he will notify the manufacturer to rescind the change within 5 days of receipt of the notification. The Administrator will then proceed as in § 85.874-32 (b) and (c), or § 85.874-33 (b) and (c) as appropriate.

(d) Election to produce engines under this section will be deemed to be a consent to recall all engines which the Administrator determines under § 85.874-32 (c) do not meet applicable standards, and to cause such nonconformity to be remedied at no expense to the owner.

**§ 85.874-35 Labeling.**

(a) (1) The manufacturer of any heavy duty diesel engine subject to the standards prescribed in § 85.874-1 shall, at the time of manufacture, affix a permanent, legible label, of the type and in the manner described below, containing the information hereinafter provided, to all production models of such engines available for sale to the public and covered by a certificate of conformity under § 85.874-30(a).

(2) A plastic or metal label shall be welded, bonded, or otherwise permanently attached to the engine in a position in which it will be readily visible after installation in the vehicle.

(3) The label shall be attached to an engine part necessary for normal engine

operation and not normally requiring replacement during engine life.

(4) The label shall contain the following information lettered in the English language in block letters and numerals which shall be of a color that contrasts with the background of the label:

- (i) The label heading: Engine Exhaust Emission Control Information;
- (ii) Full corporate name and trademark of manufacturer;
- (iii) Engine family identification and model;
- (iv) Date of engine manufacture (month and year);
- (v) Engine specification:

Advertised hp \_\_\_\_\_ @ \_\_\_\_\_ r.p.m.  
 Fuel rate @ advertised hp \_\_\_\_\_ mm.<sup>3</sup>/stroke.  
 Valve lash \_\_\_\_\_ (inches)  
 Initial injection timing (if adjustable) \_\_\_\_\_

(The information applicable to each engine is to be inserted on the appropriate line.)

(vi) The statement: This engine conforms to U.S. Environmental Protection Agency Regulations applicable to 1974 model year heavy duty diesel engines.

(b) The provisions of this section shall not prevent a manufacturer from also reciting on the label that such engine conforms to any applicable State emission standards for new motor vehicle engines or any other information that such manufacturer deems necessary for, or useful to, the proper operation and satisfactory maintenance of the engine.

(c) The label may be made up of one or more pieces provided that all pieces are permanently attached to the same engine or vehicle part as applicable.

**§ 85.874-36 [Reserved]**

**§ 85.874-37 Production engines.**

(a) Any manufacturer obtaining certification under this subpart shall supply to the Administrator, upon his request, a reasonable number of production engines selected by the Administrator which are representative of the engines, emission control systems, fuel systems, and transmissions offered and typical of production models available for sale under the certificate. These engines shall be supplied for testing at such time and place and for such reasonable periods as the Administrator may require. Engines supplied under this paragraph may be required to be mounted in chassis and appropriately equipped for operation on a chassis dynamometer.

(b) Any manufacturer obtaining certification under this part shall notify the Administrator, on a quarterly basis, of the number of engines of each engine family-engine displacement-exhaust emission control system-fuel system combination produced for sale in the United States during the preceding quarter.

**§ 85.874-38 Maintenance instructions.**

(a) The manufacturer shall furnish or cause to be furnished to the ultimate purchaser of each new motor vehicle engine subject to the standards prescribed in § 85.874-1, written instructions for the maintenance and use of the engine by the ultimate purchaser

as may be reasonable and necessary to assure the proper functioning of emission control systems.

(1) Such instructions shall be provided for those engine components listed in Appendix VI to this part (and for any other components) to the extent that maintenance of these components is necessary to assure the proper functioning of emission control systems.

(2) Such instructions shall be in clear, and to the extent practicable, nontechnical language.

(b) The maintenance instructions required by this section shall contain a general description of the documentation which the manufacturer will require from the ultimate purchaser or any subsequent purchaser as evidence of compliance with the instructions.

**§ 85.874-39 Submission of maintenance instructions.**

(a) The manufacturer shall provide to the Administrator, no later than the time of the submission required by § 85.874-4, a copy of the maintenance instructions which the manufacturer proposes to supply to the ultimate purchaser in accordance with § 85.874-38(a). The Administrator will review such instructions to determine whether they are reasonable and necessary to assure the proper functioning of the engine's emission control systems. The Administrator will notify the manufacturer of his determination whether such instructions are reasonable and necessary, to assure the proper functioning of the emission control systems.

(b) Any revision to the maintenance instructions which will affect emissions shall be supplied to the Administrator at least 30 days before being supplied to the ultimate purchaser unless the Administrator consents to a lesser period of time.

**Subpart J—Engine Exhaust Gaseous Emission Regulations for New Diesel Heavy Duty Engines**

**§ 85.901 General applicability.**

The provisions of this subpart are applicable to new diesel heavy duty engines beginning with the 1974 model year.

**§ 85.902 Definitions.**

(a) As used in this subpart, all terms not defined herein shall have the meaning given them in the Act:

(1) "Act" means Part A of title II of the Clean Air Act, 42 U.S.C. 1357 f-1 through f-7, as amended by Public Law 91-604.

(2) "Administrator" means the Administrator of the Environmental Protection Agency or his authorized representative.

(3) "Model year" means the manufacturer's annual production period (as determined by the Administrator) which includes January 1 of such calendar year: *Provided*, That if the manufacturer has no annual production period, the term "model year" shall mean the calendar year.



(4) "Gross vehicle weight" means the manufacturer's gross weight rating for the individual vehicle.

(5) "Heavy duty vehicle" means any motor vehicle either designed primarily for transportation of property and rated at more than 6,000 pounds GVW or designed primarily for transportation of persons and having a capacity of more than 12 persons.

(6) "Heavy duty engine" means any engine which the engine manufacturer could reasonably expect to be used for motive power in a heavy duty vehicle.

(7) "System" includes any motor vehicle engine modification which controls or causes the reduction of substances emitted from motor vehicle engines.

(8) "Engine family" means the basic classification unit of a manufacturer's product line used for the purpose of test fleet selection and determined in accordance with § 85.974-5(a).

(9) "Engine-system combination" means an engine family-exhaust emission control system-fuel evaporative emission control system (where applicable) combination.

(10) "Fuel system" means the combination of fuel tank, fuel pump, fuel lines, and carburetor, or fuel injection components, and includes all fuel system vents and fuel evaporative emission control systems.

(11) "Crankcase emissions" means airborne substances emitted to the atmosphere from any portion of the engine crankcase ventilation or lubrication systems.

(12) "Exhaust emissions" means substances emitted to the atmosphere from any opening downstream from the exhaust port of a motor vehicle engine.

(13) "Maximum rated horsepower" means the maximum brake horsepower output of an engine as stated by the manufacturer in his sales and service literature and his application for certification under § 85.874-2.

(14) "Rated speed" means the speed at which the manufacturer specifies the maximum rated horsepower of an engine.

(15) "Maximum rated torque" means the maximum torque produced by an engine as stated by the manufacturer in his sales and service literature and his application for certification under § 85.874-2.

(16) "Zero (O) hours" means that point after normal assembly line operations and adjustments and before one additional operating hour has been accumulated.

(17) "Oxides of Nitrogen" means the sum of the nitric oxide and nitrogen dioxide contained in a gas sample as if the nitric oxide were in the form of nitrogen dioxide.

(18) "Useful life" means a period of use of 5 years or 100,000 miles of vehicle operation or 3,000 hours of engine operation (or an equivalent period of 1,000 hours of dynamometer operation, whichever first occurs).

(19) "Peak torque speed" means the speed at which an engine develops maximum torque.

(20) "Percent load" means the fraction of the maximum available torque at an engine speed.

(21) "Intermediate speed" means the peak torque speed or 60 percent of rated speed, whichever is higher.

(22) "Military engine" means any engine manufactured solely for the Department of Defense to meet military specifications.

#### § 85.903 Abbreviations.

The abbreviations used in this subpart have the following meanings in both capital and lower case:

ASTM—American Society for Testing and Materials.  
BHP—Brake horsepower.  
BSCO—Brake specific carbon monoxide.  
BSHC—Brake specific hydrocarbons.  
BSNO<sub>x</sub>—Brake specific oxides of nitrogen.  
CO—Carbon Monoxide.  
Conc.—Concentration.  
F.—Fahrenheit.  
GVW—Gross Vehicle Weight.  
HC—Hydrocarbon(s).  
Hg—Mercury.  
HP—Horsepower.  
Hr.—Hour.  
Lb.—Pound(s).  
Min.—Minimum.  
NO—Nitric Oxide.  
NO<sub>x</sub>—Oxides of Nitrogen.  
R.p.m.—Revolutions per minute.  
S.A.E.—Society of Automotive Engineers.  
WF—Weighting factor.  
°—Degrees.  
%—Percent.  
Σ—Summation.

#### § 85.904 General standards: increase in emissions; unsafe conditions.

(a) (1) Every new motor vehicle engine manufactured for sale, sold, offered for sale, introduced or delivered for introduction into commerce, or imported into the United States for sale or resale which is subject to any of the standards prescribed in this subpart shall be covered by a certificate of conformity issued pursuant to § 85.974-2 through § 85.974-4 and § 85.974-29 and § 85.974-34 of this subpart.

(2) No heavy duty vehicle manufacturer shall take any of the actions specified in section 203(a) (1) of the Act with respect to any diesel-powered heavy duty vehicle which uses an engine which has not been certified as meeting applicable standards. Such manufacturer shall provide to the Administrator prior to the beginning of each model year a statement signed by an authorized representative which includes the following information:

- (i) A description of the vehicles which will be produced subject to this section;
- (ii) Identification of the engines used in the vehicles;
- (iii) Projected sales data on each vehicle-engine combination;
- (iv) A statement that the engines will not be modified by the vehicle manufacturer or a detailed specification of any changes which will be made. Changes made solely for the purpose of mounting an engine in a vehicle need not be included.

(b) (1) Any system installed on or incorporated in a new motor vehicle engine

to enable such vehicle to conform to standards imposed by this subpart:

(i) Shall not in its operation or function cause the emission into the ambient air of any noxious or toxic substance that would not be emitted in the operation of such engine without such system, except as specifically permitted by regulation; and

(ii) Shall not in its operation, function, or malfunction result in any unsafe condition endangering the motor vehicle, its occupants, or persons or property in close proximity to the vehicle.

(2) Every manufacturer of new motor vehicle engines subject to any of the standards imposed by this subpart shall, prior to taking any of the actions specified in section 203(a) (1) of the Act, test or cause to be tested motor vehicle engines in accordance with good engineering practice to ascertain that such test engines will meet the requirements of this section for the useful life of the engine.

#### § 85.905 Hearings on certification.

(a) (1) After granting a request for a hearing under § 85.974-30, the Administrator will designate a Presiding Officer for the hearing.

(2) The General Counsel will represent the Environmental Protection Agency in any hearing under this section.

(3) If a time and place for the hearing have not been fixed by the Administrator under § 85.974-30, the hearing shall be held as soon as practicable at a time and place fixed by the Administrator or by the Presiding Officer.

(b) (1) Upon his appointment pursuant to paragraph (a) of this section, the Presiding Officer will establish a hearing file. The file shall consist of the notice issued by the Administrator under § 85.974-30, together with any accompanying material, the request for a hearing and the supporting data submitted therewith and all documents relating to the request for certification, including the application for certification and all documents submitted therewith, and correspondence and other data material to the hearing.

(2) The appeal file will be available for inspection by the applicant at the office of the Presiding Officer.

(c) An applicant may appear in person, or may be represented by counsel or by any other duly authorized representative.

(d) (1) The Presiding Officer upon the request of any party, or in his discretion, may arrange for a prehearing conference at a time and place specified by him to consider the following:

- (i) Simplification of the issues;
- (ii) Stipulations, admissions of fact, and the introduction of documents;
- (iii) Limitation of the number of expert witnesses;
- (iv) Possibility of agreement disposing of all or any of the issues in dispute;
- (v) Such other matters as may aid in the disposition of the hearing, including such additional tests as may be agreed upon by the parties.

(2) The results of the conference shall be reduced to writing by the Presiding Officer and made part of the record.



(e) (1) Hearings shall be conducted by the Presiding Officer in an informal but orderly and expeditious manner. The parties may offer oral or written evidence, subject to the exclusion by the Presiding Officer of irrelevant, immaterial, and repetitious evidence.

(2) Witnesses will not be required to testify under oath. However, the Presiding Officer shall call to the attention of witnesses that their statements may be subject to the provisions of title 18 U.S.C. 1001 which imposes penalties for knowingly making false statements or representations, or using false documents in any matter within the jurisdiction of any department or agency of the United States.

(3) Any witness may be examined or cross-examined by the Presiding Officer, the parties, or their representatives.

(4) Hearings shall be reported verbatim. Copies of transcripts of proceedings may be purchased by the applicant from the reporter.

(5) All written statements, charts, tabulations, and similar data offered in evidence at the hearing shall, upon a showing satisfactory to the Presiding Officer of their authenticity, relevancy, and materiality, be received in evidence and shall constitute a part of the record.

(6) Oral argument may be permitted in the discretion of the Presiding Officer and shall be reported as part of the record unless otherwise ordered by him.

(f) (1) The Presiding Officer shall make an initial decision which shall include written findings and conclusions and the reasons or basis therefor on all the material issues of fact, law or discretion presented on the record. The findings, conclusions, and written decision shall be provided to the parties and made a part of the record. The initial decision shall become the decision of the Administrator without further proceedings unless there is an appeal to the Administrator or motion for review by the Administrator within 20 days of the date the initial decision was filed.

(2) On appeal from or review of the initial decision the Administrator shall have all the powers which he would have in making the initial decision including the discretion to require or allow briefs, oral argument, the taking of additional evidence or the remanding to the Presiding Officer for additional proceedings. The decision by the Administrator shall include written findings and conclusions and the reasons or basis therefor on all the material issues of fact, law, or discretion presented on the appeal or considered in the review.

**§ 85.906 Maintenance of records; submission of information; right of entry.**

(a) The manufacturer of any new motor vehicle engine subject to any of the standards prescribed in this subpart shall establish and maintain the following adequately organized and indexed records:

(1) Identification and description of all engines for which testing is required under this subpart.

(2) A description of all emission control systems which are installed on or incorporated in each engine.

(3) A description of the procedures used to test such engines.

(4) Test data on each emission data engine which will show its emissions at 0 and 125 hours.

(5) Test data on each durability engine which will show the performance of the systems installed on or incorporated in the engine during extended operation, as well as a record of all pertinent maintenance performed on the engine.

(b) The manufacturer of any new motor vehicle engine subject to any of the standards prescribed in this subpart shall submit to the Administrator at the time of issuance by the manufacturer copies of all instructions or explanations regarding the use, repair, adjustment, maintenance, or testing of such engine relevant to the control of exhaust emissions issued by the manufacturer for use by other manufacturers, assembly plants, distributors, dealers, and ultimate purchasers: *Provided*, That any material not translated in the English language need not be submitted unless specifically requested by the Administrator.

(c) The manufacturer of any new motor vehicle engine subject to any of the standards prescribed in this subpart shall permit officers or employees duly designated by the Administrator, upon presenting appropriate credentials and a written notice to the manufacturer:

(1) To enter, at reasonable times, any premises used during the certification procedure for purposes of monitoring tests and service accumulation procedures, observing maintenance procedures and verifying correlation or calibration of test equipment, or

(2) To inspect, at reasonable times, records, files, and papers compiled by such manufacturer in accordance with paragraph (a) of this section.

A separate notice shall be given for each such inspection, but a separate notice shall not be required for each entry made during the period covered by the inspection. Each such inspection shall be commenced and completed with reasonable promptness.

**§ 85.974-1 Exhaust gaseous emission standards for 1974 model year engines.**

(a) (1) Exhaust gaseous emissions from new heavy duty diesel engines shall not exceed:

(i) *Hydrocarbons plus oxides of nitrogen* (as NO<sub>x</sub>).—16 grams per brake horsepower hour.

(ii) *Carbon monoxide*.—40 grams per brake horsepower hour.

(2) The standards set forth in paragraph (a) of this section refer to exhaust gaseous emissions generated under the conditions set forth in § 85.974-9 through § 85.974-18 and measured and calculated in accordance with those procedures.

(b) [Reserved]

(c) [Reserved]

(d) Every manufacturer of new motor vehicle engines subject to the standards prescribed in this subpart shall, prior to taking any of the actions specified in section 203(a)(1) of the Act, test or cause to be tested motor vehicle engines in accordance with test procedures prescribed in § 85.974-9 through § 85.974-18 to ascertain that such test engines meet the requirements of paragraph (a) of this section.

**§ 85.974-2 Application for certification.**

(a) An application for a certificate of conformity to the regulations applicable to any new motor vehicle engine shall be made to the Administrator by the manufacturer.

(b) The application shall be in writing, signed by an authorized representative of the manufacturer, and shall include the following:

(1) Identification and description of the engines covered by the application and a description of their emission control systems.

(2) Projected U.S. sales data sufficient to enable the Administrator to select a test fleet representative of the engines for which certification is requested.

(3) A description of the test equipment and fuel proposed to be used.

(4) A description of the proposed service accumulation procedure for durability testing.

(5) A statement of recommended maintenance and procedures necessary to assure that the engines covered by a certificate of conformity in operation conform to the regulations, and a description of the program for training of personnel for such maintenance, and the equipment required.

(6) At the option of the manufacturer, the proposed composition of the emission data and durability data test fleet.

**§ 85.974-3 Approval of procedure and equipment; test fleet selections.**

Based upon the information provided in the application for certification, and any other information the Administrator may require, the Administrator will approve or disapprove in whole or in part the service accumulation procedure and equipment and fuel proposed by the manufacturer, and notify him in writing of such determination. Where any part of a proposal is disapproved, such notification will specify the reasons for disapproval. The Administrator will select a test fleet in accordance with § 85.974-5.

**§ 85.974-4 Required data.**

The manufacturer shall perform the tests required by the applicable test procedures, and submit to the Administrator the following information:

(a) Durability data on such engines tested in accordance with the applicable test procedures of this subpart, and in such numbers as therein specified, which will show the performance of the systems installed on or incorporated in the engine for extended operation, as well as a record of all pertinent maintenance performed on the test engines.



(b) Emission data on such engines tested in accordance with the applicable emission test procedures of this subpart and in such numbers as therein specified, which will show their emissions after 0 hours and 125 hours of operation.

(c) A description of tests performed to ascertain compliance with the general standards in § 85.974-1 and the data derived from such tests.

(d) A statement that the test engines with respect to which data are submitted have been tested in accordance with the applicable test procedures, that they meet the requirement of such tests, and that, on the basis of such tests, they conform to the requirements of the regulations in this subpart. If such statements cannot be made with respect to any engine tested, the engine shall be identified, and all pertinent test data relating thereto shall be supplied.

#### § 85.974-5 Test engines.

The test engines selected for testing under § 85.974-5 shall be used as the test engines for this subpart. The engines may be tested with the test procedure in § 85.874 and the test procedure in § 85.974-9 through § 85.974-18 consecutively at each test point irrespective of the requirements of § 85.874-19(b) and § 85.974-7(a).

#### § 85.974-6 Maintenance.

(a) (1) Maintenance on the engines and fuel systems of durability engines may be performed only under the following provisions:

(i) One major engine servicing to manufacturer's specifications may be performed at 500 hours ( $\pm 8$  hours) of dynamometer operation. A major engine servicing shall be restricted to the following:

- (a) Adjust low idle speed.
- (b) Adjust valve lash if required.
- (c) Adjust injector timing.
- (d) Adjust governor.
- (e) Clean and service injector tips.

(ii) Injectors may be changed if a persistent misfire is detected.

(iii) Normal engine lubrication services (engine oil change and oil filter, fuel filter, and air filter servicing and adjustment of drive belt tension and engine bolt torque, as required, will be allowed at manufacturer's recommended intervals.

(iv) Readjustment of the engine fuel rates may be performed only if there is a problem of dropping below 95 percent of maximum rated horsepower at 95-100 percent rated speed.

(v) Leaks in the fuel system, engine lubrication system and cooling system may be repaired.

(vi) Engine low-idle speed may be adjusted at the 125-hour test point.

(vii) Any other engine or fuel system maintenance or repair will be allowed only with the advance approval of the Administrator.

(2) Allowable maintenance on emission data engines shall be limited to the adjustment of engine low idle speed at the 125-hour test point, except that other maintenance or repair may be al-

lowed with the advance approval of the Administrator.

(b) Complete emission tests (see § 85.974-10 through § 85.974-18) shall be run before and after any engine maintenance which may reasonably be expected to affect emissions. These test data shall be supplied to the Administrator immediately after the tests, along with a complete record of all pertinent maintenance, including an engineering report of any malfunction diagnosis and the corrective action taken. In addition, all test data and maintenance reports shall be compiled and provided to the Administrator in accordance with § 85.974-4.

(c) If the Administrator determines that maintenance or repairs performed have resulted in a substantial change to the engine-system combination, the engine shall not be used as a durability data engine.

#### § 85.974-7 Service accumulation and emission measurements.

Service accumulation shall be accomplished by operation of an engine on a dynamometer.

(a) Emission data engines: Each engine shall be operated on a dynamometer for 125 hours with the dynamometer and engine adjusted so that the engine is operating at 95-100 percent of rated speed and at least 95 percent of maximum rated horsepower. During such operation, the engine shall be run at the exhaust back pressure specified in § 85.974-12(c) and the air inlet restriction specified in § 85.974-12(d) except that the tolerances shall be  $\pm 0.5$  inches of Hg. and  $\pm 3$  inches of water respectively. Exhaust smoke tests shall be conducted at zero and 125 hours of operation.

(b) Durability data engines: Each engine shall be operated on a dynamometer for 1,000 hours with the dynamometer and engine adjusted so that the engine is operating at 95-100 percent of rated speed and at least 95 percent of maximum rated horsepower. During such operation, the engine shall be run at the exhaust back pressure specified in § 85.974-12(c) and the air inlet restriction specified in § 85.974-12(d) except that the tolerances shall be  $\pm 0.5$  inches of Hg. and  $\pm 3$  inches of water respectively. Exhaust smoke measurements shall be made at zero hours and at each 125 hours of operation. All results except the zero hour results shall be used to establish the deterioration factors (see § 85.974-19).

(c) All tests required by this subpart to be conducted after 125 hours of dynamometer operation or at any multiple of 125 hours may be conducted at any accumulated hours within 8 hours of 125 hours or the appropriate multiple of 125 hours, respectively.

(d) The result of each emission test shall be supplied to the Administrator immediately after the test. In addition, all test data shall be compiled and provided to the Administrator in accordance with § 85.974-4.

(e) Whenever the manufacturer proposes to operate and test an engine which may be used for emission or durability data, he shall provide the zero hour

test data to the Administrator and make the engine available for such testing under § 85.974-29 as the Administrator may require before beginning to accumulate hours on the engine. Failure to comply with this requirement shall invalidate all test data submitted for this engine.

(f) Once a manufacturer begins to operate an emission data or durability data engine, as indicated by compliance with paragraph (e) of this section, he shall continue to run the engine to 125 hours or 1,000 hours, respectively, and the data from the engine shall be used in the calculations under § 85.974-19. Discontinuation of an engine shall be allowed only with the prior written consent of the Administrator.

(g) All emission control systems installed on or incorporated in a new motor vehicle engine shall be functioning during all test procedures in this subpart.

#### § 85.974-8 Special test procedures.

The Administrator may, on the basis of a written application therefor by a manufacturer, prescribe test procedures, other than those set forth in this subpart, for any motor vehicle engine which he determines is not susceptible to satisfactory testing by the procedures set forth herein.

#### § 85.974-9 Test procedures.

The test procedures described in this and subsequent sections will be the test program to determine the conformity of engines with the standards set forth in § 85.974-1.

(a) The test procedure begins with a warm engine and consists of a prescribed sequence of engine operating conditions on an engine dynamometer with continuous examination of the exhaust gases.

(b) The test is designed to determine the brake-specific emissions of hydrocarbons, carbon monoxide and oxides of nitrogen when an engine is operated through a cycle which consists of three idle modes and five power modes at each of two speeds which span the typical operating range of diesel engines. The procedure requires the determination of the concentration of each pollutant, the exhaust flow and the power output during each mode. The measured values are weighted and used to calculate the grams of each pollutant emitted per brake-horsepower hour.

(c) When an engine is tested for exhaust emissions or is operated for durability testing on an engine dynamometer, the complete engine shall be tested with all standard accessories which might reasonably be expected to influence emissions to the atmosphere installed and functioning.

#### § 85.974-10 Diesel fuel specifications.

(a) The diesel fuels employed shall be clean and bright, with pour and cloud points adequate for operability. The fuels may contain nonmetallic additives as follows: cetane improver, metal deactivator, antioxidant, dehazer, antirust, pour depressant, dye, and dispersant.

(b) Fuel meeting the following specifications, or substantially equivalent speci-



fications approved by the Administrator, shall be used in exhaust emission testing. The grade of fuel recommended by the

engine manufacturer, commercially designated as "Type 1-D" or "Type 2-D", shall be used.

Item	ASTM test method No.	Type 1-D	Type 2-D
Cetane.....	D 613.....	48-54	42-50
Distillation range.....	D 86.....		
IBP, °F.....		330-390	340-400
10 percent point, °F.....		370-430	400-460
50 percent point, °F.....		410-480	470-540
90 percent point, °F.....		460-520	550-610
EP, °F.....		500-560	580-660
Gravity, °API.....	D 287.....	40-44	33-37
Total sulfur, percent.....	D 129 or D 2622.....	0.05-0.20	0.2-0.5
Hydrocarbon composition.....	D 1319.....		
Aromatics, percent.....		8-15	27 (Min.)
Paraffins, Naphthenes, Olefins.....		Remainder	Remainder
Flash point, °F (Min.).....	D 93.....	120	130
Viscosity, centistokes.....	D 415.....	1.6-2.0	2.0-3.2

(c) Fuel meeting the following specifications, or substantially equivalent specifications approved by the Administrator, shall be used in service accumulation. The grade of fuel recommended by the engine manufacturer, commercially designated as "Type 1-D" or "Type 2-D", shall be used.

Item	ASTM test method No.	Type 1-D	Type 2-D
Cetane.....	D 613.....	48-54	42-55
Distillation range.....	D 86.....		
IBP, °F.....		330-390	340-410
10 percent point, °F.....		370-430	400-470
50 percent point, °F.....		410-480	470-540
90 percent point, °F.....		460-520	550-610
EP, °F.....		500-560	580-660
Gravity, °API.....	D 287.....	40-44	33-40
Total sulfur, percent.....	D 129 or D 2622.....	0.05-0.20	0.2-0.5
Flash point, °F (Min.).....	D 93.....	120	130
Viscosity, centistokes.....	D 445.....	1.6-2.0	2.0-3.2

(d) The type fuel, including additive and other specifications, used under paragraphs (b) and (c) of this section shall be reported in accordance with § 85.974-2(b) (3).

#### § 85.974-11 Dynamometer procedure.

(a) The following 13 mode cycle shall be followed in dynamometer operation tests of heavy-duty diesel engines:

Mode No.	Engine speed	Percent load
1.....	Low idle.....	0
2.....	Intermediate.....	2
3.....	do.....	25
4.....	do.....	50
5.....	do.....	75
6.....	do.....	100
7.....	Low idle.....	0
8.....	Rated.....	100
9.....	do.....	75
10.....	do.....	50
11.....	do.....	25
12.....	do.....	2
13.....	Low idle.....	0

(b) During each mode the specified speed shall be held to within 50 r.p.m. and the specified torque shall be held to within 2 percent of the maximum torque at the test speed. For example, the torque for mode 4 shall be between 48 and 52 percent of the maximum torque measured at the intermediate speed.

#### § 85.974-12 Dynamometer and engine equipment.

The following equipment shall be used for emission testing of engines on engine dynamometers:

(a) An engine dynamometer with adequate characteristics to perform the test cycle described in § 85.974-11.

(b) An engine cooling system having sufficient capacity to maintain the en-

gine at normal operating temperatures during conduct of the prescribed engine tests.

(c) A noninsulated exhaust system extending 15±5 feet from the exhaust manifold, or the crossover junction in the case of Vee engines, and presenting an exhaust back pressure within ±0.2 inch Hg. of the upper limit at maximum rated horsepower, as established by the engine manufacturer in his sales and service literature for vehicle application. A conventional automotive muffler of a size and type commonly used with the engine being tested shall be employed in the exhaust system during emission testing.

(d) An engine air inlet system presenting an air inlet restriction within ±1 inch of water of the upper limit for the engine operating condition which results in maximum airflow, as established by the engine manufacturer in his sales and service literature, for the engine being tested.

#### § 85.974-13 Sampling and analytical methods.

(a) The determination of the carbon monoxide and nitric oxide concentrations shall be accomplished using sampling and analysis components as specified in sections 2.1 and 2.2 of SAE Recommended Practice No. J177 titled, "Measurement of Carbon Dioxide, Carbon Monoxide and Oxides of Nitrogen in Diesel Exhaust," dated June 1970.

(b) The determination of the hydrocarbon concentrations shall be accomplished using sampling and analysis components as specified in sections 2.1 and 2.2 of SAE Recommended Practice No. J215 titled, "Continuous Hydrocarbon

Analysis of Diesel Exhaust," dated November 1970.

(c) The determination of the intake airflow or exhaust flow shall be accomplished using SAE Recommended Practice No. J244 titled, "The Measurement of Intake or Exhaust Flow in Diesel Engines," dated May 1971.

#### § 85.974-14 Information.

The following information shall be recorded:

- Test number.
- Date and time of day.
- Instrument operator.
- Engine operator.
- Engine identification numbers—

date of manufacture—number of hours of operation accumulated on engine—engine family—exhaust pipe diameter—fuel injector type—low idle r.p.m., governed speed, maximum power and torque speeds—maximum horsepower and torque—fuel consumption at maximum power and torque—air aspiration system—exhaust system back pressure—air inlet restriction.

(f) All pertinent instrument information such as tuning—gain—serial numbers—detector numbers—range.

(g) Recorder chart. Identify zero traces—calibration or span traces—emission concentration traces for each test mode—start and finish of each test.

(h) Ambient temperature in dynamometer testing room.

(i) Engine intake air temperature and humidity for each mode.

(j) Barometric pressure.

(k) Observed engine torque for each mode.

(l) Intake airflow or exhaust flow for each mode.

(m) Fuel flow and temperature for each mode.

#### § 85.974-15 Calibration and instrument checks.

Calibration and instrument checks shall be performed according to section 2.3.1 of SAE Recommended Practice No. J177, dated June 1970, and sections 3 and 7 of SAE Recommended Practice No. J215, dated November 1970, except that the instrument zeros need not be checked after each analysis but as necessary to maintain test validity. Calibration and checks of other instruments used for the test shall be performed as necessary according to good practice.

#### § 85.974-16 Test run.

(a) The temperature of the air supplied to the engine shall be between 68° F. and 86° F. The fuel temperature at the pump inlet shall be 100° F. ±10° F. The observed barometric pressure shall be between 28.5 inches and 31 inches Hg. Higher air temperature or lower barometric pressure may be used, if desired, but no allowance shall be made for increased emissions because of such conditions.

(b) The governor and fuel system shall have been adjusted to provide engine performance at the levels specified by the engine manufacturer for maximum rated horsepower and maximum rated torque. These specifications



shall be reported in accordance with § 85.974-2(b)(3).

(c) The following steps shall be taken for each test:

(1) Install instrumentation and sample probes as required.

(2) Start cooling system.

(3) Start the engine, warm it up and precondition it by running it at rated speed and maximum horsepower for 10 minutes or until all temperatures and pressures have reached equilibrium.

(4) Determine by experimentation the maximum torque at rated speed and intermediate speed to calculate the torque values for the specified test modes.

(5) Zero and span the emission analyzers.

(6) Start the test sequence of § 85.974-11. Operate the engine for 10 minutes in each mode, completing engine speed and load changes in the first minute. Record the responses of the analyzers on a strip chart recorder for the full 10 minutes with exhaust gas flowing through the analyzers at least during the last 5 minutes. Record the engine speed and load, intake air temperature and restriction, exhaust back pressure, fuel flow and air or exhaust flow during the last 5 minutes of each mode, making certain that the speed and load requirements of § 85.974-11(b) are met during the last minute of each mode. Fuel flow during idle or 2 percent load conditions may be determined just prior to or immediately following the dynamometer sequence if longer times are required for accurate measurements.

(7) Read and record any additional data as required for § 85.974-14.

(8) Check and reset the zero and span settings of the emission analyzers as required, but at least at the end of the second idle mode (mode No. 7) and at the end of the test. If a change of over 2 percent of full-scale response is observed, make necessary adjustments to the analyzers and repeat all test modes since the last zero and span check.

(9) Backflush condensate trap and replace filters as required.

#### § 85.974-17 Chart reading.

(a) Locate the last 60 seconds of each mode and determine the average chart reading for HC, CO, and NO over the 1-minute period.

(b) Determine the concentration of HC, CO, NO during each mode from the average chart readings and the corresponding calibration data.

#### § 85.974-18 Calculations.

The final reported test results shall be derived through the following steps:

(a) Determine the exhaust gas mass-flow rate for each mode according to the SAE Recommended Practice J244 dated May 1971.

(b) Convert the measured carbon monoxide and nitric oxide concentrations to a wet basis according to sections 4 and 5.4 of SAE Recommended Practice No. J177 (See § 85.974-13(a)).

(c) Multiply the corrected nitric oxide values by the following humidity correction factor.

$$\frac{1}{1 - 0.0025 (H - 75)}$$

Where H is the humidity of the inlet air measured as grains of H<sub>2</sub>O per pound of dry air.

(d) Calculate the mass emissions of HC (HC<sub>mass</sub>), CO (CO<sub>mass</sub>), and NO<sub>x</sub> (NO<sub>x</sub><sub>mass</sub>) in grams per hour for each mode as follows:

(1)  $HC_{mass} = 0.0132 \times HC_{conc} \times \text{exhaust mass (lb./min.)}$

(2)  $CO_{mass} = 0.0263 \times CO_{conc} \times \text{exhaust mass (lb./min.)}$

(3)  $NO_{x, mass} = 0.0432 \times NO_{conc} \times \text{exhaust mass (lb./min.)}$

(e) Calculate the weighted brake horsepower and HC, CO, and NO<sub>x</sub><sub>mass</sub> values as follows:

(1) Multiply the average of the three idle values by a weighting factor of 0.2.

(2) Multiply the values for all of the other modes by a weighting factor of 0.08.

(f) Calculate the brake specific emissions for HC, CO, and NO<sub>x</sub> for each set of data as follows:

$$BSHC = \frac{\sum (HC_{mass} \times WF)}{\sum (\text{Measured BHP} \times WF)}$$

$$BSCO = \frac{\sum (CO_{mass} \times WF)}{\sum (\text{Measured BHP} \times WF)}$$

$$BSNO_x = \frac{\sum (NO_{x, mass} \times WF)}{\sum (\text{Measured BHP} \times WF)}$$

#### §§ 85.974-19—85.974-27 [Reserved]

#### § 85.974-28 Compliance with emission standards.

(a) The exhaust gaseous emission standards in § 85.974-1 apply to the emissions of engines for their useful life.

(b) Since emission control efficiency decreases with the accumulation of hours on the engine, the emission level of an engine which has accumulated 1,000 hours of dynamometer operation will be used as the basis for determining compliance with the standards.

(c) The procedure for determining compliance of a new engine with exhaust emission standards is as follows:

(1) Separate emission deterioration factors shall be determined from the emission results of the durability data engines for each engine-system combination. Separate factors shall be established for CO and for the combined emissions of HC and NO<sub>x</sub>.

(i) The applicable results to be used in determining the deterioration factors for each combination shall be:

(a) All emission data from the tests required under § 85.874(b) except the zero-hour tests. This shall include the official test results, as determined in § 85.974-29, for all tests conducted on all durability engines of the combination selected under § 85.874-5(c) (including all engines selected to be operated by the manufacturer under § 85.874-5(c)(2)).

(b) All emission data from the tests conducted before and after the maintenance provided in § 85.874-6(a)(1)(i).

(ii) All applicable results shall be plotted as a function of the hours on the system, rounded to the nearest hour, and the best fit straight line, fitted by the method of least squares, shall be drawn through these data points. The interpolated 125- and 1,000-hour points on this line must be within the standard provided in § 85.974-1 or the data shall

not be used in calculation of a deterioration factor.

(iii) An exhaust emission deterioration factor shall be calculated for each combination as follows:

factor = exhaust emissions interpolated to 1000 hours minus the exhaust emissions interpolated to 125 hours.

(2) The appropriate deterioration factor shall be added to the exhaust emissions test results for each emission data engine: *Provided*, That if a deterioration factor as computed in subparagraph (1) of this paragraph is negative, that deterioration factor shall be zero when comparing adjusted emissions to the standards.

(3) The emissions to compare with the standard shall be the adjusted emissions of subparagraph (2) of this paragraph for each emission data engine.

(4) Every test engine of an engine family must comply with all applicable standards, as determined in subparagraph (3) of this paragraph, before any engine in that family will be certified.

#### § 85.974-29 Testing by the Administrator.

(a) The Administrator may require that any one or more of the test engines be submitted to him, at such place or places as he may designate, for the purpose of conducting emissions tests. The Administrator may specify that he will conduct such testing at the manufacturer's facility, in which case instrumentation and equipment specified by the Administrator shall be made available by the manufacturer for test operations. Any testing conducted at a manufacturer's facility pursuant to this paragraph shall be scheduled by the manufacturer as promptly as possible.

(b)(1) Whenever the Administrator conducts a test on a test engine, the results of that test shall comprise the official data for the engine at that prescribed test point.

(2) Whenever the Administrator does not conduct a test on a test engine at a test point, the manufacturer's test data will be accepted as the official data for that test point: *Provided*, That if the Administrator makes a determination based on testing under paragraph (a) of this section, that there is a lack of correlation between the manufacturer's test equipment and the test equipment used by the Administrator, no manufacturer's test data will be accepted for purposes of certification until the reasons for the lack of correlation are determined and the validity of the data is established by the manufacturer.

(3) If the Administrator determines that the test data developed under paragraph (a) of this section would cause an engine to fail due to excessive 125-hour emissions or excessive deterioration, then the following procedure shall be observed:

(i) The manufacturer may request a retest. Before the retest, the engine may be adjusted to manufacturer's specifications, and parts may be replaced in accordance with § 85.974-6. All work on the engine shall be done at such location



and under such conditions, as the Administrator may prescribe.

(ii) The engine will be retested by the Administrator and the results of this test shall comprise the official data for that prescribed test point.

(4) If sufficient durability data is not available, at the time of any emission test conducted under paragraph (a) of this section, to enable the Administrator to determine whether a test engine would fail, the manufacturer may request a retest in accordance with the provisions of subparagraph (3) (i) and (ii) of this paragraph. If the manufacturer does not promptly make such request, he shall be deemed to have waived the right to a retest. A request for retest must be made before the manufacturer removes the engine from the test premises.

#### § 85.974-30 Certification.

(a) (1) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.974-29, the Administrator determines that a test engine(s) conforms to the regulations of this subpart, he will issue a certificate of conformity with respect to such engine(s).

(2) Such certificate will be issued for such period not more than 1 year as the Administrator may determine and upon such terms as he may deem necessary to assure that any new motor vehicle engine covered by the certificate will meet the requirements of these regulations relating to durability and performance.

(b) (1) The Administrator will determine whether an engine covered by the application complies with applicable standards by observing the following relationships:

(i) A test engine selected under § 85.974-5(b) (2) or (4) shall represent all engines in the same engine family of the same engine displacement-exhaust emission control system combination.

(ii) [Reserved]

(iii) A test engine selected under § 85.974-5(c) (1) shall represent all engines of the same engine-system combination.

(2) The Administrator will proceed as in paragraph (a) of this section with respect to the engines belonging to an engine family all of which comply with applicable standards.

(3) If, after a review of the test reports and data submitted by the manufacturer and data derived from any additional testing conducted pursuant to § 85.974-29, the Administrator determines that one or more test engines of the certification test fleet do not meet applicable standards, he will notify the manufacturer in writing, setting forth the basis for his determination. Within 30 days following receipt of the notification, the manufacturer may request a hearing on the Administrator's determination. The request shall be in writing, signed by an authorized representative of the manufacturer and shall include a statement specifying the manufacturer's objections to the Administrator's determination, and data in support of such

objections. If, after a review of the request and supporting data, the Administrator finds that the request raises a substantial factual issue, he shall provide the manufacturer a hearing in accordance with § 85.905 with respect to such issue.

(4) The manufacturer may, at his option, proceed with any of the following alternatives with respect to any engine family represented by a test engine(s) determined not in compliance with applicable standards:

(i) Request a hearing under § 85.905, or

(ii) Delete from the application for certification the engines represented by the failing test engine. (Engines so deleted may be included in a later request for certification under § 85.974-32.) The Administrator will then select in place of each failing engine an alternate engine chosen in accordance with selection criteria employed in selecting the engine that failed, or

(iii) Modify the test vehicle and demonstrate by testing that it meets applicable standards. Another engine which is in all material respects the same as the first engine, as modified, shall then be operated and tested in accordance with applicable test procedures.

(5) If the manufacturer does not request a hearing or present the required data under subparagraph (4) of this paragraph, the Administrator will deny certification.

#### § 85.974-31 Separate certification.

Where possible a manufacturer should include in a single application for certification all engines for which certification is required. A manufacturer may, however, choose to apply separately for certification of part of his product line. The selection of test engines and the computation of test results will be determined separately for each application.

#### § 85.974-32 Addition of an engine after certification.

(a) If a manufacturer proposes to add to his product line an engine of the same engine-system combination as engines previously certified but which was not described in the application for certification when the test engine(s) representing other engines of that combination was certified, he shall notify the Administrator. Such notification shall be in advance of the addition unless the manufacturer elects to follow the procedure described in § 85.974-34. This notification shall include a full description of the engine to be added.

(b) The Administrator may require the manufacturer to perform such tests on the test engine(s) representing the engine to be added which would have been required if the engine had been included in the original application for certification.

(c) If, after a review of the test reports and data submitted by the manufacturer, and data derived from any testing conducted under § 85.974-29, the Administrator determines that the test engine(s) meets all applicable standards, the appropriate certificate will be

amended accordingly. If the Administrator determines that the test engine(s) does not meet applicable standards, he will proceed under § 85.974-30(b).

#### § 85.974-33 Changes to an engine covered by certification.

(a) The manufacturer shall notify the Administrator of any change in production engines in respect to any of the parameters listed in § 85.073-5(a) (3), giving a full description of the change. Such notification shall be in advance of the change unless the manufacturer elects to follow the procedure described in § 85.974-34.

(b) Based upon the description of the change, and data derived from such testing as the Administrator may require or conduct, the Administrator will determine whether the engine, as modified, would still be covered by the certificate of conformity then in effect.

(c) If the Administrator determines that the outstanding certificate would cover the modified engines, he will notify the manufacturer in writing. Except as provided in § 85.974-34, the change may not be put into effect prior to the manufacturer's receiving this notification. If the Administrator determines that the modified engines would not be covered by the certificate then in effect, then the modified engines shall be treated as additions to the product line subject to § 85.974-32.

#### § 85.974-34 Alternative procedure for notification of additions and changes.

(a) A manufacturer may, in lieu of notifying the Administrator in advance of an addition of an engine under § 85.974-32 or a change in an engine under § 85.974-33, notify him concurrently with the making of the change if the manufacturer believes the addition or change will not require any testing under the appropriate section. Upon notification to the Administrator, the manufacturer may proceed to put the addition or change into effect.

(b) The manufacturer may continue to produce engines as described in the notification to the Administrator for a maximum of 30 days, unless the Administrator grants an extension in writing. This period may be shortened by a notification in accordance with paragraph (c) of this section.

(c) If the Administrator determines, based upon a description of the addition or change, that no test data will be required, he will notify the manufacturer in writing of the acceptability of the addition or change. If the Administrator determines that test data will be required, he will notify the manufacturer to rescind the change within 5 days of receipt of the notification. The Administrator will then proceed as in § 85.974-32 (b) and (c), or § 85.974-33 (b) and (c) as appropriate.

(d) Election to produce engines under this section will be deemed to be a consent to recall all engines which the Administrator determines under § 85.974-32 (c) do not meet applicable standards, and to cause such nonconformity to be remedied at no expense to the owner.



**§ 85.974-35 Labeling.**

(a) (1) The manufacturer of any heavy duty diesel engine subject to the standards prescribed in § 85.974-1 shall, at the time of manufacture, affix a permanent, legible label, of the type and in the manner described below, containing the information hereinafter provided, to all production models of such engines available for sale to the public and covered by a certificate of conformity under § 85.974-30(a).

(2) A plastic or metal label shall be welded, bonded, or otherwise permanently attached to the engine in a position in which it will be readily visible after installation in the vehicle.

(3) The label shall be attached to an engine part necessary for normal engine operation and not normally requiring replacement during engine life.

(4) The label shall contain the following information lettered in the English language in block letters and numerals which shall be of a color that contrasts with the background of the label:

(i) The label heading: Engine Exhaust Emission Control Information;

(ii) Full corporate name and trademark of manufacturer;

(iii) Engine family identification and model;

(iv) Date of engine manufacture (month and year);

(v) Engine specification:

Advertised hp. ----- @ ----- r.p.m.

Fuel rate @ advertised hp. ----- m.m.<sup>3</sup>/stroke.

Valve lash ----- (Inches).

Initial injection timing (if adjustable) -----

(The information applicable to each engine is to be inserted on the appropriate line.)

(vi) The statement: This Engine Conforms to U.S. Environmental Protection Agency Regulations Applicable to 1974 model year heavy duty diesel engines.

(b) The provisions of this section shall not prevent a manufacturer from also reciting on the label that such engine conforms to any applicable State emission standards for new motor vehicle engines or any other information that such manufacturer deems necessary for, or useful to the proper operation and satisfactory maintenance of the engine.

(c) The label may be made up of one or more pieces provided that all pieces are permanently attached to the same engine or vehicle part as applicable.

**§ 85.974-36 [Reserved]****§ 85.974-37 Production engines.**

(a) Any manufacturer obtaining certification under this subpart shall supply to the Administrator, upon his request, a reasonable number of production engines selected by the Administrator which are representative of the engines, emission control systems, fuel systems, and transmissions offered and typical of production models available for sale under the certificate. These engines shall be supplied for testing at such time and place and for such reasonable periods as the Administrator may require. Engines supplied under this paragraph may be required to be mounted in chassis and

appropriately equipped for operation on a chassis dynamometer.

(b) Any manufacturer obtaining certification under this part shall notify the Administrator, on a quarterly basis, of the number of engines of each engine family-engine displacement-exhaust emission control system-fuel system combination produced for sale in the United States during the preceding quarter.

**§ 85.974-38 Maintenance instructions.**

(a) The manufacturer shall furnish or cause to be furnished to the ultimate purchaser of each new engine subject to the standards prescribed in § 85.974-1, written instructions for the maintenance and use of the vehicle or engine by the ultimate purchaser as may be reasonable and necessary to assure the proper functioning of emission control systems.

(1) Such instructions shall be provided for those engine components listed in Appendix VI to this part (and for any other components) to the extent that maintenance of these components is necessary to assure the proper functioning of emission control systems.

(2) Such instructions shall be in clear, and to the extent practicable, nontechnical language.

(b) The maintenance instruction required by this section shall contain a general description of the documentation which the manufacturer will require from the ultimate purchaser or any subsequent purchaser as evidence of compliance with the instructions.

**§ 85.974-39 Submission of maintenance instructions.**

(a) The manufacturer shall provide to the Administrator, no later than the time of the submission required by § 85.974-4, a copy of the maintenance instructions which the manufacturer proposes to supply to the ultimate purchaser in accordance with § 85.974-38(a). The Administrator will review such instructions to determine whether they are reasonable and necessary to assure the proper functioning of the engine's emission control systems. The Administrator will notify the manufacturer of his determination whether such instructions are reasonable and necessary to assure the proper functioning of the emission control systems.

(b) Any revision to the maintenance instructions which will affect emissions shall be supplied to the Administrator at least 30 days before being supplied to the ultimate purchaser unless the Administrator consents to a lesser period of time.

**Subpart P—Importation of Motor Vehicles and Motor Vehicle Engines****§ 85.1501 Applicability.**

(a) The provisions of this subpart are applicable to new motor vehicles and new motor vehicle engines which are offered for importation or imported into the United States by any person. As used in this subpart, "new motor vehicles" and "new motor vehicle engines" mean

new and used motor vehicles or engines manufactured after the effective date of a regulation issued under section 202 of the Act which is applicable to such vehicles or engines (or which would have been applicable to such vehicles or engines had they been manufactured for importation into the United States). The term United States means the customs territory of the United States as defined in 19 U.S.C. 1202, and the Virgin Islands, Guam, and American Samoa.

(b) Regulations prescribing further procedures for entry of motor vehicles and motor vehicle engines into the customs territory of the United States, as defined in 19 U.S.C. 1202, are set forth in 19 CFR 12.73.

**§ 85.1502 Admission for testing.**

A motor vehicle or motor vehicle engine offered for importation or imported pursuant to 19 CFR 12.73(b)(5)(vi), solely for purposes of testing, may be operated on the public streets or highways for a period not to exceed 1 year from the date of importation if the importer or consignee receives prior written approval of such operation from the Administrator. Requests for such approval shall be in writing, and shall briefly describe the proposed testing program, including the estimated duration of such program.

**§ 85.1503 Admission pending certification.**

A motor vehicle or motor vehicle engine offered for importation or imported pursuant to 19 CFR 12.73(b)(5)(ix) under a declaration that it is one of a class of vehicles or engines represented by test vehicles or engines for which an application for certification of conformity with Federal motor vehicle emission standards is pending before the Administrator may be conditionally admitted into the United States, but shall be refused final admission unless:

(a) Not later than 5 days following such conditional admission the importer or consignee has submitted to the Administrator a written request that such vehicle or engine be permitted conditional admission pending certification of the test vehicle which represents the class of vehicles or engines to which such vehicle or engine belongs, which request shall contain the following:

(1) Identification of the test vehicle or engine which represents such vehicle or engine;

(2) Identification of the place where such vehicle or engine will be stored while the application for certification is pending before the Administrator; *Provided*, That such vehicle or engine shall not be stored on the premises of, or subject to access by or control of, any dealer;

(3) An acknowledgment of responsibility for the custody of the vehicle or engine while certification is pending; and

(b) The Administrator has issued the requested certificate of conformity.

**§ 85.1504 Admission pending modification.**

Any motor vehicle or motor vehicle engine offered for importation or im-



ported pursuant to 19 CFR 12.73(b)(5)(x) under a declaration that it is not covered by a certificate of conformity with Federal motor vehicle emission standards may be conditionally admitted into the United States, but shall be refused final admission unless:

(a) Not later than 5 days following such conditional admission, the importer or consignee has submitted to the Administrator a written request that he be allowed to modify the vehicle or engine so that it will be in conformity with applicable emission standards, which request shall contain the following:

(1) A statement, acceptable to the Administrator, that specifies the modifications which are necessary to render the vehicle or engine in conformity with a test vehicle or engine for which a certificate of conformity has been issued; or, if the vehicle or engine cannot be modified to bring it within a class of vehicles or engines represented by a test vehicle or engine for which a certificate of conformity has been issued, the request shall state that the importer or consignee will demonstrate that the vehicle or engine is in conformity with applicable emission standards by testing the vehicle or engine or causing it to be tested in accordance with test procedures prescribed in 40 CFR Part 85:

(2) The date by which the modifications will be accomplished;

(3) Identification of the place where the vehicle or engine will be stored pending a determination of conformity under this paragraph: *Provided*, That such vehicle or engine shall not be stored on the premises of, or subject to access by or control of any dealer;

(4) An acknowledgment of responsibility for the custody of the vehicle or engine while the modifications are being made and while a determination of conformity is pending;

(5) Authorization for representatives of the Environmental Protection Agency to inspect or test the vehicle or engine at any reasonable time for the purpose of making a determination of conformity; and

(b) The Administrator has issued a written determination stating that the vehicle or engine is in conformity with Federal motor vehicle emission standards.

**§ 85.1505 Admission pending receipt of information.**

Any motor vehicle or motor vehicle engine offered for importation or imported pursuant to 19 CFR 12.73(b)(5)(xi) under a declaration that the importer or consignee does not possess sufficient information to make a knowledgeable declaration may be conditionally admitted into the United States, but shall be refused final admission unless:

(a) Not later than 5 days following such conditional admission, the importer or consignee has submitted to the Administrator a written request that such vehicle or engine be permitted entry pending receipt of sufficient information to determine whether such vehicle or engine is covered by a certificate of con-

formity, and what modifications or testing, if any, are required to bring the vehicle or engine into conformity with applicable emission standards, which request shall contain the following:

(1) Identification of the place where the vehicle or engine will be stored while the receipt of the information is pending: *Provided*, That such vehicle shall not be stored on the premises of or subject to access by or control of, any dealer; and

(2) An acknowledgment of responsibility for the custody of the vehicle or engine during the period; and

(b) The importer or consignee redeclares the vehicle in accordance with 19 CFR 12.73(b)(5)(i) through (x).

**§ 85.1506 Waiver of conditions of admission.**

Upon the written request of the importer or consignee, and for good cause shown, the Administrator may waive any of the conditions of admission set forth in §§ 85.1502, 85.1503(a), 85.1504(a), and 85.1505(a), and may give written consent to admission of a vehicle or engine upon such terms and conditions as the Administrator may specify.

**§ 85.1507 Storage and prohibited operation or sale of vehicles or engines conditionally admitted.**

A motor vehicle or engine conditionally admitted pursuant to § 85.1503, § 85.1504, or § 85.1505 shall be stored and shall not be operated on the public highways or sold until such vehicle or engine has been granted final admission. Failure to comply with this provision shall constitute a violation of section 203(a)(1) of the Clean Air Act, as amended.

**§ 85.1508 Prohibited importation; penalties.**

(a) The importation of any motor vehicle or motor vehicle engine otherwise than in accordance with any applicable provisions of this subpart and the bonding and entry regulations of the Bureau of Customs set forth in 19 CFR 12.73 is prohibited.

(b) Any vehicle or engine conditionally admitted pursuant to § 85.1503, § 85.1504, or § 85.1505 and not granted final admission within 90 days of such conditional admission, or within such additional time as the Bureau of Customs may allow for good cause shown pursuant to 19 CFR 12.73(c), shall be deemed to be unlawfully imported into the United States in violation of section 203(a)(1) of the Clean Air Act unless such vehicle or engine shall have been delivered to the Bureau of Customs for export or other disposition under applicable Customs laws and regulations. Any importer or consignee who violates section 203(a)(1) of the Clean Air Act is subject to a civil penalty of not more than \$10,000 for each violation. In addition to the penalty provided in the Clean Air Act, any importer or consignee who fails to deliver such vehicle or engine to the Bureau of Customs is liable for liquidated damages in the amount of the bond required by applicable Customs laws and regulations.

**Subpart Q—Low-Emission Vehicles**

**§ 85.1601 Definitions.**

(a) As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (42 U.S.C. 1857f-1 et seq.) and in § 85.002:

(1) "Motor vehicle" means any self-propelled vehicle designed for use in the United States on the highways, other than a vehicle designed or used for military field training, combat, or tactical purposes.

(2) "Inherently low-polluting vehicle" means any low-emission vehicle which is powered by a propulsion system which does not require control devices, for exhaust emissions, external to the engine.

(3) "Anticipated certification period" means the 1-year period which begins 270 days after submission of a completed certification application to the Administrator.

(4) "Model year" as used in this subpart shall have the same meaning as that term has under section 202(b)(3)(A)(i) of the Clean Air Act.

(5) "Light duty motor vehicle" as used in this subpart means a motor vehicle which may be a suitable substitute for a class or model of light duty motor vehicles as defined at § 85.002(a)(5).

**§ 85.1602 Low-emission vehicle.**

(a) A "low-emission vehicle" for the purpose of being certified as a suitable substitute for any class or model of light duty motor vehicles means any motor vehicle for which a completed certification application has been filed in accordance with § 85.1603 and which—

(1) Meets the most stringent crankcase emission and fuel evaporative standards which will apply under section 202 of the Clean Air Act during any part of the anticipated certification period to motor vehicles of that type; and

(2) Produces exhaust emissions of (i) hydrocarbons or carbon monoxide which meet the emission standards applicable under section 202 of the Act to model year 1975 gasoline-fueled light duty vehicles, or (ii) oxides of nitrogen which meet the emission standard applicable under section 202 to model year 1976 gasoline-fueled light duty vehicles; and

(3) Does not exceed the following exhaust emission standards:

(i) *Hydrocarbons*. 3 grams per vehicle mile;

(ii) *Carbon monoxide*. 28 grams per

(iii) *Oxides of nitrogen*. 3.1 grams per vehicle mile; and

(4) Emits no air pollutant other than those pollutants which are emitted by any class or model of motor vehicles for which the applicant vehicle may be a suitable substitute, unless the Administrator determines that such other emissions will not contribute significantly to air pollution which causes or contributes to the endangerment of public health or welfare; and



(5) Does not significantly increase the emissions of any air pollutant not subject to an emission standard under section 202 of the Act by comparison to the emissions of such pollutant by any class or model of motor vehicles for which the applicant vehicle may be a suitable substitute.

(b) The applicable test procedures for determining compliance with the standards established by paragraph (a) of this section shall be those in effect under section 202 of the Act for 1975 model year gasoline-fueled light duty motor vehicles, except as provided in § 85.1603(b).

#### § 85.1603 Application for certification.

(a) Any person desiring certification of a test vehicle under section 212 of the Clean Air Act shall submit to the Administrator a notice of intent to submit a certification application with respect to such vehicle. The notice of intent shall contain a description of the vehicle, including the propulsion system and the fuel used by it, and such other information as the Administrator may request. The Administrator will transmit a copy of the notice of intent to the Low-Emission Vehicle Certification Board.

(b) As soon as practicable after receipt of a notice of intent to submit a certification application for a vehicle, the Administrator shall determine whether the test procedures required under § 85.1602(b) are applicable to that vehicle. If he determines they are inapplicable, he shall, as soon as practicable thereafter, prescribe test procedures for determining whether such vehicle is a low-emission vehicle, and, if necessary, he shall establish emission standards equivalent to those in effect under paragraph (a) of § 85.1602. He shall also select test vehicles in accordance with § 85.1603.

(c) After completion of testing of all test vehicles in accordance with applicable test procedures and with § 85.1604, the person desiring certification shall submit to the Administrator a written application signed by an authorized representative of the applicant. The application shall contain all emission data from the tests of the emission and durability data test vehicles and all data required by the Board under § 400.4 of this title, relative to the following vehicle characteristics:

- (1) Safety;
- (2) Performance characteristics;
- (3) Reliability potential;
- (4) Serviceability;
- (5) Fuel availability;
- (6) Noise level; and
- (7) Maintenance costs.

(d) Any certification application must be filed prior to July 8, 1972, in order for that vehicle to be eligible for certification, except that the Administrator may, after consultation with the Board, accept an application filed no later than December 31, 1972, if he determines that it is likely that the Board will be able to make the determination required by § 400.6 of this title no later than April 2, 1973.

(e) In addition to the information required under this section, and under

§ 400.4 of this title, the Administrator may require the applicant to submit any other information which the Administrator deems necessary in determining whether the test vehicle is a low-emission vehicle. The application for certification may be considered incomplete, unless all information required by the Administrator and the Low-Emission Vehicle Certification Board has been submitted.

(f) The Administrator shall, immediately upon receipt of a completed application for certification under paragraph (c) of this section, publish in the FEDERAL REGISTER notice of receipt of the application, the name of the applicant, a brief description of the propulsion system and fuel used by the applicant vehicle, and information concerning the method by which the public may have access to data relating to the emission characteristics of the applicant vehicle.

#### § 85.1604 Test vehicle selection.

(a) The test vehicles covered by the application for certification shall be divided into engine families in accordance with § 85.073-5(a)(2) unless the Administrator approves an alternative procedure under § 85.1603(b).

(b) Except as the Administrator may require pursuant to § 85.1603(b), the applicant shall test or cause to be tested two durability data vehicles of each engine-system combination and four emission data vehicles of each engine family described in the notice of intent. The test vehicles shall be selected by the Administrator upon receipt of the notice of intent and after consultation with the Board to determine the models or classes of vehicles for which the test vehicle may be a suitable substitute.

#### § 85.1605 Data reporting.

(a) All data on emission data and durability data test vehicles shall be reported in accordance with §§ 85.073-4(a), and 85.073-20(d).

(b) For the purpose of this subpart, § 85.073-7(e) shall not apply.

#### § 85.1606 Testing by the Administrator.

The Administrator may require that any one or more of the applicant's test vehicles be submitted to him, at such place or places and at such time or times as he may designate for the purpose of conducting emission tests.

#### § 85.1607 Administrator's determination.

(a) The Administrator shall, within 90 days after receipt of a completed application for certification, determine whether the applicant vehicle is a low-emission vehicle. Such determination shall be based upon an evaluation of the data provided to the Administrator in the application for certification, any supporting information the Administrator may obtain from the applicant, any relevant information obtained from the public, and the results of any testing the Administrator may have conducted in accordance with § 85.1606.

(b) The Administrator shall, immediately upon making the determination required in paragraph (a) of this sec-

tion, publish in the FEDERAL REGISTER notice of such determination and the reasons therefor.

(c) The Administrator may make any recommendation which he deems appropriate concerning whether any applicant vehicle is an inherently low-polluting vehicle.

(d) If at any time after making an affirmative determination under paragraph (a) of this section but prior to certification by the Board, the Administrator obtains information which demonstrates that the applicant vehicle is not a low-emission vehicle, he may revoke such determination. The Administrator must immediately thereafter notify the Board and publish in the FEDERAL REGISTER notice of such revocation and the reasons therefor.

#### § 85.1608 Postcertification testing.

The Administrator shall, at the request of the Board, test the emissions from certified low-emission vehicles purchased by the Federal Government. If these tests show that the emissions exceed the rates on which the Administrator based his determination under § 85.1607, the Administrator shall notify the Board.

#### APPENDIX I

EPA URBAN DYNAMOMETER DRIVING SCHEDULE  
(Speed versus Time Sequence)

Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)
0	0.0	57	19.8	114	32.2
1	0.0	58	21.6	115	31.7
2	0.0	59	23.2	116	28.6
3	0.0	60	24.2	117	23.3
4	0.0	61	24.6	118	22.0
5	0.0	62	24.9	119	18.7
6	0.0	63	25.0	120	15.4
7	0.0	64	24.6	121	12.1
8	0.0	65	24.5	122	8.8
9	0.0	66	24.7	123	5.5
10	0.0	67	24.8	124	2.2
11	0.0	68	24.7	125	0.0
12	0.0	69	24.6	126	0.0
13	0.0	70	24.6	127	0.0
14	0.0	71	25.1	128	0.0
15	0.0	72	25.6	129	0.0
16	0.0	73	25.7	130	0.0
17	0.0	74	25.4	131	0.0
18	0.0	75	24.9	132	0.0
19	0.0	76	25.0	133	0.0
20	0.0	77	25.4	134	0.0
21	3.0	78	26.0	135	0.0
22	5.9	79	26.0	136	0.0
23	8.6	80	25.7	137	0.0
24	11.5	81	26.1	138	0.0
25	14.3	82	26.7	139	0.0
26	16.9	83	27.5	140	0.0
27	17.3	84	28.6	141	0.0
28	18.1	85	29.3	142	0.0
29	20.7	86	29.8	143	0.0
30	21.7	87	30.1	144	0.0
31	22.4	88	30.4	145	0.0
32	22.5	89	30.7	146	0.0
33	22.1	90	30.7	147	0.0
34	21.5	91	30.5	148	0.0
35	20.9	92	30.4	149	0.0
36	20.4	93	30.3	150	0.0
37	19.8	94	30.4	151	0.0
38	17.0	95	30.8	152	0.0
39	14.9	96	30.4	153	0.0
40	14.9	97	29.9	154	0.0
41	15.2	98	29.5	155	0.0
42	15.5	99	29.8	156	0.0
43	16.0	100	30.3	157	0.0
44	17.1	101	30.7	158	0.0
45	19.1	102	30.9	159	0.0
46	21.1	103	31.0	160	0.0
47	22.7	104	30.9	161	0.0
48	22.9	105	30.4	162	0.0
49	22.7	106	29.8	163	0.0
50	22.6	107	29.9	164	3.3
51	21.3	108	30.2	165	6.6
52	19.0	109	30.7	166	9.9
53	17.1	110	31.2	167	13.2
54	15.8	111	31.8	168	16.5
55	15.8	112	32.2	169	19.8
56	17.7	113	32.4	170	22.2



# RULES AND REGULATIONS

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APPENDIX I—Continued

Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)
171	24.3	274	52.5	376	36.0
172	25.8	275	53.0	377	36.0
173	26.4	276	53.5	378	36.1
174	26.7	277	54.0	379	36.4
175	25.1	278	55.9	380	36.5
176	24.7	279	55.4	381	36.4
177	25.0	280	55.4	382	36.0
178	25.2	281	56.0	383	35.1
179	25.4	282	56.0	384	34.1
180	25.8	283	55.8	385	33.5
181	27.2	284	55.2	386	31.4
182	26.5	285	54.6	387	29.0
183	24.0	286	53.6	388	25.7
184	22.7	287	52.5	389	23.0
185	19.4	288	51.6	390	20.3
186	17.7	289	51.5	391	17.5
187	17.2	290	51.5	392	14.5
188	18.1	291	51.1	393	12.0
189	18.6	292	50.1	394	8.7
190	20.0	293	50.0	395	5.4
191	22.2	294	50.1	396	2.1
192	24.5	295	50.0	397	0.0
193	27.3	296	49.6	398	0.0
194	30.5	297	49.5	399	0.0
195	33.5	298	49.5	400	0.0
196	36.2	299	49.5	401	0.0
197	37.3	300	49.1	402	0.0
198	39.3	301	48.6	403	2.6
199	40.5	302	48.1	404	5.9
200	42.1	303	47.2	405	9.2
201	43.5	304	46.1	406	12.5
202	45.1	305	45.0	407	15.8
203	46.0	306	43.8	408	19.1
204	46.8	307	42.5	409	22.4
205	47.5	308	41.5	410	25.0
206	47.5	309	40.5	411	25.6
207	47.3	310	38.5	412	27.5
208	47.2	311	37.0	413	29.0
209	47.0	312	35.2	414	30.0
210	47.0	313	33.8	415	30.1
211	47.0	314	32.5	416	30.0
212	47.0	315	31.5	417	29.7
213	47.0	316	30.6	418	29.3
214	47.2	317	30.5	419	28.8
215	47.4	318	30.0	420	28.0
216	47.9	319	29.0	421	25.0
217	48.5	320	27.5	422	21.7
218	49.1	321	24.8	423	18.4
219	49.5	322	21.5	424	15.1
220	50.0	323	20.1	425	11.8
221	50.6	324	19.1	426	8.5
222	51.0	325	18.5	427	5.2
223	51.5	326	17.0	428	1.9
224	52.2	327	15.5	429	0.0
225	53.2	328	12.5	430	0.0
226	54.1	329	10.8	431	0.0
227	54.6	330	8.0	432	0.0
228	51.9	331	4.7	433	0.0
229	55.0	332	1.4	434	0.0
230	54.9	333	0.0	435	0.0
231	54.6	334	0.0	436	0.0
232	54.6	335	0.0	437	0.0
233	54.8	336	0.0	438	0.0
234	55.1	337	0.0	439	0.0
235	55.5	338	0.0	440	0.0
236	55.7	339	0.0	441	0.0
237	56.1	340	0.0	442	0.0
238	56.3	341	0.0	443	0.0
239	56.6	342	0.0	444	0.0
240	56.7	343	0.0	445	0.0
241	56.7	344	0.0	446	0.0
242	56.5	345	0.0	447	0.0
243	56.5	346	0.0	448	3.3
244	56.5	347	1.0	449	6.6
245	56.5	348	4.3	450	9.9
246	56.5	349	7.6	451	13.2
247	56.5	350	10.9	452	16.5
248	56.4	351	14.2	453	19.8
249	56.1	352	17.3	454	23.1
250	55.8	353	20.0	455	26.4
251	55.1	354	22.5	456	27.8
252	54.6	355	23.7	457	29.1
253	54.2	356	25.2	458	31.1
254	54.0	357	26.6	459	33.1
255	53.7	358	28.1	460	33.1
256	53.6	359	30.0	461	34.8
257	53.9	360	30.8	462	35.1
258	54.0	361	31.6	463	35.1
259	54.1	362	32.1	464	36.1
260	54.1	363	32.8	465	36.1
261	53.8	364	33.6	466	36.1
262	53.4	365	34.5	467	36.1
263	53.0	366	34.6	468	36.0
264	52.6	367	34.9	469	35.7
265	52.1	368	34.8	470	36.1
266	52.4	369	34.5	471	36.1
267	52.0	370	34.7	472	35.1
268	51.9	371	35.5	473	35.1
269	51.7	372	36.0	474	35.5
270	51.5	373	36.0	475	35.5
271	51.6	374	36.0	476	35.5
272	51.8	375	36.0	477	35.5
273	52.1	376	36.0	478	35.2

APPENDIX I—Continued

Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)
479	35.2	582	17.0	685	0.0
480	35.2	583	16.9	686	0.0
481	35.0	584	16.6	687	0.0
482	35.1	585	17.0	688	0.0
483	35.2	586	17.1	689	0.0
484	35.5	587	17.0	690	0.0
485	35.2	588	16.6	691	0.0
486	35.0	589	16.5	692	0.0
487	35.0	590	16.5	693	0.0
488	35.0	591	16.6	694	1.4
489	34.8	592	17.0	695	3.3
490	34.6	593	17.6	696	4.4
491	34.5	594	18.5	697	6.5
492	33.5	595	19.2	698	9.2
493	32.0	596	20.2	699	11.3
494	30.1	597	21.0	700	13.5
495	28.0	598	21.1	701	14.6
496	26.5	599	21.2	702	16.4
497	22.5	600	21.6	703	16.7
498	19.8	601	22.0	704	16.5
499	16.5	602	22.4	705	16.5
500	13.2	603	22.5	706	18.2
501	10.3	604	22.5	707	19.2
502	7.2	605	22.5	708	20.1
503	4.0	606	22.7	709	21.5
504	1.0	607	23.7	710	22.5
505	0.0	608	25.1	711	22.5
506	0.0	609	26.0	712	22.1
507	0.0	610	26.5	713	22.7
508	0.0	611	27.0	714	23.3
509	0.0	612	26.1	715	23.5
510	0.0	613	22.8	716	22.5
511	1.2	614	19.5	717	21.6
512	3.5	615	16.2	718	20.5
513	5.5	616	12.9	719	18.0
514	6.5	617	9.6	720	15.0
515	8.5	618	6.3	721	12.0
516	9.6	619	3.0	722	9.0
517	10.5	620	0.0	723	6.2
518	11.9	621	0.0	724	4.5
519	14.0	622	0.0	725	3.0
520	16.0	623	0.0	726	2.1
521	17.7	624	0.0	727	0.5
522	19.0	625	0.0	728	0.5
523	20.1	626	0.0	729	3.2
524	21.0	627	0.0	730	6.5
525	22.0	628	0.0	731	9.6
526	23.0	629	0.0	732	12.5
527	23.8	630	0.0	733	14.0
528	24.5	631	0.0	734	16.0
529	24.9	632	0.0	735	18.0
530	25.0	633	0.0	736	19.6
531	25.0	634	0.0	737	21.5
532	25.0	635	0.0	738	23.1
533	25.0	636	0.0	739	24.6
534	25.0	637	0.0	740	25.8
535	25.0	638	0.0	741	26.5
536	25.6	639	0.0	742	27.1
537	25.8	640	0.0	743	27.6
538	26.0	641	0.0	744	27.9
539	25.6	642	0.0	745	28.3
540	25.2	643	0.0	746	28.6
541	25.0	644	0.0	747	28.6
542	25.0	645	0.0	748	28.3
543	25.0	646	2.0	749	28.2
544	24.4	647	4.5	750	28.0
545	23.1	648	7.8	751	27.5
546	19.8	649	10.2	752	26.8
547	16.5	650	12.5	753	25.5
548	13.2	651	14.0	754	23.5
549	9.9	652	15.3	755	21.5
550	6.6	653	17.5	756	19.0
551	3.3	654	19.6	757	16.5
552	0.0	655	21.0	758	14.9
553	0.0	656	22.2	759	12.5
554	0.0	657	23.3	760	9.4
555	0.0	658	24.5	761	6.2
556	0.0	659	25.3	762	3.0
557	0.0	660	25.6	763	1.5
558	0.0	661	26.0	764	0.5
559	0.0	662	26.1	765	0.5
560	0.0	663	26.2	766	0.0
561	0.0	664	26.2	767	3.0
562	0.0	665	26.4	768	6.3
563	0.0	666	26.5	769	9.6
564	0.0	667	26.5	770	12.9
565	0.0	668	26.0	771	15.8
566	0.0	669	25.5	772	17.5
567	0.0	670	23.6	773	18.4
568	0.0	671	21.4	774	19.8
569	3.3	672	18.5	775	20.7
570	6.6	673	16.4	776	22.0
571	9.9	674	14.5	777	23.2
572	13.0	675	11.6	778	25.0
573	14.6	676	8.7	779	26.5
574	16.0	677	5.8	780	27.5
575	17.0	678	3.5	781	28.0
576	17.0	679	2.0	782	28.3
577	17.0	680	0.0	783	28.9
578	17.5	681	0.0	784	28.9
579	17.7	682	0.0	785	28.9
580	17.7	683	0.0	786	28.8
581	17.5	684	0.0	787	28.5

APPENDIX I—Continued

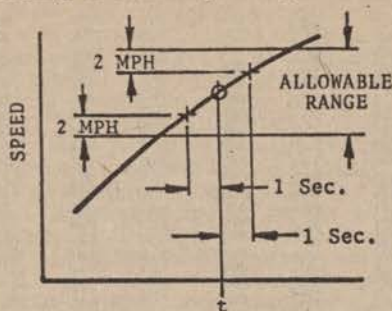
Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)
788	28.3	892	27.8	996	23.0
789	28.3	893	28.0	997	22.7
790	28.3	894	27.8	998	22.7
791	28.2	895	28.0	999	22.7
792	27.6	896	28.0	1,000	23.5
793	27.5	897	28.0	1,001	24.0
794	27.5	898	27.7	1,002	24.6
795	27.5	899	27.4	1,003	24.8
796	27.5	900	26.9	1,004	25.0
797	27.5	901	26.6	1,005	25.0
798	27.5	902	26.5	1,006	25.0
799	27.6	903	26.5	1,007	25.0
800	28.0	904	26.5	1,008	25.0
801	28.5	905	26.3	1,009	23.0
802	30.0	906	26.2	1,010	23.0
803	31.0	907	26.2	1,011	23.0
804	32.0	908	25.9	1,012	22.0
805	33.0	909	25.6	1,013	22.0
806	33.0	910	25.6	1,014	22.0
807	33.6	911	25.9	1,015	21.0
808	34.0	912	25.8	1,016	20.0
809	34.3	913	25.5	1,017	17.0
810	34.2	914	24.6	1,018	14.0
811	34.0	915	23.5	1,019	10.0
812	34.0	916	22.2	1,020	7.0
813	33.9	917	21.6	1,021	4.0
814	33.6	918	21.6	1,022	1.0
815	33.1	919	21.7	1,023	0.0
816	33.0	920	22.6	1,024	0.0
817	32.5	921	23.4	1,025	0.0
818	32.0	922	24.0	1,026	0.0
819	31.9	923	24.2	1,027	0.0
820	31.6	924	24.4	1,028	0.0
821	31.5	925	24.9	1,029	0.0
822	30.6	926	25.1	1,030	0.0
823	30.0	927	25.2	1,031	0.0
824	29.9	928	25.3	1,032	0.0
825	29.9	929	25.5	1,033	0.0
826	29.9	930	25.2	1,034	0.0
827	29.9	931	25.0	1,035	0.0
828	29.6	932	25.0	1,036	0.0
829	29.5	933	25.0	1,037	0.0
830	29.5	934	24.7	1,038	0.0
831	29.3	935	24.5	1,039	0.0
832	28.9	936	24.3	1,040	0.0
833	28.2	937	24.3	1,041	0.0
834	27.7	938	24.5	1,042	0.0
835	27.0	939	25.0	1,043	0.0
836	25.5	940	25.0	1,044	0.0
837	23.7	941	24.6	1,045	0.0
838	22.0	942	24.6	1,046	0.0
839	20.5	943	24.1	1,047	0.0
840	19.2	944	24.5	1,048	0.0
841	19.2	945	25.1	1,049	0.0
842	20.1	946	25.6	1,050	0.0
843	20.9	947	25.1	1,051	0.0
844	21.4	948	24.0	1,052	0.0
845	22.0	949	22.0	1,053	1.2
846	22.6	950	20.1	1,054	4.0
847	23.2	951	16.9	1,055	7.3
848	24.0	952	13.6	1,056	10.0
849	25.0	953	10.3	1,057	13.0
850	26.0	954	7.0	1,058	17.0
851	26.6	955	3.7	1,059	18.0
852	26.6	956	0.0	1,060	20.0
853	26.6	957	0.0	1,061	21.8
854	27.0	958	0.0	1,062	23.0
855	27.2	959	0.0	1,063	24.0
856	27.8	960	2.0	1,064	24.5
857	28.1	961	5.0	1,065	25.0
858	28.8	962	8.6	1,066	26.0
859	28.9	963	11.9	1,067	26.8
860	29.0	964	15.2	1,068	27.0
861	29.1	965	17.5	1,069	27.9
862	29.0	966	18.6	1,070	28.0
863	28.1	967	20.0	1,071	28.0
864	27.5	968	21.1	1,072	27.0
865	27.0	969	22.0	1,073	27.0
866	25.8	970	23.0	1,074	27.0
867	25.0	971	24.5	1,075	26.3
868	24.5	972	26.3	1,076	24.5
869	24.8	973	27.5	1,077	22.5
870	25.1	974	28.1	1,078	21.5
871	25.5	975	28.4	1,079	20.6
872	25.7	976	28.5	1,080	18.0
873	26.2	977	28.5	1,081	15.0
874	26.9	978	28.5	1,082	12.3
875	27.5	979	27.7	1,083	11.1
876	27.8	980	27.5	1,084	10.6
877	28.4	981	27.2	1,085	10.0
878	29.0	982	26.8	1,086	9.5
879	29.2	983	26.5	1,087	9.1
880	29.1	984	26.0	1,088	8.7
881	29.0	985	25.7	1,089	8.6
882	28.9	986	25.2	1,090	8.8
883	28.5	987	24.0	1,091	9.0
884	28.1	988	22.0	1,092	8.7
885	28.0	989	21.5	1,093	8.8
886	28.0	990	21.8	1,094	8.0
887	27.6	991	21.5	1,095	7.0
888	27.2	992	22.5	1,096	6.0
889	26.6	993	23.0	1,097	4.6
890	27.0	994	22.8	1,098	2.6
891	27.5	995	22.8	1,099	1.0



## APPENDIX I—Continued

Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)	Time (sec.)	Speed (m.p.h.)
1.100	0.0	1.191	0.0	1.282	23.5
1.101	0.1	1.192	0.0	1.283	23.5
1.102	0.6	1.193	0.0	1.284	23.5
1.103	1.6	1.194	0.0	1.285	23.5
1.104	3.6	1.195	0.0	1.286	23.5
1.105	6.9	1.196	0.0	1.287	23.5
1.106	10.0	1.197	0.2	1.288	24.0
1.107	12.8	1.198	1.5	1.289	24.1
1.108	14.0	1.199	3.5	1.290	24.5
1.109	14.5	1.200	6.5	1.291	24.7
1.110	16.0	1.201	9.8	1.292	25.0
1.111	18.1	1.202	12.0	1.293	25.4
1.112	20.0	1.203	12.9	1.294	25.6
1.113	21.0	1.204	13.0	1.295	25.7
1.114	21.2	1.205	12.6	1.296	26.0
1.115	21.3	1.206	12.8	1.297	26.2
1.116	21.4	1.207	13.1	1.298	27.0
1.117	21.7	1.208	13.1	1.299	27.8
1.118	22.5	1.209	14.0	1.300	28.3
1.119	23.0	1.210	15.5	1.301	29.0
1.120	23.8	1.211	17.0	1.302	29.1
1.121	24.5	1.212	18.6	1.303	29.0
1.122	25.0	1.213	19.7	1.304	28.0
1.123	24.9	1.214	21.0	1.305	24.7
1.124	24.8	1.215	21.5	1.306	21.4
1.125	25.0	1.216	21.8	1.307	18.1
1.126	25.4	1.217	21.8	1.308	14.8
1.127	25.8	1.218	21.5	1.309	11.5
1.128	26.0	1.219	21.2	1.310	8.2
1.129	26.4	1.220	21.5	1.311	4.9
1.130	26.6	1.221	21.8	1.312	1.6
1.131	26.9	1.222	22.0	1.313	0.0
1.132	27.0	1.223	21.9	1.314	0.0
1.133	27.0	1.224	21.7	1.315	0.0
1.134	27.0	1.225	21.5	1.316	0.0
1.135	26.9	1.226	21.5	1.317	0.0
1.136	26.8	1.227	21.4	1.318	0.0
1.137	26.8	1.228	20.1	1.319	0.0
1.138	26.5	1.229	19.5	1.320	0.0
1.139	26.4	1.230	19.2	1.321	0.0
1.140	26.0	1.231	19.6	1.322	0.0
1.141	25.5	1.232	19.8	1.323	0.0
1.142	24.6	1.233	20.0	1.324	0.0
1.143	23.5	1.234	19.5	1.325	0.0
1.144	21.5	1.235	17.5	1.326	0.0
1.145	20.0	1.236	15.5	1.327	0.0
1.146	17.5	1.237	13.0	1.328	0.0
1.147	16.0	1.238	10.0	1.329	0.0
1.148	14.0	1.239	8.0	1.330	0.0
1.149	10.7	1.240	6.0	1.331	0.0
1.150	7.4	1.241	4.0	1.332	0.0
1.151	4.1	1.242	2.5	1.333	0.0
1.152	0.8	1.243	0.7	1.334	0.0
1.153	0.0	1.244	0.0	1.335	0.0
1.154	0.0	1.245	0.0	1.336	0.0
1.155	0.0	1.246	0.0	1.337	0.0
1.156	0.0	1.247	0.0	1.338	1.5
1.157	0.0	1.248	0.0	1.339	4.8
1.158	0.0	1.249	0.0	1.340	8.1
1.159	0.0	1.250	0.0	1.341	11.4
1.160	0.0	1.251	0.0	1.342	13.2
1.161	0.0	1.252	1.0	1.343	15.1
1.162	0.0	1.253	1.0	1.344	16.8
1.163	0.0	1.254	1.0	1.345	18.3
1.164	0.0	1.255	1.0	1.346	19.5
1.165	0.0	1.256	1.0	1.347	20.3
1.166	0.0	1.257	1.6	1.348	21.3
1.167	0.0	1.258	3.0	1.349	21.9
1.168	0.0	1.259	4.0	1.350	22.1
1.169	2.1	1.260	5.0	1.351	22.4
1.170	5.4	1.261	6.3	1.352	22.0
1.171	8.7	1.262	8.0	1.353	21.6
1.172	12.0	1.263	10.0	1.354	21.1
1.173	15.3	1.264	10.5	1.355	20.5
1.174	18.6	1.265	9.5	1.356	20.0
1.175	21.1	1.266	8.5	1.357	19.6
1.176	23.0	1.267	7.6	1.358	18.5
1.177	23.5	1.268	8.8	1.359	17.5
1.178	23.0	1.269	11.0	1.360	16.5
1.179	22.5	1.270	14.0	1.361	15.5
1.180	20.0	1.271	17.0	1.362	14.0
1.181	16.7	1.272	19.5	1.363	11.0
1.182	13.4	1.273	21.0	1.364	8.0
1.183	10.1	1.274	21.8	1.365	5.2
1.184	6.8	1.275	22.2	1.366	2.5
1.185	3.5	1.276	23.0	1.367	0.0
1.186	0.2	1.277	23.6	1.368	0.0
1.187	0.0	1.278	24.1	1.369	0.0
1.188	0.0	1.279	24.5	1.370	0.0
1.189	0.0	1.280	24.5	1.371	0.0
1.190	0.0	1.281	24.0	1.372	0.0

The diagrams below show the range of acceptable speed tolerances for typical points. The curve on the left is typical of portions of the speed curve which are increasing or decreasing throughout the two



TIME

## APPENDIX II

## PROCEDURE FOR DYNAMOMETER ROAD HORSE-POWER CALIBRATION

This appendix describes the method for determining the road horsepower absorbed by a chassis dynamometer. The measured absorbed road horsepower includes the dynamometer friction as well as the power absorbed by the power absorption unit. The dynamometer is driven above the test speed range. The device used to drive the dynamometer is then disengaged from the dynamometer and the roll(s) is allowed to coast down. The kinetic energy of the system is dissipated by the dynamometer friction and absorption unit. This method neglects the variations in roll bearing friction due to the drive axle weight of the vehicle. The difference in coast down time of the free (rear) roll relative to the drive (front) roll may be neglected in the case of dynamometers with paired rolls.

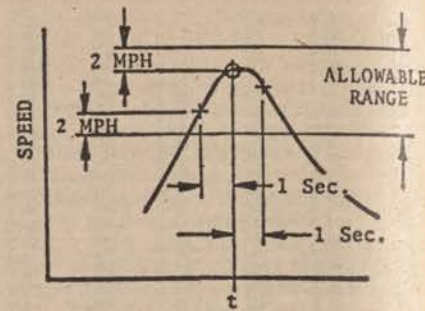
These procedures shall be followed:

1. Devise a method to determine the speed of the drive roll if not already measured. A fifth wheel, revolution pickup or other suitable means may be used.
2. Place a vehicle on the dynamometer or devise another method of driving the dynamometer.
3. Engage inertia flywheel for the most common vehicle weight class for which the dynamometer is used.
4. Drive dynamometer up to 50 m.p.h.
5. Record indicated road horsepower.
6. Drive dynamometer up to 60 m.p.h.
7. Disengage the device used to drive the dynamometer.
8. Record the time for the dynamometer drive roll to coast down from 55 m.p.h. to 45 m.p.h.
9. Adjust the power absorption unit to a different level.
10. Repeat steps 4 to 9 above sufficient times to cover the range of road horsepower used.
11. Calculate absorbed road horsepower from:  

$$HP_a = (1/2) (W_i/82.2) (V_1^2 - V_2^2) / (550t)$$

$$HP_a = 0.06073 (W_i/t)$$
 Where:  
 $W_i$  = Equivalent inertia in lb.  
 $V_1$  = Initial velocity in ft./sec. (55 m.p.h. = 80.67 ft./sec.)  
 $V_2$  = Final velocity in ft./sec. (45 m.p.h. = 66 ft./sec.)  
 $t$  = Elapsed time for rolls to coast from 55 m.p.h. to 45 m.p.h.

second time interval. The curve on the right is typical of portions of the speed curve which include a maximum or minimum value.

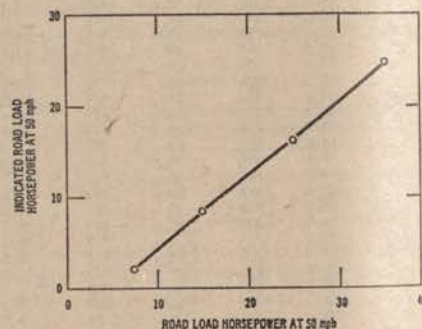


TIME

$V_2$  = Final velocity in ft./sec. (45 m.p.h. = 66 ft./sec.)

$t$  = Elapsed time for rolls to coast from 55 m.p.h. to 45 m.p.h.

12. Plot indicated road load horsepower at 50 m.p.h. versus road load horsepower at 50 m.p.h.

EXAMPLE: Dynamometer calibration curve  
(See, No. CN-255-R) 5-24-69

13. The road load horsepower reported in § 85.073-15 is obtained by entering the plot at the indicated road load horsepower determined in § 85.073-15(c) (1) (ii).

14. Once the road load horsepower at 50 m.p.h. is known for a vehicle, it may be tested on other dynamometers using a similar calibration.

## APPENDIX III

## CONSTANT VOLUME SAMPLER FLOW CALIBRATION

The following procedure is used in Federal laboratories to calibrate the gas flow of constant volume samplers which use positive displacement pumps. First, the gas flow as a function of the pressure increase across the pump is determined. Second, the whole system, including the instruments, is checked to determine if it accounts for an amount of pure propane or carbon monoxide (caution—carbon monoxide is extremely toxic) introduced into the system.

The following steps are followed to determine the gas flow as a function of the pressure increase across the pump in cubic feet per pump revolution.



1. The pump inlet pressure depression during a typical test is determined.
2. A variable flow restrictor, such as a slide valve, is attached to the CVS at a point upstream of the positive displacement pump. The dilution air filter system may or may not be in use during calibration, depending on the particular CVS design.
3. A flow measuring device (laminar flow element) is attached ahead of the flow restrictor.
4. The CVS is operated at several different pump inlet pressure settings (controlled by the flow restrictor) and the measurements as specified in § 85.073-22 (h), (j), (l), (m), the time per test, and the measurements related to the flow device are recorded. The data points are equally spaced around the normal operating condition.
5. The gas flow,  $Q$ , at each test point is calculated in standard cubic feet per minute from the flow device data.
6. The gas flow (at pump inlet pressure and temperature) is calculated in cubic feet per revolution from the following:

$$V_o = \frac{Q}{n} \times \frac{T_p}{528} \times \frac{760}{P_p}$$

Where:

$Q$  = Gas flow in standard cubic feet per minute.

$n$  = Pump speed in revolution per minute. See § 85.073-26 for remainder of definitions.

7.  $V_o$  is plotted versus the square root of the pressure increase across the pump,  $\Delta P$ , and a linear fit is performed.

The following procedure is followed to check the CVS calibration using a known quantity of injected gas. It assumes a reliable analyzer calibration.

1. A small cylinder is charged with pure propane or carbon monoxide gas (caution—carbon monoxide is extremely toxic).
2. The cylinder is weighed to the nearest 0.01 gram.
3. The CVS is operated in the normal manner and a quantity of pure propane or carbon monoxide is released into the system.
4. The calculations of § 85.073-26 are performed in the normal way except the density of propane (17.30 grams/cu. ft./carbon atom) is used in place of the density of exhaust hydrocarbons.
5. The CVS measured mass is compared to the gravimetric measured mass.
6. The reason for any discrepancy is found and corrected.

#### APPENDIX IV

##### DURABILITY DRIVING SCHEDULE

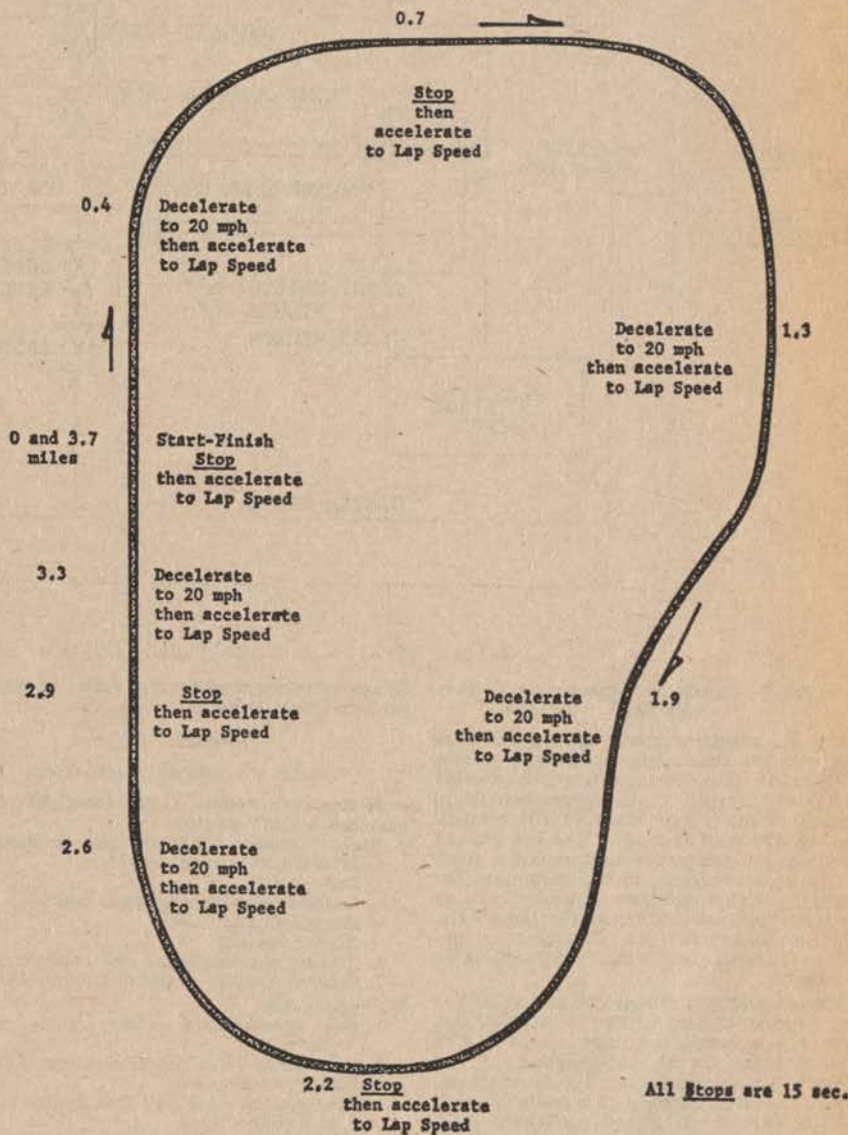
The schedule consists basically of 11 laps of 3.7 mile course. The basic vehicle speed for each lap is listed below:

Lap	Speed- m.p.h.
1	40
2	30
3	40
4	40
5	35
6	30
7	35
8	45
9	35
10	55
11	70

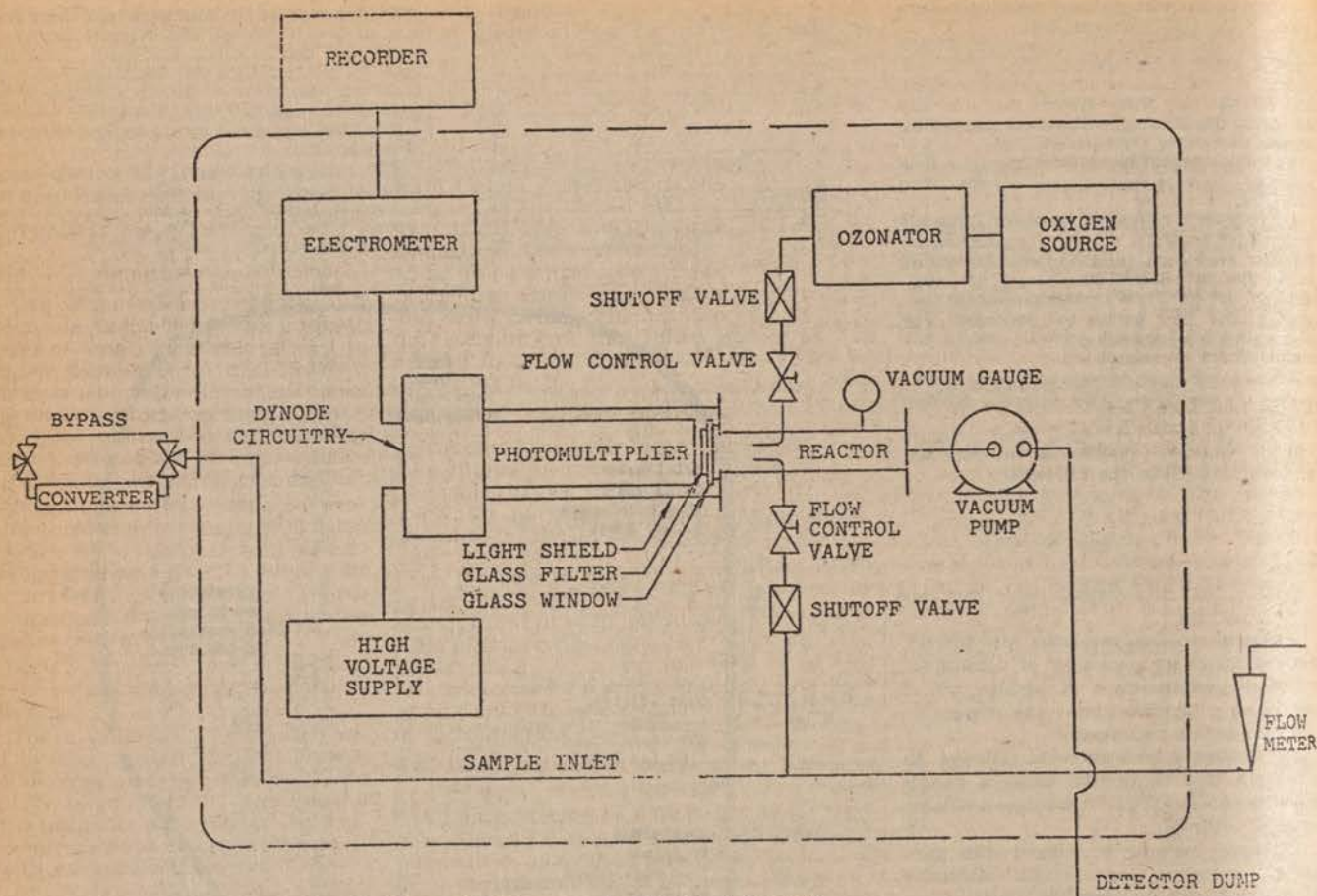
During each of the first nine laps there are 4 stops with 15 second idle. Normal accelerations and decelerations are used. In addition, there are 5 light decelerations each lap from the base speed to 20 m.p.h. followed by light accelerations to the base speed.

The 10th lap is run at a constant speed of 55 m.p.h.

The 11th lap is begun with a wide open throttle acceleration from stop to 70 m.p.h. A normal deceleration to idle followed by a second wide open throttle acceleration occurs at the midpoint of the lap.







Oxides of Nitrogen Analytical System

## APPENDIX V—OXIDES OF NITROGEN ANALYTICAL SYSTEM

The chemiluminescence method utilizes the principle that nitric oxide (NO) reacts with ozone ( $O_3$ ) to give nitrogen dioxide ( $NO_2$ ) and oxygen ( $O_2$ ). Approximately 10 percent of the  $NO_2$  is electronically excited. The transition of excited  $NO_2$  to the ground state yields a detectable light emission (590-630 nanometer region) at low pressures. The intensity of this emission is proportional to the mass flow rate of NO into the reactor. The light emission can be measured utilizing a photomultiplier tube and associated electronics.

The method also utilizes the principle that the thermal decomposition of  $NO_2$  ( $2NO_2 \rightarrow 2NO + O_2$ ) is complete at about 600° C. The rate constant for the dissociation of  $NO_2$  at 600° C. is approximately  $10^6$  (liters/mole-second). A 6-foot length of one-eighth inch outside diameter, 0.028 wall thickness, flawless stainless steel tubing resistance heated using a low voltage, high current power supply to a temperature of 650° C. (1200° F.) provides sufficient residence time at a sample flow rate of 700 cc. per minute (1.5 c.f.h.) for essentially complete conversion of nitrogen dioxide to nitric oxide. Other converter designs may be used if shown to yield essentially 100 percent conversion of  $NO_2$  to NO.

The method permits continuous monitoring of NO<sub>x</sub> concentrations over a wide range. Response time (2 to 4 seconds is typical) is primarily dependent on the mechanical pumping rate at the operating pressure of the reactor. The operating pressure of the reactor is generally less than 5 torr.

The following figure is a flow schematic illustrating one configuration of the major

components required for the oxides of nitrogen analytical system.

## APPENDIX VI

## VEHICLE AND ENGINE COMPONENTS

## A. Gasoline Fueled Light Duty Vehicles and Heavy Duty Engines.

## I. Basic Mechanical Components—Engine:

1. Intake and exhaust valves.
2. Drive belts.
3. Manifold and cylinder head bolts.
4. Engine oil and filter.
5. Engine coolant.
6. Cooling system hoses and connections.
7. Vacuum fittings, hoses and connections.

## II. Fuel System

1. Fuel specification—octane rating, lead content.
2. Carburetor—idle r.p.m., mixture ratio.
3. Choke mechanism.
4. Fuel system filter and fuel system lines and connections.
5. Choke plate and linkage.

## III. Ignition Components

1. Ignition timing and advance systems.
2. Distributor breaker points and condenser.
3. Spark plugs.
4. Ignition wiring.
5. Operating parts of distributor.

## IV. Crankcase Ventilation System:

1. PCV valve.
2. Ventilation hoses.
3. Oil filler breather cap.
4. Manifold inlet (carburetor spacer, etc.).

## V. External Exhaust Emission Control System:

1. Secondary air injection system hoses.
2. Air system manifolds.
3. Control valves and air pump.

4. Manifold reactors.
5. Catalytic mufflers.
6. Exhaust recirculation.
7. Water injection.

## VI. Evaporative Emission Control System:

1. Engine compartment hose connections.
2. Carbon storage media.
3. Fuel tank pressure-relief valve operation.

## 4. Fuel vapor control valves.

## VII. Air Inlet Components

1. Carburetor air cleaner filter.
2. Hot air control valve.

## B. Heavy Duty Diesel Engines.

## I. Engine Mechanical Components:

1. Valve train.
2. Cooling system.
  - a. Coolant.
  - b. Thermostat.
  - c. Filter.
3. Lubrication.
  - a. Oil Filter.
  - b. Lubricant.

## II. Fuel System:

1. Fuel type.
2. Fuel pump.
3. Fuel filters.
4. Injectors.
5. Governor.

## III. Air Inlet Components:

1. Air cleaner.
2. Inlet ducting.

## IV. External Exhaust Emission Control System:

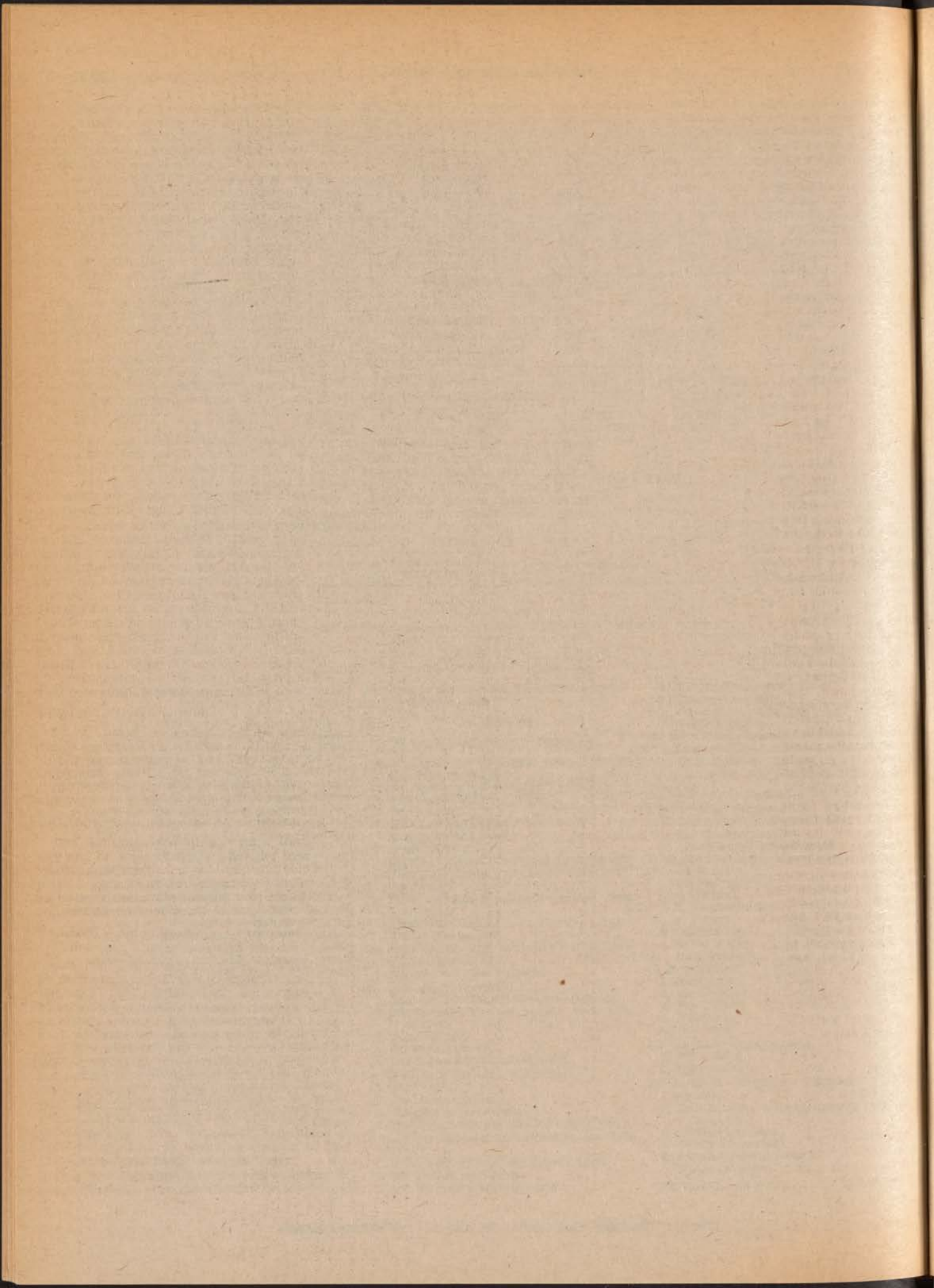
1. Rack limiting devices (aneroid, throttle delay, etc.).
2. Manifold reactor.
3. Catalytic mufflers.
4. Exhaust recirculation.
5. Water injection.

[FR Doc.72-19500 Filed 11-14-72;8:45 am]

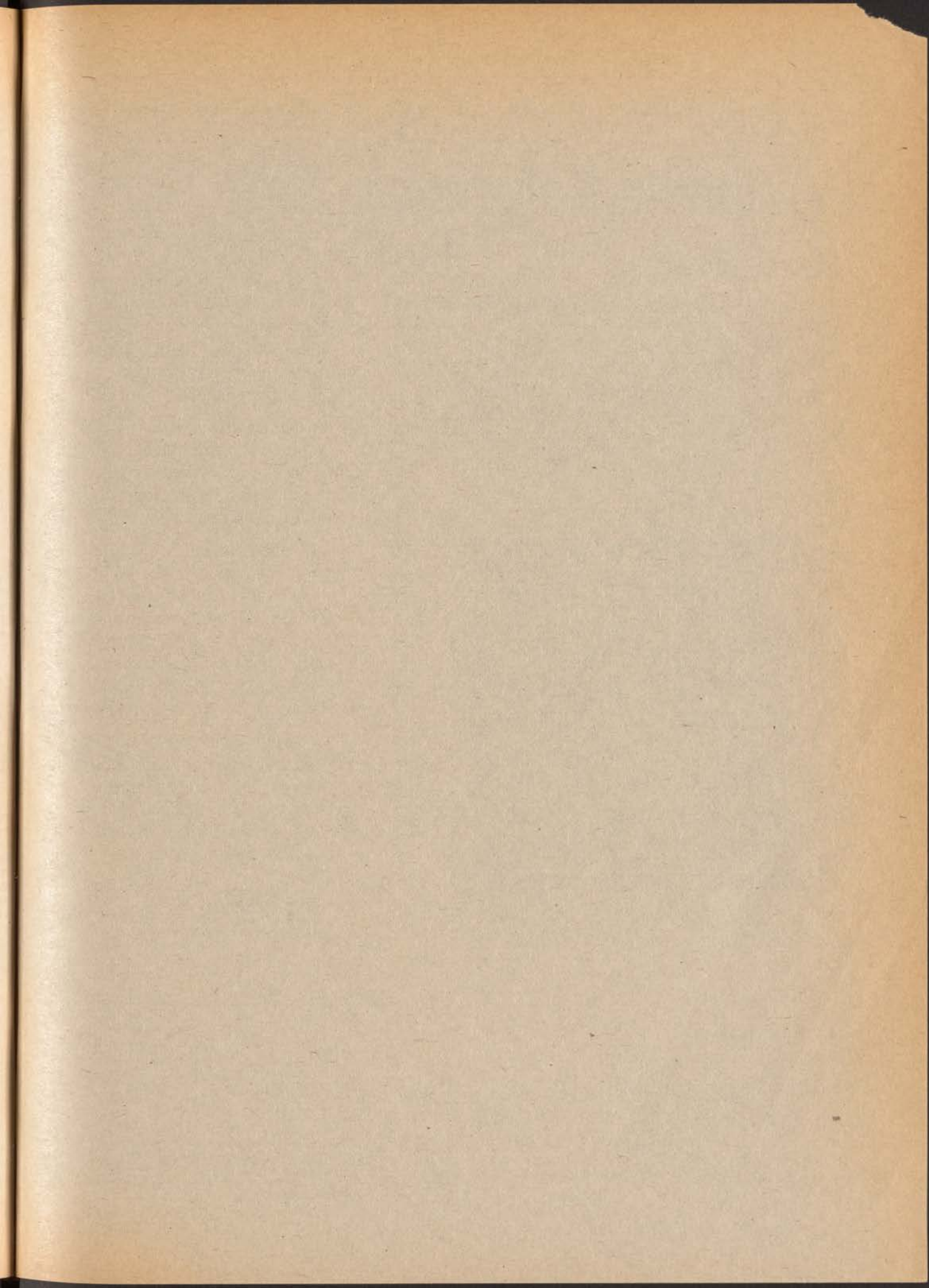














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