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Rules and Regulations

Title 9—ANIMALS AND ANIMAL PRODUCTS

Chapter I—Agricultural Research Service, Department of Agriculture

SUBCHAPTER D—EXPORTATION AND IMPORTATION OF ANIMALS AND ANIMAL PRODUCTS

PART 92—IMPORTATION OF CERTAIN ANIMALS AND POULTRY AND CERTAIN ANIMAL AND POULTRY PRODUCTS

Importation of Animal Semen

On May 29, 1964, there was published in the FEDERAL REGISTER (29 F.R. 7122) a notice of proposed amendments to Part 92, Title 9, Code of Federal Regulations, with respect to the importation of animal semen. Interested persons were given an opportunity to submit written data, views, or arguments concerning the proposed amendments by filing them with the Director, Animal Inspection and Quarantine Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., 20250, within 60 days after publication in the FEDERAL REGISTER. The acceptable date for submitting written data, views, or arguments concerning the proposed amendments was extended on two occasions. The first appeared in the FEDERAL REGISTER (29 F.R. 11458) of August 8, 1964, which extended the time until August 31, 1964; and the second was in the FEDERAL REGISTER (29 F.R. 13037) on September 17, 1964, which extended the time until November 30, 1964.

After due consideration of all relevant matters in connection with the proposed amendments and pursuant to the provisions of sections 6, 7, 8, and 10 of the Act of August 30, 1890, as amended (21 U.S.C. 102–105), section 2 of the Act of February 2, 1903, as amended (21 U.S.C. 111), section 306 of the Act of June 17, 1930, as amended (19 U.S.C. 1306), section 203 of the Act of August 14, 1946 (7 U.S.C. 1622), and the Act of July 2, 1962 (21 U.S.C. 134 et seq.), Part 92, Subchapter D, Chapter I, Title 9, Code of Federal Regulations, as amended, is amended in the following respects:

1. Section 92.4 of Part 92 is amended by adding at the end of paragraph (a) (2), the phrase "except as provided in paragraph (d) of this section."

2. A new paragraph (d) is added to § 92.4 to read as follows:

§ 92.4 Import permits for ruminants, swine, and poultry and for animal semen.

* * * * *

(d) *Animal semen from countries where rinderpest or foot-and-mouth disease exists.* Importation of semen of ruminants or swine, originating in any country designated in paragraph (a) of section 94.1 of this subchapter as a country where rinderpest or foot-and-mouth disease is determined to exist, is prohibited, except that semen from ruminants or swine originating in such a country may be offered for entry into the United States at the port of New York and later released from such port provided the following conditions have been fulfilled:

(1) The importer has applied for and obtained an import permit for the semen in accordance with the provisions of this section and related requirements concerning application therefor, which permit is in effect at the time of importation, and has deposited with the Department prior to the issuance of the permit sufficient funds so as to be available for defraying estimated expenses to be incurred in connection with the proposed semen importation and following the issuance of the permit has deposited such other amounts as may be required from time to time to defray unanticipated costs or increased expenses. Such an import permit may be denied for the reasons specified in subparagraph (a) (3) of this section. Furthermore, an import permit will be revoked unless the following conditions have been complied with:

(i) The donor animal shall have been inspected on the farm of origin by a veterinarian of the United States Department of Agriculture who, in cooperation with the veterinary service of the country of origin of the donor animal, shall have determined, insofar as possible, that the donor animal was never infected with rinderpest or foot-and-mouth disease; that the donor animal was never on a farm or other premise where rinderpest or foot-and-mouth disease then existed; that no animal on the farm of origin which was susceptible to the virus of rinderpest or foot-and-mouth disease was exposed to either disease during the 12 months immediately prior to the date of inspection of the donor animal; that the donor animal has never been vaccinated against rinderpest or foot-and-mouth disease; and that the donor animal was free from evidence of other communicable disease;

(ii) The donor animal shall have been permanently identified in a manner satisfactory to a veterinarian of this Department; blood samples from such donor animal for virus neutralization and fluorescent antibody tests or other tests shall have been collected by a veterinarian of the United States Department of Agriculture and transported by air to the New York Port Veterinarian for delivery to the Plum Island Animal Disease Laboratory of the United States Department of Agriculture in containers approved by a veterinarian of this Department, sealed in the country of origin by a veterinarian of this Department; and pending the results of the tests, the donor animal shall have been kept in isolation on the farm of origin or other acceptable location under the supervision of a veterinarian of this Department, and during such isolation period no animal susceptible to rinderpest or foot-and-mouth disease shall have been permitted to enter such farm or location and no other source of exposure to rinderpest or foot-and-mouth disease shall have been present;

(iii) The blood samples from the donor animal shall have been negative to the virus neutralization and fluorescent antibody tests made at the Plum Island Animal Disease Laboratory of the United States Department of Agriculture and to any other test for rinderpest, foot-and-mouth disease or other communicable disease prescribed by the Director of Division;

(iv) Following isolation, preliminary veterinary inspection, and testing while the donor animal was on the farm of origin or other acceptable location, the donor animal shall have been transported, under such conditions as the Department veterinarian prescribed to prevent exposure of the animal to the virus of rinderpest or foot-and-mouth disease, to an isolation facility properly equipped for the necessary care and maintenance of the donor animal and for the proper collection and handling of semen, approved by a veterinarian of this Department and under the direct supervision of such veterinarian;

(v) The semen of the donor animal shall have been collected at the approved isolation facility under the direct supervision of a veterinarian of this Department; and all handling procedures, such as examination, dilution, refrigeration, and preparation of the semen for shipment, shall have been under the direct supervision of a veterinarian of this Department.

(2) The semen collected at the approved isolation facility shall have been at all times, except during air transportation to New York, in the custody of a veterinarian of this Department.

(3) The semen for which an import permit has been issued shall have been transported by air to the port of New York in liquid nitrogen containers approved by a veterinarian of this Department; sealed in the country of origin by a veterinarian of this Department; and accompanied by a statement by such veterinarian showing the identification of the donor animal and the dates the semen was collected, along with a certificate regarding the health status of the donor animal as of the date of shipment of the semen to the port of New York. All semen received at the port of New York shall be held under quarantine in liquid nitrogen storage at such port in the custody of the Animal Inspection and Quarantine Division until released or otherwise disposed of as provided in this section. Quarantine of the semen at the port of New York shall be for a minimum period of 60 days in facilities and under conditions prescribed by the Director of Division, during which time additional tests shall be conducted as pro-

vided in subparagraphs (4), (5), and (6) of this paragraph.

(4) The donor animal shall have been retained at the approved isolation facility in the country where the semen was collected for at least 60 days after such collection; and after such 60-day retention period, blood samples shall have been collected from the donor animal by a veterinarian of this Department for virus neutralization and fluorescent antibody tests at the Plum Island Animal Disease Laboratory of the United States Department of Agriculture, and any other tests as required by the Director of Division.

(5) While the imported semen is in storage under quarantine at the port of New York, a sample of each lot of semen collected from the donor animal shall have been tested at the Plum Island Laboratory. Such test shall consist of injecting not less than 10 percent of the volume of each lot of semen into test animals which are susceptible to rinderpest or foot-and-mouth disease. The Director of Division may also require such other tests as he deems necessary to determine whether the semen harbors the virus of rinderpest or foot-and-mouth disease, or any other communicable disease.

(6) If it is determined that the requirements set forth in this paragraph have been complied with and there are no indications that the donor animal or the semen from the donor animal harbors the virus of rinderpest or foot-and-mouth disease or any other communicable disease and if the donor animal, blood samples from the donor animal, and semen samples from the donor animal are negative to all other tests required, the semen shall be released for shipment to the consignee listed by the importer; otherwise the semen shall be destroyed or disposed of as the Director of Division may direct.

(Secs. 6, 7, 8, 26 Stat. 416, as amended, sec. 10, 26 Stat. 417, as amended, sec. 2, 32 Stat. 792, as amended, sec. 306, 46 Stat. 689, as amended, sec. 203, 60 Stat. 1087, sec. 2, 76 Stat. 129, secs. 3, 4, 76 Stat. 130, sec. 11, 76 Stat. 132; 7 U.S.C. 1622, 19 U.S.C. 1306, 21 U.S.C. 102–105, 111, 134 et seq.; 19 F.R. 74, as amended)

The purpose of these amendments is to provide for procedures whereby the semen of ruminants or swine from certain countries where rinderpest or foot-and-mouth disease exists may be imported under conditions which are considered to be adequate for the prevention of the introduction of these diseases and other communicable diseases in order that new bloodlines may be established for herd improvements. The available facilities at the Department's Plum Island Animal Disease Laboratory for testing purposes make it impossible to process more than 20 lots of semen per year on the basis of one lot being the amount of semen collected from one donor animal over a period not to exceed 60 days.

The costs of providing necessary Department personnel and services related to a proposed semen importation shall be borne by the importer and are in addition to other expenses involved in the procurement and operation of the isolation facility, the care, feed, and handling of the donor animal, and the actual semen collection. These latter expenses shall also be borne by the importer through whatever arrangements are necessary between the importer and the various people concerned. However, the isolation facilities must be approved by the Department and the operation thereof must be supervised by a Department veterinarian.

Before an import permit is issued, the importer must deposit with the Department a sum of money, the amount of which will vary depending upon many factors which cannot be definitely determined until all applications have been received and a determination made concerning the permits that are to be issued. Variations in costs will depend upon factors such as the number of donor animals involved, the number of isolation facilities under supervision, and the assignment of Department personnel. In requesting an import permit, the importer must designate the country in which the donor animal is presently maintained, the species and breed of the donor animal, the general location in which the isolation facility is contemplated, and the target date for starting the 60-day Department supervised semen collection from such animal in the isolation facility. An application for an import permit must contain a statement by the importer as follows: "The specified amount of money will be deposited with the Department upon request." If the initial application is accepted, the importer will be so advised in order that he can obtain the additional information requested and proceed with the completion of further details as required by the Department before further consideration can be given to the issuance of the import permit. These include, but are not limited to, the identity of the donor animal and a complete list of premises showing the names, locations, and dates where such donor animal has been kept since birth. The amount of money requested by the Department must be deposited with the Department before an import permit is issued. If, after the importer has deposited the amount of money requested by the Department, an import permit is not issued, the importer may withdraw his application and the total amount of his deposit will be refunded. At any time after the permit is issued, it may be cancelled by the Department upon request of the importer, or it may be revoked by the Department if the donor animal fails to meet the requirements stipulated in these regulations, if other conditions specified in these regulations are not fulfilled, or if there is reason to believe that the proposed semen importation will constitute a disease hazard insofar as it concerns foot-and-mouth disease, rinderpest, or certain other diseases of similar importance. Under such circumstances, the importer will be refunded the unobligated portion of the deposit. If, at any time, the total number of lots of semen to be imported drops below the number that was used as a basis for computing the amount of each importer's deposit, each remaining importer may be required to deposit additional funds with the Department to cover the added costs.

The Department will accept applications for semen import permits following the effective date of these amendments to the regulations, and all applications received on or before March 1, 1965, will be considered as a group so that the permits can be issued on an equitable basis. From time to time, when appropriate, other dates for the acceptance and consideration of applications for import semen permits under these regulations will be established by publication of notice thereof in the FEDERAL REGISTER.

Effective date. The foregoing amendments shall become effective on January 30, 1965.

Done at Washington, D.C., this 18th day of December 1964.

B. T. SHAW,
Administrator,
Agricultural Research Service.

[F.R. Doc. 64–13228; Filed, Dec. 23, 1964; 8:46 a.m.]

Title 32—NATIONAL DEFENSE

Chapter VI—Department of the Navy

SUBCHAPTER A—OFFICIAL RECORDS

PART 701—AVAILABILITY OF OFFICIAL RECORDS

Official Records in Civil Court

Scope and purpose. Section 701.2(e) is revised in order to cite the current edition of the Navy Civilian Personnel Instruction referred to therein.

Section 701.2(e) and its footnote are revised to read as follows:

§ 701.2 Official records in civil court.

* * * * *

(e) *Medical and other records of civilian employees.* Production of medical certificates or other medical reports concerning civilian employees is controlled by the provisions of Executive Order 10561, 19 F.R. 5963, as implemented by Navy Civilian Personnel Instruction 290.4–61.[1]

b. *Disclosure of medical information.* Agencies have not been delegated authority to release medical information relating to employees subject to the Civil Service Act. Therefore, requests received by agencies from whatever source (other Federal agencies; State governmental organizations, including law offices; courts; corporations; or individuals) for copies of medical certificates or for information from medical certificates should be referred to the Civil Service Commission together with the medical certificates or other medical reports concerned. After review of the evidence the Commission will decide when and to what extent to comply with the requests.

Records of civilian employees other than medical records may be produced upon receipt of a court order without procuring specific authority from the Secretary of the Navy provided there is not involved any classified or otherwise confidential material such as loyalty and security records. Records relating to compensation benefits administered by the Bureau of Employees' Compen-

[1] NCPI 290.4–6b reads as follows:

sation may not be disclosed except upon the written approval of the Bureau (20 CFR 1.21). Further, in any case of doubt, the matter should be handled in accordance with the general rule under paragraph (a) of this section. Where information is furnished hereunder in response to a court order, it is advisable that certified copies rather than originals be furnished and that, where original records shall be produced, the assistance of the U.S. Attorney or U.S. Marshal be required so that custody be kept of the records.

(R.S. 161, sec. 5031, 70A Stat. 278, as amended; 5 U.S.C. 22, 10 U.S.C. 5031; E.O. 10561, 19 F.R. 5963, 3 CFR 1954–58 Comp. p. 205)

Dated: December 18, 1964.

By direction of the Secretary of the Navy.

[SEAL] WILFRED HEARN,
Rear Admiral, U.S. Navy, Judge Advocate General of the Navy.

[F.R. Doc. 64–13193; Filed, Dec. 23, 1964; 8:48 a.m.]

SUBCHAPTER C—PERSONNEL

PART 713—NAVAL RESERVE AND MARINE CORPS RESERVE

PART 730—ADMINISTRATIVE DISCHARGES AND RELATED MATTERS CONCERNING SEPARATIONS FROM THE NAVAL SERVICE

Miscellaneous Amendments

Scope and purpose. The amendments update Parts 713 and 730 in accordance with Change 10 to the Bureau of Naval Personnel Manual as distributed to naval commands in due course.

1. Section 713.36 is revised to read as follows:

§ 713.36 Termination of status.

(a) A Reservist who completes the courses of study required for graduation from an approved school of medicine, dentistry or theology must request appointment or reappointment in the appropriate Staff Corps, resignation or discharge. Failure to take one of these actions will result in discharge through administrative action due to his possessing a rating or designator incompatible with his civilian qualifications. A waiver to retain his present designator may be requested if a grave injustice, through rank disparity, would result because of his appointment in the Staff Corps. Such waiver, however, will not in itself authorize retention in the Ready Reserve, active duty for training with pay, or assignment in a pay billet.

(b) A Medical or Dental Officer in the Ready Reserve who is an Intern or Resident, including a Berry Plan participant:

(1) Will be assigned to the Active Status Pool while deferred from active duty, unless he volunteers for assignment to a Reserve Unit for a minimum of one year.

(2) Will not be issued mobilization orders while a member of the Active Status Pool. (The Berry Plan is the Armed Forces Physicians' Appointment and Residency Consideration Program as disseminated to medical interns.)

(c) A member of the Ready Reserve who is enrolled in an approved school of medicine or dentistry:

(1) Will be relieved of training requirements if he requests and accepts an appointment as Ensign 1915 or 1925.

(2) Will be transferred to Standby Reserve if he is eligible and is not appointed as Ensign 1915 or 1925 and is needed as an individual reinforcement.

(3) Will be required to serve on active duty if he remains in the Ready Reserve other than as Ensign 1915 or 1925 and is needed as an individual reinforcement.

(4) Is not eligible for assignment to a Naval Reserve unit in pay status.

(d) A member of the Ready Reserve who is enrolled in an approved school of theology:

(1) Will be transferred to the Standby Reserve, unless he accepts an appointment as Ensign 1945, or otherwise executes a written agreement to remain in the Ready Reserve for at least 1 year.

(2) Is not eligible for assignment to a Naval Reserve unit in pay status.

2. Section 713.68 is revised to read as follows:

§ 713.68 Equipment loaned to States for use of Naval Militia.

Such vessels, equipment, material, armament, or other facilities of the Navy as are or may be made available for the Naval Reserve may also be made available for issue or loan to the several states, territories or the District of Columbia for the use of the Naval Militia. No such facilities of the Navy will be furnished for use by any portion or unit of the Naval Militia, however, unless at least 95 percent of its personnel are members of the Naval or Marine Corps Reserve and are attached to or associated with pay units of the Naval or Marine Corps Reserve, and unless its training, organization, and administration conform to standards that will be prescribed from time to time by the Secretary of the Navy. (BUPERS Instruction 4423.1 (series) concerns loan of rifles.)

3. Section 713.214 is amended by revising paragraph (d) to read as follows:

§ 713.214 Officer service record, inactive officers.

* * * * *

(d) *Maintenance responsibility.* An officer service record shall be maintained for each inactive officer. Where this will be depends upon whether or not the officer is participating.

(1) For those who are not participating (do not have orders for any type of inactive duty training) the service record will be maintained by the Commanding Officer, Naval Reserve Manpower Center, Bainbridge, Md.

(2) The service records of inactive officers who are participating in any program (those who have orders to appropriate and/or other duty), except under the cognizance of the Chief of Naval Air Reserve Training, will be maintained by the commandant who wrote the orders. In most cases, this will be in the same naval district where the officer resides.

(3) For officers participating in a training program under the cognizance of the Chief of Naval Air Reserve Training, the officer service record will be maintained by the commanding officer of the naval air station or naval air reserve training unit, having responsibility for the training program.

* * * * *

4. Section 713.222 is amended by deleting paragraph (b).

§ 713.222 Enlisted service record.

* * * * *

(b) [Deleted]

5. Section 713.325 is amended by revising paragraph (a) to read as follows:

§ 713.325 Qualifications for original appointment.

(a) Except as otherwise approved by the Secretary of the Navy, the limiting ages for original appointments in the Naval Reserve of all officers are prescribed as follows:

Grade	Line (less SDO (law)) SC [1]	CEC [2]	Medical Service Corps	Nurse Corps [2]	MC, DC, ChC, and SDO (law)	MC and DC students
LCDR	39½–48½	39½–48½	39½–48½		39½–48½	
LT	33½–39½	33½–39½	33½–39½	21–40	33½–39½	
LTJG	27½–33½	21–33½	21–33½	21–35	21–33½	
ENS	19–27½	19–27½	[3] 21–32	21–34		
ENS 19X5					19–30	[4] 19–33
Warrant	21–44	21–44				

[1] Minimum age for Line/SC, USNR is 20 years for women.
[2] Grade to be offered will depend on professional experience.
[3] Minimum age for appointment in the Women's Specialists Section is 18.
[4] At time of expected graduation. "19X5" designates a Naval Reserve officer (unrestricted line—prospective staff corps) and applies only to officers under instruction in civilian schools.

NOTE: The maximum age limit for men and women with prior active military service may be adjusted on a month-for-month basis, depending upon the number of months of active military service performed, but in no case to exceed 36 months.

* * * * *

6. Section 713.337 is amended by revising paragraphs (a)(1), (b) and (c) to read as follows:

§ 713.337 Extension of enlistment.

(a) *Definitions.* In the discussion of extensions of enlistments in this section the following definitions are applicable:

(1) "Agreement to Extend Enlistment" or "Enlistment as extended"—Whenever these terms are used, the legal form of agreement (Page 1A of the service record (NAVPERS 601–1A/NAVCOMPT 513) is meant and not an unofficial agreement or personal assurance of intention to extend. Agreements on other than the legal form are of an informal and unofficial nature and could be repudiated or withdrawn by the individual.

* * * * *

(b) *Terms of extensions.* Provided they are serving under an enlistment contract, Naval Reserve personnel on in-

active duty who meet the qualifications for reenlistment, may extend their enlistments for periods of 1, 2, 3, or 4 years provided such extension together with other extensions, if any, since enlistment or the last reenlistment does not exceed an aggregate of 4 years. Personnel not eligible for reenlistment may not extend their enlistments without prior approval of the Chief of Naval Personnel. Commanding officers should set forth all pertinent facts and their recommendation on the forwarding endorsement to the request for such approval. Former Regular Navy personnel who have been transferred to inactive duty in the Naval Reserve to complete their UMT&S obligation are not eligible to execute an extension of enlistment contract unless they have reenlisted and are serving under an enlistment contract at the time the extension is executed. (Article C–1407 of the Bureau of Naval Personnel Manual should be consulted for provisions regarding extension of enlistment of Naval Reservists on active duty.)

(c) *Execution of extension agreement.* Extensions shall be prepared on the latest revision of Form NAVPERS 601–1A/ NAVCOMPT 513 only and, except as otherwise provided in this section, shall be executed by the organization having custody of the service record of the individual concerned. When it is inconvenient or impracticable for the individual to appear in person for the purpose of executing the extension of enlistment at the activity having custody of his service record, the extension form may be mailed to the member for execution and return. See paragraphs (d) and (e) of this section for further information regarding requirements of extensions executed by mail. In order to be valid, an agreement to extend enlistment must be entered into by the individual concerned prior to, or on the date of, expiration of enlistment. In mailing extension forms, necessary precautions must be taken to insure their receipt and execution not later than the individual's expiration of enlistment. An individual should not normally be permitted to agree to extend his enlistment more than 3 months prior to the end of the term of his enlistment, unless agreement to extend is required to acquire sufficient obligated service for recall to active duty.

* * * * *

7. Section 713.375 is amended by revising paragraph (b) to read as follows:

§ 713.375 Selection boards.

* * * * *

(e) For the purpose of complying with paragraph (a) of this section, selection boards will be convened by order of the Secretary of the Navy, from time to time, as may be required. Each such board will normally be composed of not less than 5 officers of the corps and of or above the grade for which selections are to be made. The membership of selection boards considering both regular and reserve personnel shall include an appropriate number of reserve officers otherwise qualified to serve. The membership of selection boards considering reserve personnel only shall include at least a majority of reserve members. The procedure will, in general, be the same as that followed by selection boards for the Regular Navy.

* * * * *

8. Section 713.412 is amended by revising paragraph (a) (3) (iv), adding paragraph (a) (6), revising paragraph (b), redesignating old paragraphs (c) to (e) as (d) to (f), and adding paragraph (c), to read as follows:

§ 713.412 Discharge of inactive-duty enlisted personnel.

(a) * * *

(3) * * *

(iv) Upon request for transfer to a reserve component of another armed service in accordance with the procedures outlined in paragraph (c) of this section.

* * * * *

(6) *Physical disability.* When authorized in accordance with procedures outlined in § 713.413, or when otherwise directed by the Chief of Naval Personnel.

(b) Discharge for cause: Enlisted Reservists on inactive duty are subject to discharge by reason of unsuitability, security, unfitness or misconduct in accordance with articles C–10310 through C–10313 of the Bureau of Naval Personnel Manual (§§ 730.10 to 730.15 of this chapter). The commandant of the naval district in which the Reservist resides is responsible for processing or designating an activity to process such cases. An enlisted person who is subject to undesirable discharge by reason of unfitness or misconduct shall, if his whereabouts is known, be informed as to the basis for the contemplated action and be afforded an opportunity to request or waive, in writing, any or all of the privileges set forth in article C–10311 or C–10312 of the Bureau of Naval Personnel Manual (§ 730.12 or 730.13 of this chapter).

(1) In general, field board hearings afforded under article C–10313 of the Bureau of Naval Personnel Manual (§ 730.15 of this chapter) are to be held at the location of the individual's commanding officer. However, a hearing at that location or at the district headquarters may, in some cases, seriously inconvenience or deprive the individual of substantial rights. Accordingly, if such a Reservist requests that a hearing be held in his case, it is permissible for the commandant to refer the matter to a conveniently located naval activity which has facilities for conducting the hearing. The commanding officer to whom the case is referred should be designated as the individual's commanding officer for this purpose, furnished the individual's service record, or be advised to obtain the record from the NRMC Bainbridge as appropriate, and instructed to afford the individual the privileges. The commandant is to ensure that a sufficient number of officers, including Reserve officers on active duty, are available for appointment to the board. (Note that the privilege of having a service lawyer appointed as the individual's counsel applies only if such a lawyer is reasonably available.) Regardless of where the hearing is to be held, it is incumbent upon the inactive Reservist to furnish his own transportation to the hearing. After the case has been processed at the command, it should be forwarded via the commandant to the Chief of Naval Personnel.

(2) Considerable latitude is afforded for the presentation of the respondent's case. If he requests a hearing but is unable or does not desire to attend the hearing, he may submit written statements for consideration of the field board and may waive representation by counsel. If he is to be represented by counsel, the counsel may take any or all of the following actions:

(i) Present the respondent's written statements.

(ii) Make representations in respondent's behalf.

(iii) Introduce testimony of witnesses for the respondent either orally or in writing, or both.

(iv) Cross-examine government witnesses.

(c) Interservice transfers:

(1) Interservice transfer of persons, not on active duty, between reserve components of the Armed Forces, may be accomplished only in cases wherein the Reservist requests or consents to such transfer and wherein it is mutually agreed by the two Military Departments concerned that such transfers are in the best interests of the Armed Forces.

(2) Service-initiated requests for transfers of individual reservists may be initiated at the area commander level or higher level and transmitted direct to the corresponding service area commander level or higher level for approval. Such requests normally will not be forwarded to the Departments of the Army, Navy, Air Force or Commandant (PR) U.S. Coast Guard, level except in cases of disapproval where the requesting service feels that adjudication at higher level is necessary to the best interests of the Department of Defense. Such transfers will normally be handled at area commander level. For purposes of this paragraph, "area commander" is defined as Army Area Commanders, Naval District Commandants, Chief of Naval Air Reserve Training, Marine Corps District Directors, Commanding General, Marine Corps Air Reserve Training Command, Coast Guard District Commanders, Commanding Generals of the Numbered Air Forces and the Army State Instructors.

(3) Individual reservists may initiate requests for transfer to a reserve component of another armed service. Such requests will be processed in accordance with the procedures outlined herein. Final action on such requests will normally be taken at area commander level unless adjudication at higher level is desired or necessary to the best interests of the Department of Defense.

(4) Under procedures established by the Secretary of Defense, requests for transfer between reserve components of the Armed Forces will be approved under the following conditions:

(i) When the individual concerned will be enlisted in a reserve component of another branch of the Armed Forces incident to enrollment in any officers training program, or will be appointed as a student in an officers training program wherein the individual will have a mili-

tary status. (In such cases member will be discharged pursuant to § 713.412(a)(3)(ii); or

(ii) When the service to which transfer is desired has a specific vacancy for the individual in an accredited training program within a reasonable distance of the individual's domicile or place of business and will assign him to such program, provided one of the following conditions is met:

(*a*) The service to which the individual belongs has no accredited training program within a reasonable distance of the individual's domicile or place of business to which the reservist may be usefully assigned, or

(*b*) The individual has special experience or professional, educational or technical background which is clearly of greater use to the service to which transfer is requested and outweighs the value of his previous training in his present service.

(5) Requests for transfer to another reserve component will include, (i) a statement from appropriate authority in the service to which transfer is desired covering in detail the requirement specified in paragraph (c)(4)(i) or (ii) of this section as applicable, and (ii) a statement by the individual that in the event of approval of the transfer he will accept assignment to and participate in the accredited training program of the service to which transferred.

(6) Upon approval of a request for transfer, the corresponding service authority will be advised that discharge will be issued upon receipt of notification that the individual has signed enlistment papers or accepted appointment in the gaining service. Disapproved requests will be returned to the corresponding service authority for information or action as desired. Discharges in connection with transfers between reserve components shall be effective the date preceding enlistment or appointment in the gaining service. Cite § 713.402(a)(3)(iv) as authority in effecting discharges, except that in the case of discharge to enlist or enroll in an officer training program, § 713.402(a)(3)(ii) will be cited as the authority. (Where membership in the officer training program does not confer military status, discharge will be for the purpose of immediate enlistment in the reserve component of the gaining armed force.) Discharge certificate should be forwarded to the cognizant authority of the gaining service for delivery. Discharge for this purpose does not constitute a fulfillment of the military obligation. Additional service performed after such discharge will be counted toward fulfillment of such obligation. If appropriate, cognizant authority of the gaining service will be notified of the number of constructive credit points earned by the reservist as of the date of discharge.

(7) *Enlistment of a Naval Reservist in another reserve component without obtaining a conditional release.* When information is received of the enlistment of a Naval Reservist in another reserve component without obtaining a conditional release, the command holding the member's service record is authorized to take the following action:

(i) Discharge effective the date preceding enlistment in the gaining service citing BUPERS Manual Article H–31202(1)(c)4 (§ 713.402(a)(3)(iv)) as authority, provided one of the following conditions exists:

(*a*) The member is serving on extended active duty of more than six months duration as a member of the reserve component of the other service.

(*b*) The member's transfer to the reserve component of the other service would have been approved under the conditions prescribed in paragraph (c)(4) of this section, and the enlistment appears to have been contracted in good faith by the other service.

(ii) If none of the conditions in subdivision (i) of this subparagraph exists, action shall be initiated to obtain member's discharge from the other service.

(iii) The following cases shall be forwarded to the Chief of Naval Personnel for decision:

(*a*) The other service requests adjudication of the case at the departmental level.

(*b*) The other service requests reconsideration of the case due to certain unusual circumstances and the command holding member's service record considers such referral is appropriate.

(*c*) The individual is performing, or has performed, six months active duty for training in the reserve component of the other service.

(*d*) Reservists will be discharged with the same type and character of discharge as provided for enlisted personnel of the Regular Navy.

(*e*) Full information regarding the reason for discharge together with substantiating evidence where appropriate, shall be filed in the individual's service record.

(*f*) The service records of members of the Naval Reserve on inactive duty who have failed to reply to official correspondence and for whom there is no valid address should be closed out at expiration of obligated service and forwarded to the Chief of Naval Personnel. A discharge certificate will be prepared in accordance with the instructions contained in article C–10504 of the Bureau of Naval Personnel Manual and inserted in the closed-out service record for subsequent delivery to the dischargee. Appropriate entries shall be made in the service record of the fact that discharge was effected at expiration of obligated service.

9. Part 713 is amended by inserting section 713.413 to read as follows:

§ 713.413 Physically disqualified reservists.

Upon notification by the Chief of Naval Personnel that an enlisted reservist on inactive duty has been found by the Chief, Bureau of Medicine and Surgery to be not physically qualified for retention in the Naval Reserve, the Command holding his service record will take the following action:

(a) Inform the member of his status using the following sample:

From: Commanding Officer.
To: (Name of reservist).
Subj: Finding of Physical Disqualification.
Ref: (a) Title 10, United States Code. (b) Section 13, Chapter 3, Part H, BUPERS Manual [§§ 713.421 to 713.430].
Encl: (1) Form for requesting discharge.

1. I regret to inform you that the Chief, Bureau of Medicine and Surgery, Department of the Navy, has found that you are not physically qualified for retention in the Naval Reserve by reason of (state defect. Example: Diabetes mellitus.)

2. Section 1004(c) of reference (a) provides for the removal from the Reserve rolls of the naval service of any person who is not physically qualified for assignment to active duty.

3. In view of the foregoing, it is requested that you take one of the following courses of action:

a. Request discharge by reason of being not physically qualified. Enclosure (1) is a form you may use for this.

b. Request transfer to the Retired Reserve if eligible under the provisions of reference (b).

c. Request a hearing before a physical evaluation board. The purpose of such a hearing is to comply with Section 1214 of reference (a), quoted herewith for your information:

"No member of the armed forces may be retired or separated for physical disability without a full and fair hearing if he demands it."

Appearance must be at your own expense. Moreover, you are not eligible to receive retirement pay, severance pay or any other benefits specified in Chapter 61 of reference (a). Do not use enclosure (1) to request a hearing.

4. If no reply is received from you within 30 days, it will be considered that you do not desire a hearing. Therefore, at that time, action will be taken to discharge you involuntarily by reason of being physically not qualified.

(Signature of Commanding Officer)

Enclosure (1) to Sample Letter to Reservists:

From:

(Rate)

(First Name) (Middle Name) (Last Name)

(Service No.)

(Street Number) (City) (State)

To: Commanding Officer.
Subj: Discharge, request for.
Ref: (a) CO ---- ltr dated ----

1. Having been informed in reference (a) that the Chief, Bureau of Medicine and Surgery, Department of the Navy, has found that I am not physically qualified for retention in the Naval Reserve, I request discharge by reason of Physical Disability.

(Signature)

(b) If discharge is requested, issue appropriate discharge certificate citing Bureau of Naval Personnel Manual, article H–31202(1)(f) (§ 713.412(a)(6)) and the letter informing member of his status as authority therefor. Make appropriate service record entries and forward closed out record to the Chief of Naval Personnel.

(c) If transfer to the Retired Reserve is requested, provided the reservist is eligible therefor under the provisions of Part H, Chapter 3, Section 13 of the Bureau of Naval Personnel Manual

(§§ 713.421 to 713.430), transfer to Retired Reserve in accordance therewith.

(d) If Physical Evaluation Board Hearing is requested, issue authorization as shown in Sample Orders for Physical Evaluation Board Hearing (in this subparagraph, below) for reservist to appear before the board listed in Physical Evaluation Board Address List (see mailing list in this subparagraph, below) nearest the reservist's home.

SAMPLE ORDERS FOR PHYSICAL EVALUATION BOARD HEARING

From: Commanding Officer.
To:
Via: Senior Member, Physical Evaluation Board (insert appropriate mailing address shown in listing below).
Subj: Authorization to appear before a Physical Evaluation Board.
Ref: (a) Disability Separation Manual (NAVEXOS P–1990) [Part 725 of this chapter].
Encl: (1) Statement of Rights in triplicate (NAVEXOS–3332 can be requisitioned from the Forms and Publications Supply Distribution points).

1. When notified by the via addressee that the necessary records are available for presentation of your case, you are authorized to report to that officer for an evaluation of your present physical condition.

2. In the evaluation of your physical condition, the Physical Evaluation Board is directed to conduct the proceedings in all respects as provided for hearings in the case of active duty members except that it will make only the recommended finding that you are or are not physically qualified for active service, and if not so qualified, will set forth the disqualifying defect or disability with the diagnostic nomenclature number therefor and an opinion whether such disability is or is not due to intentional misconduct or willful neglect. The Board's attention is invited to paragraph 0427 of reference (a) [§ 725.427 of this chapter] which sets forth the authority for your hearing.

3. The above is authorized with the understanding that you will not be entitled to reimbursement for mileage or expense in connection therewith. In case you do not desire to bear this expense or if for any reason you fail to report to the Physical Evaluation Board on the date specified, you will regard paragraph 1 of this authorization as revoked.

4. You are advised that if for any reason you are unable to report in person to the Physical Evaluation Board on the date specified, you may waive your right to appear in person. If you waive your right to appear in person, your case will be submitted to the Physical Evaluation Board for an examination on the record. It is requested that you execute the enclosed Statement of Rights and return it to the via addressee prior to the date set for your examination.

5. Whether you appear in person or waive your right to appear in person, you may be represented by counsel if you so desire. You are advised that if you desire counsel to assist or represent you in presenting your case before the Physical Evaluation Board, competent legal assistance is available without expense to you. Should you desire to avail yourself of this service, you may apply to the Senior Member of the Physical Evaluation Board.

6. By endorsement hereon the via addressee is requested to notify you of the date and place you are to appear.

(Signature of Commanding Officer)

Copy to:
BUMED (Code 3351)
Chief of Naval Personnel (Pers B222)
Individual concerned—4

MAILING LIST OF PHYSICAL EVALUATION BOARDS

NOTE: Address all correspondence to Senior Member:

Example: Senior Member, Physical Evaluation Board, Headquarters, Ninth Naval District, Great Lakes, Ill., 60088.

First Naval District:
U.S. Naval Hospital
Chelsea, Mass. 02150
Third Naval District:
U.S. Naval Hospital
St. Albans, L.I., N.Y. 11412
Fourth Naval District:
U.S. Naval Hospital
Philadelphia, Pa. 19145
Fifth Naval District:
U.S. Naval Hospital
Portsmouth, Va. 23708
Sixth and Eighth Naval Districts:
U.S. Naval Hospital
U.S. Naval Base
Charleston, S.C. 29408
U.S. Naval Hospital
Camp Lejeune, N.C. 28542
Ninth Naval District:
Headquarters, Ninth Naval District
Great Lakes, Ill. 60088
Eleventh Naval District:
U.S. Naval Hospital
San Diego, Calif. 92134
U.S. Naval Hospital
Camp Pendleton, Calif. 92055
Twelfth and Thirteenth Naval Districts:
U.S. Naval Hospital
Oakland, Calif. 94614
Potomac River Naval Command:
U.S. Naval Hospital
Bethesda, Md. 20014

NOTE: Do not include entitlement to travel allowance in the authorization to appear before the board, since such must be at the member's own expense. As explained in the letter to the individual (see sample letter in paragraph (a) of this section), the option of requesting a hearing before a physical evaluation board is offered solely to comply with the provision of 10 U.S.C. 1214, which states that no member of the armed forces may be retired or separated for physical disability without a full and fair hearing. Since such hearing will usually serve no useful purpose, particularly in cases of individuals who have never served on active duty and who are not qualified for retention in the Naval Reserve by reason of conditions arising in civilian life, individuals who inquire relative to the advisability of requesting a hearing should be so advised and discouraged from requesting a hearing due to the time and expense involved.

(e) If no reply to the letter informing the reservist of his status is received within 30 days, issue an appropriate discharge certificate citing the Bureau of Naval Personnel Manual, article H–31202 (1)(f) (§ 713.412) and the letter informing the reservist of his status as authority therefor.

10. Section 713.441 is revised to read as follows:

§ 713.441 Travel and residence overseas.

(a) This section pertains to Naval Reserve personnel on inactive duty, including those in retired status, who travel or reside in any country not within the jurisdiction of a Naval District. Those employed aboard merchant vessels or aircraft of the United States or friendly foreign registry are excepted unless homeported in a foreign country.

(b) Upon arrival in and departure from each country, except for brief tours, the reservist shall report to the nearest U.S. Naval Attache.

(c) If travel or residence will exceed 30 days, the Reservist shall submit advance notice to the command holding his service record, giving (1) date of departure from the United States, (2) duration of absence, (3) itinerary, including approximate dates of arrival in and departure from countries where the U.S. Naval Attache will be contacted, and (4) overseas mail addresses (official mail will be forwarded via the nearest U.S. Naval Attache).

(d) Return to the United States shall be reported to the command holding the service record.

(e) The uniform may be worn only when attending, by formal invitation, ceremonies or social functions at which the wearing of the uniform is required by the terms of the invitation or by the regulations or customs of the country, and then only with the approval of the nearest U.S. Naval Attache.

(f) Official naval titles shall not be used in connection with public appearances unless authorized by the nearest U.S. Naval Attache.

(g) Overseas training is covered in § 713.521.

11. Section 713.443 is revised to read as follows:

§ 713.443 Use of official Naval titles.

The use of official naval titles by Reserve personnel on inactive duty is authorized except as provided in § 713.441 (f) and in § 137.8(b) of this title.

12. Section 713.451 is revised to read as follows:

§ 713.451 Requirements.

(a) Officers and enlisted personnel of the Naval Reserve on inactive duty shall possess the minimum uniform items specified in U.S. Navy Uniform Regulations and Bureau of Naval Personnel Instruction 1020.4 (series), respectively.

(b) U.S. Navy Uniform Regulations govern the occasions when wearing of the uniform is mandatory and when it is permissive.

(c) Additionally, commanding officers of Specialist units, Naval Reserve Officers Schools, and Composite companies shall designate a minimum of one drill per quarter as a "drill in uniform" for all nonpay members. Such drills shall begin with a formal personnel inspection.

(d) Commanding officers of all Naval Reserve units shall encourage the wearing of name plates by all members during drills. Name plates shall conform to the standards prescribed in U.S. Navy Uniform Regulations, and shall be positioned on the uniform as prescribed therein.

13. Section 713.517 is amended by revising paragraph (c) (1)(i) and (2)(i) to read as follows:

§ 713.517 Appropriate duty (including air).

* * * * *

(c) * * *

(1) * * *

(i) To 2105, 2205, 2305, and 2905 officers for the performance of medical and dental examinations, and essential services of an administrative nature for Na-

val Reserve or Marine Corps Reserve units.

* * * * *

(2) * * *

(i) To 2105, 2205, and 2305 officers for duty as consultants at naval activities. (Appointments of officers for this duty must be approved by the commanding officer of the activity concerned and by the Chief, Bureau of Medicine and Surgery.)

* * * * *

14. Section 730.4 is amended by revising paragraphs (e) (5), (10), (11) and (12) to read as follows:

§ 730.4 Separation of enlisted personnel by reason of expiration of enlistment, fulfillment of service obligation, or expiration of tour of active service.

* * * * *

(e) * * *

(5) *Undergoing medical treatment or hospitalization.*

(i) Enlisted personnel of the Regular Navy or Naval Reserve on active duty whose enlistments or enlistments as extended expire while they are suffering disease or injury incident to the service and who are in need of medical care or hospitalization may be retained in service beyond the normal date of expiration of their enlistments or enlistments as extended, with their consent which should be indicated in writing and signed by the individual concerned on the administrative remarks page of the service record. They may be retained until they shall have recovered to the extent which would enable them to meet the physical requirements for discharge and reenlistment, or until it shall have been ascertained that the disease or injury is of a character that recovery to such an extent would be impossible. Tacit consent may be assumed for retention in service beyond expiration of enlistment in cases of mental incompetency or physical incapacity. A person in this category ordinarily will not be retained in excess of 6 months beyond expiration of enlistment. Further retention may be authorized, however, in meritorious cases upon proper recommendation accompanied by the supporting facts. (10 U.S.C. 5537.)

(ii) In the event the member persists in his desire to be separated, effect his separation provided he signs the following entry on page 13 of his service record and on Standard Form 88, witnessed by an officer, at time examined for separation:

I, ----------, desire to be
(Name)
separated from the Naval Service on my normal expiration of active obligated service date. I understand that I will not be eligible for further follow-up studies or treatment at a U.S. Armed Forces medical facility; that I will be ineligible for disability benefits under laws administered by the Navy and that any further treatment and/or benefits would be under the jurisdiction of the Veterans Administration.

Personnel being processed before a physical evaluation board will not normally be released from active duty or discharged until final action on their case has been completed by the Secretary of the Navy and instructions received from the Chief of Naval Personnel. An untimely separation of a member who is the subject of a physical evaluation board proceeding may prejudice his case in view of the fact that the law requires that the Secretary make the necessary physical disability determinations while the member is entitled to receive basic pay, except in cases of Reservists on training duty of 30 days or less. This should be explained to any member whose enlistment or term of active service is about to expire and who requests discharge or release from active duty prior to the time such determinations are made. Any request for separation which is not withdrawn following such explanation shall be entered on page 13 of the Service Record as follows:

I, ----------, desire to be
(Name)
separated from the Naval Service notwithstanding the fact that such separation may prejudice any rights or benefits to which I may be entitled as a result of the physical evaluation board hearings under Title 10, U.S. Code, Chapter 61. I have been fully advised of my rights in this matter and request that I be discharged from the Naval Service as soon as possible without further hearing and without disability retirement pay or severance pay and without any compensation whatsoever. I understand that I am not required, and am under no obligation, to give this certificate and I hereby certify that I give the certificate voluntarily.

The foregoing statement shall be signed by the individual and witnessed by an officer.

* * * * *

(10) *Retention as party to a court of inquiry.* When an enlisted member has been named a party to a court of inquiry, and the proceedings have been entered upon prior to the expiration of enlistment or term of obligated service, the individual may be retained in the service as a party to the said court of inquiry, and for resultant trial if such is indicated.

(11) *Voluntarily making up lost time.* Enlisted personnel who before 24 July 1956 lost time in excess of 24 consecutive hours from their enlistments or enlistments as extended due to unauthorized absence, confinement, or nonperformance of duty (civil arrest) as defined in paragraph 044019–1 of the Navy Comptroller Manual (§ 719.203 of this chapter) may be permitted to make up such lost time in order to complete the term for which they enlisted or extended their enlistments. In order to be valid, application to make up lost time must be submitted by the individual and approved by or on behalf of the commanding officer prior to expiration of the enlistment or extension of enlistment during which the time was lost. Appropriate entry shall be made on the administrative remarks page of the service record which shall reflect the date on which the application was approved.

(12) *Mandatorily making up lost time.* Instructions concerning mandatorily making up lost time due to sickness misconduct occurring before, on, or after July 24, 1956, and unauthorized absence, confinement, and nonperformance of duty (civil arrest) occurring on or after July 24, 1956, are contained in § 730.4a.

* * * * *

15. Section 730.5 is amended by revising paragraph (e)(2) to read as follows:

§ 730.5 Separation of enlisted personnel by reason of physical disability.

* * * * *

(e) * * *

(2) If processing of a case by a physical evaluation board has been authorized, retain the individual in service until final disposition is directed by the Chief of Naval Personnel, unless the individual concerned states in writing that he does not desire to be retained until final action has been taken on the recommended findings and proceedings of a physical evaluation board. (See § 730.4(e)(5).)

* * * * *

16. Section 730.6 is revised to read as follows:

§ 730.6 Separation of enlisted personnel for convenience of the Government.

(a) The Chief of Naval Personnel may authorize or direct the separation of enlisted or inducted personnel prior to the expiration of their active obligated service dates for any one of the reasons listed in this section. The term "separation" as used in this section includes discharge or transfer to the Naval Reserve and concurrent release to inactive duty, or release to inactive duty in certain cases of Naval Reservists serving on active duty who have time remaining in service obligation or enlistment contract.

(1) General demobilization, reduction in authorized strength, or by an order applicable to all members of a class of personnel specified in the order.

(2) Acceptance of a permanent appointment as officer in any branch of the armed services.

(3) To permit immediate reenlistment at the request of the individual prior to normal expiration of enlistment in accordance with instructions issued from time to time by the Chief of Naval Personnel.

(4) National health, safety or interest.

(5) Erroneous enlistment, reenlistment, extension or induction.

(6) Other good and sufficient reasons when determined by the Chief of Naval Personnel.

(b) Subject to the following instructions, the commanding officer shall, as appropriate, discharge or transfer for discharge for the convenience of the Government, an enlisted woman for any one of the following reasons: (The instructions contained in this paragraph should not be interpreted as precluding the commanding officer from forwarding any case to the Chief of Naval Personnel for decision should he consider such action appropriate. In the case of either parenthood or pregnancy of a married enlisted woman who has over 18 years of service but insufficient time for retirement the commanding officer will forward the case to the Chief of Naval Personnel for a decision.)

(1) Parenthood, when it is established that a woman is the parent, by birth or adoption, of a child under 18; has personal custody of a child under 18; is the stepparent of a child under 18 and the child resides within the household of the woman for a period of more than 30 days a year; or during her current enlistment or extension of enlistment, has given birth to a living child. In any case wherein a woman is the natural parent of a child born prior to her entry into the naval service and wherein all rights to custody and control of the child are asserted to have been lost through formal adoption proceedings prior to the woman's entry into the service, the commanding officer shall not effect discharge of the woman concerned without specific authorization of the Chief of Naval Personnel.

(2) Pregnancy, regardless of marital status, upon determination by a naval medical officer. The type of discharge shall be as warranted by her service record regardless of marital status. If pregnancy is terminated prior to separation, a full report of the circumstances shall be submitted to the Chief of Naval Personnel including whether or not the termination was a result of a spontaneous or therapeutic abortion or a still birth, or if there is evidence of nontherapeutic abortion, together with servicewoman's desires as to retention in the service and the Commanding Officer's recommendation thereon.

(3) Marriage, upon written request to the commanding officer provided she is not serving at a duty station which is sufficiently close to the location of her husband to permit the establishment of a joint household and further provided member meets all the conditions set forth below which are applicable in her case. (If two or more of the conditions apply, the period of time which results in retaining her to the latest date shall govern). In any case discharge will not be effected earlier than six months from the date of submission of written request therefor except that commanding officers may waive the six months' delay in discharge in those cases wherein a contact relief is not required or at such time as a relief becomes available.

(i) Must have served not less than 12 months subsequent to completion of recruit training and not less than 12 months at current duty station, or not less than 12 months at new duty station if separation requested after issuance of transfer orders.

(ii) If member attended a service school during her enlistment:

(*a*) If length of course was 24 weeks or less, must have served 18 months after completion of the course or disenrollment therefrom.

(*b*) If length of course was over 24 weeks, must have served 24 months after completion of the course or disenrollment therefrom.

Ensure that a copy of the member's request and information as to the command's action thereon is submitted to the Bureau of Naval Personnel (Pers B2122) and the cognizant personnel distributor in all cases. (Article A–4204 of the Bureau of Naval Personnel Manual contains instructions relative to recoupment of reenlistment bonus, if paid.)

(*c*) Attend college:

(1) Commanding officers are hereby authorized to separate or transfer for separation enlisted personnel for the purpose of commencing or resuming their college education provided eligibility is established in accordance with the following:

(i) The requested date of separation must be within 3 months of the individual's normal expiration of active-obligated service and, within this limitation, not earlier than 10 days prior to the date of registration as prescribed by the educational institution. (Normal expiration of active-obligated service is the date on which the individual would normally be eligible for release to inactive duty. It is not the "advanced" separation date established by any early separation program which may be in effect.)

(ii) The applicant must demonstrate an ability and willingness to make the required payment of an entrance fee, if required, provided he has not already done so. The applicant must also demonstrate that the specific school term for which he is seeking early release is academically the most opportune time for him to begin or resume his education; and that delay of enrollment until a date subsequent to normal separation date would handicap him in the pursuit of his education.

(iii) The applicant must obtain a statement from the educational institution which establishes:

(*a*) That the applicant has been accepted for enrollment without qualification for entrance in a specified school term. (A summer term may be used to fulfill this requirement.)

(*b*) That the applicant will be enrolled in a full-time course of instruction leading to a baccalaureate or higher degree. (Enrollment in an accredited Junior College may be used to fulfill this requirement.)

(*c*) The convening date of class for the specified school term.

(*d*) The registration dates for the specified school term.

(*e*) That the educational institution is currently listed in Part III of the Educational Directory published by U.S. Department of Health, Education and Welfare.

(iv) The applicant's performance of duty must have been such that he is deserving of consideration for early separation. Additionally, requirements for honorable discharge in article C–7821 (10)(b) of the Bureau of Naval Personnel Manual must be met.

(v) The loss occasioned by the early release of the applicant, without immediate replacement, will not reduce the operational readiness of the command to an unacceptable degree.

(vi) The commanding officer will assure, to his satisfaction, that early release is not being requested for the purpose of avoiding service.

(2) Exceptions: The Chief of Naval Personnel, as a policy, will not authorize the early separation of personnel who do not fully meet the requirements set forth in paragraph (c)(1) of this section. In nc case will early release for educational purposes be authorized earlier than 3 months in advance of normal expiration of active-obligated service. While the Chief of Naval Personnel does not desire to prevent personnel who are not fully qualified under paragraph (c)(1) of this section above from applying for early release, such personnel should be carefully and completely informed of the Bureau's firm policy in this regard and discouraged from submitting an official request except for unusual reasons. However, if the individual concerned still wishes to submit a request for early release in accordance with article B–1105 of the Bureau of Naval Personnel Manual, the request should be forwarded to the Chief of Naval Personnel (Attn: Pers B222) with the information listed in paragraphs (c)(1) (i) to (iii) of this section. The commanding officer in his endorsement will comment on the factors listed in subdivisions (iv) to (vi) of paragraph (c)(1) of this section.

(3) Personnel not eligible for early release to attend college. Personnel in the following categories are not eligible for early release under the provisions of paragraph (c)(1) of this section.

(i) Aliens seeking to qualify for citizenship by completion of 3 years' active military service, since early release might jeopardize their expeditious naturalization.

(ii) Personnel who will have a reserve obligation remaining upon separation, as determined by article C–1402 of the BUPERS Manual, will not be separated until they have completed 21 months' active duty on their current term of active-obligated service.

(iii) Personnel who are ordered to 6 months' active duty for training.

(iv) Personnel whose services are essential to the mission of the command.

(d) Commanding officers shall discharge or transfer for discharge those non-petty officers serving in their first enlistment who have served continuously on active duty for more than 12 months and are considered to be a burden to the Command due to substandard performance or inability to adapt to military service provided (1) they have a tenth grade education or less or a GCT of 41 or less, (2) are not potential petty officer material, and (3) have average performance marks below the minimum required for honorable discharge and reenlistment.

(e) Full information regarding the reason for separation and a recommendation concerning reenlistment in accordance with article C–10103 of the Bureau of Naval Personnel Manual based upon enlisted performance evaluations (article C–7821 of the Bureau of Naval Personnel Manual and applicable Bureau directives) shall be entered on page 13 of the service record in connection with all cases within the purview of this section.

17. Section 730.7 is amended by revising paragraph (a)(2) to read as follows:

§ 730.7 Discharge of enlisted personnel for own convenience and furlough without pay.

(a) * * *

(2) Returning to school, except as provided in § 730.6(c).

* * * * *

18. Section 730.8 is amended by revising paragraphs (b) to (e) to read as follows:

§ 730.8 Discharge or release to inactive duty for reasons of dependency and hardship.

* * * * *

(b) Enlisted personnel who desire to request discharge or release to inactive duty, as appropriate, for dependency or hardship reasons shall be informed of the proper procedure to follow. It should be clearly explained to each applicant that a request shall be submitted via official channels and that submission of a request is no assurance that discharge or release to inactive duty will be authorized. While each request received is carefully and sympathetically considered, final decision is based upon its individual merits.

(c) Policies governing discharge or release to inactive duty on account of dependency or hardship—

(1) Dependency or hardship discharges, or releases to inactive duty, will not be authorized solely for financial or business reasons; for indebtedness; for personal convenience; when an individual is under charges or in confinement; or because of the member's physical or mental condition.

(2) Discharges or releases to inactive duty will not be disapproved under the provisions of this section solely because an individual's services are needed in his assigned duties, or because he is indebted to the Government or to an individual.

(3) The Chief of Naval Personnel may direct discharge or release to inactive duty when it is considered that undue and genuine hardship exists, that the hardship is not of a temporary nature, that the conditions have arisen or have been aggravated to an excessive degree since entry into the service, and the member has made every reasonable effort by means of application for basic allowance for quarters and voluntary contributions which have proven inadequate; that the discharge or release of the individual will result in the elimination of, or will materially alleviate, the condition and that there are no means of alleviation readily available other than by such discharge or release. Examples of meritorious cases are those in which the evidence shows that, either as a result of the death or disability of a member of an enlisted person's family, the separation of the person concerned is necessary for the support or care of a member or members of the family; or that the individual or the family is undergoing hardships more severe than normally encountered by dependents of families of members of the naval service. Undue hardship does not necessarily exist solely because of altered present or expected income or because the individual is separated from his family or must suffer the inconveniences normally incident to military service. Pregnancy of an enlisted man's wife is not in itself a circumstance for which separation will be authorized.

(d) A written application for discharge or release to inactive duty for dependency or hardship shall be forwarded to the Chief of Naval Personnel via the enlisted person's commanding officer. In unusual circumstances, personnel in an authorized leave status may submit requests for dependency or hardship discharge to the Chief of Naval Personnel. To facilitate and expedite the request and to ensure that it is properly prepared in accordance with existing instructions, it should be prepared by and submitted via the nearest naval activity. The anticipated date of the individual's departure from the leave address must be included in the request. All requests must be accompanied by affidavits substantiating the dependency or hardship claim. Where practicable, one affidavit should be from the dependent concerned. The request should contain the following additional information:

(1) Reason in full for request.

(2) Complete home address of dependent and applicant.

(3) Names and addresses of persons familiar with the situation.

(4) Statement as to marital status and date of marriage.

(5) Financial statement: Complete itemized budget for serviceman and/or dependent family members, including rent, food, clothing, utilities, fuel, medical expenses, and other regular expenses; list of existing debts, including names of creditors, original amount of debt, amount of debt remaining to be paid, amount of monthly payments, date debt contracted and purpose; specific amounts and modes of contributions of serviceman to dependents.

(6) Names, ages, occupations, and monthly incomes of members of the individual's family, if any, and the reasons why these members cannot contribute to the necessary care or support of the individual's family. If dependency is the result of death of a member of the enlisted person's family occurring after entrance into the service, a certificate or other valid proof of death should be furnished. If dependency or hardship is the result of disability of a member of the enlisted person's family occurring after entrance into the service, a physician's certificate should be furnished showing specifically when such disability occurred, diagnosis, duration of hospitalization and/or convalescence.

(7) Other income of dependent family members such as from pensions, insurance, Veterans Administration compensation, rental or sale of real estate, interest on bank deposits or funds invested, fees, alimony, or moneys received of any description whatsoever, whether regular or occasional, or social security benefits.

(8) Documentary evidence if the request is based solely on marital difficulties, i.e., divorce, separation, desertion of wife, or where the serviceman or persons other than the legal spouse have been awarded custody of minor children.

(e) Before forwarding the request the commanding officer shall interview the enlisted person concerned in order to elicit any further information and to insure that the required information is supplied. The forwarding endorsement shall include:

(1) A definite recommendation for approval or disapproval of the request.

(2) A statement regarding the status of any disciplinary action pending with recommended action.

(3) An itemization of all sources of income, including type family separation allowance, if any, as determined from individual's pay record.

(4) An itemization of pay record deductions, including allotments, the amount, to whom registered and effective date.

The Commanding Officer's recommendation on an individual's request for hardship discharge should be confined to the above areas. In no case should this endorsement include a recommendation for a substitute type of discharge, i.e., general, undesirable, etc. A hardship discharge is intended to be used as an instrument to alleviate personal hardships encountered by enlisted personnel when such discharge is the only solution. It is not intended to be used as a means to rid the service of undesirables, misfits or persons considered unsuitable for continuation in the naval service.

* * * * *

19. Section 730.10 is revised to read as follows:

§ 730.10 Discharge of enlisted personnel by reason of unsuitability.

(a) Enlisted personnel may be separated, by reason of unsuitability, with an honorable or general discharge as warranted by their military record. A discharge by reason of unsuitability, regardless of the attendant circumstances, will be effected only when directed by or authorized by the Chief of Naval Personnel.

(b) An enlisted person may be discharged by reason of unsuitability because of:

(1) Inaptitude: Applicable to those persons who are best described as inapt due to lack of general adaptability, want of readiness or skill, unhandiness, or inability to learn.

(2) Character and behavior disorders: Duly diagnosed character and behavior disorders, disorders of intelligence, and transient personality disorders due to acute or special stress, as listed in "Department of Defense Disease and Injury Codes" (NAVMED P–5082).

(3) Apathy, defective attitudes and inability to expend effort constructively: A significant observable defect, apparently beyond the control of the individual, elsewhere not readily describable.

(4) Homosexual tendencies: When there is also evidence of involvement in homosexual acts in the current enlistment, processing must be in accordance with Secretary of the Navy Instruction 1900.9 or revision and § 730.12. Likewise, if there is evidence of homosexual acts prior to enlistment or during a previous enlistment and homosexual tendencies were denied on SF 89, processing in ac-

cordance with § 730.13 for fraudulent enlistment should be considered.

(5) Enuresis.

(6) Alcoholism: Chronic, or addiction to alcohol.

(7) Other good and sufficient reasons, as determined by the Chief of Naval Personnel.

(c) Prior to processing an individual under this section, review §§ 730.12 and 730.13 to insure that processing under one of those sections is not more appropriate. In this regard, chronic military misbehavior or serious involvement with civilian authorities should not be used as the basis for unsuitability processing unless there is accompanying evidence of a psychiatric disorder which significantly contributed to the misbehavior. Military misbehavior and involvement with civilian police subject the respondent to the possibility of undesirable discharge and, therefore should normally be processed under the provisions of § 730.12 or § 730.13 as appropriate.

(d) In each case processed in accordance with this section, the enlisted person shall be informed in writing of the reason(s) he is being considered for discharge and shall be afforded an opportunity to make a statement in his own behalf. In the event a statement cannot be obtained, a page 13 entry of explanation shall be made and a copy of the page 13 forwarded as an enclosure to the letter of transmittal.

(e) Recommendations for discharge by reason of unsuitability shall include the following:

(1) A letter of transmittal prepared in the format given in paragraph (g) of this section.

(2) The respondent's signed statement of awareness and his statement in his own behalf, or statement that he does not desire to make a statement in his own behalf.

(3) Psychiatric or medical evaluation as appropriate.

(4) Copy of page 9 of the service record.

(5) Comment and recommendation of the commanding officer.

(f) Enlisted personnel serving on board ships, overseas stations, and continental U.S. activities lacking separation facilities who are recommended for discharge in accordance with paragraph (b)(2), (4) or (5) of this section, whose immediate transfer is clearly indicated in the best interest of the man concerned, may be transferred to the nearest separation activity to await instructions from the Chief of Naval Personnel. The transfer orders and records must accurately reflect the person's status and reason for transfer in order to ensure that the individual is held pending receipt of the instructions from the Chief of Naval Personnel. In this connection, forward a copy of the letter of transmittal to the separation activity under a separate letter. All other personnel recommended for discharge in accordance with this section shall be retained on board pending receipt of instructions from the Chief of Naval Personnel.

(g) Format of letter of transmittal:

January 15, 1963

From: Commanding Officer, U.S.S. EVERSAIL (DD–00).

To: Chief of Naval Personnel.

Subj: DOE, John Robert, 123 45 67, SN, USN; Recommendation for discharge by reason of unsuitability.

Encl: (1) Statement of DOE; (2) Copy of page 9; (3) Psychiatric evaluation.

1. The following information is submitted in the case of subject man:

a. *Basic record data.*

Date of current enlistment: Nov. 15, 1961 for four years. EAOS: Nov. 16, 1965.

Marital Status: Single. Dependents: 0. Months on Board: 12. Age: 22. GCT: 45. Years education: 12. Total Service: (Active) 1 yr. 2 mos (Inactive) 0.

b. *Diagnosis.* Emotional instability reaction (3210).

c. Military Offenses: Feb. 15, 1962. NJP Page 13–(3)—UA 2 days—2 wks. restr.

d. *Comment and Recommendation of Commanding Officer.* It is recommended that DOE be separated from the naval service by reason of unsuitability. Because of his personality disorder, further retention in the service would not be in the best interest of DOE or the naval service.

A. B. See,
Commander, USN.

20. Section 730.12 is revised to read as follows:

§ 730.12 Discharge of enlisted personnel by reason of unfitness.

(a) Enlisted personnel may be separated by reason of unfitness with an undesirable discharge, or with a higher type discharge when it is warranted by the particular circumstances in a given case. A discharge by reason of unfitness, regardless of the attendant circumstances, will be effected only when directed by or authorized by the Chief of Naval Personnel. The provisions of this section are not to be used as a substitute for action under the Uniform Code of Military Justice. Therefore, discharge by reason of unfitness will not be issued in lieu of disciplinary action, except upon the determination by the Chief of Naval Personnel that the interests of the service as well as the individual will best be served by administrative discharge. Accordingly, discharge by reason of unfitness normally will not be recommended in lieu of disciplinary action. Also, where there is a suspended punitive discharge pending, an administrative discharge normally will not be recommended under this section.

(b) An enlisted person may be recommended for discharge by reason of unfitness to free the service of persons whose military record is characterized by one or more of the following:

(1) Frequent involvement of a discreditable nature with civil or military authorities.

(2) Sexual perversion including but not limited to (i) lewd and lascivious acts, (ii) homosexual acts, (iii) sodomy, (iv) indecent exposure, (v) indecent acts with or assault upon a child under age 16, or (vi) other indecent acts or offenses. (Secretary of the Navy Instruction 1900.9 or revision sets forth controlling policy and additional action required in homosexual cases).

(3) Drug addiction or the unauthorized use or possession of habit-forming narcotic drugs or marijuana.

(4) An established pattern of shirking.

(5) An established pattern showing dishonorable failure to pay just debts.

(6) Other good and sufficient reasons, as determined by the Chief of Naval Personnel.

(c) In each case processed in accordance with this section, the individual is subject to an undesirable discharge. If his whereabouts is known, he must be informed in writing as to the circumstances which are the basis for the contemplated action and must be afforded in writing an opportunity to request or waive in writing any or all of the following privileges: (If held by the civil authorities or not on active duty, this may be accomplished by mail).

(1) To have his case heard by a board of not less than three officers.

(2) To appear in person before such board (unless in civil confinement or otherwise unavailable).

(3) To be represented by counsel who, if reasonably available, should be a lawyer.

(4) To submit statements in his own behalf.

If the individual requests that his case be heard by a field board of officers, the commanding officer shall convene an administrative board in accordance with § 730.15. The recorder for the field board shall be furnished a brief of the case completed to the extent possible and the service record of the individual concerned. In the event attempts to obtain a request for or waiver of privileges fail, make a page 13 entry of explanation and forward a copy of the page 13 along with the other processing papers to the Chief of Naval Personnel.

(d) Enlisted personnel, except those processed under paragraph (b)(2) or (3) of this section, shall be retained on board pending receipt of instructions from the Chief of Naval Personnel. Enlisted personnel serving on board ships, overseas stations, and continental U.S. activities lacking separation facilities, who are recommended for discharge in accordance with paragraph (b)(2) or (3) of this section, may be transferred to the nearest separation activity to await instructions from the Chief of Naval Personnel. The transfer orders and records must accurately reflect the person's status and reason for transfer in order to ensure that the individual is held pending receipt of the instructions from the Chief of Naval Personnel. In this connection, forward a copy of the letter of transmittal (less the field board proceedings) to the separation activity under a separate letter.

(e) A letter of transmittal shall be prepared in the format given in paragraph (f) of this section and shall contain the following information:

(1) *Principal reason for processing,* Indicate reason as given in paragraph (b) of this section, such as repeated military offenses, indebtedness, homosexual involvement, etc.

(2) *Summary of military offenses.* List in chronological order all disciplinary action during current enlistment. Include service record entry page numbers, date of nonjudicial punishment or court-martial by type, description of offense(s), nonjudicial punishment or sentence as approved and approval date, and all violations of brig or disciplinary command regulations during current confinement with action taken thereon.

(3) *Unclean habits, if any.* Substantiate all unclean habits including the occurrence of repeated venereal disease infections during the current enlistment. When reporting venereal diseases, indicate the date of each admission and nature of the infection.

(4) *Civil convictions, if any, on the basis of information contained in the service record or otherwise readily available.* List date and court in which convicted, offense, and sentence awarded.

(5) *Remarks.* Include location of the individual and his records, any disciplinary action pending, identification of any other military personnel involved and action taken or contemplated in regard thereto, and other information pertinent to the case.

(6) *Findings and recommendation of field board, if held.*

(7) *Comment and recommendation of the Commanding Officer.* (If discharge is recommended, include type and reason.)

(8) *Enclosures.* (i) Request for or waiver of privileges. Must include the following signed statement:

I understand that I am being considered for an administrative discharge because of (one or more of the reasons listed in this section) and that I am subject to and may be separated with an undesirable discharge. I understand that an undesirable discharge is under other than honorable conditions and may deprive me of virtually all veteran's benefits based upon my current period of active service, and that I may expect to encounter substantial prejudice in civilian life in situations wherein the type of service rendered in any branch of the Armed Forces or the character of discharge received therefrom may have a bearing. I understand that I may request or waive the privileges listed below. Understanding all of the foregoing, I desire to avail myself of the privileges I have checked below:

- ☐ None of the privileges.
- ☐ To have my case heard by a board of not less than three officers.
- ☐ To appear in person before such board (unless in civil confinement or otherwise unavailable).
- ☐ To be represented by counsel who, if reasonably available, should be a lawyer.
- ☐ To submit statements in my own behalf.

(ii) Copy of page 9 of the service record.

(iii) Statements of subject, if made.

(iv) Proceedings of field board, if held.

(v) Other available documents such as psychiatric or medical evaluation, police reports, etc. If being processed as result of indebtedness, include financial statement as required by article C–11104A of the Bureau of Naval Personnel Manual.

(f) Format of letter of transmittal:

January 15, 1963

From: Commanding Officer, U.S.S. "Eversail" (DD–00).

To: Chief of Naval Personnel.

Subj: DOE, John Robert, 123 45 67, SN, USN; Recommendation for discharge by reason of unfitness.

Encl: (1) Subject's request for privileges; (2) Page 9 (copy of); (3) Statement of subject; (4) Proceedings of field board, if held; (5) Other exhibits.

1. The following information is submitted in the case of subject man:

a. *Primary reason for processing.* (Repeated military offenses, indebtedness, homosexual involvement, etc.)

b. *Basic record data.*

Date of current enlistment: November 15, 1960 for four years. EAOS: February 6, 1965.

Marital status: Single. Dependents: 0. Months on board: 12. Age: 22. GCT: 45. Years of education: 12. Total service (Active) 2 yrs 2 mos. (Inactive) 0.

c. Military offenses:

February 15, 1961 NJP; Pg 13–(3); UA 2 days—2 wks. restr.

April 11, 1961 NJP; Pg 13 –(5); UA 1 day—1 wk. extra duty.

August 5, 1961 NJP; Pg 13–(7); Failed to obey lawful order—2 wks. extra duty.

May 1, 1962 SPCM; Pg 6–(1); UA 15 days—15 days conf. approved.

October 1, 1962 SPCM; Pg 6–(2); UA 20 days—1 month conf. forf. $30.00 a month for 1 mo. approved.

January 5, 1963 NJP; Pg 13–(9); UA 5 hrs.—1 wk. restr.

d. *Other involvements.*

September 12, 1961—Convicted by civil authorities of drunkenness and fined $5.00.

December 5, 1962—Contracted VD infection.

e. *Remarks.* DOE retained on board to await action by Chief of Naval Personnel. (In accordance with authority contained in § 730.12(d), DOE being transferred on January 20, 1963 to RecSta, T. I., to await action by CNP.) Other naval personnel involved: SMITH, T. H., 645 32 21, TN. USN. Commanding Officer, U.S.S. "Lexington" has been notified.

f. *Findings, recommendation, and opinion of Board.* Had frequent involvement of a discreditable nature with military authorities. Discharge under other than honorable conditions (discharge under honorable conditions, retain, etc.).

g. *Comment and recommendation of Commanding Officer.* Concur in recommendation and opinion of field board. Recommend undesirable discharge by reason of unfitness (or other appropriate recommendation).

A. B. See,
Commander, USN.

21. Section 730.13 is revised to read as follows:

§ 730.13 Discharge of enlisted personnel by reason of misconduct.

(a) Enlisted personnel may be separated by reason of misconduct with an undesirable discharge, or with a higher type discharge when it is warranted by the particular circumstances in a given case. A discharge by reason of misconduct, regardless of the attendant circumstances, will be effected only when directed by or authorized by the Chief of Naval Personnel.

(b) Processing in accordance with this section is mandatory in any of the following cases:

(1) Conviction by civil authorities (foreign or domestic) or action taken which is tantamount to a finding of guilty of an offense for which the maximum penalty under the Uniform Code of Military Justice (10 U.S.C. 801–940) is death or confinement in excess of one year; or which involves moral turpitude; or where the offender is adjudged a juvenile delinquent, wayward minor or youthful offender as a result of an offense involving moral turpitude. If the offense is not listed in the MCM Table of Maximum Punishments or is not closely related to an offense listed therein, the maximum punishment authorized by the U.S. Code or the District of Columbia Code, whichever is lesser, applies. For the purpose of this subparagraph only, an individual shall be considered as having been convicted even though an appeal is pending or is subsequently filed.

(2) Procurement of a fraudulent enlistment, induction, or period of obligated service through any deliberate material misrepresentation or concealment which, except for such misrepresentation or concealment, may have resulted in rejection. The enlistment of a minor with false representation as to age or without proper consent will not in itself be considered as a fraudulent enlistment.

(3) Prolonged unauthorized absence. When unauthorized continuous absence of 1 year or more has been established but punitive discharge has not been authorized by competent authority.

(c) In each case processed in accordance with this section, the individual is subject to an undesirable discharge. If his whereabouts is known, he must be informed in writing as to the circumstances which are the basis for the contemplated action and must be afforded in writing an opportunity to request or waive, in writing, any or all of the following privileges: (If held by civil authorities or not on active duty this may be accomplished by mail.)

(1) To have his case heard by a board of not less than three officers.

(2) To appear in person before such board (unless in civil confinement or otherwise unavailable).

(3) To be represented by counsel who, if reasonably available, should be a lawyer.

(4) To submit statements in his own behalf.

If the individual requests that his case be heard by a field board of officers, the commanding officer shall convene an administrative board in accordance with § 730.15. The recorder for the field board shall be furnished a brief of the case completed to the extent possible and the service record of the individual concerned. In the event attempts to obtain a request for or waiver of privileges fail, make a page 13 entry of explanation and forward a copy of the page 13 along with the other processing papers to the Chief of Naval Personnel.

(d) Personnel processed in accordance with this section normally shall be retained on board pending instructions from the Chief of Naval Personnel. However, if the particular circumstances clearly indicate that the individual should be transferred, a request for transfer, indicating the reason therefor,

may be submitted to the Chief of Naval Personnel.

(e) A letter of transmittal shall be prepared in the format given in paragraph (f) of this section and shall contain the following information:

(1) Circumstances of offense(s): Include a brief resume of the circumstances surrounding the offense (must include sufficient detail to clarify reasons for initial arrest).

(2) Action of civil authorities: Include citation of any civil statute(s) violated, charge on which tried and convicted, court in which convicted, sentence of court, and maximum punishment which could have been imposed for such a conviction under the UCMJ, D.C. Code, or U.S. Code as applicable.

(3) Previous civil convictions, if any, on the basis of information contained in the service record or otherwise readily available: List date and court in which convicted, offense, and sentence awarded.

(4) Summary of military offenses, if any: List in chronological order all disciplinary action during current enlistment. Include service record entry page numbers, date of nonjudicial punishment or court-martial by type, description of offense(s), nonjudicial punishment or sentence as approved and date of approval, and all violations of brig or disciplinary command regulations during the current confinement, with action taken thereon.

(5) Remarks: Include location of the individual and his records, any unauthorized absence involved, and disciplinary action taken or pending, identification of any other military personnel involved in the case and action taken or contemplated in regard thereto, and other information pertinent to the case.

(6) Findings and recommendation of field board, if held.

(f) Format of letter of transmittal:

January 15, 1963

From: Commanding Officer, U.S.S. EVERSAIL (DD–00).

To: Chief of Naval Personnel.

Subj: DOE, John Robert, 123 45 67, SN, USN; Recommendation for discharge by reason of misconduct.

Encl: (1) Subject's request for privileges; (2) Arrest report; (3) Page 9 (copy of); (4) Statement of subject; (5) Proceedings of field board, if held; (6) Other exhibits.

1. The following information is submitted in the case of subject man:

a. *Primary reason for processing.* (Civil conviction, fraudulent enlistment, or prolonged unauthorized absence).

b. *Basic record data.*

Date of current enlistment: November 15, 1960 for four years. EAOS: Undetermined. Marital status: Single. Dependents: 0. Months on board: 12. Age: 22. GCT: 45. Years education: 12. Total service (Active) 2 yrs. 2 mos. (Inactive) 0.

(Active) (Inactive)

c. *Circumstances of offense(s) in detail.* While on authorized leave on 1/1/63, arrested by the civil authorities of Colorado Springs, Colorado, on the charge of auto theft.

d. *Action of civil authorities.* Tried on 1/5/63 at Colorado Springs, Colorado, for violation of Title 29, Chapter 133.24 (Car theft) and convicted. Received an indeterminate term up to five years confinement. Presently serving his sentence at the Colorado State Prison, Canon City, Colorado. Maximum penalty—Article 121, UCMJ, 5 years.

e. *Summary of Military Offense(s).* 4/11/61; NJP; Pg 13–(5); UA 1 day—1 wk. extra duty.

f. *Remarks.* Records and effects located at this command. Other personnel involved: SMITH, T. H., 645 32 21, TN, USN. Commanding Officer, U.S.S. LEXINGTON, has been notified.

g. *Findings, recommendation and opinion of Board.* Convicted as indicated above. Discharge under other than honorable conditions (discharge under honorable conditions, retain, etc.).

h. *Comment and recommendation of Commanding Officer.* Concur in recommendation and opinion of field board. Recommend undesirable discharge by reason of misconduct (or other appropriate recommendation).

A. B. SEE,
Commander, USN.

(7) Comment and recommendation of the Commanding Officer: (If discharge is recommended, include type and reason.)

(8) Enclosures:

(i) Request for or waiver of privileges. Must include the following signed statement:

I understand that I am being considered for an administrative discharge because of (one of the reasons listed in § 730.13) and that I am subject to and may be separated with an undesirable discharge. I understand that an undesirable discharge is under other than honorable conditions and may deprive me of virtually all veteran's benefits based upon my current period of active service, and that I may expect to encounter substantial prejudice in civilian life in situations wherein the type of service rendered in any branch of the Armed Forces or the character of discharge received therefrom may have a bearing. I understand that I may request or waive the privileges listed below. Understanding all of the foregoing, I desire to avail myself of the privileges I have checked below.

- ☐ None of the privileges.
- ☐ To have my case heard by a board of not less than three officers.
- ☐ To appear in person before such board (unless in civil confinement or otherwise unavailable).
- ☐ To be represented by counsel who, if reasonably available, should be a lawyer.
- ☐ To submit statements in my own behalf.

ii. Statement of witnesses, arrest reports, copies of court records, probation orders, or any other pertinent documents.

iii. Copy of page 9 of the service record.

iv. Statements of subject, if made.

v. Proceedings of field board, if held.

vi. Other pertinent exhibits.

§ 730.14 [Deleted]

22. Section 730.14 is deleted.

23. Section 730.15 is revised to read as follows:

§ 730.15 Field board of officers.

(a) *Appointment and composition.* When a field board hearing is to be held, the commanding officer shall appoint a board of not less than three commissioned officers in an active duty status to consider the case. The board may be composed of Regular or Reserve Navy or Marine Corps officers, or a combination thereof. If the individual under consideration (hereinafter called respondent) is a woman, the board must include a woman officer. The commanding officer shall also appoint as recorder an officer in an active duty status. The senior member of the board presides at the hearing and is responsible for its proper conduct. Prior to the hearing, the senior member shall ensure that all members of the board are familiar with the provisions of pertinent sections of this part.

(1) *Reserve membership.* If the respondent is a Reservist the membership of the board shall, if available, include a majority of Reserve officers. In any instance where a majority of Reserve officers is not available, the board will include not less than one Reserve officer among its members.

(2) *Counsel for the respondent.* If the respondent requests in writing that he be represented by counsel but does not specify a particular person, the commanding officer shall appoint an officer he considers qualified to act as counsel for the respondent. When practicable, a person selected by the respondent will be appointed as his counsel. The respondent may retain civilian counsel at his own expense, and any previously appointed counsel may accordingly be excused. The hearing should not be unduly delayed to permit attendance by counsel. If undue delay appears likely, other counsel who is immediately available should be selected or appointed.

(3) *Recorder.* The recorder is responsible for the clerical and preliminary work of the hearing, but is not a member of the board. He conducts a preliminary review of available evidence and prior to the hearing interviews prospective witnesses after warning them of their rights under article 31, UCMJ, where appropriate. After consultation with the commanding officer and the senior member, he notifies the members, respondent, and counsel as to the time, date, and place of the hearing. Subject to the provisions of paragraph (2) of this section, the recorder arranges for the attendance at the hearing of the respondent, all witnesses for the government, and military witnesses for the respondent. He verifies the information contained in the brief concerning the respondent and assembles pertinent directives, regulations and records for use by the board. At the hearing he presents the case against the respondent. He is responsible for preparing the report of the hearing.

(4) *Reporter.* Although a summary of testimony will normally suffice, the recorder or senior member may request a reporter for the purpose of making a verbatim record of the testimony if it appears that a substantial number of witnesses will testify, that the testimony will be lengthy, or that other good reason exists for making a verbatim record.

(b) *Obtaining witnesses.* No authority exists for the issuance of subpoenas in connection with these hearings. Appearance as witnesses of civilians including members of the Armed Forces on inactive duty may be arranged for on a voluntary basis. Appropriations are not available to pay witnesses' fees or

reimbursement for travel and other expenses of such persons and this fact shall be made known to them if and when they are invited to appear and testify at the hearing. Attendance at the hearing of military personnel on active duty who are in the local area shall be arranged for by the recorder if reasonably available. Testimony of active duty military personnel not in the immediate area, if needed, should be obtained and presented in the form of written statements.

(c) *ONI reports.* If an ONI report is involved which cannot be made available to the respondent and his counsel, the commanding officer should request the District or Area Intelligence Officer to furnish a resume of the report which may be made available to the respondent and his counsel in accordance with current ONI instructions. The resume but not the ONI report may be considered by the field board. The purpose of this provision is to ensure that the field board considers only matters which are also available to the respondent and his counsel.

(d) *General procedural instructions.* The proceedings of boards of officers under the provisions of this section need not conform to provisions of the Manual for Courts Martial United States, or of the JAG Manual. Such provisions may, however, be followed in specific cases and, if followed, will satisfy the requirement of this section. Whenever applicable, article 31 of the Uniform Code of Military Justice (10 U.S.C. 831) is to be complied with. Attention is directed to the fact that (1) Military personnel on active duty may not be compelled to testify or produce evidence that will incriminate them, nor may they be required to answer questions not material to the issue which might tend to degrade them and (2) Civilians, including members of the Armed Forces on inactive duty, may not be compelled to testify or produce evidence at the hearing. The board should consider any matter presented which is relevant to the issue whether written or oral, sworn or unsworn. Real evidence as distinct from testimonial evidence may be exhibited to the board and should be accurately described or reproduced for the record. The board may refuse to consider or to consider further any oral or written matter presented if it is irrelevant, immaterial, or unnecessarily repetitive and cumulative, but no such matter should be rejected or withheld from consideration on the ground that it would be incompetent for presentation to a court of law. The board will rely on its own judgment and experience in determining the weight and credibility to be given material received in evidence. Board proceedings under this section should not be in the nature of a formal fact-finding tribunal, or judicial trial, but should be formalized to the extent of assuring full opportunity for presentation of the respondent's case. If an objection is made at any stage during the proceedings the senior member will ensure that the objection and the basis therefor are noted in the record but should not make a formal ruling thereon. Any member of the board may be challenged but only on grounds which show that the member cannot render a fair and impartial decision. The challenged member may be examined by the respondent, his counsel, and other members of the board. The commanding officer, upon being informed of the circumstances of the challenge and the recommendation of the other members, may appoint a substitute for the challenged member if he deems such action appropriate.

(e) *Conduct of hearing.* (1) The senior member, upon calling the meeting to order, should direct the recorder to make a record as to the time, date, and place of the hearing, the identity and presence of the appointed members of the board and of the recorder, the respondent, his counsel, and any witnesses. The senior member should then commence the hearing by explaining in substance that:

(i) The board has been convened for the purpose of considering the pertinent facts relating to the case of (name, service number, rate, and class), who it is alleged (state the specific allegations against the respondent). The board will make findings of fact, a recommendation as to the disposition to be made in this case, and will render an opinion as to character of separation to be given if separation is recommended by the board.

(ii) The proceedings are administrative in nature, and the board is not bound by formal rules of evidence.

(iii) The respondent has the right to present evidence, to cross-examine all witnesses who appear at the hearing and to hear all evidence against him. (If evidence is classified observe the provisions of Department of the Navy Security Manual for Classified Information.)

(iv) The respondent has the right to submit an oral or written statement in his own behalf.

(v) The respondent may testify in his own behalf or remain silent, and, if he testifies he may be examined on his testimony and on the question of his general credibility.

(vi) There is no right of peremptory challenge, but a member may be challenged for cause.

(vii) Objections will be heard and noted, but there should be no formal ruling thereon.

(2) After the preliminary procedures have been completed, the recorder will present the case against the respondent who will be afforded the opportunity for rebuttal and for presentation of evidence. The general procedural instruction stated in paragraph (d) of this section will be followed. Witnesses will be excluded except while testifying. Before testifying, each witness and the respondent will be asked whether or not he elects to give his testimony under oath or affirmation. After all evidence is in and questioning and oral argument, if any, are complete the hearing will be closed.

(f) *Report of board.* The board will make and render its findings, recommendation, and opinion in closed session. The report of the field board of officers shall be completed, using the form set forth in paragraph (h) of this section as a guide, and shall be signed by all members. The dissent of any member will be duly recorded therein. Where a verbatim record has been made, only so much of the verbatim oral testimony as bears upon the critical situations of the case should be incorporated into the record of proceedings. The remainder may be summarized. Written testimony and statements which have been furnished the board shall be attached to the record as exhibits. The complete record will be authenticated by the senior member or by another member if he is not immediately available. Upon request the respondent will be provided with a copy of the record of proceedings with all exhibits, but he will not be furnished a copy of the report of the board or brief accompanying the case.

(g) *Review and forwarding of reports.* After reviewing the record of the hearing and the report of the board, the commanding officer shall note on the report his concurrence or nonconcurrence in the findings, recommendation, and opinion of the board and enter any additional comment deemed appropriate. If the commanding officer determines that the respondent should be retained in the service, he may close the case except where sexual perversion or drug addiction within the purview of § 730.12 or any case within the purview of § 730.13 is an issue. Cases in which sexual perversion or drug addiction or misconduct within the purview of the aforesaid sections is an issue must be forwarded to the Chief of Naval Personnel for final action.

(h) *Format of report of field board of officers.*

REPORT OF FIELD BOARD OF OFFICERS IN THE CASE OF

Name, DOE, John Robert; Service number, 123 45 67; Rate, SN; Class, USN.

Findings of the Board: The respondent (has) (is)

(Use one or more of the following as appropriate):

a. Had frequent involvement of a discreditable nature with civil or military authorities.

b. Chronic alcoholism or addicted to alcohol.*

c. Without authority (used) (possessed) habit forming narcotic drugs or marijuana.

d. A sexual pervert.

e. Committed homosexual acts in current enlistment.

f. Homosexual tendencies.*

g. Committed homosexual acts not in current enlistment.

h. An established pattern showing dishonorable failure to pay just debts.

i. An established pattern of shirking.

j. Been convicted of a civil offense within the purview of § 730.13.

k. Prolonged unauthorized absence within the purview of § 730.13.

l. Perpetrated a fraudulent (enlistment) (induction).

m. Other (explain).

Board Recommendation: ☐ Discharge ☐ Retain ☐ Release to inactive duty.

Opinion of Board as to character of separation: ☐ Honorable ☐ Under honorable conditions ☐ Under conditions other than honorable.

* If discharge is recommended under this finding it should be for unsuitability rather than unfitness or misconduct and the provisions of § 730.10 must be complied with.

Signature of Board Members: (include name, grade, and component).
Dissent: (Reasons).

(Signature—Include name, grade, and component)

Findings, Recommendation and Opinion of Majority ☐ Concurrence ☐ Nonconcurrence
(Comment, if any)

(Commanding officer—include name, grade, and component)

(i) *Board of officers convened by the Chief of Naval Personnel.* There is established in the Bureau of Naval Personnel an Enlisted Performance Evaluation Board composed of not less than three officers which considers cases referred to it, including performance cases submitted under § 730.12 or § 730.13. The Board will examine all evidence submitted and will make recommendation to the Chief of Naval Personnel as to final disposition. The Board will consider each case on its individual merits. All matters of record, including such variables as the person's military record, civil record, age, GCT/AFQT, education, length of service, performance marks, psychiatric and medical determinations, duty stations, nature of offense and actions taken thereon, length of time since commission of last offense, individual's statement, the field board action (when applicable), commanding officer's comments and recommendations, and other pertinent factors are carefully considered, evaluated, and correlated in arriving at a decision.

(j) *Action by the Chief of Naval Personnel.* Final disposition of performance cases acted upon under the provisions of this section will be directed by the Chief of Naval Personnel. Disposition of each case will be based upon the recommendation of the Commanding Officer, field board of officers, and the Enlisted Performance Evaluation Board together with policy or legal considerations.

(2) The final action approved by the Chief of Naval Personnel in an individual case will not, as a matter of policy and/or law, include a discharge under other than honorable conditions unless such action is proposed by the Enlisted Performance Evaluation Board. If the final action approved is less favorable to the individual than that proposed by the field board, the Chief of Naval Personnel will generally afford the individual an opportunity to make representations in an effort to show cause why the less favorable action should not be taken. If the less favorable action is an undesirable discharge and the individual so requests in writing to his commanding officer, he will be offered an opportunity to appear in person, with or without counsel, before the Enlisted Performance Evaluation Board. Instructions incident to such appearance will be included in the letter directing discharge. Personal appearance before the Board will not be authorized in the cases of personnel in civil confinement or otherwise not available.

(3) When considered appropriate, the Chief of Naval Personnel will authorize or direct that the individual be retained in the service in a probationary status. In such a case, the action of the Chief of Naval Personnel will include instructions concerning the terms of the probation and will specify the type of discharge which is to be executed without reference to the Bureau of Naval Personnel in the event the individual does not fulfill the terms of his probation. A discharge other than the type specified will not be given the probationer unless his case is reprocessed under the provisions of this section which govern discharge by reason of unsuitability, unfitness, or misconduct, as applicable, and such discharge is directed by the Chief of Naval Personnel.

'24. Section 730.16 is revised to read as follows:

§ 730.16 General provisions and restrictions relating to enlisted separations.

(a) *Effective time of discharge.* Subject to any law providing otherwise, the discharge of an enlisted person on active duty, regardless of the reason for separation, takes effect upon delivery of the discharge certificate. In the case of a person discharged while absent without authority or in civil confinement, constructive delivery of the discharge certificate is accomplished at the time it is signed by proper authority. If a discharge is effected as a result of a person's immediate entry in the same or any other component of the Armed Forces in the same or any other status, the discharge will, for administrative purposes, be dated as of the date preceding such entry or re-entry.

(b) *Effective time of release to inactive duty.* Subject to any law providing otherwise, the release to inactive duty of a Reservist who was called to active duty as a Reservist takes effect at the actual time of his arrival home or at the expiration of his authorized travel time, whichever is earlier. The release to inactive duty of members of the Regular Navy transferred to the Naval Reserve and concurrently released to inactive duty takes effect upon delivery of the separation documents.

NOTE: When a discharged member is seriously injured while returning home and is taken to a Navy hospital, he may be eligible for hospitalization and other benefits from the Veterans Administration and should be advised to file an appropriate claim with that agency.

(c) *Civilian clothing.* An enlisted member who is discharged by reason of unsuitability, security, unfitness, or misconduct with an honorable or general discharge or who is discharged for any reason with a dishonorable, bad conduct, or undesirable discharge shall surrender the outer garments and distinctive parts of the uniform which are in the member's possession at time of discharge. When the items of clothing authorized to be retained by the dischargee are insufficient to provide the dischargee with one outfit of civilian clothing suitable for wearing home, necessary items of civilian clothing may be issued at no cost to the dischargee to augment the retained clothing. These clothes shall be furnished without regard to the state of member's accounts or amount of personal funds in the member's possession. However, no extra items of clothing such as a spare shirt or socks and no accessories such as an umbrella or luggage may be issued to the dischargee. The items procured for issuance must be moderately priced but need not be the lowest quality available. Members transferred prior to the actual execution of the discharge shall take all their uniforms with them to the place to which transferred. Issuance of the outfit of civilian clothing under this paragraph is subject to the following exceptions:

(1) The clothing may be issued to a person discharged in absentia pursuant to article C–10201 (6) of the Bureau of Naval Personnel Manual only if he requests the clothing, and all conditions set forth in the first two sentences of this paragraph are met.

(2) The clothing is not to be issued to a person who is discharged while on leave granted in accordance with current instructions (see Secretary of the Navy Instruction 1050.3 (§ 719.206 of this chapter) or revisions thereof) to await completion of appellate review of a court-martial sentence which includes punitive discharge.

(For detailed instructions regarding issuance of civilian clothing, its cost, and recovery of uniforms of dischargees, see Bureau of Supplies and Accounts Manual, paragraph 25940.)

(d) *Wearing of uniform after discharge.* Enlisted personnel discharged with an honorable or general discharge (except those discharged by reason of unsuitability, security, unfitness, or misconduct), are entitled to retain their uniforms and may within 3 months after discharge wear them from place of discharge to their homes, except that persons who have served less than 6 months on active duty subsequent to last authorization of an initial clothing allowance, unless discharged to accept a direct commission or appointment as an officer or warrant officer, are entitled to retain only one complete uniform appropriate to the season. The 3-month period relates to the period between the date of discharge and the date of the person's arrival home, and does not permit the wearing of the uniform after arrival home, even though the 3-month period has not expired. Enlisted personnel discharged to accept a commission or appointment as an officer or warrant officer may retain all clothing in their possession.

(e) *Cash allowance.* An enlisted person who is discharged for any reason with a dishonorable, bad conduct, or undesirable discharge and who would be otherwise without funds to meet his immediate needs shall, upon discharge, be paid a sum not to exceed $25 or such portion thereof as will, together with other funds available to the individual concerned, total $25. The cash allowance is not payable to a member who is discharged while on leave granted in accordance with current instructions (see Secretary of the Navy Instruction (§ 719.206 of this chapter) or revisions thereof) to await completion of appellate review of a court-martial sentence which includes punitive discharge.

(f) *Not recommended for reenlistment.* Every enlisted person discharged who is not recommended for reenlistment shall be informed orally that fraudulent enlistment in any branch of the service undoubtedly will be detected by fingerprints, and that if concealment of previous service and discharge results in reenlistment that person will be subject to disciplinary action.

(g) *Information concerning the Honorable Discharge Button.* Information concerning the Honorable Discharge Button is set forth in article B–2107 of the Bureau of Naval Personnel Manual.

(h) *Information concerning recoupment of reenlistment bonus.* Information concerning recoupment of reenlistment bonus is set forth in article A–4204 of the Bureau of Naval Personnel Manual.

(R.S. 161, secs. 280, 1162, 5031, 6291–6298, 70A Stat. 14, 89, 278, 391–393, as amended; 5 U.S.C. 22, 10 U.S.C. 280, 1162, 5031, 6291–6298)

By direction of the Secretary of the Navy.

Dated: December 22, 1964.

[SEAL] WILFRED HEARN,
Rear Admiral, U.S. Navy, Judge Advocate General of the Navy.

[F.R. Doc. 64–13302; Filed, Dec. 23, 1964; 8:48 a.m.]

Title 5—ADMINISTRATIVE PERSONNEL

Chapter I—Civil Service Commission

PART 213—EXCEPTED SERVICE

Positions Other Than Those of Confidential or Policy-Determining Character for Which it is Not Practicable To Examine.

Effective upon publication in the FEDERAL REGISTER, paragraph (b) of § 213.3101, having expired by its own terms, is revoked.

(R.S. 1753, sec. 2, 22 Stat. 403, as amended; 5 U.S.C. 631, 633; E.O. 10577, 19 F.R. 7521, 3 CFR, 1954–1958 Comp., p. 218)

UNITED STATES CIVIL SERVICE COMMISSION,
[SEAL] MARY V. WENZEL,
Executive Assistant to the Commissioners.

[F.R. Doc. 64–13305; Filed, Dec. 23, 1964; 8:49 a.m.]

PART 213—EXCEPTED SERVICE

Department of the Army

Section 213.3307 is amended to show the exception under Schedule C of the position of Special Assistant to the Assistant Secretary of the Army (Installations and Logistics) for Planning. Effective upon publication in the FEDERAL REGISTER, subparagraph (15) is added to paragraph (a) of § 213.3307 as set out below.

§ 213.3307 Department of the Army.

(a) *Office of the Secretary.* * * *

(15) One Special Assistant to the Assistant Secretary of the Army (Installations and Logistics) for Planning.

* * * * *

(R.S. 1753, sec. 2, 22 Stat. 403, as amended; 5 U.S.C. 631, 633; E.O. 10577, 19 F.R. 7521, 3 CFR, 1954–1958 Comp., p. 218)

UNITED STATES CIVIL SERVICE COMMISSION,
[SEAL] MARY V. WENZEL,
Executive Assistant to the Commissioners.

[F.R. Doc. 64–13306; Filed, Dec. 23, 1964; 8:49 a.m.]

PART 213—EXCEPTED SERVICE

Department of Labor

Section 213.3315 is amended to show the exception under Schedule C of the position of Director, Neighborhood Youth Corps. Effective upon publication in the FEDERAL REGISTER, subparagraph (19) is added to paragraph (a) of § 213.3315 as set out below.

§ 213.3315 Department of Labor.

(a) *Office of the Secretary.* * * *

(19) The Director, Neighborhood Youth Corps.

* * * * *

(R.S. 1753, sec. 2, 22 Stat. 403, as amended; 5 U.S.C. 631, 633; E.O. 10577, 19 F.R. 7521, 3 CFR, 1954–1958 Comp., p. 218)

UNITED STATES CIVIL SERVICE COMMISSION,
[SEAL] MARY V. WENZEL,
Executive Assistant to the Commissioners.

[F.R. Doc. 64–13307; Filed, Dec. 23, 1964; 8:49 a.m.]

Title 22—FOREIGN RELATIONS

Chapter II—Agency for International Development, Department of State

[A.I.D. Reg. 1]

PART 201—RULES AND PROCEDURES APPLICABLE TO COMMODITY TRANSACTIONS FINANCED BY A.I.D.

Part 201 of Chapter II, Title 22 (A.I.D. Regulation 1), is amended as follows:

In § 201.86 designate the present text as paragraph (a) and add the following new paragraph (b).

As amended § 201.86 reads as follows:

§ 201.86 Continuation in effect of certain prior issuances.

(a) The following documents, if issued or executed by A.I.D. or any predecessor agency or corporation prior to the effective date of this Part 201, will continue in effect subject to all the terms and conditions of such documents and, to the extent applicable, all the terms and conditions of Regulation 1 as in effect on the date of the issuance of such documents: Project agreements, procurement authorizations and project implementation orders, United States Government agency purchase requisitions, loan agreements and implementation letters, letters of commitment and letters of notification to banks, requests for the opening of a special letter of credit and letters of commitment to suppliers. Authorizations, bank contracts, letters of guaranty to banks or suppliers issued by A.I.D. or any predecessor agency or corporation prior to the effective date of this Part 201 will continue in effect in accordance with their terms. Amendments to any of the above documents may continue to be made in accordance with the procedures in effect prior to the effective date of this Part 201.

(b) Whenever a Supplier's Certificate A.I.D. Form 280 is required to be submitted under the provisions of this part as in effect prior to November 1, 1964, a Supplier's Certificate A.I.D. Form 281 completed and executed in accordance with the provisions of § 201.52(a) (6) and (b) may, at the election of the supplier, be submitted in lieu of such Supplier's Certificate A.I.D. Form 280, and, if such Supplier's Certificate A.I.D. Form 281 is submitted, the supplier executing the same shall be bound by the provisions thereof and by the provisions of this part as in effect at the time of his execution of such Supplier's Certificate.

Dated: December 9, 1964.

WILLIAM S. GAUD,
Deputy Administrator.

[F.R. Doc. 64–13220; Filed, Dec. 23, 1964; 8:46 a.m.]

Title 42—PUBLIC HEALTH

Chapter I—Public Health Service, Department of Health, Education, and Welfare

PART 21—COMMISSIONED OFFICERS

Prescription of Numbers in Grade

Section 21.111 of Subpart G is amended to read as follows:

§ 21.111 Prescription of numbers in grade.

The following maximum number of officers is authorized to be on active duty in the Regular Corps in each of the grades from the junior assistant grade to the director grade, inclusive, during the fiscal year beginning July 1, 1964, and ending June 30, 1965:

Director grade	665
Senior grade	830
Full grade	710
Senior Assistant grade	500
Assistant grade	65
Junior Assistant grade	30

(Sec. 206, 58 Stat. 694, as amended; 42 U.S.C. and Sup., 207)

This amendment shall be effective as of July 1, 1964.

Dated: December 2, 1964.

[SEAL] LUTHER L. TERRY,
Surgeon General.

Approved: December 16, 1964.

ANTHONY J. CELEBREZZE,
Secretary.

[F.R. Doc. 64–13248; Filed, Dec. 23, 1964; 8:46 a.m.]

Title 14—AERONAUTICS AND SPACE

Chapter I—Federal Aviation Agency

[Docket No. 5066; Amdts. 1–6; 91–10]

PART 1—DEFINITIONS AND ABBREVIATIONS [NEW]

PART 4a—AIRPLANE AIRWORTHINESS

PART 4b—AIRPLANE AIRWORTHINESS; TRANSPORT CATEGORIES

PART 25—AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES [NEW]

PART 91—GENERAL OPERATING AND FLIGHT RULES [NEW]

This amendment adds Part 25 [New] to the Federal Aviation Regulations to replace Part 4b of the Civil Air Regulations, and is a part of the Agency recodification program announced in Draft Release 61–25, published in the FEDERAL REGISTER on November 15, 1961 (26 F.R. 10698).

Part 25 [New] was published as a notice of proposed rule making in the FEDERAL REGISTER on June 2, 1964 (29 F.R. 7169), and given further distribution as Notice No. 64–28.

During the life of the recodification project, Chapter I of Title 14 may contain more than one part bearing the same number. To differentiate between the two, the recodified parts, such as this one, are labeled "[New]". The label will be dropped at the completion of the project as all of the regulations will be new.

Many of the comments received recommended specific substantive changes to the regulations. Many of these recommendations appear to be meritorious. However, they cannot be adopted as a part of the recodification program, since the purpose of the program is simply to streamline and clarify present regulatory language and delete obsolete or redundant provisions. To attempt substantive changes, other than relaxatory ones that are completely noncontroversial, would delay the project and be contrary to the ground rules specified for it in Draft Release 61–25. However, all comments of this nature will be preserved and considered in any later substantive revision of this part.

Present CAR Part 4b reflects the various writing styles used by those who have worked on it in the past. The recodification has allowed us to use one style throughout Part 25 [New]. The style changes that have been made do not affect substance. They have been made to ensure consistency in language throughout the new Federal Aviation Regulations, thereby making them easier to understand and apply. Part 25 [New] substitutes the word "must" for "shall". This has been done to reflect the fact that airworthiness standards are simply conditions precedent that are required to be met for the issue of a type certificate. The imperative "shall" would be inappropriate in this case. The failure to meet the standards simply results in a denial of the issue of the type certificate.

The sections in Part 25 [New] have been rearranged and renumbered so that the requirements of this part have the same number as comparable requirements in Parts 23 [New], 27 [New], and 29 [New]. Where there is no comparable requirement in Part 25, there is a gap in the section numbering (in addition to gaps from the use of odd section numbers only and the "growth" gaps between subtopics). In addition, some material has been rearranged in order to more logically place some requirements within the part. An example of this was the grouping of the parts of §§ 4b.117, 4b.361, 4b.362, 4b.437, 4b.640, 4b.719, 4b.736, 4b.740 through 4b.743, and SR 422B sections 4T.123 and 4T.743, dealing with recording of information and data in the Airplane Flight Manual, into the Airplane Flight Manual subdivision of this part. A similar rearrangement was made by combining the flutter requirements of §§ 4b.190(a), 4b.210(c)(3), and 4b.308 into § 25.629 and vibration requirements of these same sections into § 25.251.

The most significant changes to Part 25 since the notice are listed below. The numbers in parentheses refer to the section number in the notice and in former Part 4b, respectively.

Section 25.1001 (§ 25.733) (§ 4b.437) has been revised by changing the requirement for a placard to warn flight crewmembers against jettisoning fuel with flaps lowered (if it has not been shown that it is safe to do so with them lowered). It now reads "means (including flaps, slots, and slats) for changing the airflow across or around the wing" instead of the word flaps. This was done to update the language as these other devices (slats and slots) take the place of the flaps in some airplanes and are referred to in other regulations (particularly in ADs).

In § 25.611 (§ 25.401) (§ 4b.305) "periodic inspection" has been replaced with "recurring inspection". This avoids any potential conflict between the intent of the subject section, to cover all inspections that occur at regular intervals, and the more specific use of the term "periodic inspection" in Parts 43 [New] and 91 [New].

In response to a comment, a cross reference to § 25.1145(b) has been added to § 25.1307 (§ 25.947) (§ 4b.605) to make it clear that a ganged ignition switch may be used to satisfy the subject requirement.

Other minor changes of a technical clarifying nature have been made. They are not substantive and do not impose any burden on regulated persons. For example, the Agency is standardizing the language used to describe an aircraft, with respect to the type of engine installed, as follows:

An aircraft powered by a reciprocating engine is a "reciprocating engine powered aircraft".

An aircraft powered by a turbine engine is a "turbine engine powered aircraft".

An aircraft powered by a particular subtype of turbine engine is a "turbopropeller powered aircraft" or "turbojet powered aircraft", whichever is appropriate.

In the notice, it was proposed to convert references to "miles" and "miles per hour" to their nautical equivalents. The only comment received was favorable. To make this part uniform and to conform to modern practice, "nautical miles" and "knots" have been used throughout. The associated values have been adjusted so that no increase in burden results.

This part incorporates Amendment 4b–15, Installation of Cockpit Voice Recorders, published in the FEDERAL REGISTER July 3, 1964, and Amendment 4b–16, Flutter Deformation and Vibration Requirements, published in the FEDERAL REGISTER on September 5, 1964.

The definitions, abbreviations, and rules of construction contained in Part 1 [New] of the Federal Aviation Regulations apply to Part 25 [New].

When Part 1 [New] was adopted, its preamble stated that it would be amended as necessary in order to apply to specific regulations as they were recodified. As part of this action, Part 1 [New] is being amended to incorporate definitions and abbreviations found to be necessary because of the adoption of subsequently issued Federal Aviation Regulations, including Subchapter C.

The definition of "accelerate-stop distance" has been incorporated from Parts 4b, 40, 41, and 42, that of "critical altitude", from Parts 3, 4b, 6, 7, and 13, and that of "load factor", from Parts 3, 4b, 6, and 7. The definitions of "clearway" and "stopway" have been incorporated from Special Civil Air Regulations 422A and 422B and, as a result, § 91.37 is being amended to delete the definitions of "clearway" and "stopway" in paragraph (d). Also, since SRs 422A and 422B, together, set forth the certification procedures for all turbine engine powered airplanes certificated after September 30, 1958, the references to the two SRs in § 91.37 have been replaced by references to their respective periods of effectiveness.

In addition to these definitions, Part 1 [New] is being amended to correctly reflect the "½" in the definition of "true airspeed" as a power rather than as a multiplicand.

The abbreviations and symbols set forth below have been incorporated from Parts 3, 4b, 6, and 7.

The performance and Airplane Flight Manual requirements of SR 422B are in this part. The corresponding requirements of SRs 422 and 422A are being deleted as they may no longer be used for airplanes to be certificated under this part. They will have the same status as any superseded section of a current rule. The operating rules of SRs 422, 422A, and 422B where current, will be put in the Air Carrier Operating rules.

As CAR Part 4a, "Airplane Airworthiness" has not been used for certification of new airplanes since 1947, it is being deleted. This action is consistent with the recodification aim of eliminating ob-

solete or unnecessary provisions and is similar to the action taken with Part 33 of the Civil Air Regulations and Parts 450, 560, and 580 of the Regulations of the Administrator. CAR 4a will have the same status as any superseded section of a current rule.

Interested persons have been afforded an opportunity to participate in the making of this regulation and due consideration has been given to all relevant matter presented. The Agency is particularly appreciative of the cooperative spirit in which the public's comments were submitted.

In consideration of the foregoing, Chapter I of Title 14 is amended as follows, effective February 1, 1965.

1. By deleting items 1 and 2 of SR 422.
2. By deleting items 1, 2, and 5 of SR 422A.
3. By deleting items 1, 2, and 5 of SR 422B.
4. By deleting Part 4a "Airplane Airworthiness".
5. By deleting Part 4b "Airplane Airworthiness, Transport Category".
6. By amending Part 1 "Definitions and Abbreviations" [New] as follows:

(a) By inserting the following new definitions in § 1.1:

"Accelerate-stop distance" means the distance required to accelerate an airplane to a specified speed and, assuming failure of the critical engine at the instant that speed (V_1) is attained, to bring the airplane to a stop.

"Clearway" means:

(1) For turbine engine powered airplanes certificated after August 29, 1959, an area beyond the runway, not less than 500 feet wide, centrally located about the extended centerline of the runway, and under the control of the airport authorities. The clearway is expressed in terms of a clearway plane, extending from the end of the runway with an upward slope not exceeding 1.25 percent, above which no object nor any terrain protrudes. However, threshold lights may protrude above the plane if their height above the end of the runway is 26 inches or less and if they are located to each side of the runway.

(2) For turbine engine powered airplanes certificated after September 30, 1958, but before August 30, 1959, an area beyond the takeoff runway extending no less than 300 feet on either side of the extended centerline of the runway, at an elevation no higher than the elevation of the end of the runway, clear of all fixed obstacles, and under the control of the airport authorities.

"Critical altitude" means the maximum altitude at which, in standard atmosphere, it is possible to maintain, at a specified rotational speed, a specified power or a specified manifold pressure. Unless otherwise stated, the critical altitude is the maximum altitude at which it is possible to maintain, at the maximum continuous rotational speed, one of the following:

(1) The maximum continuous power, in the case of engines for which this power rating is the same at sea level and at the rated altitude.

(2) The maximum continuous rated manifold pressure, in the case of engines, the maximum continuous power of which is governed by a constant manifold pressure.

"Load factor" means the ratio of a specified load to the total weight of the aircraft. The specified load is expressed in terms of any of the following: aerodynamic forces, inertia forces, or ground or water reactions.

"Stopway" means an area beyond the takeoff runway, no less wide than the runway and centered upon the extended centerline of the runway, able to support the airplane during an aborted takeoff, without causing structural damage to the airplane, and designated by the airport authorities for use in decelerating the airplane during an aborted takeoff.

(b) By amending the definition of "True airspeed" in § 1.1 to read as follows:

"True airspeed" means the airspeed of an aircraft relative to undisturbed air. True airspeed is equal to equivalent airspeed multiplied by $(\rho 0/\rho)^{1/2}$.

(c) By inserting the following new abbreviations and symbols in § 1.2:

EAS means equivalent airspeed.
IAS means indicated airspeed.
M means mach number.
PAR means precision approach radar.
TAS means true airspeed.
V_A means design maneuvering speed.
V_B means design speed for maximum gust intensity.
V_C means design cruising speed.
V_D means design diving speed.
V_{DF}/M_{DF} means demonstrated flight diving speed.
V_F means design flap speed.
V_{FC}/M_{FC} means maximum speed for stability characteristics.
V_{FE} means maximum flap extended speed.
V_H means maximum speed in level flight with rated r.p.m. and power.
V_{LE} means maximum landing gear extended speed.
V_{LO} means maximum landing gear operating speed.
V_{LOF} means lift-off speed.
V_{MC} means minimum control speed with the critical engine inoperative.
V_{MO}/M_{MO} means maximum operating limit speed.
V_{MU} means minimum unstick speed.
V_{NE} means never-exceed speed.
V_R means rotation speed.
V_S means the stalling speed or the minimum steady flight speed at which the airplane is controllable.
V_{S_0} means the stalling speed or the minimum steady flight speed in the landing configuration.
V_{S_1} means the stalling speed or the minimum steady flight speed obtained in a specified configuration.
V_X means speed for best angle of climb.
V_Y means speed for best rate of climb.
V_1 means critical-engine-failure speed.
V_2 means takeoff safety speed.
$V_{2\ min}$ means minimum takeoff safety speed.

7. By amending § 91.37 to read as follows:

§ 91.37 Transport category civil airplane weight limitations.

(a) No person may take off any transport category airplane (other than a turbine engine powered airplane certificated after September 30, 1958) unless—

(1) The takeoff weight does not exceed the authorized maximum takeoff weight for the elevation of the airport of takeoff;

(2) The elevation of the airport of takeoff is within the altitude range for which maximum takeoff weights have been determined;

(3) Normal consumption of fuel and oil in flight to the airport of intended landing will leave a weight on arrival not in excess of the authorized maximum landing weight for the elevation of that airport; and

(4) The elevations of the airport of intended landing and of all specified alternate airports are within the altitude range for which maximum landing weights have been determined.

(b) No person may operate a turbine engine powered transport category airplane certificated after September 30, 1958 contrary to the Airplane Flight Manual, nor take off that airplane unless—

(1) The takeoff weight does not exceed the takeoff weight specified in the Airplane Flight Manual for the elevation of the airport and for the ambient temperature existing at the time of takeoff;

(2) Normal consumption of fuel and oil in flight to the airport of intended landing and to the alternate airports will leave a weight on arrival not in excess of the landing weight specified in the Airplane Flight Manual for the elevation of each of the airports involved and for the ambient temperatures expected at the time of landing;

(3) The takeoff weight does not exceed the weight shown in the Airplane Flight Manual to correspond with the minimum distances required for takeoff considering the elevation of the airport, the runway to be used, the effective runway gradient, and the ambient temperature and wind component existing at the time of takeoff; and

(4) Where the takeoff distance includes a clearway, the clearway distance is not greater than one-half of—

(i) The takeoff run, in the case of airplanes certificated after September 30, 1958 and before August 30, 1959; or

(ii) The runway length, in the case of airplanes certificated after August 29, 1959.

(c) No person may take off a turbine engine powered transport category airplane certificated after August 29, 1959 unless, in addition to the requirements of paragraph (b) of this section—

(1) The accelerate-stop distance is no greater than the length of the runway

plus the length of the stopway (if present);

(2) The takeoff distance is no greater than the length of the runway plus the length of the clearway (if present); and

(3) The takeoff run is no greater than the length of the runway.

8. By adding a Part 25 [New] reading as hereinafter set forth.

Issued in Washington, D.C., on November 3, 1964.

N. E. HALABY,
Administrator.

Subpart A—General

Subpart B—Flight

General

Performance: Reciprocating Engine Powered Airplanes

Performance: Turbine Engine Powered Airplanes

Controllability and Maneuverability

Trim

Stability

Stalls

Ground and Water Handling Characteristics

Miscellaneous Flight Requirements

Subpart C—Structure

General

Flight Loads

Flight Maneuver and Gust Conditions

Supplementary Conditions

Control Surface and System Loads

AUTHORITY: The provisions of this Part 25 issued under secs. 313(a), 601, 603, Federal Aviation Act of 1958; 49 U.S.C. 1354(a), 1421, and 1423.

Subpart A—General

§ 25.1 Applicability.

(a) This part prescribes airworthiness standards for the issue of type certificates, and changes to those certificates, for transport category airplanes.

(b) Each person who applies under Part 21 [New] for such a certificate or change must show compliance with the applicable requirements in this part.

Subpart B—Flight

GENERAL

§ 25.21 Proof of compliance.

(a) Each requirement of this subpart must be met at each appropriate combination of weight and center of gravity within the range of loading conditions for which certification is requested. This must be shown—

(1) By tests upon an airplane of the type for which certification is requested, or by calculations based on, and equal in accuracy to, the results of testing; and

(2) By systematic investigation of each probable combination of weight and center of gravity, if compliance cannot be reasonably inferred from combinations investigated.

(b) If there is less than a 2 knot difference in the forward and rearward c.g. stalling speeds, the flying qualities may be based upon the forward c.g. stalling speeds.

(c) The controllability, stability, trim, and stalling characteristics of the airplane must be shown for each altitude up to the maximum expected in operation.

(d) The following general tolerances from specified values are allowed during flight testing. However, greater tolerances may be allowed in particular tests. These tolerances are plus or minus variations unless otherwise noted in the particular test:

Item	*Tolerance*
Weight	+5%, −10%.
Critical items affected by weight.	+5%, −1%.
C.G	7% total travel.
Airspeed	3 knots or 3%, whichever is higher.
Power	5%.
Wind (takeoff and landing tests).	As low as possible but not to exceed approximately 12% V_{S_1} or 10.0 knots, whichever is lower, along the runway—measured at a height of six feet above the runway surface.

§ 25.23 Load distribution limits.

(a) Ranges of weights and centers of gravity within which the airplane may be safely operated must be established. If a weight and center of gravity combination is allowable only within certain load distribution limits (such as spanwise) that could be inadvertently exceeded, these limits and the corresponding weight and center of gravity combinations must be established.

(b) The load distribution limits may not exceed—

(1) The selected limits;

(2) The limits at which the structure is proven; or

(3) The limits at which compliance with each applicable flight requirement of this subpart is shown.

§ 25.25 Weight limits.

(a) *Maximum weight.* The maximum weight (the highest weight at which compliance with each applicable requirement of this part is shown) must be established so that it is not more than—

(1) The highest weight selected by the applicant;

(2) The design maximum weight (the highest weight at which compliance with each applicable structural loading condition of this part is shown; or

(3) The highest weight at which compliance with each applicable flight requirement is shown.

(b) *Minimum weight.* The minimum weight (the lowest weight at which compliance with each applicable requirement of this part is shown) must be established so that it is not less than—

(1) The lowest weight selected by the applicant;

(2) The design minimum weight (the lowest weight at which compliance with each structural loading condition of this part is shown); or

(3) The lowest weight at which compliance with each applicable flight requirement is shown.

§ 25.27 Center of gravity limits.

The extreme forward and the extreme aft center of gravity limitations must be established for each practicably separable operating condition. No such limit may lie beyond—

(a) The extremes selected by the applicant;

(b) The extremes within which the structure is proven; or

(c) The extremes within which compliance with each applicable flight requirement is shown.

§ 25.29 Empty weight and corresponding center of gravity.

(a) The empty weight and corresponding center of gravity must be determined by weighing the airplane with—

(1) Fixed ballast;

(2) Unusable fuel determined under § 25.959;

(3) Undrainable oil; and

(4) Hydraulic fluid.

(b) The condition of the airplane at the time of determining empty weight must be one that is well defined and can be easily repeated.

§ 25.31 Removable ballast.

Removable ballast may be used in showing compliance with the flight requirements of this subpart.

§ 25.33 Propeller speed and pitch limits.

(a) The propeller speed and pitch must be limited to values that will ensure—

(1) Safe operation under normal operating conditions; and

(2) Compliance with the performance requirements in §§ 25.45 through 25.75 for reciprocating engine powered airplanes, and §§ 25.101 through 25.125 for turbopropeller powered airplanes.

(b) There must be a propeller speed limiting means at the governor. It must limit the maximum possible governed engine speed to a value not exceeding the maximum allowable r.p.m.

(c) The low pitch blade stop, or other means used to limit the low pitch position of the propeller blades, must be set so that the engine speed does not exceed 103 percent of the maximum allowable engine r.p.m. with—

(1) The propeller blades at the low pitch limit and governor inoperative; and

(2) Takeoff manifold pressure with the airplane stationary under standard atmospheric conditions.

PERFORMANCE: RECIPROCATING ENGINE POWERED AIRPLANES

§ 25.45 General.

(a) For reciprocating engine powered airplanes, compliance with each applicable performance requirement of this subpart must be shown—

(1) For still air with a standard atmosphere; and

(2) Where engine power affects performance, with air at 80 percent relative humidity, in accordance with paragraph (c) of this section.

(b) Performance data required for a particular flight condition must be determined with each powerplant accessory absorbing the normal amount of power appropriate to that condition.

(c) Engine power corrections for vapor pressure must be made in accordance with the following table:

Altitude H (ft.)	Vapor pressure e (in. Hg.)	Specific humidity w (Lb. moisture per lb. dry air)	Density ratio $\sigma = \frac{\rho}{0.0023769}$
0	0.403	0.00849	0.99508
1,000	.354	.00773	.96672
2,000	.311	.00703	.93895
3,000	.272	.00638	.91178
4,000	.238	.00578	.88514
5,000	.207	.00523	.85910
6,000	.1805	.00472	.83361
7,000	.1566	.00425	.80870
8,000	.1356	.00382	.78434
9,000	.1172	.00343	.76053
10,000	.1010	.00307	.73722
15,000	.0463	.001710	.62868
20,000	.01978	.000896	.53263
25,000	.00778	.000436	.44806

§ 25.47 Wing flap position.

Takeoff, en route, approach, and landing wing flap positions must be selected by the applicant. Flap positions may vary with weight and altitude.

§ 25.49 Stalling speeds.

(a) V_{S_0} is the calibrated stalling speed, or the minimum steady speed, in knots, at which the airplane is controllable, with the—

(1) Engines idling, throttles closed (or at not more than the power necessary for zero thrust at a speed not more than 110 percent of the stalling speed);

(2) Propeller pitch in the takeoff position;

(3) Landing gear extended;

(4) Wing flaps in the landing position;

(5) Cowl flaps closed;

(6) Center of gravity in the most unfavorable position within the allowable landing range; and

(7) Weight used when V_{S_0} is being used as a factor to determine compliance with a required performance standard.

(b) V_{S_1} is the calibrated stalling speed, or the minimum steady speed, in knots, at which the airplane is controllable, with the—

(1) Engines idling, throttles closed (or at not more than the power necessary for zero thrust at a speed not more than 110 percent of the stalling speed);

(2) Propeller pitch in the takeoff position;

(3) Airplane in other respects (such as flaps and landing gear) in the condition existing in the test in which V_{S_1} is being used; and

(4) Weight used when V_{S_1} is being used as a factor to determine compliance with a required performance standard.

(c) The stalling speeds V_{S_0} and V_{S_1} are the minimum speeds obtained in flight tests conducted as follows:

(1) At a speed great enough above the probable stall speed to ensure steady conditions, apply the elevator control at a rate so that the airplane speed reduction does not exceed one knot per second.

(2) During these tests—

(i) The airplane must be trimmed at 1.4 V_{S_1} except that airplanes with adjustable stabilizers may be trimmed at any speed from 1.2 V_{S_1} to 1.4 V_{S_1}; and

(ii) The flight requirements of § 25.203 must be met.

§ 25.51 Takeoff.

(a) The takeoff speeds described in § 25.55, the accelerate-stop distance described in § 25.57, and the takeoff path described in § 25.59, must be determined—

(1) At each weight and altitude selected by the applicant;

(2) With a constant takeoff flap position for the weight and altitude; and

(3) With the operating engines within approved operating limitations.

(b) No takeoff made to determine the data required by this section may require exceptional piloting skill or alertness.

(c) The takeoff data must be based on—

(1) A smooth, dry, hard-surfaced runway, in the case of landplanes and amphibians;

(2) Smooth water, in the case of seaplanes and amphibians; and

(3) Smooth, dry snow, in the case of skiplanes.

(d) Temperature accountability corrections must be made in accordance with § 25.61.

§ 25.55 Takeoff speeds.

(a) V_1 must be selected by the applicant and must be at least the minimum calibrated airspeed at which controllability is shown (during the takeoff run) to be adequate to safely continue the takeoff, using normal piloting skill, when the critical engine is suddenly made inoperative. This need not be shown if the engine failure is assumed to occur at V_2 or above.

(b) V_2, in terms of calibrated airspeed, must be selected by the applicant to allow the rate of climb required in § 25.67 (a) and b). However, V_2 may not be less than—

(1) 1.2 V_{S_1} for two-engine airplanes;

(2) 1.15 V_{S_1} for airplanes with more than two engines; or

(3) 1.10 times V_{MC} established under § 25.149.

§ 25.57 Accelerate-stop distance.

(a) Means other than wheel brakes may be used to determine the accelerate-stop distance if that means—

(1) Is safe and reliable;

(2) Is used so that consistent results can be expected under normal operating conditions; and

(3) Is such that exceptional skill is not required to control the airplane.

(b) The landing gear must remain extended throughout the accelerate-stop distance.

§ 25.59 Takeoff path.

(a) The takeoff path consists of the following elements:

(1) The distance required to accelerate to V_2, assuming the critical engine fails at V_1.

(2) The horizontal distance traversed, and the height reached, by the airplane in the time required to retract the landing gear at V_2, with the landing gear extended, the critical engine inoperative, and—

(i) The propeller of the inoperative engine windmilling and its control in a position normally used during takeoff until (if applicable) the rotation is stopped; and

(ii) The propeller of the inoperative engine feathered (if applicable) for the rest of the gear retraction time.

(3) If applicable, the horizontal distance traversed and the height reached by the airplane in the time elapsed from the end of the element in paragraph (a)(2) of this section until the rotation of the propeller of the inoperative engine is stopped—

(i) With the stopping of the propeller begun no earlier than the time at which the airplane is 50 feet above the takeoff surface;

(ii) At V_2;

(iii) With the landing gear retracted; and

(iv) With the propeller of the inoperative engine windmilling with the propeller control in the normal takeoff position.

(4) If applicable, the horizontal distance traversed and the height reached by the airplane in the time from the end of the element in paragraph (a)(3) until the time limit on the use of takeoff power is reached—

(i) At V_2;

(ii) With the propeller of the inoperative engine stopped; and

(iii) With the landing gear retracted.

(5) The slope of the flight path followed by the airplane in the configuration prescribed in paragraph (a)(4) with not more than maximum continuous power on the operating engines.

(b) For automatically feathering propellers for which the net work produced, from the instant of engine failure to completion of feathering under any kind of engine failure, is positive (using a datum based on feathered propeller drag), it may be assumed that the propeller of the failed engine is in the feathered drag condition from the instant V_2 is reached.

§ 25.61 Temperature accountability.

(a) Operating correction factors for temperatures above and below standard must be determined for takeoff weight and distance.

(b) The average full temperature accountability must be computed for the range of weights, altitudes above sea level, and ambient temperatures expected in operations. The effect of temperature on the aerodynamic characteristics and on engine power must be considered. Full temperature accountability, in terms of a weight correction, a takeoff distance correction, and a change, if any, in V_1, must be expressed per degree change in temperature.

(c) The operating correction factors for the weight and takeoff distance must be at least one-half of the full accountability values. The value of V_1 must be further corrected by the average amount necessary to ensure that the airplane can stop within the runway length at the ambient temperature. However, the corrected value of V_1 may not be less than the minimum at which the airplane can be controlled with the critical engine inoperative.

§ 25.65 Climb: all engines operating.

(a) *Cruising configuration.* The steady rate of climb in feet per minute at 5,000 feet, in the cruising configuration, must be at least 9.0 V_{S_0} (that is, the number of feet per minute is obtained by multiplying the number of knots by 9.0). In addition, the steady rate of climb must be determined at any altitude at which the airplane is expected to operate and at any weight for which certification is requested. The steady rate of climb must be shown under the following conditions:

(1) Landing gear fully retracted.

(2) Wing flaps in the most favorable position.

(3) Cowl flaps (or other means of controlling the engine cooling air supply) in the position that provides adequate cooling in the hot-day condition.

(4) Most unfavorable center of gravity position.

(5) Engines operating within the maximum continuous power limitations.

(6) Maximum takeoff weight.

(b) *Landing configuration.* The steady rate of climb in feet per minute in the landing configuration must be at least 0.092 $V_{S_0}^2$ at any altitude within the range of altitudes in which landing weight is certificated, and must be shown under the following conditions:

(1) Landing gear extended.

(2) Wing flaps in the landing position.

(3) Cowl flaps in the position normally used in an approach to a landing.

(4) The most unfavorable center of gravity allowed for landing.

(5) Engines operating at the takeoff power available at that altitude.

(6) The weight equal to maximum landing weight for that altitude.

(7) A climb speed not more than 1.4 V_{S_0}.

§ 25.67 Climb: one engine inoperative.

(a) *Flaps in takeoff position; landing gear extended.* The steady rate of climb without ground effect must be at least 50 ft./min. at any altitude within the range of takeoff altitudes for which certification is requested, and must be shown at V_2 with—

(1) Wing flaps in the takeoff position;

(2) Cowl flaps in the normal takeoff position;

(3) The most unfavorable center of gravity allowed for takeoff;

(4) The critical engine inoperative and (except as provided in paragraph (c) of this section) its propeller windmilling with the propeller control in a normal takeoff position;

(5) The remaining engines operating at the available takeoff power;

(6) The maximum takeoff weight for the takeoff altitude; and

(7) Landing gear extended.

(b) *Flaps in takeoff position; landing gear retracted.* With the landing gear retracted, the steady rate of climb in feet per minute must be at least 0.046 $V_{S_1}^2$ under the conditions described in paragraph (a) of this section.

(c) *Automatic feathering.* The propeller of the inoperative engine may be in the feathered condition during the landing gear extended or retracted conditions if—

(1) The propeller would be completely feathered at the beginning of these segments of the takeoff flight path; or

(2) The net work produced by the feathering propeller during the segment is positive, using a datum based on feathered propeller drag.

(d) *Flaps in en route position.* The steady rate of climb in feet per minute, at any expected operating altitude and at any weight within the range of weights for which certification is requested, must be determined. At a standard altitude of 5,000 feet and at the maximum takeoff weight, this rate must be at least

$$\left(0.079-\frac{0.106}{N}\right)V_{S_0}^2,$$

where N is the number of engines. The steady rate of climb must be shown with the—

(1) Landing gear retracted;

(2) Wing flaps in the most favorable position;

(3) Cowl flaps (or other means of controlling the engine-cooling air supply) in the position that provides adequate cooling in the hot-day condition;

(4) The most unfavorable center of gravity;

(5) Critical engine inoperative and its propeller stopped; and

(6) Remaining engines at the maximum continuous power available for the altitude.

(e) *Flaps in approach position.* The steady rate of climb in feet per minute must be at least 0.053 $V_{S_0}^2$ at any altitude within the range of altitudes for which landing weight is certificated, and must be shown with the—

(1) Landing gear retracted;

(2) Wing flaps set in position so that V_{S_1} does not exceed 1.10 V_{S_0};

(3) Cowl flaps in the normal approach position;

(4) The most unafavorable center of gravity position allowed for landing;

(5) Critical engine inoperative and its propeller stopped;

(6) Remaining engines at the available takeoff power;

(7) Weight equal to the maximum landing weight for the altitude; and

(8) Climb speed not more than 1.5 V_{S_1}.

§ 25.69 Climb: two engines inoperative.

For airplanes with four or more engines, the steady rate of climb at any expected operating altitude, and at any weight within the range of weights specified in the Airplane Flight Manual, must be determined with the—

(a) Landing gear retracted;

(b) Wing flaps in the most favorable position;

(c) Cowl flaps (or other means of controlling the engine cooling air supply) in the position that provides adequate cooling in the hot-day condition;

(d) The most unfavorable center of gravity;

(e) Two critical engines on one side of the airplane inoperative and their propellers stopped; and

(f) Remaining engines at the maximum continuous power available at each altitude.

§ 25.75 Landing.

(a) The horizontal distance necessary to land and to come to a complete stop (or to a speed of approximately 3 knots for water landings) from a point 50 feet above the landing surface must be determined (for the range of weights and altitudes selected by the applicant) as follows:

(1) A steady gliding approach, with a calibrated airspeed of at least 1.3 V_{S_0}, must be maintained down to the 50 foot height.

(2) After reaching the 50 foot height—

(i) The nose may not be depressed; and

(ii) Forward thrust may not be increased by the application of power.

(3) The flaps must be in the landing position from a point immediately before landing to the point at which the airplane is on the landing surface and the calibrated airspeed is reduced to 0.9 V_{S_0}.

(4) The landing must be made without excessive vertical acceleration, tendency to bounce, nose over, ground loop, porpoise, or water loop.

(5) The landing may not require exceptionally favorable conditions.

(b) For landplanes and amphibians, the landing distance on land must be determined on a dry, hard-surfaced runway. In addition—

(1) The pressures on the wheel braking system may not exceed those specified by the brake manufacturer;

(2) The brakes may not be used so as to cause tire skidding or excessive heating requiring replacement during a series of five test landings; and

(3) Means other than wheel brakes may be used if that means—

(i) Is safe and reliable;

(ii) Is used so that consistent results can be expected in service; and

(iii) Is such that exceptional skill is not required to control the airplane.

(c) For seaplanes and amphibians, the landing distance on water must be determined on smooth water.

(d) For skiplanes, the landing distance on snow must be determined on smooth, dry snow.

PERFORMANCE: TURBINE ENGINE POWERED AIRPLANES

§ 25.101 General.

(a) Unless otherwise prescribed, turbine powered airplanes must meet the applicable performance requirements of this subpart for ambient atmospheric conditions and still air.

(b) The performance, as affected by engine power or thrust, must be based on a relative humidity of—

(1) 80 percent, at and below standard temperatures; and

(2) 34 percent, at and above standard temperatures plus 50° F.

Between these two temperatures, the relative humidity must vary linearly.

(c) The performance must correspond to the propulsive thrust available under the particular ambient atmospheric conditions, the particular flight condition, and the relative humidity specified in paragraph (b) of this section. The available propulsive thrust must correspond to engine power or thrust, not exceeding the approved power or thrust, less—

(1) Installation losses; and

(2) The power or equivalent thrust absorbed by the accessories and services appropriate to the particular ambient atmospheric conditions and the particular flight condition.

(d) Unless otherwise prescribed, the applicant must select the takeoff, en route, approach, and landing configurations for the airplane.

(e) The airplane configurations may vary with weight, altitude, and temperature, to the extent they are compatible with the operating procedures required by paragraph (f) of this section.

(f) Unless otherwise prescribed, in determining the accelerate-stop distances, takeoff flight paths, takeoff distances, and landing distances, changes in the airplane's configuration, speed, power, and thrust, must be made in accordance with procedures established by the applicant for operation in service.

(g) Procedures for the execution of balked landings and missed approaches associated with the conditions prescribed in §§ 25.119 and 25.121(d) must be established.

(h) The procedures established under paragraphs (f) and (g) of this section must—

(1) Be able to be consistently executed in service by crews of average skill;

(2) Use methods or devices that are safe and reliable; and

(3) Include allowance for any time delays, in the execution of the procedures, that may reasonably be expected in service.

§ 25.103 Stalling speed.

(a) V_S is the calibrated stalling speed, or the minimum steady flight speed, in knots, at which the airplane is controllable, with—

(1) Zero thrust at the stalling speed, or, if the resultant thrust has no appreciable effect on the stalling speed, with engines idling and throttles closed;

(2) Propeller pitch controls (if applicable) in the position necessary for compliance with subparagraph (1) of this paragraph and the airplane in other respects (such as flaps and landing gear) in the condition existing in the test in which V_S is being used;

(3) The weight used when V_S is being used as a factor to determine compliance with a required performance standard; and

(4) The most unfavorable center of gravity allowable.

(b) The stalling speed V_S is the minimum speed obtained as follows:

(1) Trim the airplane for straight flight at any speed not less than 1.2 V_S or more than 1.4 V_S. At a speed sufficiently above the stall speed to ensure steady conditions, apply the elevator control at a rate so that the airplane speed reduction does not exceed one knot per second.

(2) Meet the flight characteristics provisions of § 25.203.

§ 25.105 Takeoff.

(a) The takeoff speeds described in § 25.107, the accelerate-stop distance described in § 25.109, the takeoff path described in § 25.111, and the takeoff distance and takeoff run described in § 25.113, must be determined—

(1) At each weight, altitude, and ambient temperature within the operational limits selected by the applicant; and

(2) In the selected configuration for takeoff.

(b) No takeoff made to determine the data required by this section may require exceptional piloting skill or alertness.

(c) The takeoff data must be based on—

(1) A smooth, dry, hard-surfaced runway, in the case of land planes and amphibians;

(2) Smooth water, in the case of seaplanes and amphibians; and

(3) Smooth, dry snow, in the case of skiplanes.

(d) The takeoff data must include, within the established operational limits of the airplane, the following operational correction factors:

(1) Not more than 50 percent of nominal wind components along the takeoff path opposite to the direction of takeoff, and not less than 150 percent of nominal wind components along the takeoff path in the direction of takeoff.

(2) Effective runway gradients.

§ 25.107 Takeoff speeds.

(a) V_1 must be selected by the applicant and must be at least the minimum calibrated airspeed at which controllability by primary aerodynamic controls alone is shown (during the takeoff run) to be adequate to safely continue the takeoff, using normal piloting skill, when the critical engine is suddenly made inoperative.

(b) $V_{2\ min}$, in terms of calibrated airspeed, may not be less than—

(1) 1.2 V_S for—

(i) Two-engine and three-engine turbopropeller powered airplanes; and

(ii) Turbojet powered airplanes without provisions for obtaining a significant reduction in the one-engine-inoperative power-on stalling speed;

(2) 1.15 V_S for—

(i) Turbopropeller powered airplanes with more than three engines; and

(ii) Turbojet powered airplanes with provisions for obtaining a significant reduction in the one-engine-inoperative power-on stalling speed; and

(3) 1.10 times V_{MC} established under § 25.149.

(c) V_2, in terms of calibrated airspeed, must be selected by the applicant to provide at least the gradient of climb required by § 25.121(b) but may not be less than—

(1) $V_{2\,min}$; and

(2) V_R plus the speed increment attained (in accordance with § 25.111(c)(2)) before reaching a height of 35 feet above the takeoff surface.

(d) V_{MU} is the calibrated airspeed at and above which the airplane can safely lift off the ground, and continue the takeoff. V_{MU} speeds must be selected by the applicant for the all-engines-operating and the one-engine-inoperative conditions. These speeds may be established from free air data if these data are verified by ground takeoff tests.

(e) V_R, in terms of calibrated airspeed, must be selected in accordance with the conditions of subparagraphs (1) through (4) of this paragraph:

(1) V_R may not be less than—

(i) V_1;

(ii) 105 percent of V_{MU};

(iii) The speed (determined in accordance with § 25.111(c)(2)) that allows reaching V_2 before reaching a height of 35 feet above the takeoff surface; or

(iv) A speed that, if the airplane is rotated at its maximum practicable rate, will result in a V_{LOF} of not less than 110 percent of V_{MU} in the all-engines-operating condition or less than 105 percent of V_{MU} in the one-engine-inoperative condition.

(2) For any given set of conditions (such as weight, configuration, and temperature), a single value of V_R, obtained in accordance with this paragraph, must be used to show compliance with both the one-engine-inoperative and the all-engines-operating takeoff provisions.

(3) It must be shown that the one-engine-inoperative takeoff distance, using a rotation speed of 5 knots less than V_R established in accordance with subparagraphs (1) and (2) of this paragraph, does not exceed the corresponding one-engine-inoperative takeoff distance using the established V_R. The takeoff distances must be determined in accordance with § 25.113(a)(1).

(4) Reasonably expected variations in service from the established takeoff procedures for the operation of the airplane (such as over-rotation of the airplane and out-of-trim conditions) may not result in unsafe flight characteristics or in marked increases in the scheduled takeoff distances established in accordance with § 25.113(a).

(f) V_{LOF} is the calibrated airspeed at which the airplane first becomes airborne.

§ 25.109 Accelerate-stop distance.

(a) The accelerate-stop distance is the sum of the distances necessary to—

(1) Accelerate the airplane from a standing start to V_1; and

(2) Come to a full stop from the point at which V_1 is reached, assuming that the critical engine fails at V_1.

(b) Means other than wheel brakes may be used to determine the accelerate-stop distance if that means—

(1) Is safe and reliable;

(2) Is used so that consistent results can be expected under normal operating conditions; and

(3) Is such that exceptional skill is not required to control the airplane.

(c) The landing gear must remain extended throughout the accelerate-stop distance.

(d) If the accelerate-stop distance includes a stopway with surface characteristics substantially different from those of a smooth hard-surfaced runway, the takeoff data must include operational correction factors for the accelerate-stop distance. The correction factors must account for the particular surface characteristics of the stopway and the variations in these characteristics with seasonal weather conditions (such as temperature, rain, snow, and ice) within the established operational limits.

§ 25.111 Takeoff path.

(a) The takeoff path extends from a standing start to a point in the takeoff at which the airplane is 1,500 feet above the takeoff surface, or at which the transition from the takeoff to the en route configuration is completed and a speed is reached at which compliance with § 25.121(c) is shown, whichever point is higher. In addition—

(1) The takeoff path must be based on the procedures prescribed in § 25.101(c);

(2) The airplane must be accelerated on the ground to V_1, at which point the critical engine must be made inoperative and remain inoperative for the rest of the takeoff; and

(3) After reaching V_1, the airplane must be accelerated to V_2.

(b) During the acceleration to speed V_2, the nose gear may be raised off the ground at a speed not less than V_R. However, landing gear retraction may not be begun until the airplane is airborne.

(c) During the takeoff path determination in accordance with paragraphs (a) and (b) of this section—

(1) The slope of the airborne part of the takeoff path must be positive at each point;

(2) The airplane must reach V_2 before it is 35 feet above the takeoff surface and must continue at a speed as close as practical to, but not less than V_2, until it is 400 feet above the takeoff surface;

(3) At each point along the takeoff path, starting at the point at which the airplane reaches 400 feet above the takeoff surface, the available gradient of climb may not be less than—

(i) 1.2 percent for two-engine airplanes;

(ii) 1.5 percent for three-engine airplanes; and

(iii) 1.7 percent for four-engine airplanes; and

(4) Except for gear retraction and propeller feathering, the airplane configuration may not be changed until the airplane is 400 feet above the takeoff surface.

(d) The takeoff path must be determined by a continuous demonstrated takeoff or by synthesis from segments. If the takeoff path is determined by the segmental method—

(1) The segments must be clearly defined and must be related to the distinct changes in the configuration, power or thrust, and speed;

(2) The weight of the airplane, the configuration, and the power or thrust must be constant throughout each segment and must correspond to the most critical condition prevailing in the segment;

(3) The flight path must be based on the airplane's performance without ground effect; and

(4) The takeoff path data must be checked by continuous demonstrated takeoffs up to the point at which the airplane is out of ground effect and its speed is stabilized, to ensure that the path is conservative relative to the continous path.

The airplane is considered to be out of the ground effect when it reaches a height equal to its wing span.

§ 25.113 Takeoff distance and takeoff run.

(a) Takeoff distance is the greater of—

(1) The horizontal distance along the takeoff path from the start of the takeoff to the point at which the airplane is 35 feet above the takeoff surface, determined under § 25.111; or

(2) 115 percent of the horizontal distance along the takeoff path, with the engines operating, from the start of the takeoff to the point at which the airplane is 35 feet above the takeoff surface, as determined by a procedure consistent with § 25.111.

(b) If the takeoff distance includes a clearway, the takeoff run is the greater of—

(1) The horizontal distance along the takeoff path from the start of the takeoff to a point equidistant between the point at which V_{LOF} is reached and the point at which the airplane is 35 feet above the takeoff surface, as determined under § 25.111; or

(2) 115 percent of the horizontal distance along the takeoff path, with the engines operating, from the start of the takeoff to a point equidistant between the point at which V_{LOF} is reached and the point at which the airplane is 35 feet above the takeoff surface, determined by a procedure consistent with § 25.111.

§ 25.115 Takeoff flight path.

(a) The takeoff flight path begins 35 feet above the takeoff surface at the end of the takeoff distance determined in accordance with § 25.113(a).

(b) The net takeoff flight path data must be determined so that they represent the actual takeoff flight paths (determined in accordance with § 25.111 and with paragraph (a) of this section) reduced at each point by a gradient of climb equal to—

(1) 0.8 percent for two-engine airplanes;

(2) 0.9 percent for three-engine airplanes; and

(3) 1.0 percent for four-engine airplanes.

(c) The prescribed reduction in climb gradient may be applied as an equivalent reduction in acceleration along that part of the takeoff flight path at which the airplane is accelerated in level flight.

§ 25.117 Climb: general.

Compliance with the requirements of §§ 25.119 and 25.121 must be shown at each weight, altitude, and ambient temperature within the operational limits established for the airplane and with the most unfavorable center of gravity for each configuration.

§ 25.119 Landing climb: All-engine-operating.

In the landing configuration, the steady gradient of climb may not be less than 3.2 percent, with—

(a) The engines at the power or thrust that is available eight seconds after initiation of movement of the power or thrust controls from the minimum flight idle to the takeoff position; and

(b) A climb speed of not more than $1.3\ V_S$.

§ 25.121 Climb: One-engine-inoperative.

(a) *Takeoff; landing gear extended.* In the critical takeoff configuration existing along the flight path (between the points at which the airplane reaches V_{LOF} and at which the landing gear is fully retracted) and in the configuration used in § 25.111 but without ground effect, the steady gradient of climb must be positive for two-engine airplanes, and not less than 0.3 percent for three-engine airplanes or 0.5 percent for four-engine airplanes, at V_{LOF} and with—

(1) The critical engine inoperative and the remaining engines at the power or thrust available when retraction of the landing gear is begun in accordance with § 25.111 unless there is a more critical power operating condition existing later along the flight path but before the point at which the landing gear is fully retracted; and

(2) The weight equal to the weight existing when retraction of the landing gear is begun, determined under § 25.77.

(b) *Takeoff; landing gear retracted.* In the takeoff configuration existing at the point of the flight path at which the landing gear is fully retracted, and in the configuration used in § 25.111 but without ground effect, the steady gradient of climb may not be less than 2.4 percent for two-engine airplanes, 2.7 percent for three-engine airplanes, and 3.0 percent for four-engine airplanes, at V_2 and with—

(1) The critical engine inoperative, the remaining engines at the takeoff power or thrust available at the time the landing gear is fully retracted, determined under § 25.111, unless there is a more critical power operating condition existing later along the flight path but before the point where the airplane reaches a height of 400 feet above the takeoff surface; and

(2) The weight equal to the weight existing when the airplane's landing gear is fully retracted, determined under § 25.111.

(c) *Final takeoff.* In the en route configuration at the end of the takeoff path determined in accordance with § 25.111, the steady gradient of climb may not be less than 1.2 percent for two-engine airplanes, 1.5 percent for three-engine airplanes, and 1.7 percent for four-engine airplanes, at not less than $1.25\ V_S$ and with—

(1) The critical engine inoperative and the remaining engines at the available maximum continuous power or thrust; and

(2) The weight equal to the weight existing at the end of the takeoff path, determined under § 25.111.

(d) *Approach.* In the approach configuration corresponding to the normal all-engines-operating procedure in which V_S for this configuration does not exceed 110 percent of the V_S for the related landing configuration, the steady gradient of climb may not be less than 2.1 percent for two-engine airplanes, 2.4 percent for three-engine airplanes, and 2.7 percent for four-engine airplanes, with—

(1) The critical engine inoperative, the remaining engines at the available takeoff power or thrust;

(2) The maximum landing weight; and

(3) A climb speed established in connection with normal landing procedures, but not exceeding $1.5\ V_S$.

§ 25.123 En route flight paths.

(a) For the en route configuration, the flight paths prescribed in paragraphs (b) and (c) of this section must be determined at each weight, altitude, and ambient temperature, within the operating limits established for the airplane. The variation of weight along the flight path, accounting for the progressive consumption of fuel and oil by the operating engines, may be included in the computation. The flight paths must be determined at any selected speed, with—

(1) The most unfavorable center of gravity;

(2) The critical engines inoperative;

(3) The remaining engines at the available maximum continuous power or thrust; and

(4) The means for controlling the engine-cooling air supply in the position that provides adequate cooling in the hot-day condition.

(b) The one-engine-inoperative net flight path data must represent the actual climb performance diminished by a gradient of climb of 1.1 percent for two-engine airplanes, 1.4 percent for three-engine airplanes, and 1.6 percent for four-engine airplanes.

(c) For three- or four-engine airplanes, the two-engine-inoperative net flight path data must represent the actual climb performance diminished by a gradient of climb of 0.3 percent for three-engine airplanes and 0.5 percent for four-engine airplanes.

§ 25.125 Landing.

(a) The horizontal distance necessary to land and to come to a complete stop (or to a speed of approximately 3 knots for water landings) from a point 50 feet above the landing surface must be determined (for standard temperatures, at each weight, altitude, and wind within the operational limits established by the applicant for the airplane) as follows:

(1) The airplane must be in the landing configuration.

(2) A steady gliding approach, with a calibrated airspeed of not less than $1.3\ V_S$, must be maintained down to the 50 foot height.

(3) Changes in configuration, power or thrust, and speed, must be made in accordance with the established procedures for service operation.

(4) The landing must be made without excessive vertical acceleration, tendency to bounce, nose over, ground loop, porpoise, or water loop.

(5) The landings may not require exceptional piloting skill or alertness.

(b) For landplanes and amphibians, the landing distance on land must be determined on a level, smooth, dry, hard-surfaced runway. In addition—

(1) The pressures on the wheel braking systems may not exceed those specified by the brake manufacturer;

(2) The brakes may not be used so as to cause excessive wear of brakes or tires; and

(3) Means other than wheel brakes may be used if that means—

(i) Is safe and reliable;

(ii) Is used so that consistent results can be expected in service; and

(iii) Is such that exceptional skill is not required to control the airplane.

(c) For seaplanes and amphibians, the landing distance on water must be determined on smooth water.

(d) For skiplanes, the landing distance on snow must be determined on smooth, dry, snow.

(e) The landing distance data must include correction factors for not more than 50 percent of the nominal wind components along the landing path opposite to the direction of landing, and not less than 150 percent of the nominal wind components along the landing path in the direction of landing.

(f) If any device is used that depends on the operation of any engine, and if the landing distance would be noticeably increased when a landing is made with that engine inoperative, the landing distance must be determined with that engine inoperative unless the use of compensating means will result in a landing distance not more than that with each engine operating.

CONTROLLABILITY AND MANEUVERABILITY

§ 25.143 General.

(a) The airplane must be safely controllable and maneuverable during—

(1) Takeoff;

(2) Climb;

(3) Level flight;

(4) Descent; and

(5) Landing.

(b) It must be possible to make a smooth transition from one flight condition to any other without exceptional piloting skill, alertness, or strength and without danger of exceeding the limit-load factor under any probable operating

conditions (including the sudden failure of any engine).

(c) If, during the testing required by paragraphs (a) and (b) of this section, marginal conditions exist with regard to required pilot strength, the "strength of pilots" limits may not exceed the limits prescribed in the following table:

Values in pounds of force as applied to the control wheel or rudder pedals.	Pitch	Roll	Yaw
For temporary application	75	60	180
For prolonged application	10	5	20

(d) In showing the temporary control force limitations of paragraph (c) of this section, approved operating procedures or conventional operating practices must be followed (including being as nearly trimmed as possible at the next preceding steady flight condition, except that, in the case of takeoff, the airplane must be trimmed in accordance with approved operating procedures).

(e) For the purpose of complying with the prolonged control force limitations of paragraph (c) of this section, the airplane must be as nearly trimmed as possible.

§ 25.145 Longitudinal control.

(a) It must be possible at any speed between the trim speed prescribed in § 25.49(c)(2)(i) and V_{S_1} (for reciprocating engine powered airplanes), or at any speed between the trim speed prescribed in § 25.103(b)(i) and V_S (for turbine engine powered airplanes), to pitch the nose downward so that the acceleration to this selected trim speed is prompt with—

(1) The airplane trimmed at the trim speed prescribed in § 25.49(c)(2)(i) (for reciprocating engine powered airplanes), or in § 25.103(b)(1) (for turbine engine powered airplanes);

(2) The landing gear extended;

(3) The wing flaps (i) retracted and (ii) extended; and

(4) Power (i) off and (ii) at maximum continuous power on the engines.

(b) With the landing gear extended, no change in trim control, or exertion of more than 50 pounds control force (representative of the maximum temporary force that readily can be applied by one hand) may be required for the following maneuvers:

(1) With power off, flaps retracted, and the airplane trimmed at 1.4 V_{S_1}, extend the flaps as rapidly as possible while maintaining the airspeed at approximately 40 percent above the stalling speed existing at each instant throughout the maneuver.

(2) Repeat subparagraph (1) except initially extend the flaps and then retract them as rapidly as possible.

(3) Repeat subparagraph (2) except with takeoff power.

(4) With power off, flaps retracted, and the airplane trimmed at 1.4 V_{S_1}, apply takeoff power rapidly while maintaining the same airspeed.

(5) Repeat subparagraph (4) except with flaps extended.

(6) With power off, flaps extended, and the airplane trimmed at 1.4 V_{S_1}, obtain and maintain airspeeds between 1.1 V_{S_1} and 1.7 V_{S_1} or V_{FE}, whichever is less.

(c) It must be possible, without exceptional piloting skill, to prevent loss of altitude when flap retraction from any position is begun during steady, straight, level flight at 1.1 V_{S_1} with—

(1) Simultaneous application of not more than maximum continous power;

(2) The landing gear extended; and

(3) The maximum sea level landing weight.

§ 25.147 Directional and lateral control.

(a) *Directional control; general.* It must be possible, while holding the wings approximately level, to safely make reasonably sudden changes in heading in both directions. This must be shown at 1.4 V_{S_1} for heading changes up to 15° (except that the heading change at which the rudder pedal force is 180 pounds need not be exceeded), and with—

(1) The critical engine inoperative and its propeller in the minimum drag position;

(2) The power required for level flight at 1.4 V_{S_1}, but not more than maximum continuous power;

(3) The most unfavorable center of gravity;

(4) Landing gear retracted;

(5) Flaps in the approach position; and

(6) Maximum landing weight.

(b) *Directional control; airplanes with four or more engines.* Airplanes with four or more engines must meet the requirements of paragraph (a) of this section except that—

(1) The two critical engines must be inoperative with their propellers (if applicable) in the minimum drag position;

(2) The center of gravity must be in the most forward position; and

(3) The flaps must be in the most favorable climb position.

(c) *Lateral control; general.* It must be possible to make 20° banked turns, with and against the inoperative engine, from steady flight at a speed equal to 1.4 V_{S_1}, with—

(1) The critical engine inoperative and its propeller (if applicable) in the minimum drag position;

(2) The remaining engines at maximum continuous power;

(3) The most unfavorable center of gravity;

(4) Landing gear (i) retracted and (ii) extended;

(5) Flaps in the most favorable climb position; and

(6) Maximum takeoff weight.

(d) *Lateral control; airplanes with four or more engines.* Airplanes with four or more engines must be able to make 20° banked turns, with and against the inoperative engines, from steady flight at a speed equal to 1.4 V_{S_1}, with maximum continuous power, and with the airplane in the configuration prescribed by paragraph (b) of this section.

(e) *Lateral control; all engines operating.* With the engines operating, roll response must allow normal maneuvers (such as recovery from upsets produced by gusts and the initiation of evasive maneuvers). There must be enough excess lateral control in sideslips (up to sideslip angles that might be required in normal operation), to allow a limited amount of maneuvering and to correct for gusts. Lateral control must be enough at any speed up to V_{FC}/M_{FC} to provide a peak roll rate necessary for safety, without excessive control forces or travel.

§ 25.149 Minimum control speed.

(a) V_{MC} is the calibrated airspeed, at which, when the critical engine is suddenly made inoperative, it is possible to recover control of the airplane with that engine still inoperative, and maintain straight flight either with zero yaw or, at the option of the applicant, with an angle of bank of not more than five degrees.

(b) For reciprocating engine powered airplanes, V_{MC} may not exceed 1.2 V_{S_1} with—

(1) Takeoff or maximum available power on the engines;

(2) The rearmost center of gravity;

(3) The airplane trimmed for takeoff;

(4) The maximum sea level takeoff weight (or any lesser weight necessary to show V_{MC});

(5) Flaps in the takeoff position;

(6) Landing gear retracted;

(7) Cowl flaps in the normal takeoff position;

(8) The propeller of the inoperative engine—

(i) Windmilling;

(ii) In the most probable position for the specific design of the propeller control; or

(iii) Feathered, if the airplane has an automatic feathering device acceptable for showing compliance with the climb requirements of § 25.67; and

(9) The airplane airborne and the ground effect negligible.

(c) For turbine engine powered airplanes, V_{MC} may not exceed 1.2 V_S with—

(1) Maximum available takeoff power or thrust on the engines;

(2) The most unfavorable center of gravity;

(3) The airplane trimmed for takeoff;

(4) The maximum sea level takeoff weight (or any lesser weight necessary to show V_{MC});

(5) The airplane in the most critical takeoff configuration existing along the flight path after the airplane becomes airborne, except with the landing gear retracted; and

(6) The airplane airborne and the ground effect negligible.

(d) The rudder forces required to maintain control at V_{MC} may not exceed 180 pounds nor may it be necessary to reduce power or thrust of the operative engines. During recovery, the airplane may not assume any dangerous attitude or require exceptional piloting skill, alertness, or strength to prevent a heading change of more than 20 degrees.

TRIM

§ 25.161 Trim.

(a) *General.* Each airplane must meet the trim requirements of this section after being trimmed, and without further pressure upon, or movement of, either the primary controls or their corresponding trim controls by the pilot or the automatic pilot.

(b) *Lateral and directional trim.* The airplane must maintain lateral and directional trim with the most adverse lateral displacement of the center of gravity within the relevant operating limitations, during normally expected conditions of operation (including operation at any speed from 1.4 V_{S_1} to V_{MO}/M_{MO}).

(c) *Longitudinal trim.* The airplane must maintain longitudinal trim during—

(1) A climb with maximum continuous power at a speed not more than 1.4 V_{S_1}, with the landing gear retracted, and the flaps (i) retracted and (ii) in the takeoff position;

(2) A glide with power off at a speed not more than 1.4 V_{S_1}, with the landing gear extended, the wing flaps (i) retracted and (ii) extended, the most forward center of gravity position approved for landing with the maximum landing weight, and with the most forward center of gravity position approved for landing regardless of weight; and

(3) Level flight at any speed from 1.4 V_{S_1} to V_{MO}/M_{MO}, with the landing gear and flaps retracted, and from 1.4 V_{S_1} to V_{LE} with the landing gear extended.

(d) *Longitudinal, directional, and lateral trim.* The airplane must maintain longitudinal, directional, and lateral trim (and for lateral trim, the angle of bank may not exceed five degrees) at 1.4 V_{S_1} during climbing flight with—

(1) The critical engine inoperative;

(2) The remaining engines at maximum continuous power; and

(3) The landing gear and flaps retracted.

(e) *Airplanes with four or more engines.* Each airplane with four or more engines must maintain trim in rectilinear flight—

(1) At the climb speed, configuration, and power required by § 25.69 for the purpose of establishing the rate of climb;

(2) With the most unfavorable center of gravity position; and

(3) At the weight at which the two-engine-inoperative climb is equal to at least 0.013 $V_{S_0}^2$ at an altitude of 5,000 feet.

STABILITY

§ 25.171 General.

The airplane must be longitudinally, directionally, and laterally stable in accordance with the provisions of §§ 25.173 through 25.177. In addition, suitable stability is required in any condition normally encountered in service, if flight tests show it is necessary for safe operation.

§ 25.173 Static longitudinal stability.

Under the conditions specified in § 25.175, the characteristics of the elevator control forces (including friction) and the elevator control surface displacement must be as follows:

(a) A pull must be required to obtain and maintain speeds below the specified trim speed, and a push must be required to obtain and maintain speeds above the specified trim speed. In addition, if the elevator control forces are not dependent upon the hinge moments of the elevator control surface, it must also be shown that upward displacement of the elevator trailing edge is required to obtain and maintain speeds below the specified trim speed, and a downward displacement of the elevator trailing edge is required to obtain and maintain speeds above the specified trim speed. This must be shown at any speed that can be obtained except speeds higher than the landing gear or wing flap operating limit speeds or V_{FC}/M_{FC}, whichever is appropriate, or lower than the minimum speed for steady, unstalled flight.

(b) The airspeed must return to within 10 percent of the original trim speed when the control force is slowly released from any speed within the range specified in paragraph (a) of this section.

(c) The stable slope of the stick force versus speed curve may not be less than 0.5 pound for each three knots or exceed a value beyond which control of the airplane is difficult.

§ 25.175 Demonstration of static longitudinal stability.

Static longitudinal stability must be shown as follows:

(a) *Climb.* The stick force curve and, if required by § 25.173(a), the elevator angle curve must have stable slopes at speeds between 85 and 115 percent of the speed at which the airplane—

(1) Is trimmed, with—

(i) Wing flaps retracted;

(ii) Landing gear retracted;

(iii) Maximum takeoff weight; and

(iv) 75 percent of maximum continuous power for reciprocating engines or the maximum power or thrust selected by the applicant as an operating limitation for use during climb for turbine engines; and

(2) Is trimmed at the speed for best rate-of-climb except that the speed need not be less than 1.4 V_{S_1}.

(b) *Cruise.* Static longitudinal stability must be shown in the cruise condition as follows:

(1) With the landing gear retracted at high speed, the stick force curve and, if required by § 25.173(a), the elevator angle curve must have stable slopes at speeds from V_{FC}/M_{FC} to the lower of $V_{FC}-\left(\frac{V_{FC}-1.4\,V_{S_1}}{2}\right)$, or 50 knots less than the trim speed specified in subdivision (iv) of this subparagraph (however, the speed need not be less than 1.4 V_{S_1}) and the stick force may not exceed 50 pounds with—

(i) Flaps retracted;

(ii) The most critical weight between maximum landing weight and maximum takeoff weight;

(iii) 75 percent of maximum continuous power for reciprocating engines or, for turbine engines, the maximum cruising power (though it need not exceed that power required at V_{MO}/M_{MO}) selected by the applicant as an operating limitation; and

(iv) The airplane trimmed for level flight with the power required in subdivision (iii) of this subparagraph.

(2) With the landing gear retracted at low speed, the stick force curve and, if required by § 25.173(a) the elevator angle curve must have stable slopes at speeds from a speed equal to $V_{FC}-\left(\frac{V_{FC}-1.4\,V_{S_1}}{2}\right)$ to 1.4 V_{S_1}, and the stick force may not exceed 50 pounds, with—

(i) Flaps retracted;

(ii) The most critical weight between the maximum landing weight and maximum takeoff weight;

(iii) Power required for level flight at a speed equal to $V_{FC}-\left(\frac{V_{FC}-1.4\,V_{S_1}}{2}\right)$; and

(iv) The airplane trimmed for level flight with the power required in subdivision (iii) of this subparagraph.

At altitudes where Mach number is critical, the calibrated airspeed corresponding to M_{FC} may be used to calculate the speed $V_{FC}-\left(\frac{V_{FC}-1.4\,V_{S_1}}{2}\right)$.

(3) With the landing gear extended, the stick force curve and, if required by § 25.173(a), the elevator angle curve must have stable slopes at speeds between 1.4 V_{S_1} and V_{LE}, and the stick force may not exceed 50 pounds with—

(i) Wing flaps retracted;

(ii) The most critical weight between the maximum landing weight and maximum takeoff weight;

(iii) Power required for level flight at V_{LE}; and

(iv) The airplane trimmed for level flight with the power required in subparagraph (3)(iii) of this paragraph.

(c) *Approach.* The stick force curve and, if required by § 25.173(a), the elevator angle curve must have stable slopes at speeds between 1.1 V_{S_1} and 1.8 V_{S_1}, with—

(1) Wing flaps in the approach position;

(2) Landing gear retracted;

(3) Maximum landing weight; and

(4) The airplane trimmed at 1.4 V_{S_1} with enough power to maintain level flight at this speed.

(d) *Landing.* The stick force curve and, if required by § 25.173(a), the elevator angle curve must have stable slopes, and the stick force may not exceed 80 pounds, at speeds between 1.1 V_{S_0} and 1.8 V_{S_0} with—

(1) Wing flaps in the landing position;

(2) Landing gear extended;

(3) Maximum landing weight;

(4) Power or thrust off on the engines; and

(5) The airplane trimmed at 1.4 V_{S_0} with power or thrust off.

§ 25.177 Static directional and lateral stability.

(a) The static directional stability (as shown by the tendency to recover from a skid with the rudder free) must be positive for any landing gear and flap position and symmetrical power condition, at speeds from 1.2 V_{S_1} up to V_{FE}, V_{LE}, or V_{FC}/M_{FC} (as appropriate).

(b) The static lateral stability (as shown by the tendency to raise the low wing in a sideslip with the aileron controls free and for any landing gear and flap position and symmetrical power condition) must be positive at V_{FE}, V_{LE}, or V_{FC}/M_{FC} (as appropriate) and may not be negative at 1.2 V_{S_1}.

(c) In straight, steady, sideslips (unaccelerated forward slips) the aileron and rudder control movements and forces must be substantially proportional to the angle of sideslip, and the factor of proportionality must lie between limits found necessary for safe operation throughout the range of sideslip angles appropriate to the operation of the airplane. At greater angles, up to the angle at which full rudder control is used or a rudder pedal force of 180 pounds is obtained, the rudder pedal forces may not reverse and increased rudder deflection must produce increased angles of sideslip. Unless the airplane has a yaw indicator, there must be enough bank accompanying sideslipping to clearly indicate any departure from steady unyawed flight.

§ 25.181 Dynamic longitudinal, directional, and lateral stability.

Any short period oscillation occurring between stalling speed and maximum allowable speed appropriate to the configuration of the airplane (for example, V_{FE}, V_{LE}, or V_{FC}/M_{FC}) must be heavily damped with the primary controls (1) free and (2) in a fixed position.

STALLS

§ 25.201 Stall demonstration.

(a) Stalls must be shown in straight flight and in 30 degree banked turns with—

(1) Power off; and

(2) The power necessary to maintain level flight at 1.6 V_{S_1} (where V_{S_1} corresponds to the stalling speed with flaps in the approach position, the landing gear retracted, and maximum landing weight).

(b) In either condition required by paragraph (a) of this section, it must be possible to meet the applicable requirements of § 25.203 with—

(1) Flaps and landing gear in any likely combination of positions;

(2) Representative weights within the range for which certification is requested; and

(3) The most adverse center of gravity for recovery.

(c) The following procedure must be used to show compliance with § 25.203:

(1) With the airplane trimmed for straight flight at the speed prescribed in § 25.49(c)(2)(i) for reciprocating engine powered airplanes, or in § 25.103(b)(1) for turbine engine powered airplanes, reduce the speed with the elevator control until it is steady at slightly above stalling speed. Apply elevator control so that the speed reduction does not exceed one knot per second until (i) the airplane is stalled, or (ii) the control reaches the stop.

(2) The airplane is considered stalled when, at an angle of attack measurably greater than that of maximum lift, the inherent flight characteristics give a clear indication to the pilot that the airplane is stalled. Typical indications of a stall are a nose-down pitch, or a roll, that cannot be readily arrested, or, if clear enough, a loss of control effectiveness, an abrupt change in control force or motion, characteristic buffeting, or a distinctive vibration of the pilot's controls. However, for airplanes with unmistakable inherent aerodynamic warning (such as buffeting, small amplitude pitch or roll oscillations, or distinctive shaking of the pilot's control) associated with the stall in each required configuration, the speed need not be reduced below a value providing an adequate stall warning margin as specified in § 25.207.

(3) As soon as the airplane is stalled, recover by normal recovery techniques.

§ 25.203 Stall characteristics.

(a) It must be possible to produce and to correct roll and yaw by unreversed use of the aileron and rudder controls, up to the time the airplane is stalled. No abnormal nose-up pitching may occur. The longitudinal control force must be positive up to and throughout the stall. In addition, it must be possible to promptly prevent stalling and to recover from a stall by normal use of the controls.

(b) For level wing stalls, the roll occurring between the stall and the completion of the recovery may not exceed approximately 20 degrees.

(c) For turning flight stalls, the action of the airplane after the stall may not be so violent or extreme as to make it difficult, with normal piloting skill, to effect a prompt recovery and to regain control of the airplane.

§ 25.205 Stalls: Critical engine inoperative.

(a) It must be possible to safely recover from a stall with the critical engine inoperative—

(1) Without applying power to the inoperative engine;

(2) With flaps and landing gear retracted; and

(3) With the remaining engines at up to 75 percent of maximum continuous power, or up to the power at which the wings can be held level with the use of maximum control travel, whichever is less.

(b) The operating engines may be throttled back during stall recovery from stalls with the critical engine inoperative.

§ 25.207 Stall warning.

(a) Stall warning with sufficient margin to prevent inadvertent stalling with the flaps and landing gear in any normal position must be clear and distinctive to the pilot in straight and turning flight.

(b) The warning may be furnished either through the inherent aerodynamic qualities of the airplane or by a device that will give clearly distinguishable indications under expected conditions of flight. However, a visual stall warning device that requires the attention of the crew within the cockpit is not acceptable by itself.

(c) The stall warning must begin at a speed exceeding the stalling speed by seven percent or at any lesser margin if the stall warning has enough clarity, duration, distinctiveness, or similar properties.

GROUND AND WATER HANDLING CHARACTERISTICS

§ 25.231 Longitudinal stability and control.

(a) Landplanes may have no uncontrollable tendency to nose over in any reasonably expected operating condition or when rebound occurs during landing or takeoff. In addition—

(1) Wheel brakes must operate smoothly and may not cause any undue tendency to nose over; and

(2) If a tail-wheel landing gear is used, it must be possible, during the takeoff ground run on concrete, to maintain any attitude up to thrust line level, at 80 percent of V_{S_1}.

(b) For seaplanes and amphibians, the most adverse water conditions safe for takeoff, taxiing, and landing, must be established.

§ 25.233 Directional stability and control.

(a) There may be no uncontrollable ground-looping tendency in 90° cross winds, up to a wind velocity of 0.2 V_{S_0} at any speed at which the airplane may be expected to be operated on the ground. This may be shown while establishing the cross wind component velocity required by § 25.237.

(b) Landplanes must be satisfactorily controllable, without exceptional piloting skill or alertness, in power-off landings at normal landing speed, without using brakes or engine power to maintain a straight path. This may be shown during power-off landings made in conjunction with other tests.

(c) The airplane must have adequate directional control during taxiing. This may be shown during taxiing prior to takeoffs made in conjunction with other tests.

§ 25.235 Taxiing condition.

The shock absorbing mechanism may not damage the structure of the airplane when the airplane is taxied on the roughest ground that may reasonably be expected in normal operation.

§ 25.237 Wind velocities.

(a) For landplanes, a cross component of wind velocity, shown to be safe for takeoff and landing, must be established.

(b) For seaplanes and amphibians, the following wind velocities must be established:

(1) A lateral wind component, not less than 0.2 V_{S_0}, up to which takeoff and landing is safe under any water condition that may reasonably be expected in normal operation.

(2) A wind velocity up to which taxiing is safe in any direction under water conditions that may reasonably be expected in normal operation.

§ 25.239 Spray characteristics and control stability on water.

(a) For seaplanes and amphibians, during takeoff, taxiing, and landing, and in the conditions set forth in paragraph (b) of this section, there may be no—

(1) Spray characteristics that would impair the pilot's view, cause damage, or result in the taking in of an undue quantity of water;

(2) Dangerously uncontrollable porpoising, bounding, or swinging tendency; or

(3) Immersion of auxiliary floats or sponsons, wing tips, propeller blades, or other parts not designed to withstand the resulting water loads.

(b) Compliance with the requirements of paragraph (a) of this section must be shown—

(1) In water conditions, from smooth to the most adverse condition established in accordance with § 25.231;

(2) In wind and cross-wind velocities, water currents, and associated waves and swells that may reasonably be expected in operation on water;

(3) At speeds that may reasonably be expected in operation on water;

(4) With sudden failure of the critical engine at any time while on water; and

(5) At each weight and center of gravity position, relevant to each operating condition, within the range of loading conditions for which certification is requested.

(c) In the water conditions of paragraph (b) of this section, and in the corresponding wind conditions, the seaplane or amphibian must be able to drift for five minutes with engines inoperative, aided, if necessary, by a sea anchor.

MISCELLANEOUS FLIGHT REQUIREMENTS

§ 25.251 Vibration and buffeting.

(a) The airplane must be designed to withstand any vibration and buffeting that might occur in any likely operating condition. This must be shown by calculations, resonance tests, or other tests found necessary by the Administrator.

(b) Each part of the airplane must be shown in flight to be free from excessive vibration, under any appropriate speed and power conditions up to at least the minimum value of V_D allowed in § 25.335. The maximum speeds shown must be used in establishing the operating limitations of the airplane in accordance with § 25.1505. In addition, it must be shown by analysis or tests, that the airplane is free from such vibration that would prevent safe flight under the conditions in § 25.629(d).

(c) There may be no buffeting condition, in normal flight, severe enough to interfere with the control of the airplane, to cause excessive fatigue to the crew, or to cause structural damage. Stall warning buffeting within these limits is allowable.

§ 25.253 High-speed characteristics.

(a) *Speed increase and recovery characteristics.* The following speed increase and recovery characteristics must be met:

(1) Operating conditions and characteristics likely to cause inadvertent speed increases (including upsets in pitch and roll) must be simulated with the airplane trimmed at any likely cruise speed up to V_{MO}/M_{MO}. These conditions and characteristics include gust upsets, inadvertent control movements, low stick force gradient in relation to control friction, passenger movement, leveling off from climb, and descent from Mach to airspeed limit altitudes.

(2) Allowing for pilot reaction time after effective inherent or artificial speed warning occurs, it must be shown that the airplane can be recovered to a normal altitude and its speed reduced to V_{MO}/M_{MO}, without—

(i) Exceptional piloting strength or skill;

(ii) Exceeding V_D/M_D, V_{DF}/M_{DF}, or the structural limitations; and

(iii) Buffeting that would cause structure damage.

(3) There may be no control reversal about any axis at any speed up to V_{DF}/M_{DF}. Any reversal of elevator control force or tendency of the airplane to pitch, roll, or yaw must be mild and readily controllable, using normal piloting techniques.

(b) *Maximum speed for stability characteristics, V_{FC}/M_{FC}.* V_{FC}/M_{FC} is the maximum speed at which the requirements of §§ 25.147(e), 25.175(b)(1), 25.177, 25.181, and 25.187 must be met with flaps and landing gear retracted. It may not be less than a speed midway between V_{MO}/M_{MO} and V_{DF}/M_{DF}, except that, for altitudes where Mach number is the limiting factor, M_{FC} need not exceed the Mach number at which effective speed warning occurs.

Subpart C—Structure

General

No. 250—5

§ 25.301 Loads.

(a) Strength requirements are specified in terms of limit loads (the maximum loads to be expected in service) and ultimate loads (limit loads multiplied by prescribed factors of safety). Unless otherwise provided, prescribed loads are limit loads.

(b) Unless otherwise provided, the specified air, ground, and water loads must be placed in equilibrium with inertia forces, considering each item of mass in the airplane. These loads must be distributed to conservatively approximate or closely represent actual conditions.

(c) If deflections under load would significantly change the distribution of external or internal loads, this redistribution must be taken into account.

§ 25.303 Factor of safety.

Unless otherwise provided, a factor of safety of 1.5 must be used.

§ 25.305 Strength and deformation.

(a) The structure must be able to support limit loads without detrimental permanent deformation. At any load up to limit loads, the deformation may not interfere with safe operation.

(b) The structure must be able to support ultimate loads without failure for at least three seconds. However, when proof of strength is shown by dynamic tests simulating actual load conditions, the three second limit does not apply.

(c) Where structural flexibility is such that any rate of load application likely to occur in the operating conditions might produce transient stresses appreciably higher than those corresponding to static loads, the effects of this rate of application must be considered.

§ 25.307 Proof of structure.

(a) Compliance with the strength and deformation requirements of this subpart must be shown for each critical loading condition. Structural analysis may be used only if the structure conforms to those for which experience has shown this method to be reliable. In other cases, substantiating load tests must be made.

(b) Compliance with the fatigue evaluation requirements of §§ 25.571 and 25.573 must be shown.

(c) Certain parts of the structure must be tested as specified in § 25.601.

Flight Loads

§ 25.321 General.

(a) Flight load factors represent the ratio of the aerodynamic force component (acting normal to the assumed longitudinal axis of the airplane) to the weight of the airplane. A positive load factor is one in which the aerodynamic force acts upward with respect to the airplane.

(b) Considering compressibility effects at each speed, compliance with the flight load requirements of this subpart must be shown—

(1) At each critical altitude within the range of altitudes selected by the applicant;

(2) At each weight from the design minimum weight to the design maximum weight; and

(3) For each required altitude and weight, for any practicable distribution of disposable load within the operating limitations recorded in the Airplane Flight Manual.

Flight Maneuver and Gust Conditions

§ 25.331 General.

(a) *Procedure.* The analysis of symmetrical flight must include at least the conditions specified in paragraphs (b) through (d) of this section. The following procedure must be used:

(1) Enough points on the maneuvering and gust envelopes must be investigated to ensure that the maximum load for each part of the airplane structure is obtained. A conservative combined envelope may be used.

(2) The significant forces acting on the airplane must be placed in equilibrium in a rational or conservative manner. The linear inertia forces must be considered to be in equilibrium with wing and horizontal tail surface loads, while the angular (pitching) inertia forces must be considered to be in equilibrium with wing and fuselage aerodynamic moments and horizontal tail surface loads.

(3) Where sudden displacement of a control is specified, the assumed rate of displacement need not exceed the rate that could be applied by the pilot.

(4) In determining elevator angles and chordwise load distribution (in the maneuvering conditions of paragraphs (b) and (c) of this section) in turns and pullups, the effect of corresponding pitching velocities must be taken into account.

(b) *Maneuvering balanced conditions.* Assuming the airplane to be in equilibrium with zero pitching acceleration, the maneuvering conditions A through I on the maneuvering envelope in § 25.333(b) must be investigated.

(c) *Maneuvering pitching conditions.* The following conditions involving pitching acceleration must be investigated:

(1) *Maximum elevator displacement at V_A.* The airplane is assumed to be flying in steady level flight (point A_1, § 25.333(b)) and, except as limited by pilot effort in accordance with § 25.397(b), the pitching control is suddenly moved to obtain extreme positive pitching (nose up).

(2) *Checked maneuver at speeds between V_A and V_D.* The airplane is assumed to be subjected to a checked maneuver (a maneuver in which the pitching control is suddenly displaced in one direction and then suddenly moved in the opposite direction) from steady level flight (points A_1 to D_1, § 25.333(b)), and from the positive load factor (points A_2 to D_2, § 25.333(b)) as follows:

(i) Unless lesser values could not be exceeded, a positive pitching acceleration (nose up) is assumed to be reached concurrently with the airplane load factor of 1.0 (points A_1 to D_1, § 25.333(b)). This positive acceleration must be equal to at least $\frac{39}{V}n\ (n-1.5)$ (radians/sec.^{2}), where—

(*a*) n is the positive load factor at the speed under consideration; and

(*b*) V is the airplane equivalent speed in knots.

(ii) Unless lesser values could not be exceeded, a negative pitching acceleration (nose down) is assumed to be reached concurrently with the positive maneuvering load factor (points A_2 to D_2, § 25.333(b)). This negative pitching acceleration must be equal to at least

$$-\frac{26}{V}n\ (n-1.5)\ \text{(radians/sec.}^2\text{)}$$

where—

(*a*) n is the positive load factor at the speed under consideration; and

(*b*) V is the airplane equivalent speed in knots.

(3) *Specified control displacement.* Instead of the conditions in subparagraph (2) of this paragraph, a checked maneuver, based on a rational pitching control motion vs. time profile, may be established in which the design limit load factor specified in § 25.337 will not be exceeded. Unless lesser values cannot be exceeded, the airplane response must result in pitching accelerations not less than those specified in subparagraph (2).

(d) *Gust conditions.* The gust conditions B′ through J′, § 25.333(c), must be investigated. The following provisions apply:

(1) The air load increment due to a specified gust must be added to the initial balancing tail load corresponding to steady level flight.

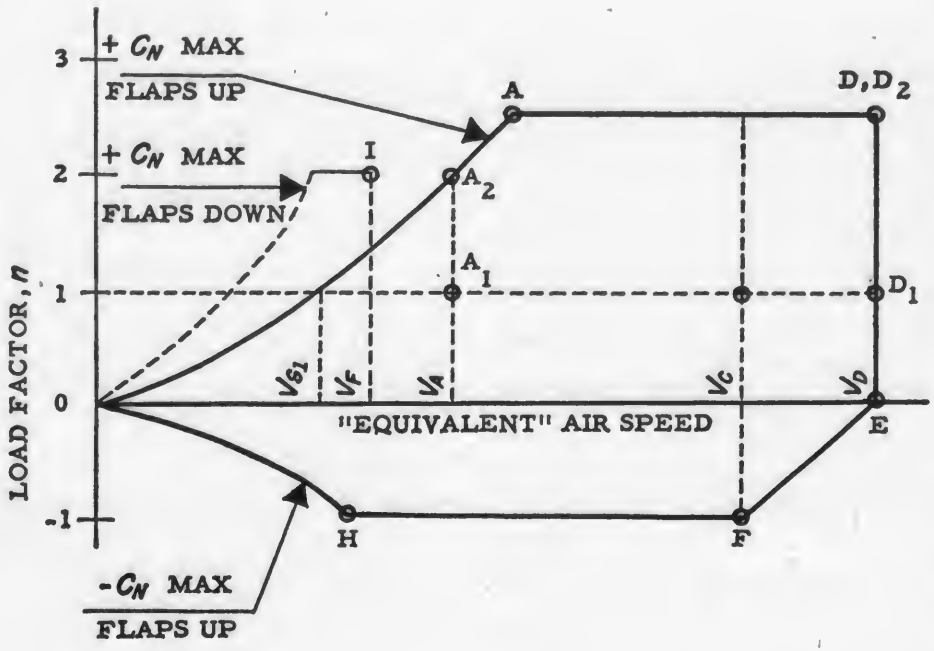
(2) The alleviating effect of wing down-wash and of the airplane's motion in response to the gust may be included in computing the tail gust load increment.

(3) Instead of a rational investigation of the airplane response, the gust alleviation factor K_g may be applied to the specified gust intensity for the horizontal tail.

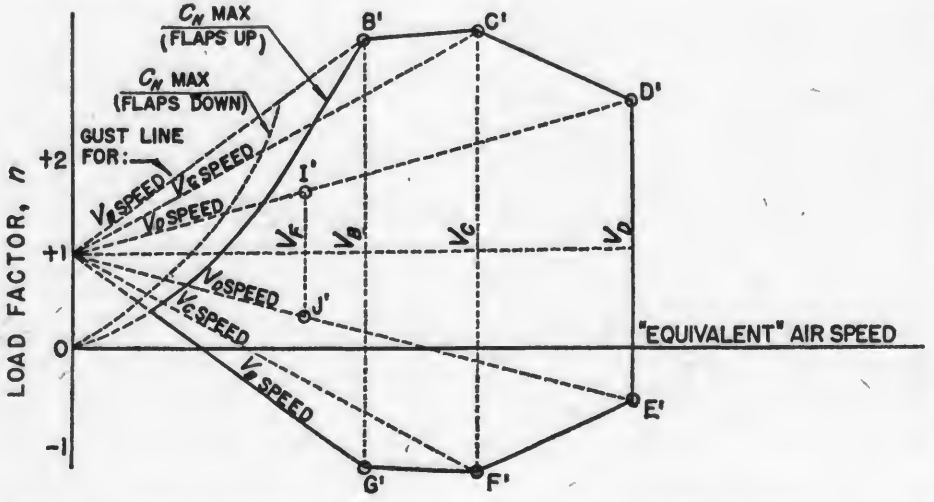
§ 25.333 Flight envelope.

(a) *General.* The strength requirements must be met at each combination of airspeed and load factor on and within the boundaries of the representative maneuvering and gust envelopes (V–n diagrams) of paragraphs (b) and (c) of this section. These envelopes must also be used in determining the airplane structural operating limitations as specified in § 25.1501.

(b) *Maneuvering envelope.*



(c) *Gust envelope.*



§ 25.335 Design airspeeds.

The selected design airspeeds are equivalent airspeeds (EAS). Estimated values of V_{S_0} and V_{S_1} must be conservative.

(a) *Design cruising speed, V_C.* For V_C, the following apply:

(1) The minimum value of V_C must be sufficiently greater than V_B to provide for inadvertent speed increases likely to occur as a result of severe atmospheric turbulence.

(2) In the absence of a rational investigation substantiating the use of other values, V_C may not be less than V_B+43 knots. However, it need not exceed the maximum speed in level flight at maximum continuous power for the corresponding altitude.

(3) At altitudes where V_D is limited by Mach number, V_C may be limited to a selected Mach number.

(b) *Design dive speed, V_D.* The selected design dive speed must be used in determining the maximum operating limit speed for the airplane in accordance with § 25.1505.

(c) *Design maneuvering speed V_A.* For V_A, the following apply:

(1) V_A may not be less than $V_{S_1}\sqrt{n}$ where—

(i) n is the limit positive maneuvering load factor at V_C; and

(ii) V_{S_1} is the stalling speed with flaps retracted.

(2) V_A and V_S must be evaluated at the design weight and altitude under consideration.

(3) V_A need not be more than V_C or the speed at which the positive $C_{N\ max}$ curve intersects the positive maneuver load factor line, whichever is less.

(d) *Design speed for maximum gust intensity, V_B.* For V_B, the following apply:

(1) V_B may not be less than the speed determined by the intersection of the line representing the maximum positive lift $C_{N\ max}$ and the line representing the rough air gust velocity on the gust V-n diagram, or $(\sqrt{n_g})\ V_{S_1}$, whichever is less, where—

(i) n_g is the positive airplane gust load factor due to gust, at speed V_C (in accordance with § 25.341), and at the particular weight under consideration; and

(ii) V_{S_1} is the stalling speed with the flaps retracted at the particular weight under consideration.

(2) V_B need not be greater than V_C.

(e) *Design flap speeds, V_F.* For V_F, the following apply:

(1) The design flap speed for each flap position (established in accordance with § 25.697(a)) must be sufficiently greater than the operating speed recommended for the corresponding stage of flight (including balked landings) to allow for probable variations in control of airspeed and for transition from one flap position to another.

(2) If an automatic flap positioning or load limiting device is used, the speeds and corresponding flap positions programmed or allowed by the device may be used.

(3) V_F may not be less than—

(i) 1.6 V_{S_1} with the flaps in takeoff position at maximum takeoff weight;

(ii) 1.8 V_{S_1} with the flaps in approach position at maximum landing weight; and

(iii) 1.8 V_{S_0} with the flaps in landing position at maximum landing weight.

§ 25.337 Limit maneuvering load factors.

(a) Except where limited by maximum (static) lift coefficients, the airplane is assumed to be subjected to symmetrical maneuvers resulting in the limit maneuvering load factors prescribed in this section. Pitching velocities appropriate to the corresponding pull-up and steady turn maneuvers must be taken into account.

(b) The positive limit maneuvering load factor n for any speed up to V_D may not be less than 2.5.

(c) The negative limit maneuvering load factor—

(1) May not be less than −1.0 at speeds up to V_C, and

(2) Must vary linearly with speed from the value at V_C to zero at V_D.

(d) Maneuvering load factors lower than those specified in this section may be used if the airplane has design features that make it impossible to exceed these values in flight.

§ 25.341 Gust loads.

(a) The airplane is assumed to be subjected to symmetrical vertical gusts in level flight. The resulting limit load factors must correspond to the conditions determined as follows:

(1) Positive (up) and negative (down) rough air gusts of 66 fps at V_B must be considered at altitudes between sea level and 20,000 feet. The gust velocity may

be reduced linearly from 66 fps at 20,000 feet to 38 fps at 50,000 feet.

(2) Positive and negative gusts of 50 fps at V_C must be considered at altitudes between sea level and 20,000 feet. The gust velocity may be reduced linearly from 50 fps at 20,000 feet to 25 fps at 50,000 feet.

(3) Positive and negative gusts of 25 fps at V_D must be considered at altitudes between sea level and 20,000 feet. The gust velocity may be reduced linearly from 25 fps at 20,000 feet to 12.5 fps at 50,000 feet.

(b) The following assumptions must be made:

(1) The shape of the gust is

$$U=\frac{U_{de}}{2}\left(1-\cos\frac{2\pi s}{25\bar{C}}\right)$$

where—

s = distance penetrated into gust (ft);
$\bar{C}$ = mean geometric chord of wing (ft); and
U_{de} = derived gust velocity referred to in paragraph (a) (fps).

(2) Gust load factors vary linearly between the specified conditions B′ through G′, as shown on the gust envelope in § 25.333(c).

(c) In the absence of a more rational analysis, the gust load factors must be computed as follows:

$$n=1+\frac{K_g U_{de} V a}{498\,(W/S)}$$

where—

$K_g=\frac{0.88\mu_g}{5.3+\mu_g}$ = gust alleviation factor;

$\mu_g=\frac{2(W/S)}{\rho \bar{C} a g}$ = airplane mass ratio;

U_{de} = derived gust velocities referred to in paragraph (a) (fps);
ρ = density of air (slugs/cu. ft.);
W/S = wing loading (psf);
$\bar{C}$ = mean geometric chord (ft.);
g = acceleration due to gravity (ft/sec.²);
V = airplane equivalent speed (knots); and
a = slope of the airplane normal force coefficient curve C_{N_A} per radian if the gust loads are applied to the wings and horizontal tail surfaces simultaneously by a rational method. The wing lift curve slope C_L per radian may be used when the gust load is applied to the wings only and the horizontal tail gust loads are treated as a separate condition.

§ 25.343 Design fuel and oil loads.

(a) The disposable load combinations must include each fuel and oil load in the range from zero fuel and oil to the selected maximum fuel and oil load. A structural reserve fuel condition, not exceeding 45 minutes of fuel under the operating conditions in § 25.1001(c), may be selected.

(b) If a structural reserve fuel condition is selected, it must be used as the minimum fuel weight condition for showing compliance with the flight load requirements as prescribed in this subpart. In addition—

(1) The structure must be designed for a condition of zero fuel and oil in the wing at limit loads corresponding to—

(i) A maneuvering load factor of +2.25; and

(ii) Gust intensities equal to 85 percent of the values prescribed in § 25.341; and

(2) Fatigue evaluation of the structure must account for any increase in operating stresses resulting from the design condition of subparagraph (b)(1) of this paragraph; and

(3) The flutter, deformation, and vibration requirements must also be met with zero fuel.

§ 25.345 High lift devices.

(a) If flaps are to be used during takeoff, approach, or landing, at the design flap speeds established for these stages of flight under § 25.335(e) and with the flaps in the corresponding positions, the airplane is assumed to be subjected to symmetrical maneuvers and gusts within the range determined by—

(1) Maneuvering to a positive limit load factor of 2.0; and

(2) Positive and negative 25 fps derived gusts acting normal to the flight path in level flight.

(b) The airplane must be designed for the conditions prescribed in paragraph (a) of this section, except that the airplane load factor need not exceed 1.0, taking into account, as separate conditions, the effects of—

(1) Propeller slipstream corresponding to maximum continuous power at the design flap speeds V_F, and with takeoff power at not less than 1.4 times the stalling speed for the particular flap position and associated maximum weight; and

(2) A head-on gust of 25 feet per second velocity (EAS).

(c) If flaps or similar high lift devices are to be used as speed brakes in en route conditions, and with flaps in the appropriate position at speeds up to the flap design speed chosen for these conditions, the airplane is assumed to be subjected to symmetrical maneuvers and gusts within the range determined by—

(1) Maneuvering to a positive limit load factor of 2.5; and

(2) Positive and negative derived gusts as prescribed in § 25.341 acting normal to the flight path in level flight.

§ 25.349 Rolling conditions.

The airplane must be designed for rolling loads resulting from the conditions specified in paragraphs (a) and (b) of this section. Unbalanced aerodynamic moments about the center of gravity must be reacted in a rational or conservative manner, considering the principal masses furnishing the reacting inertia forces.

(a) *Maneuvering.* The following conditions, speeds, and aileron deflections (except as the deflections may be limited by pilot effort) must be considered in combination with an airplane load factor of zero and of two-thirds of the positive maneuvering factor used in design. In determining the required aileron deflections, the torsional flexibility of the wing must be considered in accordance with § 25.301(b):

(1) Conditions corresponding to steady rolling velocities must be investigated. In addition, conditions corresponding to maximum angular acceleration must be investigated for airplanes with engines or other weight concentrations outboard of the fuselage. For the angular acceleration conditions, zero rolling velocity may be assumed in the absence of a rational time history investigation of the maneuver.

(2) At V_A, a sudden deflection of the aileron to the stop is assumed.

(3) At V_C, the aileron deflection must be that required to produce a rate of roll not less than that obtained in subparagraph (2) of this paragraph.

(4) At V_D, the aileron deflection must be that required to produce a rate of roll not less than one-third of that in subparagraph (2) of this paragraph.

(b) *Unsymmetrical gusts.* The condition of unsymmetrical gusts must be considered by modifying the symmetrical flight conditions B′ or C′ (in § 25.333(c)) whichever produces the greater load factor. It is assumed that 100 percent of the wing air load acts on one side of the airplane and 80 percent acts on the other side.

§ 25.351 Yawing conditions.

The airplane must be designed for loads resulting from the conditions specified in paragraphs (a) and (b) of this section. Unbalanced aerodynamic moments about the center of gravity must be reacted in a rational or conservative manner considering the principal masses furnishing the reacting inertia forces:

(a) *Maneuvering.* At speeds from V_{MC} to V_A, the following maneuvers must be considered. In computing the tail loads, the yawing velocity may be assumed to be zero:

(1) With the airplane in unaccelerated flight at zero yaw, it is assumed that the rudder control is suddenly displaced to the maximum deflection, as limited by the control stops or by a 300 lb. rudder pedal force, whichever is critical.

(2) With the rudder deflected as specified in subparagraph (1) of this paragraph, it is assumed that the airplane yaws to the resulting sideslip angle.

(3) With the airplane yawed to the static sideslip angle corresponding to the rudder deflection specified in subparagraph (1) of this paragraph, it is assumed that the rudder is returned to neutral.

(b) *Lateral gusts.* The airplane is assumed to encounter derived gusts normal to the plane of symmetry while in unaccelerated flight. The derived gusts and airplane speeds corresponding to conditions B′ through J′ (in § 25.333(c)) (as determined by §§ 25.341 and 25.345(a)(2) or 25.345(c)(2)) must be investigated. The shape of the gust must be as specified in § 25.341. In the absence of a rational investigation of the airplane's response to a gust, the gust

loading on the vertical tail surfaces must be computed as follows:

$$L_t = \frac{K_{g_t} U_{de} V a_t S_t}{498}$$

where—

L_t = vertical tail load (lbs.);

$K_{g_t} = \frac{0.88\mu_{g_t}}{5.3+\mu_{g_t}}$ = gust alleviation factor;

$\mu_{g_t} = \frac{2W}{\rho \bar{C}_t g a_t S_t}\left(\frac{K}{l_t}\right)^2$ = lateral mass ratio;

U_{de} = derived gust velocity (fps);

ρ = air density (slugs/cu. ft.);

W = airplane weight (lbs.);

S_t = area of vertical tail (ft.²);

$\bar{C}_t$ = mean geometric chord of vertical surface (ft.);

a_t = lift curve slope of vertical tail (per radian);

K = radius of gyration in yaw (ft.);

l_t = distance from airplane c.g. to lift center of vertical surface (ft.);

g = acceleration due to gravity (ft./sec.²); and

V = airplane equivalent speed (knots).

SUPPLEMENTARY CONDITIONS

§ 25.361 Engine torque.

(a) Each engine mount and its supporting structures must be designed for engine torque effects combined with—

(1) The limit engine torque corresponding to takeoff power and propeller speed acting simultaneously with 75 percent of the limit loads from flight condition A of § 25.333(b);

(2) The limit engine torque corresponding to maximum continuous power and propeller speed acting simultaneously with the limit loads from flight condition A of § 25.333(b); and

(3) For turbopropeller installations, in addition to the conditions specified in subparagraphs (1) and (2) of this paragraph, the limit engine torque corresponding to takeoff power and propeller speed multiplied by a factor of 1.6 acting simultaneously with 1g level flight loads.

(b) For turbine engine installations, the limit engine torque load imposed by sudden engine stoppage due to malfunction or structural failure (such as compressor jamming) must be considered in the design of the engine mounts and supporting structure.

(c) The limit engine torque is obtained by multiplying the mean torque for maximum continuous power by a factor of—

(1) 1.25 for turbopropeller installations;

(2) 1.33 for reciprocating engines with five or more cylinders; or

(3) Two, three, or four, for engines with four, three, or two cylinders, respectively.

§ 25.363 Side load on engine mount.

(a) Each engine mount and its supporting structure must be designed for a limit load factor in a lateral direction, for the side load on the engine mount, at least equal to the maximum load factor obtained in the yawing conditions but not less than—

(1) 1.33; or

(2) One-third of the limit load factor for flight condition A.

(b) The side load prescribed in paragraph (a) of this section may be assumed to be independent of other flight conditions.

§ 25.365 Pressurized cabin loads.

For each pressurized compartment for occupants, the following apply:

(a) The airplane structure must be strong enough to withstand the flight loads combined with pressure differential loads from zero up to the maximum relief valve setting.

(b) The external pressure distribution in flight, and stress concentrations and fatigue effects must be accounted for.

(c) If landings may be made with the cabin pressurized, landing loads must be combined with pressure differential loads from zero up to the maximum allowed during landing.

(d) The airplane structure must be strong enough to withstand the pressure differential loads corresponding to the maximum relief valve setting multiplied by a factor of 1.33, omitting other loads.

(e) If a pressurized cabin has two or more compartments separated by partitions, bulkheads, or floors, the structure supporting the prescribed flight and grounds loads (and any other structure that, if it failed, could interfere with continued safe flight and landing) must be designed to withstand the effects of sudden release of pressure in any compartment through an opening resulting from the failure or penetration of an external door, window, or windshield panel, or from structural fatigue or penetration of the fuselage in this compartment, unless it is shown that the probability of failure or penetration is extremely remote.

(f) In determining the probability of failure or penetration and probable size of openings, the fail-safe features of the design may be considered if possible improper operation of closure devices and inadvertent door openings are also considered. The pressure relief provided by intercompartment venting may also be considered.

(g) Reasonable design precautions must be taken to minimize the probability of parts becoming detached and injuring occupants while in their seats.

§ 25.367 Unsymmetrical loads due to engine failure.

(a) The airplane must be designed for the unsymmetrical loads resulting from the failure of the critical engine. Turbopropeller airplanes must be designed for the following conditions in combination with a single malfunction of the propeller drag limiting system, considering the probable pilot corrective action on the flight controls:

(1) At speeds between V_{MC} and V_D, the loads resulting from power failure because of fuel flow interruption are considered to be limit loads.

(2) At speeds between V_{MC} and V_C, the loads resulting from the disconnection of the engine compressor from the turbine or from loss of the turbine blades are considered to be ultimate loads.

(3) The time history of the thrust decay and drag build-up occurring as a result of the prescribed engine failures must be substantiated by test or other data applicable to the particular engine-propeller combination.

(4) The timing and magnitude of the probable pilot corrective action must be conservatively estimated, considering the characteristics of the particular engine-propeller-airplane combination.

(b) Pilot corrective action may be assumed to be initiated at the time maximum yawing velocity is reached, but not earlier than two seconds after the engine failure. The magnitude of the corrective action may be based on the control forces specified in § 25.397(b) except that lower forces may be assumed where it is shown by analysis or test that these forces can control the yaw and roll resulting from the prescribed engine failure conditions.

§ 25.371 Gyroscopic loads.

The structure supporting the engines must be designed for gyroscopic loads associated with the conditions specified in §§ 25.331, 25.349, and 25.351, with the engines at maximum continuous r.p.m.

§ 25.373 Speed control devices.

If speed control devices (such as spoilers and drag flaps) are installed for use in en route conditions—

(a) The airplane must be designed for the symmetrical maneuvers and gusts prescribed in §§ 25.333, 25.337, and 25.341, and the yawing maneuvers and lateral gusts in § 25.351, with the device extended at speeds up to the placard device extended speed; and

(b) If the device has automatic operating or load limiting features, the airplane must be designed for the maneuver and gust conditions prescribed in paragraph (a) of this section, at the speeds and corresponding device positions that the mechanism allows.

CONTROL SURFACE AND SYSTEM LOADS

§ 25.391 Control surface loads: general.

The control surfaces must be designed for the limit loads resulting from the flight conditions in §§ 25.331, 25.349, and 25.351 and the ground gust conditions in § 25.415, considering the requirements for—

(a) Loads parallel to hinge line, in § 25.393;

(b) Pilot effort effects, in § 25.397;

(c) Trim tab effects, in § 25.407;

(d) Unsymmetrical loads, in § 25.427; and

(e) Outboard fins, in § 25.445.

§ 25.393 Loads parallel to hinge line.

(a) Control surfaces and supporting hinge brackets must be designed for inertia loads acting parallel to the hinge line.

(b) In the absence of more rational data, the inertia loads may be assumed to be equal to KW, where—

(1) K=24 for vertical surfaces;

(2) K=12 for horizontal surfaces; and

(3) W=weight of the movable surfaces.

§ 25.395 Control system.

(a) Elevator, aileron, and rudder control systems and their supporting structures must be designed for loads corresponding to 125 percent of the computed hinge moments of the movable control surface in the conditions prescribed in § 25.391.

(b) The system limit loads, except the loads resulting from ground gusts, need not exceed the loads that can be produced by the pilot (or pilots) and by automatic devices operating the controls. The loads must be great enough to provide a rugged system for service use, considering jamming, ground gusts, taxiing tail to wind, control inertia, and friction.

§ 25.397 Control system loads.

(a) *General.* The maximum and minimum pilot forces, specified in paragraph (c) of this section, are assumed to act at the appropriate control grips or pads (in a manner simulating flight conditions) and to be reacted at the attachment of the control system to the control surface horn.

(b) *Pilot effort effects.* In the control surface flight loading condition, the air loads on movable surfaces and the corresponding deflections need not exceed those that would result in flight from the application of any pilot force within the ranges specified in paragraph (c) of this section. Two-thirds of the maximum values specified for the aileron and elevator may be used if control surface hinge moments are based on reliable data. In applying this criterion, the effects of servo mechanisms, tabs, and automatic pilot systems, must be considered.

(c) *Limit pilot forces.* The limit pilot forces are as follows:

Control	Maximum forces	Minimum forces
Aileron:		
Stick	100 lbs.	40 lbs.
Wheel*	80 D in.-lbs.**	40 D in.-lbs.
Elevator:		
Stick	250 lbs.	100 lbs.
Wheel	300 lbs.	100 lbs.
Rudder	300 lbs.	130 lbs.

*The critical parts of the aileron control system must be designed for a single tangential force with a limit value equal to 1.25 times the couple force determined from these criteria.

**D=wheel diameter (inches).

§ 25.399 Dual control system.

(a) Each dual control system must be designed for the pilots operating in opposition, using individual pilot forces not less than—

(1) 0.75 times those obtained under § 25.395; or

(2) The minimum forces specified in § 25.397(c).

(b) The control system must be designed for pilot forces applied in the same direction, using individual pilot forces not less than 0.75 times those obtained under § 25.395.

§ 25.405 Secondary control system.

Secondary controls, such as wheel brake, spoiler, and tab controls, must be designed for the maximum forces that a pilot is likely to apply to those controls. The following values may be used:

PILOT CONTROL FORCE LIMITS (SECONDARY CONTROLS)

Control	Limit pilot forces
Miscellaneous:	
*Crank, wheel, or lever.	$\left(\frac{1+R}{3}\right)\times 50$ lbs., but not less than 50 lbs. nor more than 150 lbs. (R=radius). (Applicable to any angle within 20° of plane of control).
Twist	133 in.-lbs.
Push-pull	To be chosen by applicant.

*Limited to flap, tab, stabilizer, spoiler, and landing gear operation controls.

§ 25.407 Trim tab effects.

The effects of trim tabs on the control surface design conditions must be accounted for only where the surface loads are limited by maximum pilot effort. In these cases, the tabs are considered to be deflected in the direction that would assist the pilot, and the deflections are—

(a) For elevator trim tabs, those required to trim the airplane at any point within the positive portion of the pertinent flight envelope in § 25.333(b), except as limited by the stops; and

(b) For aileron and rudder trim tabs, those required to trim the airplane in the critical unsymmetrical power and loading conditions, with appropriate allowance for rigging tolerances.

§ 25.409 Tabs.

(a) *Trim tabs.* Trim tabs must be designed to withstand loads arising from all likely combinations of tab setting, primary control position, and airplane speed (obtainable without exceeding the flight load conditions prescribed for the airplane as a whole), when the effect of the tab is opposed by pilot effort forces up to those specified in § 25.397(b).

(b) *Balancing tabs.* Balancing tabs must be designed for deflections consistent with the primary control surface loading conditions.

(c) *Servo tabs.* Servo tabs must be designed for deflections consistent with the primary control surface loading conditions obtainable within the pilot maneuvering effort, considering possible opposition from the trim tabs.

§ 25.415 Ground gust conditions.

(a) The control system must be designed as follows for control surface loads due to ground gusts and taxiing downwind:

(1) The control system between the stops nearest the surfaces and the cockpit controls must be designed for loads corresponding to the limit hinge moments H of subparagraph (2) of this paragraph. These loads need not exceed—

(i) The loads corresponding to the maximum pilot loads in § 25.397(c) for each pilot alone; or

(ii) 0.75 times these maximum loads for each pilot when the pilot forces are applied in the same direction.

(2) The control system stops nearest the surfaces, the control system locks, and the parts of the systems (if any) between these stops and locks and the control surface horns, must be designed for limit hinge moments H obtained from the formula, $H=KcSq$, where—

H=limit hinge moment (ft. lbs.);
c=mean chord of the control surface aft of the hinge line (ft.);
S=area of the control surface aft of the hinge line (sq. ft.);
q=dynamic pressure (p.s.f.) based on a design speed not less than $14.6\sqrt{W/S}+14.6$ (f.p.s.), except that the design speed need not exceed 88 f.p.s.; and
K=limit hinge moment factor for ground gusts derived in paragraph (b) of this section.

(b) The limit hinge moment factor K for ground gusts must be derived as follows:

Surface	K	Position of controls
(a) Aileron	0.75	Control column locked or lashed in mid-position.
(b) Aileron	*±0.50	Ailerons at full throw.
(c) Elevator	*±0.75	(c) Elevator full down.
(d) Elevator	*±0.75	(d) Elevator full up.
(e) Rudder	0.75	(e) Rudder in neutral.
(f) Rudder	0.75	(f) Rudder at full throw.

*A positive value of K indicates a moment tending to depress the surface, while a negative value of K indicates a moment tending to raise the surface.

§ 25.427 Unsymmetrical loads.

(a) Horizontal tail surfaces and their supporting structure must be designed for unsymmetrical loads arising from yawing and slipstream effects, in combination with the prescribed flight conditions.

(b) In the absence of more rational data, the following apply:

(1) For airplanes that are conventional in regard to location of propellers, wings, tail surfaces, and fuselage shape—

(i) 100 percent of the maximum loading from the symmetrical flight conditions may be assumed to act on the surface on one side of the plane of symmetry; and

(ii) 80 percent of this loading may be assumed to act on the other side.

(2) For airplanes that are not conventional (such as where the horizontal tail surfaces have appreciable dihedral or are supported by the vertical tail surfaces), the surfaces and supporting structures may be designed for combined vertical and horizontal surface loads resulting from the prescribed maneuvers.

§ 25.445 Outboard fins.

(a) If outboard fins are on the horizontal tail surface, the tail surfaces must be designed for the maximum horizontal surface load in combination with the corresponding loads induced on the vertical surfaces by endplate effects. These induced effects need not be combined with other vertical surface loads.

(b) To provide for unsymmetrical loading when outboard fins extend above and below the horizontal surface, the critical vertical surface loading (load per unit area) determined under § 25.391 must also be applied as follows:

(1) 100 percent to the area of the vertical surfaces above (or below) the horizontal surface.

(2) 80 percent to the area below (or above) the horizontal surface.

§ 25.457 Wing flaps.

Wing flaps, their operating mechanisms, and their supporting structures must be designed for critical loads occurring in the conditions prescribed in § 25.345, accounting for the loads occurring during transition from one flap position and airspeed to another.

§ 25.459 Special devices.

The loading for special devices using aerodynamic surfaces (such as slots and spoilers) must be determined from test data.

GROUND LOADS

§ 25.471 General.

(a) *Loads and equilibrium.* For limit ground loads—

(1) Limit ground loads obtained under this subpart are considered to be external forces applied to the airplane structure; and

(2) In each specified ground load condition, the external loads must be placed in equilibrium with the linear and angular inertia loads in a rational or conservative manner.

(b) *Critical centers of gravity.* The critical centers of gravity within the range for which certification is requested must be selected so that the maximum design loads are obtained in each landing gear element.

(c) *Design weights.* Design weights may be used for structural design only.

(d) *Landing gear dimension data.* Figure (1) of Appendix A contains the basic landing gear dimension data.

§ 25.473 Ground load conditions and assumptions.

(a) For the landing conditions specified in §§ 25.479 through 25.485, the following apply:

(1) The selected limit vertical inertia load factors at the center of gravity of the airplane may not be less than the values that would be obtained—

(i) In the attitude and subject to the drag loads associated with the particular landing condition;

(ii) With a limit descent velocity of 10 f.p.s. at the design landing weight (the maximum weight for landing conditions at the maximum descent velocity); and

(iii) With a limit descent velocity of 6 f.p.s. at the design takeoff weight (the maximum weight for taxiing conditions and landing conditions at a reduced descent velocity).

(2) A wing lift, not exceeding the airplane weight, may be assumed to exist throughout the landing impact and to act through the center of gravity of the airplane.

(b) The prescribed descent velocities may be modified if it is shown that the airplane has design features that make it impossible to develop these velocities.

(c) The minimum limit inertia load factors corresponding to the required limit descent velocities must be determined in accordance with § 25.723(a).

§ 25.477 Landing gear arrangement.

Sections 25.479 through 25.485 apply to airplanes with conventional arrangements of main and nose gears, or main and tail gears, when normal operating techniques are used.

§ 25.479 Level landing conditions.

(a) In the level attitude, the airplane is assumed to contact the ground at forward velocity components, ranging from V_{L_1} to 1.25 V_{L_2}, parallel to the ground, and to be subjected to the load factors prescribed in § 25.473(a)(1) with—

(1) V_{L_1} equal to V_{S_0} (TAS) at the appropriate landing weight and in standard sea level conditions; and

(2) V_{L_2} equal to V_{S_0} (TAS) at the appropriate landing weight and altitudes in a hot day temperature of 41 degrees F. above standard.

(b) The effects of increased contact speeds must be investigated if approval of downwind landings exceeding 10 knots is desired.

(c) Assuming that the following combinations of vertical and drag components act at the axle centerline, the following apply:

(1) For the condition of maximum wheel spin-up load, drag components simulating the forces required to accelerate the wheel rolling assembly up to the specified ground speed must be combined with the vertical ground reactions existing at the instant of peak drag loads. The coefficient of friction between the tires and the ground may be established by considering the effects of skidding velocity and tire pressure. However, this coefficient of friction need not be more than 0.8. This condition must be applied to the landing gear, directly affected attaching structure, and large mass items such as external fuel tanks and nacelles.

(2) For the condition of maximum wheel vertical load, an aft acting drag component of not less than 25 percent of the maximum vertical ground reaction must be combined with the maximum ground reaction of § 25.473.

(3) For the condition of maximum springback load, forward-acting horizontal loads resulting from a rapid reduction of the spin-up drag loads must be combined with the vertical ground reactions at the instant of the peak forward load. This condition must be applied to the landing gear, directly affected attaching structure, and large mass items such as external fuel tanks and nacelles.

(d) For the level landing attitude for airplanes with tail wheels, the conditions specified in paragraph (a) of this section must be investigated with the airplane horizontal reference line horizontal in accordance with figure 2 of Appendix A.

(e) For the level landing attitude for airplanes with nose wheels, shown in Figure 2 of Appendix A, the conditions specified in paragraphs (a) through (c) of this section must be investigated, assuming the following attitudes:

(1) An attitude in which the main wheels are assumed to contact the ground with the nose wheel just clear of the ground.

(2) If reasonably attainable at the specified descent and forward velocities, an attitude in which the nose and main wheels are assumed to contact the ground simultaneously. For this attitude—

(i) The nose and main gear may be separately investigated under the conditions in paragraph (c)(1) and (3) of this section; and

(ii) The pitching moment is assumed, under the condition in paragraph (c)(2) of this section, to be resisted by the nose gear.

§ 25.481 Tail-down landing conditions.

(a) In the tail-down attitude, the airplane is assumed to contact the ground at forward velocity components, ranging from V_{L_1} to V_{L_2}, parallel to the ground, and is subjected to the load factors prescribed in § 25.473(a)(1) with—

(1) V_{L_1} equal to V_{S_0} (TAS) at the appropriate landing weight and in standard sea level conditions; and

(2) V_{L_2} equal to V_{S_0} (TAS) at the appropriate landing weight and altitudes in a hot day temperature of 41 degrees F. above standard.

The combination of vertical and drag components specified in § 25.479(c)(1) and (3) is considered to be acting at the main wheel axle centerline.

(b) For the tail-down landing condition for airplanes with tail wheels, the main and tail wheels are assumed to contact the ground simultaneously, in accordance with figure 3 of Appendix A. Ground reaction conditions on the tail wheel are assumed to act—

(1) Vertically; and

(2) Up and aft through the axle at 45 degrees to the ground line.

(c) For the tail-down landing condition for airplanes with nose wheels, the airplane is assumed to be at an attitude corresponding to either the stalling angle or the maximum angle allowing clearance with the ground by each part of the airplane other than the main wheels, in accordance with figure 3 of Appendix A, whichever is less.

§ 25.483 One-wheel landing conditions.

For the one-wheel landing condition, the airplane is assumed to be in the level attitude and to contact the ground on one side of the main landing gear, in accordance with Figure 4 of Appendix A. In this attitude—

(a) The ground reactions must be the same as those obtained on that side under § 25.479(c)(2); and

(b) Each unbalanced external load must be reacted by airplane inertia in a rational or conservative manner.

§ 25.485 Side load conditions.

(a) For the side load condition, the airplane is assumed to be in the level attitude with only the main wheels contacting the ground, in accordance with figure 5 of Appendix A.

(b) Side loads of 0.8 of the vertical reaction (on one side) acting inward and 0.6 of the vertical reaction (on the other side) acting outward must be combined with one-half of the maximum vertical

ground reactions obtained in the level landing conditions. These loads are assumed to be applied at the ground contact point and to be resisted by the inertia of the airplane. The drag loads may be assumed to be zero.

§ 25.487 Rebound landing condition.

(a) The landing gear and its supporting structure must be investigated for the loads occurring during rebound of the airplane from the landing surface.

(b) With the landing gear fully extended and not in contact with the ground, a load factor of 20.0 must act on the unsprung weights of the landing gear. This load factor must act in the direction of motion of the unsprung weights as they reach their limiting positions in extending with relation to the sprung parts of the landing gear.

§ 25.489 Ground handling conditions.

Unless otherwise prescribed, the landing gear and airplane structure must be investigated for the conditions in §§ 25.491 through 25.509 with the airplane at the design takeoff weight. No wing lift may be considered. The shock absorbers and tires may be assumed to be in their static position.

§ 25.491 Takeoff run.

The landing gear and the airplane structure are assumed to be subjected to loads not less than those obtained under conditions described in § 25.235.

§ 25.493 Braked roll conditions.

(a) An airplane with a tail wheel is assumed to be in the level attitude with the load on the main wheels, in accordance with figure 6 of Appendix A. The limit vertical load factor is 1.2 at the design landing weight, and 1.0 at the design takeoff weight. A drag reaction equal to the vertical reaction multiplied by a coefficient of friction of 0.8, must be combined with the vertical ground reaction and applied at the ground contact point.

(b) For an airplane with a nose wheel, the limit vertical load factor is 1.2 at the design landing weight, and 1.0 at the design takeoff weight. A drag reaction equal to the vertical reaction, multiplied by a coefficient of friction of 0.8, must be combined with the vertical reaction and applied at the ground contact point of each wheel with brakes. The following two attitudes, in accordance with figure 6 of Appendix A, must be considered:

(1) The level attitude with the wheels contacting the ground and the loads distributed between the main and nose gear. Zero pitching acceleration is assumed.

(2) The level attitude with only the main gear contacting the ground and with the pitching moment resisted by angular acceleration.

(c) A drag reaction lower than that prescribed in paragraphs (a) and (b) of this section may be used if it is substantiated that an effective drag force of 0.8 times the vertical reaction cannot be attained under any likely loading condition.

§ 25.495 Turning.

In the static position, in accordance with figure 7 of Appendix A, the airplane is assumed to execute a steady turn by nose gear steering, or by application of sufficient differential power, so that the limit load factors applied at the center of gravity are 1.0 vertically and 0.5 laterally. The side ground reaction of each wheel must be 0.5 of the vertical reaction.

§ 25.497 Tail-wheel yawing.

(a) A vertical ground reaction equal to the static load on the tail wheel, in combination with a side component of equal magnitude, is assumed.

(b) If there is a swivel, the tail wheel is assumed to be swiveled 90° to the airplane longitudinal axis with the resultant load passing through the axle.

(c) If there is a lock, steering device, or shimmy damper the tail wheel is also assumed to be in the trailing position with the side load acting at the ground contact point.

§ 25.499 Nose-wheel yaw.

(a) A vertical load factor of 1.0 at the airplane center of gravity, and a side component at the nose wheel ground contact equal to 0.8 of the vertical ground reaction at that point, are assumed.

(b) With the airplane assumed to be in static equilibrium with the loads resulting from the use of brakes on one side of the main landing gear, the nose gear, its attaching structure, and the fuselage structure must be designed for the following loads:

(1) A vertical load factor at the center of gravity of 1.0.

(2) A forward acting load at the airplane center of gravity of 0.8 times the vertical load on one main gear.

(3) Side and vertical loads at the ground contact point on the nose gear that are required for static equilibrium.

(4) A side load factor at the airplane center of gravity of zero.

(c) If the loads prescribed in paragraph (a) of this section result in a nose gear side load higher than 0.8 times the vertical nose gear load, the design nose gear side load may be limited to 0.8 times the vertical load, with unbalanced yawing moments assumed to be resisted by airplane inertia forces.

(d) For the landing gear and airplane structure, the loading conditions are those prescribed in paragraph (b) of this section, except that—

(1) A lower drag reaction may be used if an effective drag force of 0.8 times the vertical reaction cannot be reached under any likely loading condition; and

(2) The forward acting load at the center of gravity need not exceed the maximum drag reaction on one main gear, determined in accordance with § 25.493(b).

§ 25.503 Pivoting.

(a) The airplane is assumed to pivot about one side of the main gear with the brakes on that side locked. The limit vertical load factor must be 1.0 and the coefficient of friction 0.8.

(b) The airplane is assumed to be in static equilibrium, with the loads being applied at the ground contact points, in accordance with figure 8 of Appendix A.

§ 25.507 Reversed braking.

(a) The airplane must be in a three point static ground attitude. Horizontal reactions parallel to the ground and directed forward must be applied at the ground contact point of each wheel with brakes. The limit loads must be equal to 0.55 times the vertical load at each wheel or to the load developed by 1.2 times the nominal maximum static brake torque, whichever is less.

(b) For airplanes with nose wheels, the pitching moment must be balanced by rotational inertia.

(c) For airplanes with tail wheels, the resultant of the ground reactions must pass through the center of gravity of the airplane.

§ 25.509 Towing loads.

(a) The towing loads specified in paragraph (d) of this section must be considered separately. These loads must be applied at the towing fittings and must act parallel to the ground. In addition—

(1) A vertical load factor equal to 1.0 must be considered acting at the center of gravity;

(2) The shock struts and tires must be in their static positions; and

(3) With W_T as the design maximum takeoff weight, the towing load, F_{TOW}, is—

(i) 0.3 W_T for W_T less than 30,000 pounds;

(ii) $\frac{6W_T+450,000}{70}$ for W_T between 30,000 and 100,000 pounds; and

(iii) 0.15 W_T for W_T over 100,000 pounds.

(b) For towing points not on the landing gear but near the plane of symmetry of the airplane, the drag and side tow load components specified for the auxiliary gear apply. For towing points located outboard of the main gear, the drag and side tow load components specified for the main gear apply. Where the specified angle of swivel cannot be reached, the maximum obtainable angle must be used.

(c) The towing loads specified in paragraph (d) of this section must be reacted as follows:

(1) The side component of the towing load at the main gear must be reacted by a side force at the static ground line of the wheel to which the load is applied.

(2) The towing loads at the auxiliary gear and the drag components of the towing loads at the main gear must be reacted as follows:

(i) A reaction with a maximum value equal to the vertical reaction must be applied at the axle of the wheel to which the load is applied. Enough airplane inertia to achieve equilibrium must be applied.

(ii) The loads must be reacted by airplane inertia.

(d) The prescribed towing loads are as follows:

Tow point	Position	Load		
		Magnitude	No.	Direction
Main gear.		0.75 *Frow* per main gear unit.	1	Forward, parallel to drag axis.
			2	Forward, at 30° to drag axis.
			3	Aft, parallel to drag axis.
			4	Aft, at 30° to drag axis.
Auxiliary gear.	Swiveled forward.	1.0 *Frow*.	5	Forward.
			6	Aft.
	Swiveled aft.		7	Forward.
			8	Aft.
	Swiveled 45° from forward.	0.5 *Frow*.	9	Forward, in plane of wheel.
			10	Aft, in plane of wheel.
	Swiveled 45° from aft.		11	Forward, in plane of wheel.
			12	Aft, in plane of wheel.

§ 25.511 Ground load; unsymmetrical loads on multiple-wheel units.

(a) *General.* Multiple-wheel landing gear units are assumed to be subjected to the limit ground loads prescribed in this subpart under paragraphs (b) through (f) of this section. In addition—

(1) A tandem strut gear arrangement is a multiple-wheel unit; and

(2) In determining the total load on a gear unit with respect to the provisions of paragraphs (b) through (f) of this section, the transverse shift in the load centroid, due to unsymmetrical load distribution on the wheels, may be neglected.

(b) *Distribution of limit loads to wheels; tires inflated.* The distribution of the limit loads among the wheels of the landing gear must be established for each landing, taxiing, and ground handling condition, taking into account the effects of the following factors:

(1) The number of wheels and their physical arrangements. For truck type landing gear units, the effects of any see-saw motion of the truck during the landing impact must be considered in determining the maximum design loads for the fore and aft wheel pairs.

(2) Any differentials in tire diameters resulting from a combination of manufacturing tolerances, tire growth, and tire wear. A maximum tire-diameter differential equal to ⅔ of the most unfavorable combination of diameter variations that is obtained when taking into account manufacturing tolerances, tire growth, and tire wear, may be assumed.

(3) Any unequal tire inflation pressure, assuming the maximum variation to be ±5 percent of the nominal tire inflation pressure.

(4) A runway crown of zero and a runway crown having a convex upward shape that may be approximated by a slope of 1½ percent with the horizontal. Runway crown effects must be considered with the nose gear unit on either slope of the crown.

(5) The airplane attitude.

(6) Any structural deflections.

(c) *Deflated tires.* The effect of deflated tires on the structure must be considered with respect to the loading conditions specified in paragraphs (d) through (f) of this section, taking into account the physical arrangement of the gear components. In addition—

(1) The deflation of any one tire for each multiple wheel landing gear unit, and the deflation of any two critical tires for each landing gear unit using four or more wheels per unit, must be considered; and

(2) The ground reactions must be applied to the wheels with inflated tires except that, for multiple-wheel gear units with more than one shock strut, a rational distribution of the ground reactions between the deflated and inflated tires, accounting for the differences in shock strut extensions resulting from a deflated tire, may be used.

(d) *Landing conditions.* For one and for two deflated tires, the applied load to each gear unit is assumed to be 60 percent and 50 percent, respectively, of the limit load applied to each gear for each of the prescribed landing conditions. However, for the drift landing condition of § 25.485, 100 percent of the vertical load must be applied.

(e) *Taxiing and ground handling conditions.* For one and for two deflated tires—

(1) The applied side or drag load factor, or both factors, at the center of gravity must be the most critical value up to 50 percent and 40 percent, respectively, of the limit side or drag load factors, or both factors, corresponding to the most severe condition resulting from consideration of the prescribed taxiing and ground handling conditions;

(2) For the braked roll conditions of § 25.493(a) and (b)(2), the drag loads on each inflated tire may not be less than those at each tire for the symmetrical load distribution with no deflated tires;

(3) The vertical load factor at the center of gravity must be 60 percent and 50 percent, respectively, of the factor with no deflated tires, except that it may not be less than 1g; and

(4) Pivoting need not be considered.

(f) *Towing conditions.* For one and for two deflated tires, the towing load, F_{TOW}, must be 60 percent and 50 percent, respectively, of the load prescribed.

WATER LOADS

§ 25.521 General.

(a) Seaplanes must be designed for the water loads developed during takeoff and landing, with the seaplane in any attitude likely to occur in normal operation, and at the appropriate forward and sinking velocities under the most severe sea conditions likely to be encountered.

(b) Unless a more rational analysis of the water loads is made, or the standards in ANC–3 are used, §§ 25.523 through 25.537 apply.

(c) The requirements of this section and §§ 25.523 through 25.537 apply also to amphibians.

§ 25.523 Design weights and center of gravity positions.

(a) *Design weights.* The water load requirements must be met at each operating weight up to the design landing weight except that, for the takeoff condition prescribed in § 25.531, the design takeoff weight must be used.

(b) *Center of gravity positions.* The critical centers of gravity within the limits for which certification is requested must be considered to reach maximum design loads for each part of the seaplane structure.

§ 25.525 Application of loads.

(a) Unless otherwise prescribed, the seaplane as a whole is assumed to be subjected to the loads corresponding to the load factors specified in § 25.527.

(b) In applying the loads resulting from the load factors prescribed in § 25.527, the loads may be distributed over the hull or main float bottom (in order to avoid excessive local shear loads and bending moments at the location of water load application) using pressures not less than those prescribed in § 25.533 (b).

(c) For twin float seaplanes, each float must be treated as an equivalent hull on a fictitious seaplane with a weight equal to one-half the weight of the twin float seaplane.

(d) Except in the takeoff condition of § 25.531, the aerodynamic lift on the seaplane during the impact is assumed to be ⅔ of the weight of the seaplane.

§ 25.527 Hull and main float load factors.

(a) Water reaction load factors n_W must be computed in the following manner:

(1) For the step landing case

$$n_W = \frac{C_1 V_{S_0}^2}{\tan^{2/3}\beta W^{1/3}}$$

(2) For the bow and stern landing cases

$$n_W = \frac{C_1 V_{S_0}^2}{\tan^{2/3}\beta W^{1/3}} \times \frac{K_1}{(1+r_g^2)^{2/3}}.$$

(b) The following values are used:

(1) n_W=water reaction load factor (that is, the water reaction divided by seaplane weight).

(2) C_1=empirical seaplane operations factor equal to 0.012 (except that this factor may not be less than that necessary to obtain the minimum value of step load factor of 2.33).

(3) V_{S_0}=seaplane stalling speed with flaps extended in the appropriate landing position and with no slipstream effect.

(4) β=angle of dead rise at the longitudinal station at which the load factor is being determined, in accordance with figure 1 of Appendix B.

(5) W=seaplane design landing weight in pounds.

(6) K_1=empirical hull station weighing factor, in accordance with figure 2 of Appendix B.

(7) r_x=ratio of distance, measured parallel to hull reference axis, from the center of gravity of the seaplane to the hull longitudinal station at which the load factor is being computed to the radius of gyration in pitch of the seaplane, the hull reference axis being a straight line, in the plane of symmetry, tangential to the keel at the main step.

(c) For a twin float seaplane, because of the effect of flexibility of the attachment of the floats to the seaplane, the factor K_1 may be reduced at the bow and stern to 0.8 of the value shown in figure 2 of Appendix B. This reduction applies only to the design of the carry-through and seaplane structure.

§ 25.529 Hull and main float landing conditions.

(a) *Symmetrical step, bow, and stern landing.* For symmetrical step, bow, and stern landings, the limit water reaction load factors are those computed under § 25.527. In addition—

(1) For symmetrical step landings, the resultant water load must be applied at the keel, through the center of gravity, and must be directed perpendicularly to the keel line;

(2) For symmetrical bow landings, the resultant water load must be applied at the keel, one-fifth of the longitudinal distance from the bow to the step, and must be directed perpendicularly to the keel line; and

(3) For symmetrical stern landings, the resultant water load must be applied at the keel, at a point 85 percent of the longitudinal distance from the step to the stern post, and must be directed perpendicularly to the keel line.

(b) *Unsymmetrical landing for hull and single float seaplanes.* Unsymmetrical step, bow, and stern landing conditions must be investigated. In addition—

(1) The loading for each condition consists of an upward component and a side component equal, respectively, to 0.75 and 0.25 tan β times the resultant load in the corresponding symmetrical landing condition; and

(2) The point of application and direction of the upward component of the load is the same as that in the symmetrical condition, and the point of application of the side component is at the same longitudinal station as the upward component but is directed inward perpendicularly to the plane of symmetry at a point midway between the keel and chine lines.

(c) *Unsymmetrical landing; twin float seaplanes.* The unsymmetrical loading consists of an upward load at the step of each float of 0.75 and a side load of 0.25 tan β at one float times the step landing load reached under § 25.527. The side load is directed inboard, perpendicularly to the plane of symmetry midway between the keel and chine lines of the float, at the same longitudinal station as the upward load.

§ 25.531 Hull and main float takeoff condition.

For the wing and its attachment to the hull or main float—

(a) The aerodynamic wing lift is assumed to be zero; and

(b) A downward inertia load, corresponding to a load factor computed from the following formula, must be applied:

$$n=\frac{C_{TO}V_{S_1}^2}{\tan^{2/3}\beta W^{1/3}}$$

where—

n=inertia load factor;

C_{TO}=empirical seaplane operations factor equal to 0.004;

V_{S_1}=seaplane stalling speed at the design takeoff weight with the flaps extended in the appropriate takeoff position;

β=angle of dead rise at the main step (degrees); and

W=seaplane design takeoff weight in pounds.

§ 25.533 Hull and main float bottom pressures.

(a) *General.* The hull and main float structure, including frames and bulkheads, stringers, and bottom plating, must be designed under this section.

(b) *Local pressures.* For the design of the bottom plating and stringers and their attachments to the supporting structure, the following pressure distributions must be applied:

(1) For an unflared bottom, the pressure at the chine is 0.75 times the pressure at the keel, and the pressures between the keel and chine vary linearly, in accordance with figure 3 of Appendix B. The pressure at the keel (psi) is computed as follows:

$$P_k=C_2\frac{K_2V_{S_1}^2}{\tan\beta_k}$$

where—

P_k=pressure at the keel;

C_2=0.00213;

K_2=hull station weighing factor, in accordance with figure 2 of Appendix B;

V_{S_1}=seaplane stalling speed at the design takeoff weight with flaps extended in the appropriate takeoff position; and

β_k=angle of dead rise at keel, in accordance with figure 1 of Appendix B.

(2) For a flared bottom, the pressure at the beginning of the flare is the same as that for an unflared bottom, and the pressure between the chine and the beginning of the flare varies linearly, in accordance with figure 3 of Appendix B. The pressure distribution is the same as that prescribed in subparagraph (1) of this paragraph for an unflared bottom except that the pressure at the chine is computed as follows:

$$P_{ch}=C_3\frac{K_2V_{S_1}^2}{\tan\beta}$$

where—

P_{ch}=pressure at the chine;

C_3=0.0016;

K_2=hull station weighing factor, in accordance with figure 2 of Appendix B;

V_{S_1}=seaplane stalling speed at the design takeoff weight with flaps extended in the appropriate takeoff position; and

β=angle of dead rise at appropriate station.

The area over which these pressures are applied must simulate pressures occurring during high localized impacts on the hull or float, but need not extend over an area that would induce critical stresses in the frames or in the overall structure.

(c) *Distributed pressures.* For the design of the frames, keel, and chine structure, the following pressure distributions apply:

(1) Symmetrical pressures are computed as follows:

$$P=C_4\frac{K_2V_{S_0}^2}{\tan\beta}$$

where—

P=pressure;

C_4=0.078 C_1 (with C_1 computed under § 25.527);

K_2=hull station weighing factor, determined in accordance with figure 2 of Appendix B;

V_{S_0}=seaplane stalling speed with landing flaps extended in the appropriate position and with no slipstream effect; and

β=angle of dead rise at appropriate station.

(2) The unsymmetrical pressure distribution consists of the pressures prescribed in subparagraph (1) of this paragraph on one side of the hull or main float centerline and one-half of that pressure on the other side of the hull or main float centerline, in accordance with figure 3 of Appendix B.

These pressures are uniform and must be applied simultaneously over the entire hull or main float bottom. The loads obtained must be carried into the sidewall structure of the hull proper, but need not be transmitted in a fore and aft direction as shear and bending loads.

§ 25.535 Auxiliary float loads.

(a) *General.* Auxiliary floats and their attachments and supporting structures must be designed for the conditions prescribed in this section. In the cases specified in paragraphs (b) through (e) of this section, the prescribed water loads may be distributed over the float bottom to avoid excessive local loads, using bottom pressures not less than those prescribed in paragraph (g) of this section.

(b) *Step loading.* The resultant water load must be applied in the plane of symmetry of the float at a point three-fourths of the distance from the bow to the step and must be perpendicular to the keel. The resultant limit load is computed as follows, except that the value of L need not exceed three times the weight of the displaced water when the float is completely submerged:

$$L=\frac{C_5\ V_{S_0}^2\ W^{2/3}}{\tan^{2/3}\beta_s(1+r_y^2)^{2/3}}$$

where—

L=limit load;

C_5=0.0053;

V_{S_0}=seaplane stalling speed with landing flaps extended in the appropriate position and with no slipstream effect;

W=seaplane design landing weight in pounds;

β_s=angle of dead rise at a station ¾ of the distance from the bow to the step, but need not be less than 15 degrees; and

r_y=ratio of the lateral distance between the center of gravity and the plane of symmetry of the float to the radius of gyration in roll.

(c) *Bow loading.* The resultant limit load must be applied in the plane of symmetry of the float at a point one-fourth of the distance from the bow to the step and must be perpendicular to the tangent to the keel line at that point. The magnitude of the resultant load is that specified in paragraph (b) of this section.

(d) *Unsymmetrical step loading.* The resultant water load consists of a component equal to 0.75 times the load specified in paragraph (a) of this section and a side component equal to 0.25 tan β times the load specified in paragraph (b) of this section. The side load must be applied perpendicularly to the plane of symmetry of the float at a point midway between the keel and the chine.

(e) *Unsymmetrical bow loading.* The resultant water load consists of a component equal to 0.75 times the load specified in paragraph (b) of this section and a side component equal to 0.25 tan β times the load specified in paragraph (c) of this section. The side load must be applied perpendicularly to the plane of symmetry at a point midway between the keel and the chine.

(f) *Immersed float condition.* The resultant load must be applied at the centroid of the cross section of the float at a point one-third of the distance from the bow to the step. The limit load components are as follows:

$$\text{vertical}=\rho g V,$$

$$\text{aft}=C_x\frac{\rho}{2}V^{2/3}(KV_{S_0})^2$$

$$\text{side}=C_y\frac{\rho}{2}V^{2/3}(KV_{S_0})^2$$

where—

ρ=mass density of water;

V=volume of float;

C_x=coefficient of drag force, equal to 0.133;

C_y=coefficient of side force, equal to 0.106;

K=0.8, except that lower values may be used if it is shown that the floats are incapable of submerging at a speed of 0.8 V_{S_0} in normal operations;

V_{S_0}=seaplane stalling speed with landing flaps extended in the appropriate position and with no slipstream effect; and

g=acceleration due to gravity (ft/sec²).

(g) *Float bottom pressures.* The float bottom pressures must be established under § 25.533. The angle of dead rise to be used in determining the float bottom pressures is set forth in paragraph (b) of this section.

§ 25.537 Seawing loads.

Seawing design loads must be based on applicable test data.

EMERGENCY LANDING CONDITIONS

§ 25.561 General.

(a) The airplane, although it may be damaged in emergency landing conditions on land or water, must be designed as prescribed in this section to protect each occupant under those conditions.

(b) The structure must be designed to give each occupant every reasonable chance of escaping serious injury in a minor crash landing when—

(1) Proper use is made of seats, belts, and all other safety design provisions;

(2) The wheels are retracted (where applicable); and

(3) The occupant experiences the following ultimate inertia forces relative to the surrounding structure:

(i) Upward—2.0 g.

(ii) Forward—9.0 g.

(iii) Sideward—1.5 g.

(iv) Downward—4.5 g, or any lesser force that will not be exceeded when the airplane absorbs the landing loads resulting from impact with an ultimate descent velocity of five f.p.s. at design landing weight.

(c) The supporting structure must be designed to restrain, under all loads up to those specified in paragraph (b)(3) of this section, each item of mass that could injure an occupant if it came loose in a minor crash landing.

§ 25.563 Structural ditching provisions.

Structural strength considerations of ditching provisions must be in accordance with § 25.801(e).

FATIGUE EVALUATION

§ 25.571 Fatigue evaluation of flight structure.

(a) *Strength, detail design, and fabrication.* Those parts of the structure (including wings, fixed and movable control surfaces, the fuselage, and their related primary attachments), whose failure could result in catastrophic failure of the airplane, must be evaluated under the provisions of either paragraph (b) or (c) of this section.

(b) *Fatigue strength.* The structure must be shown by analysis, tests, or both, to be able to withstand the repeated loads of variable magnitude expected in service. In addition, the following apply:

(1) The evaluation must include—

(i) The typical loading spectrum expected in service;

(ii) Identification of principal structural elements and detail design points, the fatigue failure of which could cause catastrophic failure of the airplane; and

(iii) An analysis or repeated load tests, or a combination of analysis and load tests, of principal structural elements and detail design points identified in subdivision (ii) of this subparagraph.

(2) The service history of airplanes of similar structural design, taking due account of differences in operating conditions and procedures, may be used.

(3) If substantiation of the pressure cabin by fatigue tests is required, the cabin, or representative parts of it, must be cycle-pressure tested, using the normal operating pressure plus the effects of external aerodynamic pressure combined with the flight loads. The effects of flight loads may be represented by an increased cabin pressure or may be omitted if they are shown to have no significant effect upon fatigue.

(c) *Fail safe strength.* It must be shown by analysis, tests, or both, that catastrophic failure or excessive structural deformation, that could adversely affect the flight characteristics of the airplane, are not probable after fatigue failure or obvious partial failure of a single principal structural element. After these types of failure of a single principal structural element, the remaining structure must be able to withstand static loads corresponding to the following:

(1) An ultimate maneuvering load factor of 2.0 at V_C.

(2) Gust loads as specified in §§ 25.341 and 25.351(b) except that these gust loads are considered to be ultimate loads and the gust velocities are—

(i) At speed V_B, 49 fps from sea level to 20,000 feet, thereafter decreasing linearly to 28 fps at 50,000 feet;

(ii) At speed V_C, 33 fps from sea level to 20,000 feet, thereafter decreasing linearly to 16.5 fps at 50,000 feet; and

(iii) At speed V_D, 15 fps from sea level to 20,000 feet, thereafter decreasing linearly to 6 fps at 50,000 feet.

(3) Eighty percent of the limit loads resulting from the conditions specified in § 25.427. These loads are considered to be ultimate loads.

(4) Eighty percent of the limit maneuvering loads resulting from the conditions specified in § 25.351(a), except that the load need not exceed 100 percent of the critical load obtained in compliance with § 25.351(a), using a pilot effort of 180 pounds. This load is an ultimate load.

The loads prescribed in this paragraph must be multiplied by a factor of 1.15 unless the dynamic effects of failure under static load are otherwise considered. For a pressurized cabin, the normal operating pressures combined with the expected external aerodynamic pressures must be applied simultaneously with the flight loading conditions specified in this paragraph.

§ 25.573 Fatigue evaluation of landing gear.

(a) The strength, detail design, and fabrication of those parts of the airplane landing gear and its attachment fittings in which fatigue may be critical, must be evaluated under either the provisions of paragraph (b) or (c) of this section.

(b) The fatigue strength of the landing gear must be evaluated as follows:

(1) The evaluation must include—

(i) The typical loading spectrum expected in service;

(ii) Identification of principal structural elements and detail design points, the fatigue failure of which could cause catastrophic failure of the landing gear; and

(iii) Analysis or repeated load testing of the principal structural elements and detail design points identified in subdivision (ii) of this subparagraph.

(2) Where the evaluation indicates its necessity, inspection or other procedures must be established to prevent catastrophic fatigue failure.

(3) The service history of airplanes of similar structural design, taking due account of differences in operating conditions and procedures, may be used.

(c) The fail-safe strength of the landing gear must be shown as follows:

(1) It must be shown by analysis or tests that catastrophic failure is not probable after fatigue failure, or obvious partial failure, of any single principal structural element.

(2) After these kinds of failure, the remaining structure must be able to withstand static loads corresponding to 80 percent of the limit loads resulting from the conditions prescribed in § 25.473. These static loads are ultimate loads.

Subpart D—Design and Construction

General

§ 25.601 General.

The airplane may not have design features or details that experience has shown to be hazardous or unreliable. The suitability of each questionable design detail and part must be established by tests.

§ 25.603 Materials.

The suitability and durability of materials used in the structure must—

(a) Be established on the basis of experience or tests; and

(b) Conform to approved specifications (such as industry or military specifications, or Technical Standard Orders) that ensure their having the strength and other properties assumed in the design data.

§ 25.605 Fabrication methods.

The methods of fabrication used must produce a consistently sound structure. If a fabrication process (such as gluing, spot welding, or heat treating) requires close control to reach this objective, the process must be performed under an approved process specification.

§ 25.607 Self-locking nuts.

No self-locking nut may be used on any bolt subject to rotation during airplane operation.

§ 25.609 Protection of structure.

Each part of the structure must—

(a) Be suitably protected against deterioration or loss of strength in service due to any cause, including—

(1) Weathering;

(2) Corrosion; and

(3) Abrasion; and

(b) Have provisions for ventilation and drainage where necessary for protection.

§ 25.611 Inspection provisions.

There must be means to allow close examination of each part requiring recurring inspection, adjustment for proper alignment and function, or lubrication.

§ 25.613 Material strength properties and design values.

(a) Material strength properties must be based on enough tests of material meeting approved specifications to establish design values on a statistical basis.

(b) Design values must be chosen so that the probability of any structure being understrength because of material variations is extremely remote.

(c) The effects of temperature on allowable stresses used for design in an essential component or structure must be considered where thermal effects are significant under normal operating conditions.

(d) The strength, detail design, and fabrication of the structure must minimize the probability of disastrous fatigue failure, particularly at points of stress concentration.

(e) Unless they are shown to be inapplicable in a particular case, the design values must be those contained in the following publications (obtainable from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402):

MIL-HDBK-5, "Metallic Materials and Elements for Flight Vehicle Structure";
MIL-HDBK-17, "Plastics for Flight Vehicles";
ANC-18, "Design of Wood Aircraft Structures"; and
MIL-HDBK-23, "Composite Construction for Flight Vehicles".

§ 25.615 Design properties.

(a) Design properties outlined in MIL-HDBK-5 may be used subject to the following conditions:

(1) Where applied loads are eventually distributed through a single member within an assembly, the failure of which would result in the loss of the structural integrity of the component involved, the guaranteed minimum design mechanical properties ("A" values) listed in MIL-HDBK-5 must be met.

(2) Redundant structures, in which the failure of individual elements would result in applied loads being safely distributed to other load-carrying members, may be designed on the basis of the "90 percent probability ("B" values)" listed in MIL-HDBK-5.

(b) Design values greater than the guaranteed minimums required by paragraph (a) of this section may be used where only guaranteed minimum values are normally allowed if a "premium selection" of the material is made in which a specimen of each individual item is

tested before use to determine that the actual strength properties of that particular item will equal or exceed those used in design.

§ 25.619 Special factors.

The factors of safety prescribed in § 25.303 must be multiplied by the special factors of safety prescribed in §§ 25.621 through 25.625 for each part of the structure whose strength is—

(a) Uncertain;

(b) Likely to deteriorate in service before normal replacement; or

(c) Subject to appreciable variability because of uncertainties in manufacturing processes or inspection methods.

§ 25.621 Casting factors.

(a) *General.* The factors, tests, and inspections specified in paragraphs (b) through (d) of this section must be applied in addition to those necessary to establish foundry quality control. The inspections must meet approved specifications. Paragraphs (c) and (d) of this section apply to any structural castings except castings that are pressure tested as parts of hydraulic or other fluid systems and do not support structural loads.

(b) *Bearing stresses and surfaces.* The casting factors specified in paragraphs (c) and (d) of this section—

(1) Need not exceed 1.25 with respect to bearing stresses regardless of the method of inspection used; and

(2) Need not be used with respect to the bearing surfaces of a part whose bearing factor is larger than the applicable casting factor.

(c) *Critical castings.* For each casting whose failure would preclude continued safe flight and landing of the airplane or result in serious injury to occupants, the following apply:

(1) Each critical casting must—

(i) Have a casting factor of not less than 1.25; and

(ii) Receive 100 percent inspection by visual, radiographic, and magnetic particle or penetrant inspection methods or approved equivalent nondestructive inspection methods.

(2) For each critical casting with a casting factor less than 1.50, three sample castings must be static tested and shown to meet—

(i) The strength requirements of § 25.305 at an ultimate load corresponding to a casting factor of 1.25; and

(ii) The deformation requirements of § 25.305 at a load of 1.15 times the limit load.

(3) Examples of these castings are structural attachment fittings, parts of flight control systems, control surface hinges and balance weight attachments, seat, berth, safety belt, and fuel and oil tank supports and attachments, and cabin pressure valves.

(d) *Noncritical castings.* For each casting other than those specified in paragraph (c) of this section, the following apply:

(1) Except as provided in subparagraphs (2) and (3) of this paragraph, the casting factors and corresponding inspections must meet the following table:

Casting factor	*Inspection*
2.0 or more	100 percent visual.
Less than 2.0 but more than 1.5.	100 percent visual, and magnetic particle or penetrant or equivalent nondestructive inspection methods.
1.25 through 1.50.	100 percent visual, magnetic particle or penetrant, and radiographic, or approved equivalent nondestructive inspection methods.

(2) The percentage of castings inspected by nonvisual methods may be reduced below that specified in subparagraph (1) of this paragraph when an approved quality control procedure is established.

(3) For castings procured to a specification that guarantees the mechanical properties of the material in the casting and provides for demonstration of these properties by test of coupons cut from the castings on a sampling basis—

(i) A casting factor of 1.0 may be used; and

(ii) The castings must be inspected as provided in subparagraph (1) of this paragraph for casting factors of "1.25 through 1.50" and tested under paragraph (c)(2) of this section.

§ 25.623 Bearing factors.

(a) Except as provided in paragraph (b) of this section, each part that has clearance (free fit), and that is subject to pounding or vibration, must have a bearing factor large enough to provide for the effects of normal relative motion.

(b) No bearing factor need be used for a part for which any larger special factor is prescribed.

§ 25.625 Fitting factors.

For each fitting (a part or terminal used to join one structural member to another), the following apply:

(a) For each fitting whose strength is not proven by limit and ultimate load tests in which actual stress conditions are simulated in the fitting and surrounding structures, a fitting factor of at least 1.15 must be applied to each part of—

(1) The fitting;

(2) The means of attachment; and

(3) The bearing on the joined members.

(b) No fitting factor need be used—

(1) For joints made under approved practices and based on comprehensive test data (such as continuous joints in metal plating, welded joints, and scarf joints in wood); or

(2) With respect to any bearing surface for which a larger special factor is used.

(c) For each integral fitting, the part must be treated as a fitting up to the point at which the section properties become typical of the member.

§ 25.629 Flutter, deformation, and fail-safe criteria.

(a) *General.* Compliance with this section must be shown by calculations, resonance tests, or other tests found necessary by the Administrator.

(b) *Flutter and divergence prevention.* The dynamic evaluation of the airplane must include an investigation of the significant elastic, inertia, and aerodynamic forces associated with the rotations and displacements of the plane of the propeller. In addition the following apply:

(1) The airplane must be designed to be free from flutter and divergence (unstable structural distortion due to aerodynamic loading) at speeds up to 1.2 V_D.

(2) A smaller margin above V_D may be used if—

(i) The characteristics of the airplane (including the effects of compressibility) make a speed of 1.2 V_D unlikely to be reached;

(ii) A proper margin of damping exists at V_D; and

(iii) There is no large and rapid reduction in damping as V_D is approached.

(3) If concentrated balance weights are used on control surfaces, their effectiveness and strength, including supporting structure, must be substantiated.

For the purposes of subparagraph (2) of this paragraph, in the absence of more accurate data, the terminal velocity in a dive of 30 degrees to the horizontal may be used as the maximum speed likely to be reached.

(c) *Loss of control due to structural deformation.* The airplane must be designed to be free from control reversal and from undue loss of longitudinal, lateral, and directional stability and control, as a result of structural deformation (including that of the control surface covering) at speeds up to the speed prescribed in paragraph (b) of this section for flutter prevention.

(d) *Fail-safe criteria.* The following fail-safe criteria must be met:

(1) It must be shown, by analysis or tests, that the airplane is free from such flutter or divergence that would preclude safe flight, at any speed up to V_D, after—

(i) Each of the failures, malfunctions, or adverse conditions listed in subparagraph (4) of this paragraph; and

(ii) Any other reasonably probable single failure, malfunction, or adverse condition affecting flutter or divergence.

(2) If a failure, malfunction, or adverse condition described in subparagraph (4) of this paragraph is simulated during a flight test in showing compliance with this paragraph, the maximum speed investigated need not exceed V_{FC} if it is shown, by correlation of the flight test data with other test data or analyses, that hazardous flutter or divergence will not occur at any speed up to V_D.

(3) The structural failures described in subparagraph (4)(i) and (4)(ii) of this paragraph need not be considered in showing compliance with this paragraph if engineering data substantiate that the probability of their occurrence is negligible by showing that the structural element is designed with—

(i) Conservative static strength margins for each ground and flight loading condition specified in this part; or

(ii) Sufficient fatigue strength for the loading spectrum expected in operation.

(4) The failures, malfunctions, or adverse conditions used to show compliance with this paragraph are as follows:

(i) Failure of any single element of the structure supporting any engine, independently mounted propeller shaft, large auxiliary power unit, or large externally mounted aerodynamic body (such as an external fuel tank).

(ii) Any single failure of the engine structure, on turbopropeller airplanes, that would reduce the yaw or pitch rigidity of the propeller rotational axis.

(iii) Absence of propeller aerodynamic forces resulting from the feathering of any single propeller, and, for airplanes with four or more engines, the feathering of the critical combination of two propellers. In addition, any single feathered propeller must be paired with the failures, specified in subdivision (i) of this subparagraph, involving failure of any single element of the structure supporting any engine or independently mounted propeller shaft, and the failures specified in subdivision (ii) of this subparagraph.

(iv) Any single propeller rotating at the highest likely overspeed.

(v) Failure of each principal structural element for which compliance with the alternative provisions of § 25.571(c) is selected. Safety following a failure may be substantiated by showing that possible losses in rigidity or changes in frequency, modal form, or damping, resulting from the failure, are within the general parameter variations covered in the flutter and divergence investigations.

(vi) Failure, malfunction, or disconnection of any single element in the main flight control system (including automatic flight control systems, if installed), in any tab control system, or in any flutter damper connected to a control surface or tab. Investigation of the forced structural vibrations, other than flutter resulting from failures, malfunctions, or adverse conditions in the automatic flight control system, may be limited to airspeeds up to V_C.

Control Surfaces

§ 25.651 Proof of strength.

(a) Limit load tests of control surfaces are required. These tests must include the horn or fitting to which the control system is attached.

(b) Compliance with the special factors requirements of §§ 25.619 through 25.625, and 25.657 for control surface hinges must be shown by analysis or individual load tests.

§ 25.655 Installation.

(a) Movable tail surfaces must be installed so that there is no interference between any surfaces when one is held in its extreme position and the others are operated through their full angular movement.

(b) If an adjustable stabilizer is used, it must have stops that will limit its range of travel to the maximum for which the airplane is shown to meet the trim requirements of § 25.161.

§ 25.657 Hinges.

(a) Control surface hinges, except ball and roller bearing hinges, must have a factor of safety of not less than 6.67 with respect to the ultimate bearing strength of the softest material used as a bearing.

(b) For ball or roller bearing hinges, the approved rating of the bearing may not be exceeded.

(c) Hinges must have enough strength and rigidity for loads parallel to the hinge line.

Control Systems

§ 25.671 General.

(a) Each control and control system must operate with the ease, smoothness, and positiveness appropriate to its function.

(b) Each element of each flight control system must be designed, or distinctively and permanently marked, to minimize the probability of incorrect assembly that could result in the malfunctioning of the system.

(c) Each tab control system must be designed so that disconnection or failure of any element at speeds up to V_C cannot jeopardize safety.

(d) Each adjustable stabilizer must have means to allow any adjustment necessary for continued safety of the flight after the occurrence of any reasonably probable single failure of the actuating system.

§ 25.673 Two-control airplanes.

Two-control airplanes must be able to continue safely in flight and landing if any one connecting element in the directional-lateral flight control system fails.

§ 25.675 Stops.

(a) Each control system must have stops that positively limit the range of motion of the control surfaces.

(b) Each stop must be located so that wear, slackness, or take-up adjustments will not adversely affect the control characteristics of the airplane because of a change in the range of surface travel.

(c) Each stop must be able to withstand any loads corresponding to the design conditions for the control system.

§ 25.677 Trim systems.

(a) Trim controls must be designed to prevent inadvertent or abrupt operation and to operate in the plane, and with the sense of motion, of the airplane.

(b) There must be means adjacent to the trim control to indicate the direction of the control movement relative to the airplane motion. In addition, there must be clearly visible means to indicate the position of the trim device with respect to the range of adjustment.

(c) Trim devices must be able to continue normal operation if any one connecting or transmitting element of the primary flight control system fails. Trim control systems must be designed to prevent creeping in flight. Trim tab controls must be irreversible unless the tab is appropriately balanced and shown to be free from flutter.

(d) If an irreversible tab control system is used, the part from the tab to the attachment of the irreversible unit to the airplane structure must consist of a rigid connection.

§ 25.679 Control system gust locks.

(a) There must be a device to prevent damage to the control surfaces (including tabs), and to the control system, from gusts striking the airplane while it is on the ground or water. If the device, when engaged, prevents normal operation of the control surfaces by the pilot, it must—

(1) Automatically disengage when the pilot operates the primary flight controls in a normal manner; or

(2) Limit the operation of the airplane so that the pilot receives unmistakable warning at the start of takeoff.

(b) The device must have means to preclude the possibility of it becoming inadvertently engaged in flight.

§ 25.681 Limit load static tests.

(a) Compliance with the limit load requirements of this Part must be shown by tests in which—

(1) The direction of the test loads produces the most severe loading in the control system; and

(2) Each fitting, pulley, and bracket used in attaching the system to the main structure is included.

(b) Compliance must be shown (by analyses or individual load tests) with the special factor requirements for control system joints subject to angular motion.

§ 25.683 Operation tests.

It must be shown by operation tests that, when the controls are operated from the pilot compartment with the system loaded to correspond to 80 percent of the limit load specified for the system, the system is free from—

(a) Jamming;

(b) Excessive friction; and

(c) Excessive deflection.

§ 25.685 Control system details.

(a) Each detail of each control system must be designed and installed to prevent jamming, chafing, and interference from cargo, passengers, or loose objects.

(b) There must be means in the cockpit to prevent the entry of foreign objects into places where they would jam the system.

(c) There must be means to prevent the slapping of cables or tubes against other parts.

(d) Sections 25.689 and 25.693 apply to cable systems and joints.

§ 25.689 Cable systems.

(a) Each cable, cable fitting, turnbuckle, splice, and pulley must be approved. In addition—

(1) No cable smaller than ⅛ inch in diameter may be used in the aileron, elevator, or rudder systems; and

(2) Each cable system must be designed so that there will be no hazardous change in cable tension throughout the

range of travel under operating conditions and temperature variations.

(b) Each kind and size of pulley must correspond to the cable with which it is used. Pulleys and sprockets must have closely fitted guards to prevent the cables and chains from being displaced or fouled. Each pulley must lie in the plane passing through the cable so that the cable does not rub against the pulley flange.

(c) Fairleads must be installed so that they do not cause a change in cable direction of more than three degrees.

(d) Clevis pins subject to load or motion and retained only by cotter pins may not be used in the control system.

(e) Turnbuckles must be attached to parts having angular motion in a manner that will positively prevent binding throughout the range of travel.

(f) There must be provisions for visual inspection of fairleads, pulleys, terminals, and turnbuckles.

§ 25.693 Joints.—

Control system joints (in push-pull systems) that are subject to angular motion, except those in ball and roller bearing systems must have a special factor of safety of not less than 3.33 with respect to the ultimate bearing strength of the softest material used as a bearing. This factor may be reduced to 2.0 for joints in cable control systems. For ball or roller bearings, the approved ratings, including those established in MIL-HDBK-5 "Metallic Materials and Elements for Flight Vehicle Structure", may not be exceeded.

§ 25.695 Power-boost and power-operated control system.

(a) If a power-boost or power-operated control system is used, an alternate system must be immediately available to allow continued safe flight and landing in the event of a single failure in the power portion.

(b) Each alternate system may be a duplicate power portion or a manually operated mechanical system. The power portion includes the power source, such as hydraulic pumps, and such items as valves, lines, and actuators.

(c) The failure of mechanical parts (such as piston rods and links) and the jamming of power cylinders must be considered unless they are extremely remote.

(d) Both the primary and alternate systems must be operable if any engine fails. For airplanes with more than two engines, at least one system must be operable if any two engines fail. It must be shown by analysis that the airplane is controllable if all engines fail.

§ 25.697 Wing flap controls.

(a) Each wing flap control must be designed so that the flight crew can place the flaps in any takeoff, en route, approach, and landing position established under § 25.47. The flaps must maintain these positions, except for flap movement produced by an automatic flap positioning or load limiting device, without further attention by the flight crew.

(b) The wing flap control must be designed and located to make inadvertent operation improbable.

(c) The rate of motion of the flaps in response to the operation of the control and the characteristics of the automatic flap positioning or load limiting device must give satisfactory flight and performance characteristics under steady or changing conditions of airspeed, engine power, and airplane attitude.

(d) The wing flap control must be designed to retract the flaps from the fully extended position, during steady flight at maximum continuous engine power, at any speed below $V_F+8.5$ (knots).

§ 25.699 Wing flap position indicator.

(a) There must be means to indicate the takeoff, en route, approach, and landing flap positions.

(b) If any extension of the flaps beyond the landing position is possible, the flap control must be clearly marked to identify this range of extension.

§ 25.701 Flap interconnection.

(a) The motion of flaps on opposite sides of the plane of symmetry must be synchronized by a mechanical interconnection unless the airplane has safe flight characteristics with the flaps retracted on one side and extended on the other.

(b) If a mechanical interconnection is used, there must be means to prevent hazardous unsymmetrical operation of the wing flaps after any reasonably possible single failure of the flap actuating system.

(c) If a wing flap interconnection is used, it must be designed to account for the applicable unsymmetrical loads, including those resulting from flight with the engines on one side of the plane of symmetry inoperative and the remaining engines at takeoff power.

(d) For airplanes with flaps that are not subjected to slipstream conditions, the structure must be designed for the loads imposed when the wing flaps on one side are carrying the most severe load occurring in the prescribed symmetrical conditions and those on the other side are carrying not more than 80 percent of that load.

LANDING GEAR

§ 25.721 General.

(a) The landing gear must meet the requirements of this section and §§ 25.723 through 25.737.

(b) The shock absorbing elements for the main, nose, and tail wheel units must be substantiated by the tests specified in §§ 25.723 through 25.727. The shock absorbing ability of the landing gear in taxiing must be shown by the tests prescribed in § 25.235.

(c) The landing gear must withstand the tests prescribed in §§ 25.723 through 25.727.

§ 25.723 Shock absorption tests.

(a) It must be shown by energy absorption tests that the limit load factors selected for design in accordance with § 25.471(c) for takeoff and landing weights, respectively, will not be exceeded.

(b) The landing gear may not fail in a test, demonstrating its reserve energy absorption capacity, simulating a descent velocity of 12 f.p.s. at design landing weight, assuming wing lift not greater than the airplane weight acting during the landing impact.

§ 25.725 Limit drop tests.

(a) If compliance with § 25.723(a) is shown by free drop tests, these tests must be made on the complete airplane, or on units consisting of a wheel, tire, and shock absorber, in their proper positions, from free drop heights not less than—

(1) 18.7 inches for the design landing weight conditions; and

(2) 6.7 inches for the design takeoff weight conditions.

(b) If wing lift is simulated in free drop tests, the landing gear must be dropped with an effective weight equal to

$$W_e=W\left(\frac{h+(1-L)d}{h+d}\right)$$

where—

W_e = the effective weight to be used in the drop test (lbs.);

h = specified free drop height (inches);

d = deflection under impact of the tire (at the approved inflation pressure) plus the vertical component of the axle travel relative to the drop mass (inches);

$W=W_M$ for main gear units (lbs.), equal to the static weight on that unit with the airplane in the level attitude (with the nose wheel clear in the case of nose wheel type airplanes);

$W=W_T$ for tail gear units (lbs.), equal to the static weight on the tail unit with the airplane in the tail-down attitude;

$W=W_N$ for nose wheel units (lbs.), equal to the vertical component of the static reaction that would exist at the nose wheel, assuming that the mass of the airplane acts at the center of gravity and exerts a force of $1.0g$ downward and $0.25g$ forward; and

L = the ratio of the assumed wing lift to the airplane weight, but not more than 1.0.

(c) The attitude in which a landing gear unit is drop tested must simulate the critical airplane landing conditions for the unit.

(d) The value of d used in the computation of W_e in paragraph (b) of this section may not exceed the value actually obtained in the drop test.

(e) The limit inertia load factor n must be determined from the free drop test in paragraph (b) of this section according to the following formula:

$$n=n_j\frac{W_e}{W}+L$$

where—

n_j = the load factor developed in the drop test (that is, the acceleration dv/dt in g's recorded in the drop test) plus 1.0; and

W_e, W, and L are the same as in the drop test computation.

(f) The value of n determined in paragraph (e) of this section may not be more than the limit inertia load factor used in the landing conditions in § 25.473.

§ 25.727 Reserve energy absorption drop tests.

(a) If compliance with the reserve energy absorption condition specified in § 25.723(b) is shown by free drop tests, the drop height may not be less than 27 inches.

(b) If wing lift equal to the airplane weight is simulated, the units must be dropped with an effective mass equal to $W_e = W\left(\frac{h}{h+d}\right)$ where the symbols and other details are the same as in § 25.725(b).

§ 25.729 Retracting mechanism.

(a) *General.* For airplanes with retractable landing gear, the following apply:

(1) The landing gear retracting mechanism, wheel well doors, and supporting structure, must be designed for—

(i) The loads occurring in the flight conditions when the gear is in the retracted position;

(ii) The combination of friction, inertia, brake torque, and air loads, occurring during retraction and extension at any airspeed up to 1.6 V_{S_1} (with the flaps in the approach position at design landing weight); and

(iii) Any load factor up to those specified in § 25.345 for the flaps extended condition.

(2) Unless there are other means to decelerate the airplane in flight at this speed, the landing gear, the retracting mechanism, and the airplane structure (including wheel well doors) must be designed to withstand the flight loads occurring with the landing gear in the extended position at any speed up to 0.67 V_C.

(3) Landing gear doors, their operating mechanism, and their supporting structures must be designed for the yawing maneuvers prescribed for the airplane in addition to the conditions of airspeed and load factor prescribed in subparagraphs (1) and (2) of this paragraph.

(b) *Landing gear lock.* There must be positive means to keep the landing gear extended, in flight and on the ground.

(c) *Emergency operation.* There must be an emergency means for extending the landing gear in the event of—

(1) Any reasonably probable failure in the normal retraction system; or

(2) The failure of any single source of hydraulic, electric, or equivalent energy supply.

(d) *Operation test.* The proper functioning of the retracting mechanism must be shown by operation tests.

(e) *Position indicator and warning device.* If a retractable landing gear is used, there must be a landing gear position indicator (as well as necessary switches to actuate the indicator) or other means to inform the pilot that the gear is secured in the extended (or retracted) position. This means must be designed as follows:

(1) If switches are used, they must be located and coupled to the landing gear mechanical systems in a manner that prevents an erroneous indication of "down and locked" if the landing gear is not in a fully extended position, or of "up and locked" if the landing gear is not in the fully retracted position. The switches may be located where they are operated by the actual landing gear locking latch or device.

(2) Landplanes must have an aural warning device that will function continuously when one or more throttles are closed, if the landing gear is not fully extended and locked.

(3) If there is a manual shutoff for the warning device prescribed in subparagraph (2) of this paragraph, it must be installed so that reopening the throttles will reset the warning mechanism.

(4) Landplanes must have an aural warning device that will function continuously, when the wing flaps are extended beyond the maximum approach position determined under § 25.67(e), if the gear is not fully extended and locked. There may not be a manual shutoff for this warning device. The flap position sensing unit may be installed at any suitable location. The system for this device may use any part of the system (including the aural warning device) for the device required in subparagraph (2) of this paragraph.

(f) *Protection of equipment in wheel wells.* Equipment that is essential to safe operation of the airplane and that is located in wheel wells must be protected from the damaging effects of—

(1) A bursting tire, unless it is shown that a tire cannot burst from overheat; and

(2) A loose tire tread, unless it is shown that a loose tire tread cannot cause damage.

§ 25.731 Wheels.

(a) Each main and nose wheel must be approved.

(b) The maximum static load rating of each wheel may not be less than the corresponding static ground reaction with—

(1) Design takeoff weight; and

(2) Critical center of gravity.

(c) The maximum limit load rating of each wheel must equal or exceed the maximum radial limit load determined under the applicable ground load requirements of this part.

§ 25.733 Tires.

(a) Each landing gear wheel must have a tire—

(1) That is a proper fit on the rim of the wheel; and

(2) Whose load rating is not exceeded under—

(i) Equal static loads, corresponding to the most critical combination of maximum takeoff weight and center of gravity position, on each main wheel tire; and

(ii) Equal loads corresponding to the ground reactions in paragraph (b) of this section, on each nose wheel tire.

(b) The applicable ground reactions are as follows:

(1) The static ground reaction for the tire with the most critical combination of takeoff weight and center of gravity position. This load may not exceed the static rating of the tire.

(2) The dynamic ground reaction for the tire at maximum landing weight, assuming that the mass of the airplane is concentrated at the most critical location of the center of gravity for this weight and is exerting a force of 1.0g downward and 0.31g forward with the reactions being distributed to the nose and main wheels by the principles of statics and with a 0.31g drag reaction at the ground applied at each wheel with brakes. This load may not exceed the dynamic rating of the tire.

(3) The dynamic ground reaction for the tire at design takeoff weight, assuming that the mass of the airplane is concentrated at the most critical location of the center of gravity for this weight and is exerting a force of 1.0g downward and 0.20g forward. The reactions in this case must be distributed to the nose and main wheels by the principles of statics and a 0.20g drag reaction at the ground is applied at each wheel with brakes. This load may not exceed the dynamic rating of the tire.

§ 25.735 Brakes.

(a) Each brake must be approved.

(b) The brake system must be designed and constructed so that, if any connecting or transmitting element (excluding the operating pedal or handle) fails, or if any single source of hydraulic or other brake operating energy supply is lost, it is possible to bring the airplane to rest under conditions specified in § 25.75, with a mean deceleration during the landing roll of at least 50 percent of that obtained in determining the landing distance as prescribed in that section. Unless the leakage of hydraulic fluid resulting from failure of the sealing elements in hydraulic brakes, the brake drum, shoes, and actuators, (or their equivalents) does not reduce the braking effectiveness below that required by this paragraph, these units are considered to be connecting or transmitting elements.

(c) Brake controls may not require excessive control force in their operation.

(d) The airplane must have a parking control that, when set by the pilot, will without further attention, prevent the airplane from rolling on a paved, level runway with takeoff power on the critical engine.

(e) If antiskid devices are installed, the devices and associated systems must be designed so that no single probable malfunction will result in a hazardous loss of braking ability or directional control of the airplane. Antiskid devices meeting the airworthiness portions of Military Specification MIL-B-8075 (ASG) and any amendments thereto, are acceptable.

(f) The brake kinetic energy capacity rating of each main wheel-brake assembly may not be less than the kinetic energy absorption requirements determined under either of the following methods:

(1) The brake kinetic energy absorption requirements must be based on a

rational analysis of the sequence of events expected during operational landings at maximum landing weight. This analysis must include conservative values of airplane speed at which the brakes are applied, braking coefficient of friction between tires and runway, aerodynamic drag, propeller drag or powerplant forward thrust, and (if more critical) the most adverse single engine or propeller malfunction.

(2) Instead of a rational analysis, the kinetic energy absorption requirements for each main wheel brake assembly may be derived from the following formula, which assumes an equal distribution of braking between main wheels:

$$KE = \frac{0.0444\, W V_{S_0}{}^2}{N}$$

where—

KE = kinetic energy per wheel (ft. lb.);
W = design landing weight (lb.);
V_{S_0} = power-off stalling speed of the airplane at sea level, at the design landing weight, and in the landing configuration; and
N = number of main wheels.

The formula must be modified in cases of unequal braking distribution.

(g) The minimum stalling speed rating of each main wheel-brake assembly (that is, the initial speed used in the dynamometer tests) may not be more than the V_{S_0} used in the determination of kinetic energy in accordance with paragraph (f) of this section, assuming that the test procedures for wheel-brake assemblies involve a specified rate of deceleration, and, therefore, for the same amount of kinetic energy, the rate of energy absorption (the power absorbing ability of the brake) varies inversely with the initial speed.

§ 25.737 Skis.

Each ski must be approved. The maximum limit load rating of each ski must equal or exceed the maximum limit load determined under the applicable ground load requirements of this Part.

FLOATS AND HULLS

§ 25.751 Main float buoyancy.

Each main float must have—

(a) A buoyancy of 80 percent in excess of that required to support the maximum weight of the seaplane or amphibian in fresh water; and

(b) Not less than five watertight compartments approximately equal in volume.

§ 25.753 Main float design.

Each main float must be approved and must meet the requirements of § 25.521.

§ 25.755 Hulls.

(a) Each hull must have enough watertight compartments so that, with any two adjacent compartments flooded, the buoyancy of the hull and auxiliary floats (and wheel tires, if used) provides a margin of positive stability great enough to minimize the probability of capsizing in rough, fresh water.

(b) Bulkheads with watertight doors may be used for communication between compartments.

PERSONNEL AND CARGO ACCOMMODATIONS

§ 25.771 Pilot compartment.

(a) Each pilot compartment and its equipment must allow the minimum flight crew (established under § 25.1523) to perform their duties without unreasonable concentration fatigue.

(b) The primary controls listed in § 25.779(a), excluding cables and control rods, must be located with respect to the propellers so that no member of the minimum flight crew (established under § 25.1523), or part of the controls, lies in the region between the plane of rotation of any inboard propeller and the surface generated by a line passing through the center of the propeller hub making an angle of five degrees forward or aft of the plane of rotation of the propeller.

(c) If provision is made for a second pilot, the airplane must be controllable with equal safety from either pilot seat.

(d) The pilot compartment must be constructed so that, when flying in rain or snow, it will not leak in a manner that will distract the crew or harm the structure.

(e) The airplane must have a door, between the passenger and pilot compartments, that has a locking means to prevent passengers from opening it without the pilot's permission.

(f) Vibration and noise characteristics of cockpit equipment may not interfere with safe operation of the airplane.

§ 25.773 Pilot compartment view.

(a) *Nonprecipitation conditions.* For nonprecipitation conditions, the following apply:

(1) Each pilot compartment must be arranged to give the pilots a sufficiently extensive, clear, and undistorted view, to enable them to safely perform any maneuvers within the operating limitations of the airplane, including taxiing, takeoff, approach, and landing.

(2) Each pilot compartment must be free of glare and reflection that could interfere with the normal duties of the minimum flight crew (established under § 25.1523). This must be shown in day and night flight tests under nonprecipitation conditions.

(b) *Precipitation conditions.* For precipitation conditions, the following apply:

(1) The airplane must have a means to maintain a clear portion of the windshield, during precipitation conditions, sufficient for both pilots to have a sufficiently extensive view along the flight path in normal flight attitudes of the airplane. This means must be designed to function, without continuous attention on the part of the crew, in—

(i) Heavy rain at speeds up to 1.6 V_{S_1}, with flaps retracted; and

(ii) The icing conditions specified in § 25.1419 if certification with ice protection provisions is requested.

(2) The first pilot must have a window that—

(i) When the cabin is not pressurized, is openable under the conditions prescribed in subparagraph (1) of this paragraph and provides the view specified in that paragraph; and

(ii) Gives sufficient protection from the elements against impairment of the pilot's vision.

§ 25.775 Windshields and windows.

(a) Nonsplintering safety glass must be used in internal glass panes.

(b) Windshield panes directly in front of the pilots in the normal conduct of their duties, and the supporting structures for these panes, must withstand, without penetration, the impact of a four-pound bird when the velocity of the airplane (relative to the bird along the airplane's flight path) is equal to the value of V_C, at sea level, selected under § 25.335(a).

(c) Unless it can be shown by analysis or tests that the probability of occurrence of a critical windshield fragmentation condition is of a low order, the airplane must have a means to minimize the danger to the pilots from flying windshield fragments due to bird impact. This must be shown for each transparent pane in the cockpit that—

(1) Appears in the front view of the airplane;

(2) Is inclined 15 degrees or more to the longitudinal axis of the airplane; and

(3) Has any part of the pane located where its fragmentation will constitute a hazard to the pilots.

(d) The design of windshields and windows in pressurized airplanes must be based on factors peculiar to high altitude operation, including the effects of continuous and cyclic pressurization loadings, the inherent characteristics of the material used, and the effects of temperatures and temperature differentials. The windshield and window panels must be strong enough to withstand the maximum cabin pressure differential loads combined with critical aerodynamic pressure and temperature effects, after failure of any load-carrying element of the windshield or window. It may be assumed that, after a single failure that is obvious to the flight crew (established under § 25.1523), the cabin pressure differential is reduced from the maximum, in accordance with appropriate operating limitations, to allow continued safe flight of the airplane with a cabin pressure altitude of not more than 15,000 feet.

§ 25.777 Cockpit controls.

(a) Each cockpit control must be located to provide convenient operation and to prevent confusion and inadvertent operation.

(b) The direction of movement of cockpit controls must meet the requirements of § 25.779. Wherever practicable, the sense of motion involved in the operation of other controls must correspond to the sense of the effect of the operation upon the airplane or upon the part operated. Controls of a variable nature using a rotary motion must move clockwise from the off position, through an increasing range, to the full on position.

(c) The controls must be located and arranged, with respect to the pilots' seats,

so that there is full and unrestricted movement of each control without interference from the cockpit structure or the clothing of the minimum flight crew (established under § 25.1523) when any member of this flight crew, from 5'2" to 6'0" in height, is seated with the seat belt fastened.

(d) Identical powerplant controls for each engine must be located to prevent confusion as to the engines they control.

(e) Wing flap controls and other auxiliary lift device controls must be located on top of the pedestal, aft of the throttles, centrally or to the right of the pedestal centerline, and not less than 10 inches aft of the landing gear control.

(f) The landing gear control must be located forward of the throttles and must be operable by each pilot when seated with seat belts fastened.

(g) Control knobs must be shaped in accordance with § 25.781. In addition, the knobs must be of the same color, and this color must contrast with the color of control knobs for other purposes and the surrounding cockpit.

(h) If a flight engineer is required as part of the minimum flight crew (established under § 25.1523), the airplane must have a flight engineer station located and arranged so that the flight crewmembers can perform their functions efficiently and without interfering with each other.

§ 25.779 Motion and effect of cockpit controls.

Cockpit controls must be designed so that they operate in accordance with the following movement and actuation:

(a) Aerodynamic controls:

(1) *Primary.*

Controls	*Motion and effect*
Aileron	Right (clockwise) for right wing down.
Elevator	Rearward for nose up.
Rudder	Right pedal forward for nose right.

(2) *Secondary.*

Controls	*Motion and effect*
Flaps (or auxiliary lift devices).	Forward for flaps up; rearward for flaps down.
Trim tabs (or equivalent).	Rotate to produce similar rotation of the airplane about an axis parallel to the axis of the control.

(b) Powerplant and auxiliary controls:

(1) *Powerplant.*

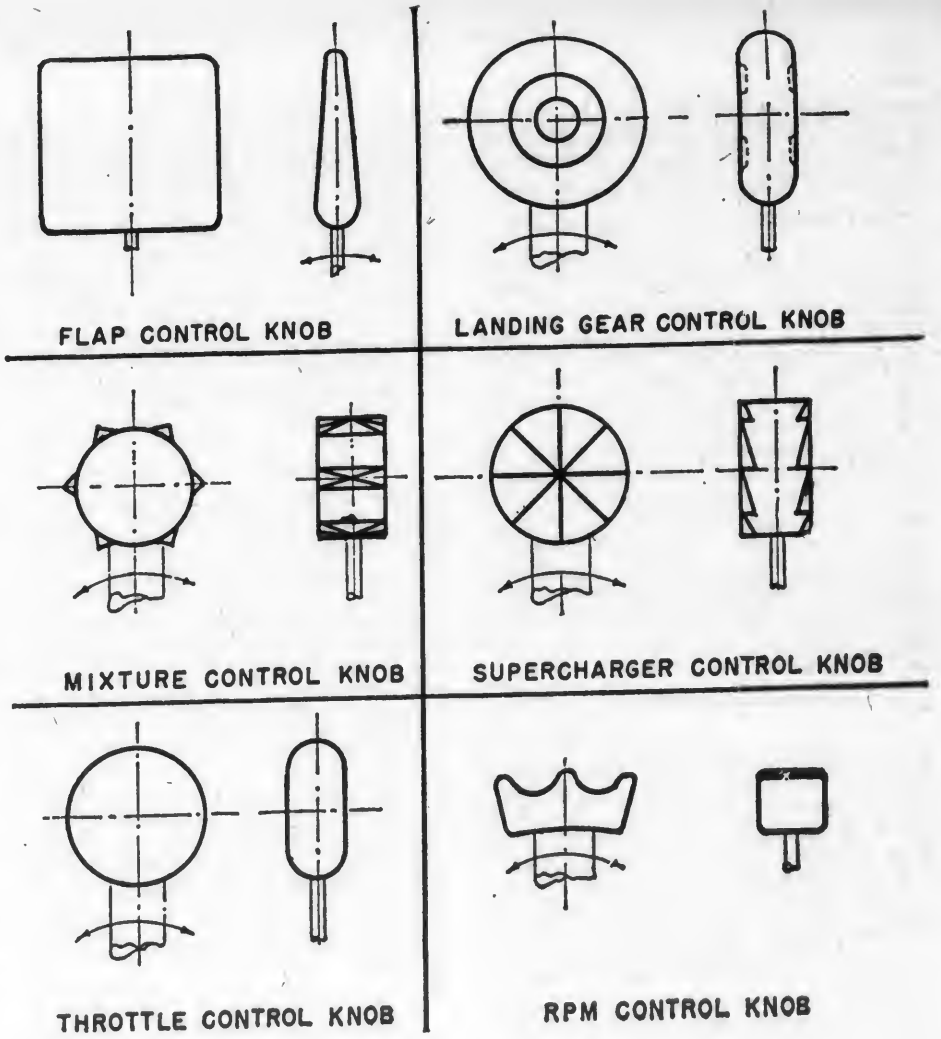
Controls	*Motion and effect*
Throttles	Forward to increase forward thrust and rearward to increase rearward thrust.
Propellers	Forward to increase rpm.
Mixture	Forward or upward for rich.
Carburetor air heat.	Forward or upward for cold.
Supercharger.	Forward or upward for low blower. For turbosuperchargers, forward, upward, or clockwise, to increase pressure.

(2) *Auxiliary.*

Controls	*Motion and effect*
Landing gear	Down to extend.

§ 25.781 Cockpit control knob shape.

Cockpit control knobs must conform to the general shapes (but not necessarily the exact sizes or specific proportions) in the following figure:



§ 25.783 Doors.

(a) Each cabin must have at least one easily accessible external door.

(b) There must be a means to lock and safeguard each external door against opening in flight (either inadvertently by persons or as a result of mechanical failure). Each external door must be openable from both the inside and the outside, even though persons may be crowded against the door on the inside of the airplane. Inward opening doors may be used if there are means to prevent occupants from crowding against the door to an extent that would interfere with the opening of the door. The means of opening must be simple and obvious and must be arranged and marked so that it can be readily located and operated, even in darkness. Auxiliary locking devices may be used.

(c) Each external door must be reasonably free from jamming as a result of fuselage deformation in a minor crash.

(d) Each external door must be located where persons using them will not be endangered by the propellers when appropriate operating procedures are used.

(e) There must be a provision for direct visual inspection of the locking mechanism by crewmembers to determine whether external doors, for which the initial opening movement is outward (including passenger, crew, service, and cargo doors), are fully locked. In addition, there must be a visual means to signal to appropriate crewmembers when normally used external doors are closed and fully locked.

(f) Cargo and service doors not suitable for use as an exit in an emergency need only meet paragraph (e) of this section and be safeguarded against opening in flight as a result of mechanical failure.

§ 25.785 Seats, berths, safety belts, and harnesses.

(a) Each seat, berth, safety belt, harness, and adjacent part of the airplane at each station designated as occupiable during takeoff and landing must be designed so that a person making proper use of these facilities will not suffer serious injury in an emergency landing as a result of the inertia forces specified in § 25.561.

(b) Each seat and berth must be approved.

(c) Each occupant must be protected from head injury by—

(1) A safety belt and shoulder harness that will prevent the head from contacting any injurious object;

(2) A safety belt plus the elimination of any injurious object within striking radius of the head; or

(3) A safety belt plus a cushioned rest that will support the arms, shoulders, head, and spine.

(d) If the seat backs do not have a firm hand hold, there must be a hand grip or rail along each aisle to enable occupants to steady themselves while using the aisles in moderately rough air.

(e) Each projecting object that would injure persons seated or moving about the airplane in normal flight must be padded.

(f) Each berth must be designed so that the forward part has a padded end board, canvas diaphragm, or equivalent means, that can withstand the static load reaction of the occupant when subjected to the forward inertia force specified in § 25.561. Berths must be free from corners and protuberances likely to cause serious injury to a person occupying the berth during emergency conditions.

(g) Each crewmember seat at flight deck stations must have provisions for a shoulder harness. These seats must meet the strength requirements of paragraph (i) of this section.

(h) Cabin attendant seats must be in the passenger compartment near approved floor level emergency exits.

(i) Each seat berth, and its supporting structure, must be designed for an occupant weight of 170 pounds, considering the maximum load factors, inertia forces, and reactions between the occupant, seat, and safety belt or harness, at each relevant flight and ground load condition (including the emergency landing conditions prescribed in § 25.561). For berths, the forward inertia force must be considered in accordance with paragraph (f) of this section and need not be considered with respect to the safety belt. In addition—

(1) The structural analysis and testing of the seats, berths, and their supporting structures may be determined by—

(i) Assuming that the critical load in the forward, sideward, downward, and rearward directions (as determined from the prescribed flight, ground, and emergency landing conditions) acts separately; and

(ii) Using selected combinations of loads if the required strength in each specified direction is substantiated;

(2) Each pilot seat must be designed for the reactions resulting from the application of the pilot forces prescribed in § 25.395; and

(3) The inertia forces specified in § 25.561 must be multiplied by a factor of 1.33 (instead of the fitting factor prescribed in § 25.625) in determining the strength of the attachment of—

(i) Each seat to the structure; and

(ii) Each belt or harness to the seat or structure.

§ 25.787 Cargo and baggage compartments.

(a) Each cargo and baggage compartment must be designed for its placarded maximum weight of contents and for the critical load distributions at the appropriate maximum load factors corresponding to the specified flight and ground load conditions, except the emergency landing conditions of § 25.561.

(b) There must be a means to prevent the contents in the compartments from becoming a hazard by shifting, under the loads specified in paragraph (a) of this section.

(c) There must be a means to protect the occupants from injury by the contents of any compartment, under the emergency landing conditions of § 25.561.

EMERGENCY PROVISIONS

§ 25.801 Ditching.

(a) If certification with ditching provisions is requested, the airplane must meet the requirements of this section and §§ 25.807(d), 25.1411, and 25.1415(a).

(b) Each practicable design measure, compatible with the general characteristics of the airplane, must be taken to minimize the probability that in an emergency landing on water, the behavior of the airplane would cause immediate injury to the occupants or would make it impossible for them to escape.

(c) The probable behavior of the airplane in a water landing must be investigated by model tests or by comparison with airplanes of similar configuration for which the ditching characteristics are known. Scoops, flaps, projections, and any other factor likely to affect the hydrodynamic characteristics of the airplane, must be considered.

(d) It must be shown that, under reasonably probable water conditions, the flotation time and trim of the airplane will allow the occupants to leave the airplane and enter the liferafts required by § 25.1415. If compliance with this provision is shown by buoyancy and trim computations, appropriate allowances must be made for probable structural damage and leakage. If the airplane has fuel tanks (with fuel jettisoning provisions) that can reasonably be expected to withstand a ditching without leakage, the jettisonable volume of fuel may be considered as buoyancy volume.

(e) Unless the effects of the collapse of external doors and windows are accounted for in the investigation of the probable behavior of the airplane in a water landing (as prescribed in paragraphs (c) and (d) of this section), the external doors and windows must be designed to withstand the probable maximum local pressures.

§ 25.803 Emergency evacuation.

(a) Each crew and passenger area must have emergency means to allow rapid evacuation in crash landings, with the landing gear extended and retracted, considering the possibility of the airplane being on fire.

(b) The passenger and crew access doors and service doors may be considered as emergency exits if they meet the applicable requirements of this section and §§ 25.805 through 25.813.

(c) If the airplane is divided into separate compartments without the minimum unobstructed passageway between compartments required by § 25.813, this section and §§ 25.805 through 25.815 apply to each compartment independently.

§ 25.805 Flight crew emergency exits.

Except for airplanes with a passenger capacity of 20 or less in which the proximity of passenger emergency exits to the flight crew area offers a convenient and readily accessible means of evacuation for the flight crew, the following apply:

(a) There must be either one exit on each side of the airplane or a top hatch, in the flight crew area.

(b) Each exit must be of sufficient size and must be located so as to allow rapid evacuation of the crew. An exit size and shape of other than at least 19 by 20 inches unobstructed rectangular opening may be used only if exit utility is satisfactorily shown, by a typical flight crewmember, to the Administrator.

§ 25.807 Passenger emergency exits.

(a) *Type and location.* For the purpose of this part, the types and locations of exits are as follows:

(1) *Type I:* This type must have a rectangular opening of not less than 24 inches wide by 48 inches high, with corner radii not greater than ⅓ the width of the exit. The first Type I exit on each side of the fuselage must be in the rearward part of the passenger compartment unless another location affords a more effective means of passenger evacuation. Type I exits must be floor level exits.

(2) *Type II:* This type must have a rectangular opening of not less than 20 inches wide by 44 inches high, with corner radii not greater than ⅓ the width of the exit. Unless Type I exits are required, one Type II exit on each side of the fuselage must be in the rearward part of the passenger compartment unless another location affords a more effective means of passenger evacuation. Type II exits must be floor level exits unless located over the wing, in which case they may not have a step-up inside the airplane of more than 10 inches nor a step-down outside the airplane of more than 17 inches.

(3) *Type III:* This type must have a rectangular opening of not less than 20 inches wide by 36 inches high, with corner radii not greater than ⅓ the width of the exit, located over the wing, with a step-up inside the airplane of not more than 20 inches and a step-down outside the airplane of not more than 27 inches.

(4) *Type IV:* This type must have a rectangular opening of not less than 19 inches wide by 26 inches high, with corner radii not greater than ⅓ the width of the exit, located over the wing, with a step-up inside the airplane of not more than 29 inches and a step-down outside the airplane of not more than 36 inches. Step-down distance as used in this section means the actual distance between the bottom of the required opening and a usable foothold, extending out from the fuselage, that is large enough to be effective without searching by sight or feel.

(b) *Accessibility.* Each required passenger emergency exit must be accessible to the passengers and located where it will afford the most effective means of passenger evacuation. Openings larger than those specified in this section, whether or not of rectangular shape, may be used if—

(1) The specified rectangular opening can be inscribed within the opening; and

(2) The base of the inscribed rectangular opening meets the specified step-up and step-down heights.

(c) *Passenger emergency exits; side-of-fuselage.* The exits prescribed in this paragraph need not be diametrically opposite each other, but must be provided as follows:

(1) Except as provided in subparagraphs (2) through (5) of this paragraph, the number and type of passenger emergency exits must be in accordance with the following table:

Passenger seating capacity	Emergency exits for each side of the fuselage			
	Type I	Type II	Type III	Type IV
1 through 10				1
11 through 19			1	
20 through 39		1		1
40 through 59	1			1
60 through 79	1		1	
80 through 109	1		1	1
110 through 139	2		1	
140 through 179	2		2	
180 through 219	2	2		

(2) Two Type IV exits may be installed instead of each required Type III exit.

(3) Additional exits, providing an effective means of passenger evacuation consistent with the minimum number prescribed in subparagraph (1) of this paragraph, are required for airplanes with a passenger capacity of 220 or more.

(4) If, there are additional emergency evacuation means on the airplane, the passenger/emergency exit relationship may be increased by not more than 10 passengers beyond the limits specified in subparagraph (1) of this paragraph. If this means is an approved inflatable slide installed at each floor level exit (other than over-the-wing exits), the passenger/emergency exit relationship may be increased by—

(i) Not more than five passengers on airplanes with at least two of these exits; and

(ii) Not more than 10 passengers on airplanes with at least four of these exits.

(5) For airplanes on which the vertical location of the wing does not allow the installation of over-the-wing exits, an exit of at least the dimensions of a Type III must be installed instead of each Type III and each Type IV exit required by subparagraph (1) of this paragraph.

(d) *Ditching emergency exits.* In addition to the requirements of paragraph (c) of this section, the following apply:

(1) There must be at least one emergency exit for each unit (or part of a unit) of 35 passengers, but no less than two such exits, both above the waterline with one on each side of the airplane, meeting the minimum dimensions of—

(i) A Type IV exit for airplanes with a passenger seating capacity of 10 or less; and

(ii) A Type III exit for airplanes with a passenger seating capacity of 11 or more.

(2) If side exits cannot be above the waterline, the side exits must be replaced by an equal number of overhead hatches of not less than the dimensions of a Type III exit except that, for airplanes with a passenger capacity of 35 or less, the two required Type III side exits need be replaced by only one overhead hatch.

(3) Two Type IV exits may be installed instead of each required Type III exit.

§ 25.809 Emergency exit arrangement.

(a) Each emergency exit, including a flight crew emergency exit, must be a movable door or hatch in the external walls of the fuselage, allowing unobstructed opening to the outside.

(b) Each emergency exit must be openable from the inside and the outside except that sliding window emergency exits in the flight crew area need not be openable from the outside if other approved exits are convenient and readily accessible to the flight crew area.

(c) The means of opening emergency exists must be simple and obvious and may not require exceptional effort. Internal exit-opening means involving sequence operations (such as operation of two handles or latches or the release of safety catches) may be used for flight crew emergency exits if it can be reasonably established that these means are simple and obvious to crewmembers trained in their use.

(d) There must be a means to lock each emergency exit and to safeguard against its opening in flight, either inadvertently by persons or as a result of mechanical failure. In addition, there must be a means for direct visual inspection of the locking mechanism by crewmembers to determine that each emergency exit, for which the initial opening movement is outward, is fully locked.

(e) There must be provisions to minimize the probability of jamming of the emergency exits resulting from fuselage deformation in a minor crash landing.

(f) Each landplane emergency exit (other than exits located over the wing) more than six feet from the ground with the airplane on the ground and the landing gear extended, must have an approved means to assist the occupants in descending to the ground. In addition—

(1) The assist device for crew exits may be a rope or any other device demonstrated to be suitable for the purpose;

(2) The assist device for passenger exits may be an inflatable slide, a non-inflatable slide, or other approved device; and

(3) Ropes and ladders may not be used at passenger floor level exits.

(g) The proper functioning of each emergency exit must be shown by tests.

§ 25.811 Emergency exit marking.

(a) Each passenger emergency exit, its means of access, and its means of opening must be conspicuously marked.

(b) The identity and location of each emergency exit must be recognizable from a distance equal to the width of the cabin.

(c) The location of each emergency exit operating handle and the instructions for opening must be marked on or

adjacent to the emergency exit, and this marking must be readable from a distance of 30 inches.

(d) A source of light, independent of the main lighting system, must be installed to illuminate each passenger emergency exit marking.

(e) Each exit light must be designed to function automatically in a crash landing and to operate manually.

(f) Each emergency exit that is required to be openable from the outside, and its means of opening, must be marked on the outside of the airplane.

(g) Exits marked as emergency exits, though in excess of the required number of emergency exits, must meet the requirements for emergency exits of the particular type. Emergency exits customarily used in entering or leaving the airplane need only be marked with the word "EXIT".

§ 25.813 Emergency exit access.

(a) Except as provided in § 25.803(c) with regard to passageways between individual compartments, each passageway between individual passenger areas, and passageways leading to Type I and Type II emergency exits, must be unobstructed and at least 20 inches wide.

(b) For each emergency exit covered by § 25.809(f), there must be enough space adjacent to that exit to allow a crewmember to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required for that exit.

(c) There must be access from the main aisle to each Type III and Type IV exit. The access may not be obstructed by seats, berths, or other protrusions, to an extent that would reduce the effectiveness of the exit. However, there may be minor obstructions if there are compensating factors to maintain the effectiveness of the exit.

(d) If it is necessary to pass through a doorway to reach any required emergency exit from any seat in the passenger cabin, the door must have a means to latch it in the open position.

§ 25.815 Width of main aisle.

The main passenger aisle width at any point between seats must equal or exceed the values in the following table:

Passenger seating capacity	Minimum main passenger aisle width	
	Less than 25 inches from floor	25 inches and more from floor
	Inches	*Inches*
10 or less	12	18
11 through 19	12	20
20 or more	15	20

VENTILATION AND HEATING

§ 25.831 Ventilation.

(a) Each passenger and crew compartment must be ventilated, and each crew compartment must have enough fresh air (but not less than 10 cu. ft. per minute per crewmember) to enable crewmembers to perform their duties without undue discomfort or fatigue.

(b) Crew and passenger compartment air must be free from harmful or hazardous concentrations of gases or vapors. In meeting this requirement, the following apply:

(1) Carbon monoxide concentrations in excess of one part in 20,000 parts of air are considered hazardous. For test purposes, any acceptable carbon monoxide detection method may be used.

(2) Carbon dioxide in excess of three percent by volume (sea level equivalent) is considered hazardous in the case of crewmembers. Higher concentrations of carbon dioxide may be allowed in crew compartments if appropriate protective breathing equipment is available.

(c) There must be provisions made to ensure that the conditions prescribed in paragraph (b) of this section are met after reasonably probable failures or malfunctioning of the ventilating, heating, pressurization, or other systems and equipment.

(d) If accumulation of hazardous quantities of smoke in the cockpit area is reasonably probable, smoke evacuation must be readily accomplished, starting with full pressurization and without depressurizing beyond safe limits.

(e) There must be a means to enable the crew to control the temperature and quantity of ventilating air supplied to the crew compartment, independently of the temperature and quantity of ventilating air supplied to other compartments.

§ 25.833 Heating systems.

(a) Combustion heaters must be approved and must meet the fire protection requirements of § 25.859.

(b) Engine exhaust heaters must meet the provisions of § 25.1125.

PRESSURIZATION

§ 25.841 Pressurized cabins.

(a) Pressurized cabins and compartments to be occupied must be equipped to provide a cabin pressure altitude of not more than 8,000 feet at the maximum operating altitude of the airplane under normal operating conditions. If certification for operation over 25,000 feet is requested, the airplane must be able to maintain a cabin pressure altitude of not more than 15,000 feet in the event of any reasonably probable failure or malfunction in the pressurization system.

(b) Pressurized cabins must have at least the following valves, controls, and indicators for controlling cabin pressure:

(1) Two pressure relief valves (at least one of which is the normal regulating valve) to automatically limit the positive pressure differential to a predetermined value at the maximum rate of flow delivered by the pressure source. The combined capacity of the relief valves must be large enough so that the failure of any one valve would not cause an appreciable rise in the pressure differential. The pressure differential is positive when the internal pressure is greater than the external.

(2) Two reverse pressure differential relief valves (or their equivalents) to automatically prevent a negative pressure differential that would damage the structure. One valve is enough, however, if it is of a design that reasonably precludes its malfunctioning.

(3) A means by which the pressure differential can be rapidly equalized.

(4) An automatic or manual regulator for controlling the intake or exhaust airflow, or both, for maintaining the required internal pressures and airflow rates.

(5) Instruments at the pilot or flight engineer station to show the pressure differential, the absolute pressure in the cabin, and the rate of change of the absolute pressure.

(6) Warning indication at the pilot or flight engineer station to indicate when the safe or preset pressure differential and absolute cabin pressure limits are exceeded. Appropriate warning markings on the cabin pressure differential indicator meet the warning requirement for pressure differential limits and an aural or visual signal (in addition to cabin altitude indicating means) meets the warning requirement for absolute cabin pressure limits if it warns the flight crew when the cabin absolute pressure is below that equivalent to 10,000 feet.

(7) A warning placard at the pilot or flight engineer station if the structure is not designed for pressure differentials up to the maximum relief valve setting in combination with landing loads.

§ 25.843 Tests for pressurized cabins.

(a) *Strength test.* The complete pressurized cabin, including doors, windows, and valves, must be tested as a pressure vessel for the pressure differential specified in § 25.365(d).

(b) *Functional tests.* The following functional tests must be performed:

(1) Tests of the functioning and capacity of the positive and negative pressure differential valves, and of the emergency release valve, to simulate the effects of closed regulator valves.

(2) Tests of the pressurization system to show proper functioning under each possible condition of pressure, temperature, and moisture, up to the maximum altitude for which certification is requested.

(3) Flight tests, to show the performance of the pressure supply, pressure and flow regulators, indicators, and warning signals, in steady and stepped climbs and descents at rates corresponding to the maximum attainable within the operating limitations of the airplane, up to the maximum altitude for which certification is requested.

(4) Tests of each door and emergency exits, to show that they operate properly after being subjected to the flight tests prescribed in subparagraph (3) of this paragraph.

§ 25.851 Fire extinguishers.

(a) *Hand fire extinguishers.* For hand fire extinguishers the following apply:

(1) Each hand fire extinguisher must be approved.

(2) The types and quantities of each extinguishing agent used must be appropriate to the kinds of fires likely to occur where used.

(3) Each extinguisher for use in a personnel compartment must be designed to minimize the hazard of toxic gas concentrations.

(4) A readily accessible hand fire extinguisher must be available for use in each Class A or Class B cargo compartment.

(b) *Built-in fire extinguishers.* If a built-in fire extinguishing system is required—

(1) The capacity of each system, in relation to the volume of the compartment where used and the ventilation rate, must be adequate for any fire likely to occur in that compartment; and

(2) Each system must be installed so that—

(i) No extinguishing agent likely to enter personnel compartments will be hazardous to the occupants; and

(ii) No discharge of the extinguisher can cause structural damage.

§ 25.853 Compartment interiors.

For each compartment to be used by the crew or passengers—

(a) The materials must be at least flash-resistant;

(b) The wall and ceiling linings, and the covering of upholstery, floors, and furnishings must be at least flame resistant;

(c) Each compartment where smoking is to be allowed must have self-contained, removable, ash trays, and each other compartment must be placarded against smoking;

(d) Each receptacle for towels, paper, or waste must be at least fire resistant and must have means for containing possible fires;

(e) There must be at least one hand fire extinguisher for use by the flight crewmembers; and

(f) There must be at least the following number of hand fire extinguishers conveniently located in passenger compartments:

Passenger capacity:	*Minimum number of hand fire extinguishers*
7 through 30	1
31 through 60	2
61 or more	3

§ 25.855 Cargo and baggage compartments.

(a) Each cargo and baggage compartment (including tie-down equipment) must be constructed of materials that are at least flame resistant.

(b) No compartment may contain any controls, wiring, lines, equipment, or accessories whose damage or failure would affect safe operation, unless those items are protected so that—

(1) They cannot be damaged by the movement of cargo in the compartment; and

(2) Their breakage or failure will not create a fire hazard.

(c) There must be means to prevent cargo or baggage from interfering with the functioning of the fire-protective features of the compartment.

(d) Sources of heat within the compartment must be shielded and insulated to prevent igniting the cargo.

(e) Cargo compartments must meet one of the class requirements of § 25.857. In addition, flight tests must be conducted to show compliance with the provisions of § 25.857 concerning—

(1) Compartment accessibility;

(2) The entry of hazardous quantities of smoke or extinguishing agent into compartments occupied by the crew or passengers; and

(3) The dissipation of the extinguishing agent in Class C compartments.

During these tests, it must be shown that no inadvertent operation of smoke or fire detectors in any compartment would occur as a result of fire contained in any one compartment, either during or after extinguishment, unless the extinguishing system floods each such compartment simultaneously.

§ 25.857 Cargo compartment classification.

(a) *Class A.* A Class A cargo or baggage compartment is one in which—

(1) The presence of a fire would be easily discovered by a crewmember while at his station; and

(2) Each part of the compartment is easily accessible in flight.

(b) *Class B.* A Class B cargo or baggage compartment is one in which—

(1) There is sufficient access in flight to enable a crew member to effectively reach any part of the compartment with the contents of a hand fire extinguisher;

(2) When the access provisions are being used, no hazardous quantity of smoke, flames, or extinguishing agent, will enter any compartment occupied by the crew or passengers;

(3) There is a separate approved smoke detector or fire detector system to give warning at the pilot or flight engineer station; and

(4) There is a fire-resistant lining.

(c) *Class C.* A Class C cargo or baggage compartment is one not meeting the requirements for either a Class A or B compartment but in which—

(1) There is a separate approved smoke detector or fire detector system to give warning at the pilot or flight engineer station;

(2) There is an approved built-in fire-extinguishing system controllable from the pilot or flight engineer stations;

(3) There are means to exclude hazardous quantities of smoke, flames, or extinguishing agent, from any compartment occupied by the crew or passengers;

(4) There are means to control ventilation and drafts within the compartment so that the extinguishing agent used can control any fire that may start within the compartment; and

(5) There is a fire-resistant lining.

(d) *Class D.* A Class D cargo or baggage compartment is one in which—

(1) A fire occurring in it will be completely confined without endangering the safety of the airplane or the occupants;

(2) There are means to exclude hazardous quantities of smoke, flames, or other noxious gases, from any compartment occupied by the crew or passengers;

(3) Ventilation and drafts are controlled within each compartment so that any fire likely to occur in the compartment will not progress beyond safe limits;

(4) There is a fire-resistant lining; and

(5) Consideration is given to the effect of heat within the compartment on adjacent critical parts of the airplane.

For compartments of 500 cu. ft. or less, an airflow of 1500 cu. ft. per hour is acceptable.

(e) *Class E.* A Class E cargo compartment is one on airplanes used only for the carriage of cargo and in which—

(1) There is a fire-resistant lining;

(2) There is a separate approved smoke or fire detector system to give warning at the pilot or flight engineer station;

(3) There are means to shut off the ventilating airflow to, or within, the compartment, and the controls for these means are accessible to the flight crew in the crew compartment;

(4) There are means to exclude hazardous quantities of smoke, flames, or noxious gases, from the flight crew compartment; and

(5) The required crew emergency exists are accessible under any cargo loading condition.

§ 25.859 Combustion heater fire protection.

(a) *Combustion heater fire zones.* The following combustion heater fire zones must be protected from fire in accordance with the applicable provisions of §§ 25.1181 through 25.1191 and 25.1195 through 25.1203:

(1) The region surrounding the heater, if this region contains any flammable fluid system components (excluding the heater fuel system), that could—

(i) Be damaged by heater malfunctioning; or

(ii) Allow flammable fluids or vapors to reach the heater in case of leakage.

(2) The region surrounding the heater, if the heater fuel system has fittings that, if they leaked, would allow fuel or vapors to enter this region.

(3) The part of the ventilating air passage that surrounds the combustion chamber. However, no fire extinguishment is required in cabin ventilating air passages.

(b) *Ventilating air ducts.* Each ventilating air duct passing through any fire zone must be fireproof. In addition—

(1) Unless isolation is provided by fireproof valves or by equally effective means, the ventilating air duct downstream of each heater must be fireproof

for a distance great enough to ensure that any fire originating in the heater can be contained in the duct; and

(2) Each part of any ventilating duct passing through any region having a flammable fluid system must be constructed or isolated from that system so that the malfunctioning of any component of that system cannot introduce flammable fluids or vapors into the ventilating airstream.

(c) *Combustion air ducts.* Each combustion air duct must be fireproof for a distance great enough to prevent damage from backfiring or reverse flame propagation. In addition—

(1) No combustion air duct may have a common opening with the ventilating airstream unless flames from backfires or reverse burning cannot enter the ventilating airstream under any operating condition, including reverse flow or malfunctioning of the heater or its associated components; and

(2) No combustion air duct may restrict the prompt relief of any backfire that, if so restricted, could cause heater failure.

(d) *Heater controls; general.* Provision must be made to prevent the hazardous accumulation of water or ice on or in any heater control component, control system tubing, or safety control.

(e) *Heater safety controls.* For each combustion heater there must be the following safety control means:

(1) There must be means for each heater, independent of the components provided for the normal continuous control of air temperature, airflow, and fuel flow, to automatically shut off the ignition and fuel supply to that heater at a point remote from that heater, when—

(i) The heat exchanger temperature or ventilating air temperature exceeds safe limits; or

(ii) Either the combustion airflow or the ventilating airflow becomes inadequate for safe operation.

(2) The means of complying with subparagraph (1) of this paragraph for any individual heater must be independent of any component serving any other heater whose heat output is essential for safe operation.

(3) There must be means to warn the crew when any heater whose heat output is essential for safe operation has been shut off by the automatic means prescribed in subparagraph (1) of this paragraph.

(f) *Air intakes.* Each combustion and ventilating air intake must be located so that no flammable fluids or vapors can enter the heater system under any operating condition—

(1) During normal operation; or

(2) As a result of the malfunctioning of any other component.

(g) *Heater exhaust.* Heater exhaust systems must meet the provisions of §§ 25.1121 and 25.1123. In addition, there must be provisions in the means exhaust system to safely expel the products of combustion to prevent the occurrence of—

(1) Fuel leakage from the exhaust to surrounding compartments;

(2) Exhaust gas impingement on surrounding equipment or structure;

(3) Ignition of flammable fluids by the exhaust, if the exhaust is in a compartment containing flammable fluid lines; and

(4) Restriction by the exhaust of the prompt relief of backfires that, if so restricted, could cause heater failure.

(h) *Heater fuel systems.* Each heater fuel system must meet each powerplant fuel system requirement affecting safe heater operation. Each heater fuel system component within the ventilating airstream must be protected by shrouds so that no leakage from those components can enter the ventilating airstream.

(i) *Drains.* There must be means to safely drain fuel that might accumulate within the combustion chamber or the heat exchanger. In addition—

(1) Each part of any drain that operates at high temperatures must be protected in the same manner as heater exhausts; and

(2) Each drain must be protected from hazardous ice accumulation under any operating condition.

§ 25.863 Flammable fluid fire protection.

If flammable fluids or vapors might be liberated by the leakage of fluid systems, there must be means to—

(a) Prevent the ignition of those fluids or vapors by any other equipment; or

(b) Control any fire resulting from that ignition.

MISCELLANEOUS

§ 25.871 Leveling marks.

There must be reference marks for leveling the airplane on the ground.

§ 25.875 Reinforcement near propellers.

(a) Each part of the airplane near the propeller tips must be strong and stiff enough to withstand the effects of the induced vibration and of ice thrown from the propeller.

(b) No window may be near the propeller tips unless it can withstand the most severe ice impact likely to occur.

Subpart E—Powerplant

GENERAL

§ 25.901 Installation.

(a) For the purpose of this part, the airplane powerplant installation includes each component that—

(1) Is necessary for propulsion;

(2) Affects the control of the major propulsive units; or

(3) Affects the safety of the major propulsive units between normal inspections or overhauls.

(b) For each powerplant—

(1) The engine installation must meet the applicable provisions of this subpart;

(2) The components of the installation must be constructed, arranged, and installed so as to ensure their continued safe operation between normal inspections or overhauls;

(3) The installation must be accessible for necessary inspections and maintenance; and

(4) The major components of the installation must be electrically bonded to the other parts of the airplane.

§ 25.903 Engines.

(a) *Engine type certification.* Each engine must be type certificated under Part 33 [New].

(b) *Engine isolation.* The powerplants must be arranged and isolated from each other to allow operation, in at least one configuration, so that the failure or malfunction of any engine, or of any system that can affect the engine, will not—

(1) Prevent the continued safe operation of the remaining engines; or

(2) Require immediate action by any crewmember for continued safe operation.

(c) *Control of engine rotation.* There must be a means to individually stop and restart the rotation of any engine in flight unless, for turbine engine installations, continued rotation could not jeopardize the safety of the airplane. Each component of the stopping and restarting system on the engine side of the firewall, and that might be exposed to fire, must be at least fire resistant. If hydraulic propeller feathering systems are used for this purpose, the feathering lines must be at least fire resistant under the operating conditions that may be expected to exist during feathering.

(d) *Turbine engine installations.* Unless the engine type certificate specifies that the engine rotor cases can contain damage resulting from rotor blade failure, turbine engine powerplant installations must have a protection means so that rotor blade failure in any engine will not affect the operation of remaining engines or jeopardize continued safety. In addition, design precautions must be taken to minimize the probability of jeopardizing safety if an engine turbine rotor fails, unless—

(1) The engine type certificate specifies that the turbine rotors can withstand damage-inducing factors (such as those that might result from abnormal rotor speed, temperature, or vibration); and

(2) The powerplant systems associated with engine control devices, systems, and instrumentation give reasonable assurance that those engine operating limitations that adversely affect turbine rotor structural integrity will not be exceeded in service.

§ 25.905 Propellers.

(a) Each propeller must be type certificated under Part 35 [New].

(b) Engine power and propeller shaft rotational speed may not exceed the limits for which the propeller is certificated.

§ 25.907 Propeller vibration.

(a) The magnitude of the propeller blade vibration stresses under any normal condition of operation must be determined by actual measurement or by comparison with similar installations for which these measurements have been made.

(b) The determined vibration stresses may not exceed values that have been shown to be safe for continuous operation.

§ 25.925 Propeller clearance.

Unless smaller clearances are substantiated, propeller clearances with the airplane at maximum weight, with the most adverse center of gravity, and with the propeller in the most adverse pitch position, may not be less than the following:

(a) *Ground clearance.* There must be a clearance of at least seven inches (for each airplane with nose wheel landing gear) or nine inches (for each airplane with tail wheel landing gear) between each propeller and the ground with the landing gear statically deflected and in the level takeoff, or taxiing attitude, whichever is most critical. In addition, there must be positive clearance between the propeller and the ground when in the level takeoff attitude with the critical tire completely deflated and the corresponding landing gear strut bottomed.

(b) *Water clearance.* There must be a clearance of at least 18 inches between each propeller and the water, unless compliance with § 25.239(a) can be shown with a lesser clearance.

(c) *Structural clearance.* There must be—

(1) At least one inch radial clearance between the blade tips and the airplane structure, plus any additional radial clearance necessary to prevent harmful vibration;

(2) At least one-half inch longitudinal clearance between the propeller blades or cuffs and stationary parts of the airplane; and

(3) Positive clearance between other rotating parts of the propeller or spinner and stationary parts of the airplane.

§ 25.929 Propeller deicing.

(a) For airplanes intended for use where icing may be expected, there must be a means to prevent or remove hazardous ice accumulation on propellers or on accessories where ice accumulation would jeopardize engine performance.

(b) If combustible fluid is used for propeller deicing, §§ 25.1181 through 25.1185 and 25.1189 apply.

§ 25.933 Reversing systems.

(a) Reversing systems intended for ground operation only must be designed so that no single failure or malfunction of the system will result in unwanted reverse thrust under any expected operating condition. Failure of structural elements need not be considered if the probability of this kind of failure is extremely remote.

(b) Turbojet reversing systems intended for inflight use must be designed so that no unsafe condition will result during normal operation of the system, or from any failure (or reasonably likely combination of failures) of the reversing system, under any anticipated condition of operation of the airplane. Failure of structural elements need not be considered if the probability of this kind of failure is extremely remote.

(c) Compliance with this section may be shown by failure analysis, testing, or both, for propeller systems that allow propeller blades to move from the flight low-pitch position to a position that is substantially less than that at the normal flight low-pitch stop position. The analysis may include or be supported by the analysis made to show compliance with the requirements of § 35.21 for the propeller and associated installation components.

§ 25.937 Turbopropeller-drag limiting systems.

Turbopropeller powered airplane propeller-drag limiting systems must be designed so that no single failure or malfunction of any of the systems during normal or emergency operation results in propeller drag in excess of that for which the airplane was designed under § 25.367. Failure of structural elements of the drag limiting systems need not be considered if the probability of this kind of failure is extremely remote.

§ 25.939 Turbine engine powerplant operating characteristics.

Turbine engine powerplant operating characteristics must be investigated in flight to determine that no adverse characteristics (such as stall, surge, or flameout) are present to a hazardous degree, during normal and emergency operation within the range of operating limitations of the airplane and of the engine.

FUEL SYSTEM

§ 25.951 General.

(a) Each fuel system must be constructed and arranged to ensure a flow of fuel at a rate and pressure established for proper engine functioning under each likely operating condition, including any maneuver for which certification is requested.

(b) Each fuel system must be arranged so that—

(1) No fuel pump can draw fuel from more than one tank at a time; or

(2) There are means to prevent introducing air into the system.

§ 25.953 Fuel system independence.

Each fuel system must meet the requirements of § 25.903(b) by—

(a) Allowing the supply of fuel to each engine through a system independent of each part of the system supplying fuel to any other engine; or

(b) Any other acceptable method.

§ 25.955 Fuel flow.

(a) Each fuel system must provide at least 100 percent of the fuel flow required under each intended operating condition and maneuver. Compliance must be shown as follows:

(1) Fuel must be delivered to each engine at a pressure within the limits specified in the engine type certificate.

(2) The quantity of fuel in the tank may not exceed the amount established as the unusable fuel supply for that tank under the requirements of § 25.959 plus that necessary to show compliance with this section.

(3) Each main pump must be used that is necessary for each operating condition and attitude for which compliance with this section is shown, and the appropriate emergency pump must be substituted for each main pump so used.

(4) If there is a fuel flowmeter, it must be blocked and the fuel must flow through the meter or its bypass.

(b) If an engine can feed from more than one fuel tank, the fuel system must supply the full fuel pressure to that engine in not more than 20 seconds after switching to any other fuel tank when engine malfunctioning becomes apparent due to the depletion of the fuel supply in any tank from which the engine can be fed.

§ 25.957 Flow between interconnected tanks.

If fuel can be pumped from one tank to another in flight, the fuel tank vents and the fuel transfer system must be designed so that no structural damage to the tanks can occur because of overfilling.

§ 25.959 Unusable fuel supply.

The unusable fuel supply for each tank must be established as not less than that quantity at which the first evidence of malfunctioning occurs under the most adverse fuel feed condition occurring under each intended operation and flight maneuver involving that tank.

§ 25.961 Fuel system hot weather operation.

(a) The fuel system must perform satisfactorily in hot weather operation. This must be shown by climbing from the altitude of the airport elected by the applicant to the altitude corresponding to that at which the one-engine-inoperative best rate of climb is not more than the en route climb with the configuration and weight specified in § 25.67(d). There may be no evidence of vapor lock or other malfunctioning during the climb test conducted under the following conditions:

(1) For reciprocating engine powered airplanes, the engines must operate at maximum continuous power, except that takeoff power must be used for the altitudes from 1,000 feet below the critical altitude through the critical altitude. The time interval during which takeoff power is used may not be less than the takeoff time limitation.

(2) For turbine engine powered airplanes, the engines must operate at takeoff power for the time interval selected for showing the takeoff flight path, and at maximum continuous power for the rest of the climb.

(3) The weight of the airplane must be the weight with full fuel tanks, minimum crew, and the ballast necessary to maintain the center of gravity within allowable limits.

(4) The speed of climb may not exceed that allowing compliance with the minimum climb requirement specified in § 25.65(a).

(5) The fuel temperature must be at least 110° F.

(b) The test prescribed in paragraph (a) of this section may be performed in flight or on the ground under closely simulated flight conditions. If a flight test is performed in weather cold enough to interfere with the proper conduct of the test, the fuel tank surfaces, fuel lines, and other fuel system parts subject to cold air must be insulated to simulate, insofar as practicable, flight in hot weather.

§ 25.963 Fuel tanks: general.

(a) Each fuel tank must be able to withstand, without failure, the vibration, inertia, fluid, and structural loads that it may be subjected to in operation.

(b) Flexible fuel tank liners must be approved or must be shown to be suitable for the particular application.

(c) Integral fuel tanks must have facilities for interior inspection and repair.

(d) Fuel tanks within the fuselage contour must be able to resist rupture, and to retain fuel, under the inertia forces prescribed for the emergency landing conditions in § 25.561. In addition, these tanks must be in a protected position so that exposure of the tanks to scraping action with the ground is unlikely.

(e) The augmentation liquid tank capacity available for the use of each engine must be large enough to allow operation of the airplane under the approved procedures for the use of liquid-augmented power. The computation of liquid consumption must be based on the maximum approved rate appropriate for the desired engine output, and must include the effect of temperature on engine performance as well as any other factors that might vary the amount of liquid required.

§ 25.965 Fuel tank tests.

(a) It must be shown by tests that the fuel tanks, as mounted in the airplane, can withstand, without failure or leakage, the more critical of the pressures resulting from the conditions specified in subparagraphs (1) and (2) of this paragraph. In addition, it must be shown by either analysis or tests, that tank surfaces subjected to more critical pressures resulting from the condition of subparagraphs (3) and (4) of this paragraph, are able to withstand the following pressures:

(1) An internal pressure of 3.5 psi.

(2) 125 percent of the maximum air pressure developed in the tank from ram effect.

(3) Fluid pressures developed during maximum limit accelerations, and deflections, of the airplane with a full tank.

(4) Fluid pressures developed during the most adverse combination of airplane roll and fuel load.

(b) Each metallic tank with large unsupported or unstiffened flat surfaces, whose failure or deformation could cause fuel leakage, must be able to withstand the following test, or its equivalent, without leakage or excessive deformation of the tank walls:

(1) Each complete tank assembly and its supports must be vibration tested while mounted to simulate the actual installation.

(2) Except as specified in subparagraph (4) of this paragraph, the tank assembly must be vibrated for 25 hours at an amplitude of not less than 1/32 of an inch (unless another amplitude is substantiated) while 2/3 filled with water or other suitable test fluid.

(3) The test frequency of vibration must be as follows:

(i) If no frequency of vibration resulting from any r.p.m. within the normal operating range of engine speeds is critical, the test frequency of vibration, in number of cycles per minute, must be the number obtained by multiplying the maximum continuous engine speed (r.p.m.) by 0.9.

(ii) If only one frequency of vibration resulting from any r.p.m. within the normal operating range of engine speeds is critical, that frequency of vibration must be the test frequency.

(iii) If more than one frequency of vibration resulting from any r.p.m. within the normal operating range of engine speeds is critical, the most critical of these frequencies must be the test frequency.

(4) Under subparagraph (3) (ii) and (iii) of this paragraph, the time of test must be adjusted to accomplish the same number of vibration cycles that would be accomplished in 25 hours at the frequency specified in subparagraph (3)(i) of this paragraph.

(5) During the test, the tank assembly must be rocked at the rate of 16 to 20 complete cycles per minute, through an angle of 15° on both sides of the horizontal (30° total), about the most critical axis, for 25 hours. If motion about more than one axis is likely to be critical, the tank must be rocked about each critical axis for 12½ hours.

(c) Except where satisfactory operating experience with a similar tank in a similar installation is shown, nonmetallic tanks must withstand the test specified in paragraph (b)(5) of this section, with fuel at a temperature of 110° F. During this test, a representative specimen of the tank must be installed in a support-

ing structure simulating the installation in the airplane.

§ 25.967 Fuel tank installations.

(a) Each fuel tank must be supported so that tank loads (resulting from the weight of the fuel in the tanks) are not concentrated on unsupported tank surfaces. In addition—

(1) There must be pads, if necessary, to prevent chafing between the tank and its supports;

(2) Padding must be nonabsorbent or treated to prevent the absorption of fluids;

(3) If a flexible tank liner is used, it must be supported so that it is not required to withstand fluid loads; and

(4) Each interior surface of the tank compartment must be smooth and free of projections that could cause wear of the liner unless—

(i) Provisions are made for protection of the liner at these points; or

(ii) The construction of the liner itself provides that protection.

(b) Spaces adjacent to tank surfaces must be ventilated to avoid fume accumulation due to minor leakage. If the tank is in a sealed compartment, ventilation may be limited to drain holes large enough to prevent excessive pressure resulting from altitude changes.

(c) The location of each tank must meet the requirements of § 25.1185(a).

(d) No engine nacelle skin immediately behind a major air outlet from the engine compartment may act as the wall of an integral tank.

(e) Each fuel tank must be isolated from personnel compartments by a fumeproof and fuelproof enclosure.

§ 25.969 Fuel tank expansion space.

Each fuel tank must have an expansion space of not less than two percent of the tank capacity. It must be impossible to fill the expansion space inadvertently with the airplane in the normal ground attitude.

§ 25.971 Fuel tank sump.

(a) Each fuel tank must have a sump with an effective capacity, in the normal ground attitude, of not less than the greater of 0.10 percent of the tank capacity or one-sixteenth of a gallon unless operating limitations are established to ensure that the accumulation of water in service will not exceed the sump capacity.

(b) Each fuel tank must allow drainage of any hazardous quantity of water from any part of the tank to its sump with the airplane in the ground attitude.

(c) Each fuel tank sump must have an accessible drain that—

(1) Allows complete drainage of the sump on the ground;

(2) Discharges clear of each part of the airplane; and

(3) Has manual or automatic means for positive locking in the closed position.

§ 25.973 Fuel tank filler connection.

Each fuel tank filler connection must prevent the entrance of fuel into any part of the airplane other than the tank itself. In addition—

(a) Each filler must be marked as prescribed in § 25.1557(c);

(b) Each recessed filler connection that can retain any appreciable quantity of fuel must have a drain that discharges clear of each part of the airplane; and

(c) Each filler cap must provide a fuel-tight seal.

§ 25.975 Fuel tank vents and carburetor vapor vents.

(a) *Fuel tank vents.* Each fuel tank must be vented from the top part of the expansion space so that venting is effective under any normal flight condition. In addition—

(1) Each vent must be arranged to avoid stoppage by dirt or ice formation;

(2) The vent arrangement must prevent siphoning of fuel during normal operation;

(3) The venting capacity and vent pressure levels must maintain acceptable differences of pressure between the interior and exterior of the tank, during—

(i) Normal flight operation;

(ii) Maximum rate of ascent and descent; and

(iii) Refueling and defueling (where applicable);

(4) Airspaces of tanks with interconnected outlets must be interconnected;

(5) There may be no point in any vent line where moisture can accumulate with the airplane in the ground attitude or the level flight attitude, unless drainage is provided; and

(6) No vent or drainage provision may end at any point—

(i) Where the discharge of fuel from the vent outlet would constitute a fire hazard; or

(ii) From which fumes could enter personnel compartments.

(b) *Carburetor vapor vents.* Each carburetor with vapor elimination connections must have a vent line to lead vapors back to one of the fuel tanks. In addition—

(1) Each vent system must have means to avoid stoppage by ice; and

(2) If there is more than one fuel tank, and it is necessary to use the tanks in a definite sequence, each vapor vent return line must lead back to the fuel tank used for takeoff and landing.

§ 25.977 Fuel tank outlet.

There must be a fuel strainer with 8 to 16 meshes per inch for the fuel tank outlet or for the booster pump. In addition—

(a) The clear area of each fuel tank outlet strainer must be at least five times the area of the outlet line;

(b) The diameter of each strainer must be at least that of the fuel tank outlet; and

(c) Each finger strainer must be accessible for inspection and cleaning.

§ 25.979 Under-wing fueling provisions.

(a) Each under-wing fuel tank connection must have means to prevent the escape of hazardous quantities of fuel from that tank, while the cover plate is removed, if the fuel entry valve malfunctions.

(b) A means, in addition to the normal means for limiting the tank content, must be installed to prevent damage to the tank if the normal means fails.

FUEL SYSTEM COMPONENTS

§ 25.991 Fuel pumps.

(a) *Main pumps.* Each fuel pump required for proper engine operation, or required to meet the fuel system requirements of this subpart (other than those in paragraph (b) of this section), is a main pump. For each main pump, provision must be made to allow the bypass of each positive displacement fuel pump other than a fuel injection pump (a pump that supplies the proper flow and pressure for fuel injection when the injection is not accomplished in a carburetor) approved as part of the engine.

(b) *Emergency pumps.* There must be emergency pumps or another main pump to feed each engine immediately after failure of any main pump (other than a fuel injection pump approved as part of the engine).

§ 25.993 Fuel system lines and fittings.

(a) Each fuel line must be installed and supported to prevent excessive vibration and to withstand loads due to fuel pressure and accelerated flight conditions.

(b) Each fuel line connected to components of the airplane between which relative motion could exist must have provisions for flexibility.

(c) Each flexible connection in fuel lines that may be under pressure and subjected to axial loading must use flexible hose assemblies.

(d) Flexible hose must be approved or must be shown to be suitable for the particular application.

(e) No flexible hose that might be adversely affected by exposure to high temperatures may be used where excessive temperatures will exist during operation or after engine shut-down.

§ 25.995 Fuel valves.

In addition to the requirements of § 25.1189 for shutoff means, each fuel valve must—

(a) Have positive stops or suitable index provisions in the "on" and "off" positions; and

(b) Be supported so that no loads resulting from their operation or from accelerated flight conditions are transmitted to the lines attached to the valve.

§ 25.997 Fuel strainer or filter.

(a) There must be a fuel strainer or filter between the tank outlet and the fuel metering device of the engine. In addition, the fuel strainer or filter must be—

(1) Between the tank outlet and the engine-driven pump inlet, if there is an engine-driven fuel pump;

(2) Accessible for drainage and cleaning and, for the strainer screen, easily removable; and

(3) Mounted so that its weight is not supported by the connecting lines or by the inlet or outlet connections of the strainer or filter itself.

(b) Unless there are means in the fuel system to prevent the accumulation of

ice on the filter, there must be means to automatically maintain the fuel flow if ice-clogging of the filter occurs.

(c) The fuel strainer or filter must be of adequate capacity (with respect to operating limitations established to ensure proper service) and of appropriate mesh to ensure proper engine operation, with the fuel contaminated to a degree (with respect to particle size and density) that can be reasonably expected in service. The degree of fuel filtering may not be less than that established for the engine under Part 33 [New].

§ 25.999 Fuel system drains.

(a) Drainage of the fuel system must be accomplished by the use of fuel strainer and fuel tank sump drains.

(b) Each drain must discharge clear of each part of the airplane and must have manual or automatic means for positive locking in the closed position.

§ 25.1001 Fuel jettisoning system.

(a) If the maximum takeoff weight is more than 105 percent of the maximum landing weight, there must be a fuel jettisoning system able to jettison enough fuel to bring the takeoff weight down to the maximum landing weight. The average rate of fuel jettisoning must be at least 1 percent of the maximum takeoff weight per minute, except that the time required to jettison the fuel need not be less than 10 minutes. This must be shown at maximum takeoff weight, with flaps and landing gear up, and in—

(1) A power-off glide at 1.4 V_{S_1};

(2) A climb at the one-engine-inoperative best rate-of-climb speed, with the critical engine inoperative and the remaining engines at maximum continuous power; and

(3) Level flight at 1.4 V_{S_1}, if the results of the tests in the conditions specified in subparagraphs (1) and (2) of this paragraph show that this condition could be critical.

(b) During the flight tests prescribed in paragraph (a) of this section, it must be shown that—

(1) The fuel jettisoning system and its operation are free from fire hazard;

(2) The fuel discharges clear of any part of the airplane;

(3) Fuel or fumes do not enter any parts of the airplane; and

(4) The jettisoning operation does not adversely affect the controllability of the airplane.

(c) For reciprocating engine powered airplanes, the jettisoning system must be designed so that it is not possible to jettison the fuel in the tanks used for takeoff and landing below the level allowing 45 minutes flight at 75 percent maximum continuous power. However, if there is an auxiliary control independent of the main jettisoning control, the system may be designed to jettison all the fuel.

(d) For turbine engine powered airplanes the jettisoning system must be designed so that it is not possible to jettison fuel in the tanks used for takeoff and landing below the level allowing climb from sea level to 10,000 feet and thereafter allowing 45 minutes cruise at a speed for maximum range.

(e) The fuel jettisoning valve must be designed to allow flight personnel to close the valve during any part of the jettisoning operation.

(f) Unless it is shown that using any means (including flaps, slots, and slats) for changing the airflow across or around the wings does not adversely affect fuel jettisoning, there must be a placard, adjacent to the jettisoning control, to warn flight crewmembers against jettisoning fuel while the means that change the airflow are being used.

(g) The fuel jettisoning system must be designed so that any reasonably probable single malfunction in the system will not result in a hazardous condition due to unsymmetrical jettisoning of, or inability to jettison, fuel.

Oil System

§ 25.1011 General.

(a) Each engine must have an independent oil system that can supply it with an appropriate quantity of oil at a temperature not above that safe for continuous operation.

(b) The usable oil capacity may not be less than the product of the endurance of the airplane under critical operating conditions and the approved maximum allowable oil consumption of the engine under the same conditions, plus a suitable margin to ensure system circulation. Instead of a rational analysis of airplane range for the purpose of computing oil requirements for reciprocating engine powered airplanes, the following fuel/oil ratios may be used:

(1) For airplanes without a reserve oil or oil transfer system, a fuel/oil ratio of 30:1 by volume.

(2) For airplanes with either a reserve oil or oil transfer system, a fuel/oil ratio of 40:1 by volume.

(c) Fuel/oil ratios higher than those prescribed in paragraphs (b) (1) and (2) of this section may be used if substantiated by data on actual engine oil consumption.

§ 25.1013 Oil tanks.

(a) *Installation.* Each oil tank installation must meet the requirements of § 25.967. However, an engine oil tank may be in a designated fire zone if the tank and its supports are fireproof to the extent that damage by fire to any non-fireproof part will not cause leakage or spillage of oil.

(b) *Expansion space.* Oil tank expansion space must be provided as follows:

(1) Each oil tank must have an expansion space of not less than the greater of—

(i) 10 percent of the tank capacity; or

(ii) 0.5 gallon.

(2) Each reserve oil tank not directly connected to any engine may have an expansion space of not less than two percent of the tank capacity.

(3) It must be impossible to fill the expansion space inadvertently with the airplane in the normal ground attitude.

(c) *Filler connection.* Each recessed oil tank filler connection that can retain any appreciable quantity of oil must have a drain that discharges clear of each part of the airplane. In addition—

(1) Each oil tank filler cap must provide an oil-tight seal; and

(2) Each oil filler must be marked under § 25.1557(c).

(d) *Vent.* Oil tanks must be vented as follows:

(1) Each oil tank must be vented from the top part of the expansion space so that venting is effective under any normal flight condition.

(2) Oil tank vents must be arranged so that condensed water vapor that might freeze and obstruct the line cannot accumulate at any point.

(e) *Outlet.* There must be means to prevent entrance into the tank itself, or into the tank outlet, of any object that might obstruct the flow of oil through the system. No oil tank outlet may be enclosed by any screen or guard that would reduce the flow of oil below a safe value at any operating temperature.

(f) *Flexible oil tank liners.* Each flexible oil tank liner must be approved or must be shown to be suitable for the particular application.

§ 25.1015 Oil tank tests.

Each oil tank must be designed and installed so that—

(a) It can withstand, without failure, each vibration, inertia, and fluid load that it may be subjected to in operation; and

(b) It meets the provisions of § 25.965, except—

(1) The test pressure must be five p.s.i. instead of the pressure specified in § 25.965(a); and

(2) The test fluid must be oil at 250° F. instead of the fluid specified in § 25.965(c).

§ 25.1017 Oil lines and fittings.

(a) Each oil line must meet the requirements of § 25.993 and each oil line and fitting in any designated fire zone must meet the requirements of § 25.1183.

(b) Breather lines must be arranged so that—

(1) Condensed water vapor that might freeze and obstruct the line cannot accumulate at any point;

(2) The breather discharge does not constitute a fire hazard if foaming occurs or causes emitted oil to strike the pilot's windshield; and

(3) The breather does not discharge into the engine air induction system.

§ 25.1019 Oil strainer or filter.

Each oil strainer or filter in the powerplant installation must be constructed and installed so that oil will flow at the normal rate through the rest of the system with the strainer or filter element completely blocked.

§ 25.1021 Oil drains.

There must be at least one accessible drain that—

(a) Allows safe drainage of the entire oil system; and

(b) Has manual or automatic means for positive locking in the closed position.

§ 25.1023 Oil radiators.

(a) Each oil radiator must be able to withstand, without failure, any vibration, inertia, and oil pressure load to which it would be subjected in operation.

(b) Each oil radiator air duct must be located so that, in case of fire, flames coming from normal openings of the engine nacelle cannot impinge directly upon the radiator.

§ 25.1025 Oil valves.

(a) Each oil shutoff must meet the requirements of § 25.1189.

(b) The closing of oil shutoff means may not prevent propeller feathering.

(c) Each oil valve must have positive stops or suitable index provisions in the "on" and "off" positions and must be supported so that no loads resulting from its operation or from accelerated flight conditions are transmitted to the lines attached to the valve.

§ 25.1027 Propeller feathering system.

(a) If the propeller feathering system depends on engine oil, there must be means to trap an amount of oil in the tank if the supply becomes depleted due to failure of any part of the lubricating system other than the tank itself.

(b) The amount of trapped oil must be enough to accomplish the feathering operation and must be available only to the feathering pump.

(c) The ability of the system to accomplish feathering with the trapped oil must be shown. This may be done on the ground using an auxiliary source of oil for lubricating the engine during operation.

COOLING

§ 25.1041 General.

The powerplant cooling provisions must be able to maintain the temperatures of powerplant components and engine fluids within the temperature limits established for these components and fluids, under ground, water, and flight operating conditions.

§ 25.1043 Cooling tests.

(a) *General.* Compliance with § 25.1041 must be shown by tests, under critical ground, water, and flight operating conditions. For these tests, the following apply:

(1) If the tests are conducted under conditions deviating from the maximum ambient atmospheric temperature, the recorded powerplant temperatures must be corrected under paragraphs (c) and (d) of this section.

(2) No corrected temperatures determined under subparagraph (1) of this paragraph may exceed established limits.

(3) For reciprocating engines, the fuel used during the cooling tests must be the minimum grade approved for the engines, and the mixture settings must be those normally used in the flight stages for which the cooling tests are conducted. The test procedures must be as prescribed in § 25.1045.

(b) *Maximum ambient atmospheric temperature.* A maximum ambient atmospheric temperature corresponding to sea level conditions must be established as a limitation on the operation of the airplane. The temperature lapse rate is 3.6° F. per thousand feet of altitude above sea level until a temperature of −69.7° F. is reached, above which altitude, the temperature is considered constant at −69.7° F.

(c) *Correction factor (except cylinder barrels).* Unless a more rational correction applies, temperatures of engine fluids and powerplant components (except cylinder barrels) for which temperature limits are established, must be corrected by adding to them the difference between the maximum ambient atmospheric temperature and the temperature of the ambient air at the time of the first occurrence of the maximum component or fluid temperature recorded during the cooling test.

(d) *Correction factor for cylinder barrel temperatures.* Unless a more rational correction applies, cylinder barrel temperatures must be corrected by adding to them 0.7 times the difference between the maximum ambient atmospheric temperature and the temperature of the ambient air at the time of the first occurrence of the maximum cylinder barrel temperature recorded during the cooling test.

§ 25.1045 Cooling test procedures.

(a) Compliance with § 25.1041 must be shown for the takeoff, climb, en route, and landing stages of flight that correspond to the applicable performance requirements. The cooling tests must be conducted with the airplane in the configuration, and operating under the conditions, that are critical relative to cooling during each stage of flight. For the cooling tests, a temperature is "stabilized" when its rate of change is less than two degrees F. per minute.

(b) Temperatures must be stabilized under the conditions from which entry is made into each stage of flight being investigated, unless the entry condition normally is not one during which component and engine fluid temperatures would stabilize (in which case, operation through the full entry condition must be conducted before entry into the stage of flight being investigated in order to allow temperatures to reach their natural levels at the time of entry). The takeoff cooling test must be preceded by a period during which the powerplant component and engine fluid temperatures are stabilized with the engines at ground idle.

(c) Cooling tests for each stage of flight must be continued until—

(1) The component and engine fluid temperatures stabilize;

(2) The stage of flight is completed; or

(3) An operating limitation is reached.

(d) For reciprocating engine powered airplanes, it may be assumed, for cooling test purposes, that the takeoff stage of flight is complete when the airplane reaches an altitude of 1,500 feet above the takeoff surface or reaches a point in the takeoff where the transition from the takeoff to the en route configuration is completed and a speed is reached at which compliance with § 25.67(d) is shown, whichever point is at a higher altitude.

(e) For hull seaplanes and amphibians, cooling must be shown during taxiing downwind for 10 minutes, at five knots above step speed.

INDUCTION SYSTEM

§ 25.1091 Air induction.

(a) The air induction system for each engine must supply—

(1) The air required by that engine under each operating condition for which certification is requested; and

(2) The air for proper fuel metering and mixture distribution with the induction system valves in any position.

(b) Each reciprocating engine must have an alternate air source that prevents the entry of rain, ice, or any other foreign matter.

(c) Air intakes may not open within the cowling, unless—

(1) That part of the cowling is isolated from the engine accessory section by means of a fireproof diaphragm; or

(2) There are means to prevent the emergence of backfire flames.

(d) For turbine engine powered airplanes—

(1) There must be means to prevent hazardous quantities of fuel leakage or overflow from drains, vents, or other components of flammable fluid systems from entering the engine intake system; and

(2) The air inlet ducts must be located or protected so as to minimize the ingestion of foreign matter during takeoff, landing, and taxiing.

§ 25.1093 Induction system deicing and anti-icing provisions.

(a) *Reciprocating engines.* Each reciprocating engine air induction system must have means to prevent and eliminate icing. Unless this is done by other means, it must be shown that, in air free of visible moisture at a temperature of 30° F., each airplane with altitude engines using—

(1) Conventional venturi carburetors has a preheater that can provide a heat rise of 120° F. with the engine at 60 percent of maximum continuous power; or

(2) Carburetors tending to reduce the probability of ice formation has a preheater that can provide a heat rise of 100° F. with the engine at 60 percent of maximum continuous power.

(b) *Turbine engines.* Each turbine engine must be able to operate throughout its flight power range without adverse effect on engine operation or serious loss of power or thrust, under the icing conditions specified in Appendix C. In addition, there must be means to indicate to appropriate flight crewmembers the functioning of the powerplant ice protection system.

§ 25.1101 Carburetor air preheater design.

Each carburetor air preheater must be designed and constructed to—

(a) Ensure ventilation of the preheater when the engine is operated in cold air;

(b) Allow inspection of the exhaust manifold parts that it surrounds; and

(c) Allow inspection of critical parts of the preheater itself.

§ 25.1103 Induction system ducts.

(a) Each induction system duct upstream of the first stage of the supercharger must have a drain to prevent the hazardous accumulation of fuel and moisture in the ground attitude. The drains may not discharge in locations that might cause a fire hazard.

(b) Each induction system duct must be—

(1) Strong enough to prevent induction system failures resulting from normal backfire conditions; and

(2) Fire-resistant if it is in any fire zone for which a fire-extinguishing system is required.

(c) Each duct connected to components between which relative motion could exist must have means for flexibility.

§ 25.1105 Induction system screens.

If induction system screens are used—

(a) Each screen must be upstream of the carburetor;

(b) No screen may be in any part of the induction system that is the only passage through which air can reach the engine, unless it can be deiced by heated air;

(c) No screen may be deiced by alcohol alone; and

(d) It must be impossible for fuel to strike any screen.

§ 25.1107 Inter-coolers and after-coolers.

Each inter-cooler and after-cooler must be able to withstand any vibration, inertia, and air pressure load to which it would be subjected in operation.

EXHAUST SYSTEM

§ 25.1121 General.

(a) Each exhaust system must ensure safe disposal of exhaust gases without fire hazard or carbon monoxide contamination in any personnel compartment. For test purposes, any acceptable carbon monoxide detection method may be used to show the absence of carbon monoxide.

(b) Unless suitable precautions are taken, no exhaust system part may be dangerously close to parts of any system carrying flammable fluids or vapors, or under parts of such a system that may leak.

(c) Each component that hot exhaust gases could strike, or that could be subjected to high temperatures from exhaust system parts, must be fireproof. All exhaust system components must be separated by fireproof shields from adjacent parts of the airplane that are outside the engine compartment.

(d) No exhaust gases may discharge so as to cause a fire hazard with respect to any flammable fluid vent or drain.

(e) No exhaust gases may discharge where they will cause a glare seriously affecting pilot vision at night.

(f) Each exhaust system component must be ventilated to prevent points of excessively high temperature.

(g) Each exhaust shroud must be ventilated or insulated to avoid, during normal operation, a temperature high enough to ignite any flammable fluids or vapors external to the shroud.

§ 25.1123 Exhaust piping.

(a) Exhaust piping must be heat and corrosion resistant, and must have provisions to prevent failure due to expansion by operating temperatures.

(b) Piping must be supported to withstand any vibration and inertia loads to which it would be subjected in operation; and

(c) Piping connected to components between which relative motion could exist must have means for flexibility.

§ 25.1125 Exhaust heat exchangers.

(a) Each exhaust heat exchanger must be constructed and installed to withstand each vibration, inertia, and other load to which it would be subjected in operation. In addition—

(1) Each exchanger must be suitable for continued operation at high temperatures and resistant to corrosion from exhaust gases;

(2) There must be means for the inspection of the critical parts of each exchanger;

(3) Each exchanger must have cooling provisions wherever it is subject to contact with exhaust gases; and

(4) No exhaust heat exchanger or muff may have any stagnant areas or liquid traps that would increase the probability of ignition of flammable fluids or vapors that might be present in case of the failure or malfunction of components carrying flammable fluids.

(b) If an exhaust heat exchanger is used for heating ventilating air—

(1) There must be a secondary heat exchanger between the primary exhaust gas heat exchanger and the ventilating air system; or

(2) Other means must be used to preclude the harmful contamination of the ventilating air.

§ 25.1127 Exhaust driven turbo-superchargers.

(a) Each exhaust driven turbo-supercharger must be approved or shown to be suitable for the particular application. It must be installed and supported to ensure safe operation between normal inspections and overhauls. In addition, there must be provisions for expansion and flexibility between exhaust conduits and the turbine.

(b) There must be provisions for lubricating the turbine and for cooling turbine parts where temperatures are critical.

(c) If the normal turbo-supercharger control system malfunctions, the turbine speed may not exceed its maximum allowable value. Except for the waste gate operating components, the components provided for meeting this requirement must be independent of the normal turbo-supercharger controls.

POWERPLANT CONTROLS AND ACCESSORIES

§ 25.1141 Powerplant controls: general.

Each powerplant control must be located, arranged, and designed under §§ 25.777 through 25.781 and marked under § 25.1555. In addition, it must meet the following requirements:

(a) Each control must be located so that it cannot be inadvertently operated by persons entering, leaving, or moving normally in, the cockpit.

(b) Each flexible control must be approved or must be shown to be suitable for the particular application.

(c) Each control must have sufficient strength and rigidity to withstand operating loads without failure and without excessive deflection.

(d) Each control must be able to maintain any set position without constant attention by flight crewmembers and without creep due to control loads or vibration.

§ 25.1143 Throttle and antidetonant injection system controls.

(a) There must be a separate throttle control for each engine.

(b) Throttle controls must be arranged to allow—

(1) Separate control of each engine; and

(2) Simultaneous control of all engines.

(c) Each throttle control must provide a positive and immediately responsive means of controlling its engine.

(d) If there is an antidetonant injection system, the flow of A.D.I. fluid must be automatically controlled with relation to the amount of power produced by the engine. In addition to the automatic control, there must be a separate control for the A.D.I. pumps.

§ 25.1145 Ignition switches.

(a) Ignition switches must control each engine ignition circuit on each engine.

(b) There must be means to quickly shut off all ignition by the grouping of switches or by a master ignition control.

(c) Each master ignition control must have a guard to prevent its inadvertent operation.

§ 25.1147 Mixture controls.

(a) If there are mixture controls, each engine must have a separate control. The controls must be grouped and arranged to allow—

(1) Separate control of each engine; and

(2) Simultaneous control of all engines.

(b) Each intermediate position of the mixture controls that corresponds to a normal operating setting must be identifiable by feel and sight.

(c) The mixture controls must be accessible to both pilots. However, if there is a separate flight engineer station with a control panel, the controls need be accessible only to the flight engineer.

§ 25.1149 Propeller speed and pitch controls.

(a) There must be a separate propeller speed and pitch control for each propeller.

(b) The controls must be grouped and arranged to allow—

(1) Separate control of each propeller; and

(2) Simultaneous control of all propellers.

(c) The controls must allow synchronization of all propellers.

(d) The propeller speed and pitch controls must be to the right of, and at least one inch below, the pilot's throttle controls.

§ 25.1153 Propeller feathering controls.

(a) There must be a separate propeller feathering control for each propeller. The control must have means to prevent its inadvertent operation.

(b) If feathering is accomplished by movement of the propeller pitch or speed control lever, there must be means to prevent the movement of this lever to the feathering position during normal operation.

§ 25.1155 Reverse thrust controls.

Reverse thrust controls must have a means to prevent their inadvertent operation. The means must have a positive lock or stop at the flight idle position and must require a separate and distinct operation by the crew to displace the control from the flight regime (forward thrust regime for turbojet powered airplanes).

§ 25.1157 Carburetor air temperature controls.

There must be a separate carburetor air temperature control for each engine.

§ 25.1159 Supercharger controls.

Each supercharger control must be accessible to the pilots or, if there is a separate flight engineer station with a control panel, to the flight engineer.

§ 25.1161 Fuel jettisoning system controls.

Each fuel jettisoning system control must have guards to prevent inadvertent operation. No control may be near any fire extinguisher control or other control used to combat fire.

§ 25.1163 Powerplant accessories.

(a) Engine-mounted accessories must be approved for installation on the engine concerned and use the provisions on the engine for mounting.

(b) Electrical equipment subject to arcing or sparking must be installed to minimize the probability of contact with any flammable fluids or vapors that might be present in a free state.

(c) If continued rotation of an engine-driven cabin supercharger or of any remote accessory driven by the engine is hazardous if malfunctioning occurs, there must be means to prevent rotation without interfering with the continued operation of the engine.

§ 25.1165 Engine ignition systems.

(a) Each battery ignition system must be supplemented by a generator that is automatically available as an alternate source of electrical energy to allow continued engine operation if any battery becomes depleted.

(b) The capacity of batteries and generators must be large enough to meet the simultaneous demands of the engine ignition system and the greatest demands of any electrical system components that draw electrical energy from the same source.

(c) The design of the engine ignition system must account for—

(1) The condition of an inoperative generator;

(2) The condition of a completely depleted battery with the generator running at its normal operating speed; and

(3) The condition of a completely depleted battery with the generator operating at idling speed, if there is only one battery.

(d) Magneto ground wiring (for separate ignition circuits) that lies on the engine side of the fire wall, must be installed, located, or protected, to minimize the probability of simultaneous failure of two or more wires as a result of mechanical damage, electrical faults, or other cause.

(e) No ground wire for any engine may be routed through a fire zone of another engine unless each part of that wire within that zone is fireproof.

(f) Each ignition system must be independent of any electrical circuit not used for analyzing the operation of that system.

(g) There must be means to warn appropriate flight crewmembers if the malfunctioning of any part of the electrical system is causing the continuous discharge of any battery necessary for engine ignition.

POWERPLANT FIRE PROTECTION

§ 25.1181 Designated fire zones: regions included.

(a) Designated fire zones are—

(1) The engine power section;

(2) The engine accessory section;

(3) Any complete powerplant compartment in which no isolation is provided between the engine power section and the engine accessory section;

(4) Any auxiliary power unit compartment;

(5) Any fuel-burning heater and other combustion equipment installation described in § 25.859;

(6) The compressor and accessory sections of turbine engines; and

(7) Combustor, turbine, and tailpipe sections of turbine engine installations that contain lines or components carrying flammable fluids or gases.

(b) Each designated fire zone must meet the requirements of §§ 25.1185 through 25.1205.

(c) The nacelle area immediately behind the fire wall must meet the requirements of §§ 25.863, 25.1103(b), 25.1165 (d) and (e), 25.1183, 25.1185(c), 25.1187, 25.1189, and 25.1195 through 25.1203. If there is a retractable landing gear in this area, compliance with this paragraph need be shown only with the landing gear retracted.

§ 25.1183 Lines and fittings.

(a) Except as provided in paragraph (b), each line and fitting carrying flammable fluids in any area subject to engine fire conditions, and each fuel line or fitting in a designated fire zone, must meet the following requirements:

(1) The line and fitting must be at least fire resistant.

(2) Flexible hose assembly (hose and end fitting) must be approved.

(b) Paragraph (a) of this section does not apply to—

(1) Lines and fittings forming an integral part of an engine; and

(2) Vent and drain lines, and their fittings, whose failure will not result in, or add to, a fire hazard.

§ 25.1185 Flammable fluids.

(a) No tank or reservoir that is part of a system containing flammable fluids or gases may be in a designated fire zone unless the fluid contained, the design of the system, the materials used in the tank, the shutoff means, and all connections, lines, and control provide a degree of safety equal to that which would exist if the tank or reservoir were outside such a zone.

(b) There must be at least one-half inch of clear airspace between each tank or reservoir and each firewall or shroud isolating a designated fire zone.

(c) Absorbent materials close to flammable fluid system components that might leak must be covered or treated to prevent the absorption of hazardous quantities of fluids.

§ 25.1187 Drainage and ventilation of fire zones.

(a) There must be complete drainage of each part of each designated fire zone to minimize the hazards resulting from failure or malfunctioning of any component containing flammable fluids. The drainage means must be—

(1) Effective under conditions expected to prevail when drainage is needed; and

(2) Arranged so that no discharged fluid will cause an additional fire hazard.

(b) Each designated fire zone must be ventilated to prevent the accumulation of flammable vapors.

(c) No ventilation opening may be where it would allow the entry of flammable fluids, vapors, or flame from other zones.

(d) Each ventilation means must be arranged so that no discharged vapors will cause an additional fire hazard.

(e) Unless the extinguishing agent capacity and rate of discharge are based on maximum air flow through a zone, there must be means to allow the crew to shut off sources of forced ventilation to any fire zone except the engine power section of the nacelle and the combustion heater ventilating air ducts.

§ 25.1189 Shutoff means.

(a) Except for lines forming an integral part of an engine, each engine and each fire zone specified in § 25.1181(a) (4) and (5) must have a means to shut off or otherwise prevent hazardous quantities of fuel, oil, deicer, and other flammable fluids, from flowing into, within, or through any designated fire zone.

(b) The closing of any fuel shutoff valve for any engine may not make fuel unavailable to the remaining engines.

(c) Operation of any shutoff may not interfere with the later emergency operation of other equipment, such as the means for feathering the propeller.

(d) Each shutoff must be outside of designated fire zones, unless an equal degree of safety is otherwise provided.

(e) No hazardous quantity of flammable fluid may drain into any designated fire zone after shutoff.

(f) There must be means to guard against inadvertent operation of the shutoff means and to make it possible for the crew to reopen the shutoff means in flight after it has been closed.

§ 25.1191 Firewalls.

(a) Each engine, auxiliary power unit, fuel-burning heater, other combustion equipment intended for operation in flight, and the combustion, turbine, and tailpipe sections of turbine engines, must be isolated from the rest of the airplane by firewalls, shrouds, or equivalent means.

(b) Each firewall and shroud must be—

(1) Fireproof;

(2) Constructed so that no hazardous quantity of air, fluid, or flame can pass from the compartment to other parts of the airplane;

(3) Constructed so that each opening is sealed with close fitting fireproof grommets, bushings, or firewall fittings; and

(4) Protected against corrosion.

§ 25.1193 Cowling and nacelle skin.

(a) Each cowling must be constructed and supported so that it can resist any vibration, inertia, and air load to which it may be subjected in operation.

(b) Cowling must meet the drainage and ventilation requirements of § 25.1187.

(c) On airplanes with a diaphragm isolating the engine power section from the engine accessory section, each part of the accessory section cowling subject to flame in case of fire in the engine power section of the powerplant must—

(1) Be fireproof; and

(2) Meet the requirements of § 25.1191.

(d) Each part of the cowling subject to high temperatures due to its nearness to exhaust system parts or exhaust gas impingement must be fireproof.

(e) Each airplane must—

(1) Be designed and constructed so that no fire originating in any fire zone can enter, either through openings or by burning through external skin, any other zone or region where it would create additional hazards;

(2) Meet subparagraph (1) of this paragraph with the landing gear retracted (if applicable); and

(3) Have fireproof skin in areas subject to flame if a fire starts in the engine power or accessory sections.

§ 25.1195 Fire extinguishing systems.

(a) Except for combustor, turbine, and tail pipe sections of turbine engine installations that contain lines or components carrying flammable fluids or gases for which it is shown that a fire originating in these sections can be controlled, there must be a fire extinguisher system serving each designated fire zone.

(b) An individual "one shot" fire extinguishing system may be used for auxiliary power units, fuel-burning heaters, and other combustion equipment. The fire extinguishing system, the quantity of extinguishing agent, and the rate of discharge, in other designated fire zones must be able to provide two adequate discharges. It must be possible to direct both discharges to any main engine installation.

(c) The fire-extinguishing system for a nacelle must be able to simultaneously protect each zone of the nacelle for which protection is provided.

§ 25.1197 Fire extinguishing agents.

(a) Extinguishing agents must be methyl bromide, carbon dioxide, or any other agent with equal extinguishing action.

(b) If methyl bromide, carbon dioxide, or any other toxic extinguishing agent is used, provisions must be made to prevent harmful concentrations of fluid or fluid vapors (from leakage during normal operation of the airplane or as a result of discharging the fire extinguisher on the ground or in flight) from entering any personnel compartment, even though a defect may exist in the extinguishing system. This must be shown by test except for built-in carbon dioxide fuselage compartment fire extinguishing systems for which—

(1) Five pounds or less of carbon dioxide will be discharged, under established fire control procedures, into any fuselage compartment; or

(2) There is protective breathing equipment for each flight crewmember on flight deck duty.

(c) Each methyl bromide container must be charged with a dry agent and sealed. This must be done by the fire extinguisher manufacturer or any person using appropriate recharging equipment.

§ 25.1199 Extinguishing agent containers.

(a) Each extinguishing agent container must have a pressure relief to prevent bursting of the container by excessive internal pressures.

(b) Each discharge line from a relief connection must terminate outside the airplane in a location convenient for inspection on the ground.

(c) There must be a visual discharge indicator at the discharge end of each discharge line.

(d) The temperature of each container must be maintained, under intended operating conditions, to prevent the pressure in the container from—

(1) Falling below that necessary to provide an adequate rate of discharge; or

(2) Rising high enough to cause premature discharge.

§ 25.1201 Fire extinguishing system materials.

(a) No material in any fire extinguishing system may react chemically with any extinguishing agent so as to create a hazard.

(b) Each system component in an engine compartment must be fireproof.

§ 25.1203 Fire-detector system.

(a) There must be approved, quick acting fire or overheat detectors in each designated fire zone, and in the combustion, turbine, and tailpipe sections of turbine engine installations, in numbers and locations ensuring prompt detection of fire in those zones.

(b) Each fire detector must be constructed and installed to withstand the vibration, inertia, and other loads to which it may be subjected to in operation.

(c) No fire detector may be affected by any oil, water, other fluids, or fumes that might be present.

(d) There must be means to allow the crew to check, in flight, the functioning of each fire-detector electric circuit.

(e) Wiring and other components of each fire-detector system in a fire zone must be at least fire-resistant.

(f) No fire-detector system component for any fire zone may pass through another fire zone, unless—

(1) It is protected against the possibility of false warnings resulting from fires in zones through which its passes; or

(2) Each zone involved is simultaneously protected by the same detector and extinguishing system.

§ 25.1205 Fire protection: other components.

(a) Surfaces to the rear of the nacelles, within one nacelle diameter of the nacelle centerline, must be at least fire-resistant.

(b) Paragraph (a) of this section does not apply to tail surfaces to the rear of the nacelles that could not be readily affected by heat, flames, or sparks coming from a designated fire zone or engine compartment of any nacelle.

Subpart F—Equipment

General

§ 25.1301 Function and installation.

Each item of installed equipment must—

(a) Be of a kind and design appropriate to its intended function;

(b) Be labeled as to its identification, function, or operating limitations, or any applicable combination of these factors;

(c) Be installed according to limitations specified for that equipment; and

(d) Function properly when installed.

§ 25.1303 Flight and navigation instruments.

(a) The following are required flight and navigation instruments:

(1) An airspeed indicating system. If airspeed limitations vary with altitude, the indicator must have a maximum allowable airspeed indication showing the variation of V_{MO}/M_{MO} with (i) altitude and (ii) compressibility limitations.

(2) An altimeter (sensitive or precision).

(3) A rate-of-climb indicator (vertical speed).

(4) A free air temperature indicator.

(5) A clock (sweep-second pointer).

(6) A rate-of-turn indicator (gyroscopic, with integral bank or slip indicator).

(7) A bank and pitch indicator (gyroscopically stabilized).

(8) A direction indicator (gyroscopically stabilized, magnetic or nonmagnetic).

(9) A direction indicator (nonstabilized magnetic compass).

(10) A machmeter (for airplanes with compressibility limitations not otherwise indicated under § 25.1545 to the pilot).

(11) A speed warning device (for each turbine engine powered airplane and each other airplane with V_{MO}/M_{MO} greater than $0.8\ V_{DF}/M_{DF}$ or $0.8\ V_D/M_D$).

(b) The speed warning device required by subparagraph (a)(11) of this section must give effective aural warning (differing distinctively from aural warnings used for other purposes) to the pilots, whenever the speed exceeds V_{MO} plus six knots or $M_{MO}+0.01$. The upper limit of the production tolerance for the warning device may not exceed the prescribed warning speed.

§ 25.1305 Powerplant instruments.

The following are required powerplant instruments:

(a) A carburetor air temperature indicator for each reciprocating engine.

(b) A cylinder head temperature indicator for each air-cooled reciprocating engine.

(c) A gas temperature indicator for each turbine engine.

(d) A manifold pressure indicator for each reciprocating engine.

(e) A fuel pressure indicator (to indicate the pressure at which the fuel is supplied) for each reciprocating engine.

(f) A fuel pressure warning means for each engine, or a master warning means for all engines with provision for isolating the individual warning means from the master warning means.

(g) A fuel flowmeter indicator for each turbine engine.

(h) A fuel flowmeter, or fuel mixture indicator, for each reciprocating engine without an automatic altitude mixture control.

(i) A fuel quantity indicator for each fuel tank.

(j) An augmentation liquid quantity indicator (appropriate for the manner in which the liquid is to be used in operation) for each tank.

(k) An oil quantity indicator for each oil tank.

(l) An oil pressure indicator for each independent pressure oil system of each engine.

(m) An oil pressure warning means for each engine, or a master warning means for all engines with provision for isolating the individual warning means from the master warning means.

(n) An oil temperature indicator for each engine.

(o) A tachometer for each reciprocating engine.

(p) A tachometer (to indicate the speed of the rotors with established limiting speeds) for each turbine engine.

(q) Fire-warning indicators.

(r) An indicator to indicate a change in thrust resulting from any deficiency in the engine, or to indicate a gas stream pressure that can be related to thrust, for each turbojet engine.

(s) A torque indicator for each turbopropeller engine.

(t) A device that indicates, to the flight crew (during flight), any change in the power output, for each reciprocating engine with—

(1) An automatic propeller feathering system, whose operation is initiated by a power output measuring system; or

(2) A total engine piston displacement of 2,000 cubic inches or more.

(u) Position indicating means to indicate to the flight crew when the propeller blade angle is below the flight low pitch position, for each turbopropeller engine propeller.

(v) A means to indicate to the pilot when the propeller is in reverse pitch, for each reversing propeller of reciprocating engines.

(w) A position indicating means to indicate to the flight crew when the thrust reversing device is in the reverse thrust position, for each turbine engine using a thrust reversing device.

§ 25.1307 Miscellaneous equipment.

The following is required miscellaneous equipment:

(a) An approved seat for each occupant.

(b) An approved safety belt for each occupant.

(c) An adequate source of electrical energy.

(d) Electrical protective devices.

(e) A two way radio communication system.

(f) A radio navigation system.

(g) A windshield wiper, or equivalent, for each pilot station.

(h) An ignition switch for each engine meeting the requirements of § 25.1145(b).

(i) An approved portable fire extinguisher.

§ 25.1309 Equipment systems and installations.

(a) The equipment systems and installations whose functioning is required by this subchapter, must be designed and installed to ensure that they perform their intended functions under any foreseeable operating condition.

(b) The equipment systems and installations must be designed to prevent hazards to the airplane if they malfunction or fail.

(c) Each installation whose functioning is required by this subchapter, and that requires a power supply, is an "essential load" on the power supply. The power sources and the system must be able to supply the following power loads in probable operating combinations and for probable durations:

(1) Loads connected to the system with the system functioning normally.

(2) Essential loads, after failure of any one prime mover, power converter, or energy storage device.

(3) Essential loads after failure of—

(i) Any one engine, on two- or three-engine airplanes; and

(ii) Any two engines on four-or-more-engine airplanes.

(d) In determining compliance with paragraph (c) (2) and (3) of this section, the power loads may be assumed to be reduced under a monitoring procedure consistent with safety in the kinds of operation authorized. Loads not required in controlled flight need not be considered for the two-engine-inoperative condition on airplanes with four or more engines.

(e) In showing compliance with paragraphs (a) and (b) of this section with regard to the electrical system and equipment design and installation, critical environmental conditions must be considered. For electrical generation, distribution, and utilization equipment required by or used in complying with this chapter, except equipment covered by Technical Standard Orders containing environmental test procedures, the ability to provide continuous, safe service under foreseeable environmental conditions may be shown by environmental tests, design analysis, or reference to previous comparable service experience on other aircraft.

Instruments: Installation

§ 25.1321 Arrangement and visibility.

(a) Duplicate instrument arrangements at two or more crew stations may be used—

(1) To meet the instrument visibility requirements of this section; and

(2) If required by the operating rules of this chapter for reliability, or cross-check purposes, in particular kinds of operations.

(b) Each flight, navigation, and powerplant instrument for use by any pilot

must be plainly visible to him from his station with the minimum practicable deviation from his normal position and line of vision when he is looking forward along the flight path.

(c) The flight instruments required by § 25.1303 must be grouped on the instrument panel and centered as nearly as practicable about the vertical plane of the pilot's forward vision. In addition—

(1) The instrument that most effectively indicates attitude must be on the panel in the top center position;

(2) The instrument that most effectively indicates airspeed must be adjacent to and directly to the left of the instrument in the top center position;

(3) The instrument that most effectively indicates altitude must be adjacent to and directly to the right of the instrument in the top center position; and

(4) The instrument that most effectively indicates direction of flight must be adjacent to and directly below the instrument in the top center position.

(d) Required powerplant instruments must be closely grouped on the instrument panel. In addition—

(1) The location of identical powerplant instruments for the engines must prevent confusion as to which engine each instrument relates; and

(2) Powerplant instruments vital to the safe operation of the airplane must be plainly visible to the appropriate crewmembers.

(e) Instrument panel vibration may not damage or impair the accuracy of any instrument.

§ 25.1323 Airspeed indicating system.

For each airspeed indicating system, the following apply:

(a) Each airspeed indicating instrument must be approved and must be calibrated to indicate true airspeed (at sea level with a standard atmosphere) with a minimum practicable instrument calibration error when the corresponding pitot and static pressures are applied.

(b) Each system must be calibrated to determine the system error (that is, the relation between IAS and CAS) in flight and during the accelerated takeoff ground run. The ground run calibration must be determined—

(1) From 0.8 of the minimum value of V_1 to the maximum value of V_2, considering the approved ranges of altitude and weight; and

(2) With the flaps and power settings corresponding to the values determined in the establishment of the takeoff path under § 25.59 or § 25.111 assuming that the critical engine fails at the minimum value of V_1.

(c) The airspeed error of the installation, excluding the airspeed indicator instrument calibration error, may not exceed three percent or five knots, whichever is greater, throughout the speed range, from—

(1) V_{MO} to 1.3 V_{S_1} with flaps retracted; and

(2) 1.3 V_{S_0} to V_{FE} with flaps in the landing position.

(b) Each system must be arranged, so far as practicable, to prevent malfunction or serious error due to the entry of moisture, dirt, or other substances.

(e) Each system must have a heated pitot tube or an equivalent means of preventing malfunction due to icing.

(f) Where duplicate airspeed indicators are required, their respective pitot tubes must be far enough apart to avoid damage to both tubes in a collision with a bird.

§ 25.1325 Static air vent and pressure altimeter systems.

(a) Each instrument with static air case connections must be vented to the outside atmosphere through an appropriate piping system.

(b) Each vent must be located where its orifices are least affected by airflow variation moisture, or other foreign matter.

(c) Except for the vent into the atmosphere, each system must be airtight.

(d) Each pressure altimeter must be approved and must be calibrated to indicate pressure altitude in a standard atmosphere, with a minimum practicable calibration error when the corresponding static pressures are applied.

(e) Each system must be designed and installed so that the error in indicated pressure altitude, at sea level, with a standard atmosphere, excluding instrument calibration error, does not result in an error of more than ±30 feet per 100 knots speed for the appropriate configuration in the speed range between 1.3 V_{S_0} with flaps extended and 1.8 V_{S_1} with flaps retracted. However, the error need not be less than ±30 feet.

§ 25.1327 Magnetic direction indicator.

(a) Each magnetic direction indicator must be installed so that its accuracy is not excessively affected by the airplane's vibration or magnetic fields.

(b) The compensated installation may not have a deviation, in level flight, greater than 10 degrees on any heading.

§ 25.1329 Automatic pilot system.

(a) Each automatic pilot system must be approved and must be designed so that the automatic pilot can be quickly and positively disengaged by the pilots to prevent it from interfering with their control of the airplane.

(b) Unless there is automatic synchronization, each system must have a means to readily indicate to the pilot the alignment of the actuating device in relation to the control system it operates.

(c) Each manually operated control for the system must be readily accessible to the pilots.

(d) Quick release (emergency) controls must be on both control wheels, on the side of each wheel opposite the throttles.

(e) Attitude controls must operate in the plane and sense of motion specified in §§ 25.777(b) and 25.779(a) for cockpit controls. The direction of motion must be plainly indicated on, or adjacent to, each control.

(f) The system must be designed and adjusted so that, within the range of adjustment available to the human pilot, it cannot produce hazardous loads on the airplane, or create hazardous deviations in the flight path, under any condition of flight appropriate to its use, either during normal operation or in the event of a malfunction, assuming that corrective action begins within a reasonable period of time.

(g) If the automatic pilot integrates signals from auxiliary controls or furnishes signals for operation of other equipment, there must be positive interlocks and sequencing of engagement to prevent improper operation. Protection against adverse interaction of integrated components, resulting from a malfunction, is also required.

§ 25.1331 Instruments using a power supply.

(a) For each rate-of-turn, bank and pitch, and direction indicator required by § 25.1303(a) (6), (7), and (8), that uses a power supply, the following apply:

(1) Each instrument must have a visual means integral with, or adjacent to, the instrument, to indicate when power adequate to sustain proper instrument performance is not being supplied. The power must be measured at or near the point where it enters the instruments. For electric instruments, the power is considered to be adequate when the voltage is within approved limits.

(2) Each instrument must have two independent power sources and a means for selecting either source. For duplicate independent instruments with independent power sources, source selection is not required.

(3) Each instrument and its related power supply system must be designed and installed so that failure of one instrument, or the failure of the energy supply from one source, or a fault in any part of the power distribution system, does not interfere with the proper supply of energy from the other source.

(b) As used in this section, "instrument" includes devices that are physically contained in one unit, and devices that are composed of two or more physically separate units or components connected together (such as a remote indicating gyroscopic direction indicator that includes a magnetic sensing element, a gyroscopic unit, an amplifier, and an indicator connected together).

§ 25.1333 Duplicate instrument systems.

If duplicate flight instruments are required by any operating rule in this chapter—

(a) Each operating system for flight instruments for the first pilot, and required to be duplicated at other flight crew stations, must be independent of the operating system for other flight crew stations;

(b) Only the required flight instruments, and duplicates of required instruments, provided for the first pilot may be connected to the operating system provided for the first pilot; and

(c) If instruments other than required instruments and their duplicates are connected to systems other than the first pilot's operating system, there must be means to disconnect or isolate these instruments in flight.

§ 25.1337 Powerplant instruments.

(a) *Instrument lines.* Each powerplant instrument line must meet the requirements of §§ 25.993 and 25.1183. Each line carrying flammable fluids or gases under pressure must have restricting orifices or equivalent safety devices, at the source of the pressure, to prevent the escape of excessive fluid or gas if the line fails.

(b) *Fuel quantity indicator.* There must be means to indicate to the flight crewmembers, the quantity, in gallons or equivalent units, of usable fuel in each tank during flight. In addition—

(1) Each fuel quantity indicator must be calibrated to read "zero" during level flight when the quantity of fuel remaining in the tank is equal to the unusable fuel supply determined under § 25.959;

(2) Tanks with interconnected outlets and airspaces may be treated as one tank and need not have separate indicators; and

(3) Each exposed sight gauge, used as a fuel quantity indicator, must be protected against damage.

(c) *Fuel flowmeter system.* If a fuel flowmeter system is installed, each metering component must have a means for bypassing the fuel supply if malfunction of that component severely restricts fuel flow.

(d) *Oil quantity indicator.* There must be a stick gauge or equivalent means to indicate the quantity of oil in each tank. If an oil transfer or reserve oil supply system is installed, there must be a means to indicate to the flight crew, in flight, the quantity of oil in each tank.

(e) *Turbopropeller blade position indicator.* Required turbopropeller blade position indicators must begin indicating before the blade moves more than eight degrees below the flight low pitch stop. The source of indication must directly sense the blade position.

(f) *Fuel pressure indicator.* There must be means to measure fuel pressure, in each system supplying reciprocating engines, at a point downstream of any fuel pump except fuel injection pumps. In addition—

(1) If necessary for the maintenance of proper fuel delivery pressure, there must be a connection to transmit the carburetor air intake static pressure to the proper pump relief valve connection; and

(2) If a connection is required under subparagraph (1) of this paragraph, the gauge balance lines must be independently connected to the carburetor inlet pressure to avoid erroneous readings.

ELECTRICAL SYSTEMS AND EQUIPMENT

§ 25.1351 General.

(a) *Electrical system capacity.* The required generating capacity, and number and kinds of power sources must—

(1) Be determined by an electrical load analysis; and

(2) Meet the requirements of § 25.1309.

(b) *Generating system.* The generating system includes electrical power sources, main power busses, transmission cables, and associated control, regulation, and protective devices. It must be designed so that—

(1) Power sources function properly when independent and when connected in combination;

(2) No failure or malfunction of any power source can create a hazard or impair the ability of remaining sources to supply essential loads;

(3) The system voltage and frequency (as applicable) at the terminals of all essential load equipment can be maintained within the limits for which the equipment is designed, during any probable operating condition; and

(4) System transients due to switching, fault clearing, or other causes do not make essential loads inoperative, and do not cause a smoke or fire hazard.

(5) There are means accessible, in flight, to appropriate crewmembers for the individual and collective disconnection of the electrical power sources from the system.

(6) There are means to indicate to appropriate crewmembers the generating system quantities essential for the safe operation of the system, such as the voltage and current supplied by each generator.

§ 25.1353 Electrical equipment and installations.

(a) Electrical equipment, controls, and wiring must be installed so that operation of any one unit or system of units will not adversely affect the simultaneous operation of any other electrical unit or system essential to the safe operation.

(b) Cables must be grouped, routed, and spaced so that damage to essential circuits will be minimized if there are faults in heavy current-carrying cables.

(c) Storage batteries must be designed and installed as follows:

(1) Safe cell temperatures and pressures must be maintained during any probable charging or discharging condition. No uncontrolled increase in cell temperature may result when the battery is recharged (after previous complete discharge)—

(i) At maximum regulated voltage;

(ii) During a flight of maximum duration; and

(iii) Under the most adverse cooling condition likely to occur in service.

(2) Compliance with subparagraph (1) of this paragraph must be shown by test unless experience with similar batteries and installations has shown that maintaining safe cell temperatures and pressures presents no problem.

(3) No explosive or toxic gases emitted by any battery in normal operation, or as the result of any probable malfunction in the charging system or battery installation, may accumulate in hazardous quantities within the airplane.

(4) No corrosive fluids or gases that may escape from the battery may damage surrounding airplane structures or adjacent essential equipment.

§ 25.1355 Distribution system.

(a) The distribution system includes the distribution busses, their associated feeders, and each control and protective device.

(b) Each system must be designed so that essential load circuits can be supplied in the event of reasonably probable faults or open circuits.

(c) If two independent sources of electrical power for particular equipment or systems are required by this chapter, their electrical energy supply must be ensured by means such as duplicate electrical equipment, throwover switching, or multi-channel or loop circuits separately routed.

§ 25.1357 Circuit protective devices.

(a) Automatic protective devices must be used to minimize distress to the electrical system and hazard to the airplane in the event of wiring faults or serious malfunction of the system or connected equipment.

(b) The protective and control devices in the generating system must be designed to de-energize and disconnect faulty power sources and power transmission equipment from their associated busses with sufficient rapidity to provide protection from hazardous over-voltage and other malfunctioning.

(c) Each resettable circuit protective device must be designed so that, when an overload or circuit fault exists, it will open the circuit irrespective of the position of the operating control.

(d) If the ability to reset a circuit breaker or replace a fuse is essential to safety in flight, that circuit breaker or fuse must be located and identified so that it can be readily reset or replaced in flight.

(e) Each circuit for essential loads must have individual circuit protection. However, individual protection for each circuit in an essential load system (such as each position light circuit in a system) is not required.

(f) If fuses are used, there must be spare fuses for use in flight equal to at least 50 percent of the number of fuses of each rating required for complete circuit protection.

(g) Automatic reset circuit breakers may be used as integral protectors for electrical equipment (such as thermal cut-outs) if there is circuit protection to protect the cable to the equipment.

§ 25.1359 Electrical system fire and smoke protection.

(a) Components of the electrical system must meet the applicable fire and smoke protection requirements of §§ 25.831(c), 25.863, and 25.1205.

(b) Electrical cables, terminals, and equipment in designated fire zones, that are used during emergency procedures, must be at least fire-resistant.

§ 25.1363 Electrical system tests.

(a) When laboratory tests of the electrical system are conducted—

(1) The tests must be performed on a mock-up using the same generating equipment used in the airplane;

(2) The equipment must simulate the electrical characteristics of the distribution wiring and connected loads to the extent necessary for valid test results; and

(3) Laboratory generator drives must simulate the actual prime movers on the airplane with respect to their reaction to generator loading, including loading due to faults.

(b) For each flight condition that cannot be simulated adequately in the laboratory or by ground tests on the airplane, flight tests must be made.

§ 25.1369 Lightning strike protection.

Parts that are electrically insulated from the basic airframe must be connected to it through lightning arrestors unless a lightning strike on the insulated part—

(a) Is improbable because of shielding by other parts; or

(b) Is not hazardous.

LIGHTS

§ 25.1381 Instrument lights.

(a) The instrument lights must—

(1) Make each instrument, switch, and other device for which they are provided easily readable; and

(2) Be installed so that—

(i) Their direct rays are shielded from the pilot's eyes; and

(ii) No objectionable reflections are visible to the pilot.

(b) Unless undimmed instrument lights are satisfactory under each expected flight condition, there must be a means to control the intensity of illumination.

§ 25.1383 Landing lights.

(a) Each landing light must be approved, and must be installed so that—

(1) No objectionable glare is visible to the pilot;

(2) The pilot is not adversely affected by halation; and

(3) It provides enough light for night landing.

(b) Except when one switch is used for the lights of a multiple light installation at one location, there must be a separate switch for each light.

(c) There must be a means to indicate to the pilots when the landing lights are extended.

§ 25.1385 Position light system installation.

(a) *General.* Each part of each position light system must meet the applicable requirements of this section and each system as a whole must meet the requirements of §§ 25.1387 through 25.1397.

(b) *Forward position lights.* Forward position lights must consist of a red and a green light spaced laterally as far apart as practicable and installed forward on the airplane so that, with the airplane in the normal flying position, the red light is on the left side and the green light is on the right side. Each light must be approved.

(c) *Rear position light.* The rear position light must be a white light mounted as far aft as practicable, and must be approved.

(d) *Light covers and color filters.* Each light cover or color filter must be at least flame resistant and may not change color or shape or lose any appreciable light transmission during normal use.

(e) *Passing light.* If an additional steady red light (commonly known as a passing light) is installed, it must be—

(1) Within the left landing light unit;

(2) On the centerline of the airplane nose; or

(3) In the leading edge of the left wing, outboard of the propeller disc.

§ 25.1387 Position light system dihedral angles.

(a) Each forward and rear position light must, as installed, show unbroken light within the dihedral angles described in this section.

(b) Dihedral angle *L* (left) is formed by two intersecting vertical planes, the first parallel to the longitudinal axis of the airplane, and the other at 110 degrees to the left of the first, as viewed when looking forward along the longitudinal axis.

(c) Dihedral angle *R* (right) is formed by two intersecting vertical planes, the first parallel to the longitudinal axis of the airplane, and the other at 110 degrees to the right of the first, as viewed when looking forward along the longitudinal axis.

(d) Dihedral angle *A* (aft) is formed by two intersecting vertical planes making angles of 70 degrees to the right and to the left, respectively, to a vertical plane passing through the longitudinal axis, as viewed when looking aft along the longitudinal axis.

§ 25.1389 Position light distribution and intensities.

(a) *General.* The intensities prescribed in this section must be provided by new equipment with light covers and color filters in place. Intensities must be determined with the light source operating at a steady value equal to the average luminous output of the source at the normal operating voltage of the airplane. The light distribution and intensity of each position light must meet the requirements of paragraph (b) of this section.

(b) *Forward and rear position lights.* The light distribution and intensities of forward and rear position lights must be expressed in terms of minimum intensities in the horizontal plane, minimum intensities in any vertical plane, and maximum intensities in overlapping beams, within dihedral angles *L*, *R*, and *A*, and must meet the following requirements:

(1) *Intensities in the horizontal plane.* Each intensity in the horizontal plane (the plane containing the longitudinal axis of the airplane and perpendicular to the plane of symmetry of the airplane) must equal or exceed the values in § 25.1391.

(2) *Intensities in any vertical plane.* Each intensity in any vertical plane (the plane perpendicular to the horizontal plane) must equal or exceed the appropriate value in § 25.1393, where *I* is the minimum intensity prescribed in § 25.1391 for the corresponding angles in the horizontal plane.

(3) *Intensities in overlaps between adjacent signals.* No intensity in any overlap between adjacent signals may exceed the values given in § 25.1395, except that higher intensities in overlaps may be used with main beam intensities substantially greater than the minima specified in §§ 25.1391 and 25.1393 if the overlap intensities in relation to the main beam intensities do not adversely affect signal clarity. When the peak intensity of the forward position lights is more than 100 candles, the maximum overlap intensities between them may exceed the values given in § 25.1395 if the overlap intensity in Area A is not more than 10 percent of peak position light intensity and the overlap intensity in Area B is not greater than 2.5 percent of peak position light intensity.

§ 25.1391 Minimum intensities in the horizontal plane of forward and rear position lights.

Each position light intensity must equal or exceed the applicable values in the following table:

Dihedral angle (light included)	Angle from right or left of longitudinal axis, measured from dead ahead	Intensity (candles)
L and *R* (forward red and green).	0° to 10°	40
	10° to 20°	30
	20° to 110°	5
A (rear white)	110° to 180°	20

§ 25.1393 Minimum intensities in any vertical plane of forward and rear position lights.

Each position light intensity must equal or exceed the applicable values in the following table:

Angle above or below the horizontal plane:	*Intensity*
0°	1.00 *I*.
0° to 5°	0.90 *I*.
5° to 10°	0.80 *I*.
10° to 15°	0.70 *I*.
15° to 20°	0.50 *I*.
20° to 30°	0.30 *I*.
30° to 40°	0.10 *I*.
40° to 90°	0.05 *I*.

§ 25.1395 Maximum intensities in overlapping beams of forward and rear position lights.

No position light intensity may exceed the applicable values in the following table, except as provided in § 25.1389 (b) (3).

Overlaps	Maximum intensity	
	Area A (candles)	Area B (candles)
Green in dihedral angle *L*	10	1
Red in dihedral angle *R*	10	1
Green in dihedral angle *A*	5	1
Red in dihedral angle *A*	5	1
Rear white in dihedral angle *L*	5	1
Rear white in dihedral angle *R*	5	1

Where—

(a) Area A includes all directions in the adjacent dihedral angle that pass through the light source and intersect the common boundary plane at more than 10 degrees but less than 20 degrees; and

(b) Area B includes all directions in the adjacent dihedral angle that pass through the light source and intersect the common boundary plane at more than 20 degrees.

§ 25.1397 Color specifications.

Each position light color must have the applicable International Commission on Illumination chromaticity coordinates as follows:

(a) *Aviation red*—

"y" is not greater than 0.335; and
"z" is not greater than 0.002.

(b) *Aviation green*—

"x" is not greater than $0.440-0.320y$;
"x" is not greater than $y-0.170$; and
"y" is not less than $0.390-0.170x$.

(c) *Aviation white*—

"x" is not less than 0.350;
"x" is not greater than 0.540; and
"$y-y_0$" is not numerically greater than 0.01, "y_0" being the y coordinate of the Planckian radiator for which $x_0=x$.

§ 25.1399 Riding light.

(a) Each riding (anchor) light required for a seaplane or amphibian must be installed so that it can—

(1) Show a white light for at least two nautical miles at night under clear atmospheric conditions; and

(2) Show the maximum unbroken light practicable when the airplane is moored or drifting on the water.

(b) Externally hung lights may be used.

§ 25.1401 Anticollision light system.

(a) *General.* The airplane must have an anticollision light system that—

(1) Consists of one or more approved anticollision lights located so that their light will not impair the crew's vision or detract from the conspicuity of the position lights; and

(2) Meets the requirements of paragraphs (b) through (f) of this section.

(b) *Field of coverage.* The system must consist of enough lights to illuminate the vital areas around the airplane considering the physical configuration and flight characteristics of the airplane. The field of coverage must extend in each direction within at least 30 degrees above and 30 degrees below the horizontal plane of the airplane, except that a solid angle or angles of obstructed visibility totaling not more than 0.03 steradians is allowable within a solid angle equal to 0.15 steradians centered about the longitudinal axis in the rearward direction.

(c) *Flashing characteristics.* The arrangement of the system, that is, the number of light sources, beam width, speed of rotation, and other characteristics, must give an effective flash frequency of not less than 40, nor more than 100, cycles per minute. The effective flash frequency is the frequency at which the airplane's complete anticollision light system is observed from a distance, and applies to each sector of light including any overlaps that exist when the system consists of more than one light source. In overlaps, flash frequencies may exceed 100, but not 180, cycles per minute.

(d) *Color.* Each anticollision light must be aviation red and must meet the requirements of § 25.1397(a).

(e) *Light intensity.* The minimum light intensities in all vertical planes, measured with the red filter and expressed in terms of "effective" intensities, must meet the requirements of paragraph (f) of this section. The following relation must be assumed:

$$I_e=\frac{\int_{t_1}^{t_2} I(t)\,dt}{0.2+(t_2-t_1)};$$

where:

I_e=effective intensity (candles).
$I(t)$=instantaneous intensity as a function of time.
t_2-t_1=flash time interval (seconds).

Normally, the maximum value of effective intensity is obtained when t_2 and t_1 are chosen so that the effective intensity is equal to the instantaneous intensity at t_2 and t_1.

(f) *Minimum effective intensities for anticollision lights.* Each anticollision light effective intensity must equal or exceed the applicable values in the following table.

Angle above or below the horizontal plane:	*Effective intensity (candles)*
0° to 5°	100
5° to 10°	60
10° to 20°	20
20° to 30°	10

SAFETY EQUIPMENT

§ 25.1411 General.

(a) *Accessibility.* Required safety equipment to be used by the crew in an emergency, such as automatic liferaft releases, must be readily accessible.

(b) *Stowage provisions.* Stowage provisions for required emergency equipment must be furnished and must—

(1) Be arranged so that the equipment is directly accessible and its location is obvious; and

(2) Protect the safety equipment from inadvertent damage.

(c) *Emergency exit descent device.* The stowage provisions for the emergency exit descent device required by § 25.807(c)(4) must be at the exits for which they are intended.

(d) *Liferafts.* The stowage provisions for the liferafts described in § 25.1415 must accommodate enough rafts for the maximum number of occupants for which certification for ditching is requested. Liferafts must be stowed near exits through which the rafts can be launched during an unplanned ditching. Rafts automatically or remotely released outside the airplane must be attached to the airplane by means of the static line prescribed in § 25.1415.

(e) *Long-range signaling device.* The stowage provisions for the long-range signaling device required by § 25.1415 must be near an exit available during an unplanned ditching.

(f) *Life preserver stowage provisions.* The stowage provisions for life preservers described in § 25.1415 must accommodate one life preserver for each occupant for which certification for ditching is requested. Each life preserver must be within easy reach of each seated occupant.

(g) *Life line stowage provisions.* If certification for ditching under § 25.801 is requested, there must be provisions to store life lines. These provisions must—

(1) Allow one life line to be attached to each side of the fuselage; and

(2) Be arranged to allow the life lines to be used to enable the occupants to stay on the wing after ditching.

§ 25.1413 Safety belts.

(a) If there are means to indicate to the passengers when safety belts should be fastened, they must be installed to be operated from either pilot seat.

(b) The rated strength of safety belts may not be less than that required to withstand the ultimate load factors specified in § 25.561, considering the dimensional characteristics of the belt installation for the specific seat or berth arrangement.

(c) Each belt must be attached so that no part of the anchorage can fail at a load lower than that which would result from the application of ultimate load factors equal to those specified in § 25.561, multiplied by a factor of 1.33. This factor must be used instead of the fitting factor prescribed in § 25.625. The forward load factor need not be applied to safety belts for berths.

§ 25.1415 Ditching equipment.

(a) Ditching equipment used in airplanes to be certificated for ditching under § 25.801, and operated under the operating rules of this chapter, must meet the requirements of this section.

(b) Each liferaft and each life preserver must be approved. In addition—

(1) Unless excess rafts of enough capacity are provided, the buoyancy and seating capacity beyond the rated capacity of the rafts must accommodate all occupants of the airplane in the event of a loss of one raft of the largest rated capacity; and

(2) Each raft must have a trailing line, and must have a static line designed to hold the raft near the airplane but to release it if the airplane becomes totally submerged.

(c) Approved survival equipment must be attached to each liferaft.

(d) There must be an approved long-range signaling device for use in one liferaft.

(e) For airplanes not certificated for ditching under § 25.801 and not having approved life preservers, there must be an approved flotation means for each occupant. This means must be within easy reach of each seated occupant and must be readily removable from the airplane.

§ 25.1419 Ice protection.

(a) If certification with ice protection provisions is desired, compliance with this section must be shown.

(b) The airplane must be able to safely operate in the continuous maximum and intermittent maximum icing conditions determined under Appendix C. An analysis must be performed to establish, on the basis of the airplane's operational needs, the adequacy of the

ice protection system for the various components of the airplane.

(c) In addition to the analysis and physical evaluation prescribed in paragraph (b) of this section, the effectiveness of the ice protection system and its components must be shown by—

(1) Laboratory dry air or simulated icing tests, or a combination of both, of the components or models of the components;

(2) Flight dry air tests of the ice protection system as a whole, or of its individual components;

(3) Flight tests of the airplane or its components in measured simulated icing conditions; or

(4) Flight tests of the airplane in measured natural atmospheric icing conditions.

(d) For turbine engine powered airplanes, the ice protection provisions of this section are considered to be applicable primarily to the airframe. For the powerplant installation, certain additional provisons of Subpart E of this part may be found applicable.

MISCELLANEOUS EQUIPMENT

§ 25.1431 Electronic equipment.

(a) In showing compliance with § 25.1309 (a) and (b) with respect to radio and electronic equipment and their installations, critical environmental conditions must be considered.

(b) Radio and electronic equipment must be supplied with power under the requirements of § 25.1355(c).

(c) Radio and electronic equipment, controls, and wiring must be installed so that operation of any one unit or system of units will not adversely affect the simultaneous operation of any other radio or electronic unit, or system of units, required by this chapter.

§ 25.1433 Vacuum systems.

(a) There must be means, in addition to the normal pressure relief, to automatically relieve the pressure in the discharge lines from the vacuum air pump when the delivery temperature of the air becomes unsafe.

(b) Each vacuum air system line and fitting on the discharge side of the pump that might contain flammable vapors or fluids must meet the requirements of § 25.1183 if they are in a designated fire zone.

(c) Other vacuum air system components in designated fire zones must be at least fire resistant.

§ 25.1435 Hydraulic systems.

(a) *Design.* Each hydraulic system must be designed as follows:

(1) Each element of the hydraulic system must be designed to withstand, without detrimental, permanent deformation, any structural loads that may be imposed simultaneously with the maximum operating hydraulic loads.

(2) Each element of the hydraulic system must be designed to withstand pressures sufficiently greater than those prescribed in paragraph (b) of this section to show that the system will not rupture under service conditions.

(3) There must be means to indicate the pressure in each main hydraulic power system.

(4) There must be means to ensure that no pressure in any part of the system will exceed a safe limit above the maximum operating pressure of the system, and to prevent excessive pressures resulting from any fluid volumetric change in lines likely to remain closed long enough for such a change to take place. The possibility of detrimental transient (surge) pressures during operation must be considered.

(5) Each hydraulic line, fitting, and component must be installed and supported to prevent excessive vibration and to withstand inertia loads. Each element of the installation must be protected from abrasion, corrosion, and mechanical damage.

(6) Means for providing flexibility must be used to connect points in a hydraulic fluid line, between which relative motion or differential vibration exists.

(b) *Tests.* Each element of the system must be tested to a proof pressure of 1.5 times the maximum pressure to which that element will be subjected in normal operation, without failure, malfunction, or detrimental deformation of any part of the system.

(c) *Fire protection.* Each hydraulic system using flammable hydraulic fluid must meet the applicable requirements of §§ 25.863, 25.1183, 25.1185, and 25.1189.

§ 25.1439 Protective breathing equipment.

(a) If there is a class A, B, or E cargo compartment, protective breathing equipment must be installed for the use of appropriate crewmembers.

(b) For protective breathing equipment required by paragraph (a) of this section or by any operating rule of this chapter, the following apply:

(1) The equipment must be designed to protect the flight crew from smoke, carbon dioxide, and other harmful gases while on flight deck duty and while combating fires in cargo compartments.

(2) The equipment must include—

(i) Masks covering the eyes, nose, and mouth; or

(ii) Masks covering the nose and mouth, plus accessory equipment to cover the eyes.

(3) The equipment, while in use, must allow the flight crew to use the radio equipment and to communicate with each other, while at their assigned duty stations.

(4) The part of the equipment protecting the eyes may not cause any appreciable adverse effect on vision and must allow corrective glasses to be worn.

(5) The equipment must supply protective oxygen of 15 minutes duration per crewmember at a pressure altitude of 8,000 feet with a respiratory minute volume of 30 liters per minute BTPD. If a demand oxygen system is used, a supply of 300 liters of free oxygen at 70° F. and 760 mm. Hg. pressure is considered to be of 15-minute duration at the prescribed altitude and minute volume. If a continuous flow protective breathing system is used (including a mask with a standard rebreather bag) a flow rate of 60 liters per minute at 8,000 feet (45 liters per minute at sea level) and a supply of 600 liters of free oxygen at 70° F. and 760 mm. Hg. pressure is considered to be of 15-minute duration at the prescribed altitude and minute volume. BTPD refers to body temperature conditions (that is, 37° C., at ambient pressure, dry).

(6) The equipment must meet the requirements of paragraphs (b) and (c) of § 25.1441.

§ 25.1441 Oxygen equipment and supply.

(a) If certification with supplemental oxygen equipment is requested, the equipment must meet the requirements of this section and §§ 25.1443 through 25.1453.

(b) The oxygen system must be free from hazards in itself, in its method of operation, and in its effect upon other components.

(c) There must be a means to allow the crew to readily determine, during flight, the quantity of oxygen available in each source of supply.

(d) The oxygen flow rate and the oxygen equipment for airplanes for which certification for operation above 40,000 feet is requested must be approved.

§ 25.1443 Minimum mass flow of supplemental oxygen.

(a) If continuous flow equipment is installed for use by flight crewmembers, the minimum mass flow of supplemental oxygen required for each crewmember may not be less than the flow required to maintain, during inspiration, a mean tracheal oxygen partial pressure of 149 mm. Hg. when breathing 15 liters per minute, BTPS, and with a maximum tidal volume of 700 cc. with a constant time interval between respirations.

(b) If demand equipment is installed for use by flight crewmembers, the minimum mass flow of supplemental oxygen required for each crewmember may not be less than the flow required to maintain, during inspiration, a mean tracheal oxygen partial pressure of 122 mm. Hg., up to and including a cabin pressure altitude of 35,000 feet, and 95 percent oxygen between cabin pressure altitudes of 35,000 and 40,000 feet, when breathing 20 liters per minute BTPS. In addition, there must be means to allow the crew to use undiluted oxygen at their discretion.

(c) For passengers and cabin attendants, the minimum mass flow of supplemental oxygen required for each person at various cabin pressure altitudes may not be less than the flow required to maintain, during inspiration and while using the oxygen equipment (including masks) provided, the following mean tracheal oxygen partial pressures:

(1) At cabin pressure altitudes above 10,000 feet up to and including 18,500 feet, a mean tracheal oxygen partial pressure of 100 mm. Hg. when breathing 15 liters per minute, BTPS, and with a tidal volume of 700 cc. with a constant time interval between respirations.

(2) At cabin pressure altitudes above 18,500 feet up to and including 40,000 feet, a mean tracheal oxygen partial pressure of 83.8 mm. Hg. when breathing

30 liters per minute, BTPS, and with a tidal volume of 1,100 cc. with a constant time interval between respirations.

(d) If first-aid oxygen equipment is installed, the minimum mass flow of oxygen to each user may not be less than four liters per minute, STPD. However, there may be a means to decrease this flow to not less than two liters per minute, STPD, at any cabin altitude. The quantity of oxygen required is based upon an average flow rate of three liters per minute per person for whom first-aid oxygen is required.

(e) If portable oxygen equipment is installed for use by crewmembers, the minimum mass flow of supplemental oxygen is the same as specified in paragraph (a) or (b) of this section, whichever is applicable.

§ 25.1445 Equipment standards for the oxygen distributing system.

(a) When oxygen is supplied to both crew and passengers, the distribution system must be designed for either—

(1) A source of supply for the flight crew on duty and a separate source for the passengers and other crewmembers; or

(2) A common source of supply with means to separately reserve the minimum supply required by the flight crew on duty.

(b) Portable walk-around oxygen units of the continuous flow, diluter-demand, and straight demand kinds may be used to meet the crew or passenger breathing requirements.

§ 25.1447 Equipment standards for oxygen dispensing units.

If oxygen dispensing units are installed, the following apply:

(a) There must be an individual dispensing unit for each occupant for whom supplemental oxygen is to be supplied. Units must be designed to cover the nose and mouth and must be equipped with a suitable means to retain the unit in position on the face. Flight crew masks for supplemental oxygen must have provisions for the use of communication equipment.

(b) If certification for operation up to and including 25,000 feet is requested, an oxygen supply terminal and unit of oxygen dispensing equipment for the immediate use of oxygen by each crewmember must be within easy reach of that crewmember. For any other occupants, the supply terminals and dispensing equipment must be located to allow the use of oxygen as required by the operating rules in this chapter.

(c) If certification for operation above 25,000 feet is requested, there must be oxygen dispensing equipment meeting the following requirements:

(1) There must be an oxygen dispensing unit connected to oxygen supply terminals immediately available to each occupant, wherever seated. If certification for operation above 30,000 feet is requested, the dispensing units providing the required oxygen flow rate must be automatically presented to the occupants. The total number of dispensing units and outlets must exceed the number of seats by at least 10 percent. The extra units must be as uniformly distributed throughout the cabin as practicable.

(2) Crewmembers on flight deck duty must be provided with demand equipment. In addition, there must be an oxygen dispensing unit, connected to an oxygen supply terminal, immediately available to each flight crewmember when seated at his station.

(3) There must be at least two outlets and units of dispensing equipment of a type similar to that required by subparagraph (1) of this paragraph in—

(i) Each washroom; and

(ii) Each lavatory, if separate from the washroom.

(4) Portable oxygen equipment must be immediately available for each cabin attendant.

§ 25.1449 Means for determining use of oxygen.

There must be a means to allow the crew to determine whether oxygen is being delivered to the dispensing equipment.

§ 25.1451 Fire protection for oxygen equipment.

(a) Oxygen equipment and lines may not be in any designated fire zone.

(b) Oxygen equipment and lines must be protected from heat that may be generated in, or escape from, any designated fire zone.

(c) Oxygen equipment and lines must be installed so that escaping oxygen cannot cause ignition of grease, fluid, or vapor accumulations that are present in normal operation or as a result of failure or malfunction of any system.

§ 25.1453 Protection of oxygen equipment from rupture.

Oxygen pressure tanks, and lines between tanks and the shutoff means, must be—

(a) Protected from unsafe temperatures; and

(b) Located where the probability and hazards of rupture in a crash landing are minimized.

§ 25.1455 Draining of fluids subject to freezing.

If fluids subject to freezing may be drained overboard in flight or during ground operation, the drains must be designed and located to prevent the formation of ice on the airplane as a result of the drainage.

§ 25.1457 Cockpit voice recorders.

(a) Each cockpit voice recorder required by the operating rules of this chapter must be approved and must be installed so that it will record—

(1) Voice communications transmitted from or received in the airplane by radio;

(2) Voice communications of flight crewmembers on the flight deck;

(3) Voice communications of flight crewmembers on the flight deck, using the airplane's interphone system;

(4) Voice communications of flight crewmembers using the loud speaker system (if there is one); and

(5) Voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

(b) The recording requirements of paragraph (a) (2) of this section must be met by installing one or more cockpit-mounted area microphones arranged to pick up continuously any voice communication by flight crewmembers when at their assigned stations on the flight deck. The microphones must be located, and the preamplifiers and filters of the recorder must be adjusted or supplemented, if necessary, so that the intelligibility of the recorded communications will be as high as practicable, when recorded under flight cockpit noise conditions and played back. Repeated aural or visual playback of the record may be used in evaluating intelligibility.

(c) Each cockpit voice recorder must be installed so that the part of the communication or audio signals specified in paragraph (a) of this section obtained from each of the following sources is recorded on a separate channel:

(1) For the first channel, from each microphone, headset, or speaker used at the first pilot station.

(2) For the second channel, from each microphone, headset, or speaker used at the second pilot station.

(3) For the third channel, from the cockpit-mounted area microphone best located for recording voice communications originating at the first and second pilot stations.

(4) For the fourth channel, from each other source including—

(i) Each second cockpit-mounted area microphone, if one is required for any required flight crewmember station other than the first or second pilot station;

(ii) Each microphone, headset, or speaker used at the station for a third crewmember (if required), if the signals at that station are not picked up by another channel; and

(iii) Each microphone on the flight deck that is used with the airplane's loud speaker system, if its signals are not picked up by another channel.

(d) Each cockpit voice recorder must be installed so that—

(1) It receives its electric power from the bus that provides the maximum reliability for operation of the cockpit voice recorder without jeopardizing service to essential or emergency loads;

(2) There is an automatic means to stop each erasure feature from functioning at the instant of crash impact; and

(3) There is an aural or visual means for preflight checking of the recorder for proper operation.

(e) The record container must be located and mounted to minimize the probability of rupture of the container as a result of crash impact and consequent heat damage to the record from fire. In meeting this requirement, the record container must be as far aft as practicable, but may not be where aft mounted engines may crush the container during impact. However, it need not be outside of the pressurized compartment.

(f) If the cockpit voice recorder has a bulk erasure device, the installation must be designed to minimize the probability of inadvertent operation and actuation of the device during crash impact.

(g) Each recorder container must be bright orange.

Subpart G—Operating Limitations and Information

§ 25.1501 General.

Each operating limitation specified in §§ 25.1503 through 25.1533 and other information necessary for safe operation must be—

(a) Included in the Airplane Flight Manual;

(b) Expressed in markings and placards; and

(c) Made available by any other means that will convey the information to the crewmembers.

OPERATING LIMITATIONS

§ 25.1503 Airspeed limitations: general.

When airspeed limitations are a function of weight, weight distribution, altitude, or Mach number, limitations corresponding to each critical combination of these factors must be established.

§ 25.1505 Maximum operating limit speed.

(a) The maximum operating limit speed (V_{MO}/M_{MO}—airspeed or Mach number, whichever is critical at a particular altitude) is a speed that may not be deliberately exceeded in any regime of flight (climb, cruise, or descent), unless a higher speed is authorized for flight test or pilot training operations. V_{MO}/M_{MO} must be established so that it is not greater than the design cruising speed V_C and so that it is sufficiently below V_D/M_D or V_{DF}/M_{DF} to make it highly improbable that the latter speeds will be inadvertently exceeded in operations. The speed margin between V_{MO}/M_{MO} and V_D/M_D or V_{DF}/M_{DF} must be determined under the detailed requirements of paragraph (b) of this section or may be selected in accordance with paragraph (c) of this section. However, the speed margin may not be less than the margin found necessary in the flight tests conducted under § 25.253.

(b) The minimum speed margin is the greater of the values determined under subparagraphs (1) and (2) of this paragraph:

(1) From an initial condition of stabilized flight at V_{MO}/M_{MO}, the airplane is assumed to be upset, flown for 20 seconds along a flight path 7.5 degrees below the initial path, and then pulled up at a load factor of 1.5 (.5g acceleration increment). The speed increase occurring in this maneuver may be calculated if reliable or conservative aerodynamic data are used. Power, as specified in § 25.173(a), is assumed until the pullup is initiated, at which time power reduction and the use of pilot controlled drag devices may be assumed.

(2) The minimum speed margin must be enough to provide for atmospheric variations (such as horizontal gusts, penetration of jet stream or cold front) and for instrument errors and airframe production variations. These factors may be considered on a probability basis. However, the margin at altitudes where M_{MO} is limited by compressibility effects may not be less than 0.05M.

(c) The minimum speed margin may be chosen so that V_{MO}/M_{MO} is not greater than $0.8\ V_D/M_D$ or $0.8\ V_{DF}/M_{DF}$.

§ 25.1507 Maneuvering speed.

The maneuvering speed must be established so that it does not exceed the design maneuvering speed V_A determined under § 25.335(c).

§ 25.1511 Flap extended speed.

The established flap extended speed V_{FE} must be established so that it does not exceed the design flap speed V_F chosen under §§ 25.335(e) and 25.345, for the corresponding flap positions and engine powers.

§ 25.1513 Minimum control speed.

The minimum control speed V_{MC} determined under § 25.149 must be established as an operating limitation.

§ 25.1515 Landing gear speeds.

(a) The established landing gear operating speed V_{LO} may not exceed the speed at which it is safe to extend or retract the landing gear, as determined under § 25.729 or by flight characteristics.

(b) The established landing gear extended speed V_{LE} may not exceed the speed at which it is safe to fly with the landing gear secured in the fully extended position, and that determined under § 25.729.

§ 25.1519 Weight, center of gravity, and weight distribution.

The airplane weight, center of gravity, and weight distribution limitations determined under §§ 25.23 through 25.27 must be established as operating limitations.

§ 25.1521 Powerplant limitations.

(a) *General.* The powerplant limitations prescribed in this section must be established so that they do not exceed the corresponding limits for which the engines or propellers are type certificated.

(b) *Takeoff operation.* The powerplant takeoff operation must be limited by—

(1) The maximum rotational speed (r.p.m.);

(2) The maximum allowable manifold pressure (for reciprocating engines);

(3) The maximum allowable gas temperature (for turbine engines);

(4) The time limit for the use of the power or thrust corresponding to the limitations established in subparagraphs (1) through (3) of this paragraph; and

(5) If the time limit established in subparagraph (4) of this paragraph exceeds two minutes, or if the maximum cylinder head and oil temperatures differ from the maximum limits for continuous operation, the maximum allowable cylinder head (for reciprocating engines) and oil temperatures.

(c) *Continuous operation.* The continuous operation must be limited by—

(1) The maximum rotational speed;

(2) The maximum allowable manifold pressure (for reciprocating engines):

(3) The maximum allowable gas temperature (for turbine engines); and

(4) The maximum allowable cylinder head and oil temperatures.

(d) *Fuel grade or designation.* The minimum fuel grade (for reciprocating engines), or fuel designation (for turbine engines), must be established so that it is not less than that required for the operation of the engines within the limitations in paragraphs (b) and (c) of this section.

(e) *Ambient temperature.* Ambient temperature limitations must be established as the maximum ambient atmospheric temperature at which compliance with the cooling provisions of §§ 25.1041 through 25.1045 is shown.

§ 25.1523 Minimum flight crew.

The minimum flight crew must be established so that it is sufficient for safe operation, considering—

(a) The workload on individual crewmembers;

(b) The accessibility and ease of operation of necessary controls by the appropriate crewmember; and

(c) The kind of operation authorized under § 25.1525.

§ 25.1525 Kinds of operation.

The kinds of operation to which the airplane is limited are established by the category in which it is eligible for certification and by the installed equipment.

§ 25.1527 Maximum operating altitude.

The maximum altitude up to which operation is allowed, as limited by flight, structural, powerplant, functional, or equipment characteristics, must be established.

§ 25.1531 Maneuvering flight load factors.

Load factor limitations, not exceeding the positive limit load factors determined from the maneuvering diagram in § 25.333(b), must be established.

§ 25.1533 Additional operating limitations for turbine engine powered airplanes.

(a) Additional operating limitations for turbine engine powered airplanes must be established as follows:

(1) The maximum takeoff weights must be established as the weights at which compliance is shown with the applicable provisions of this part (including the takeoff climb provisions of § 25.121(a) through (c), for altitudes and ambient temperatures).

(2) The maximum landing weights must be established as the weights at which compliance is shown with the applicable provisions of this part (including the landing and takeoff climb provisions of §§ 25.119 and 25.121 for altitudes and ambient temperatures).

(3) The minimum takeoff distances must be established as the distances at which compliance is shown with the applicable provisions of this part (including the provisions of §§ 25.109 and 25.113, for weights, altitudes, temperatures, wind components, and runway gradients).

(b) The extremes for variable factors (such as altitude, temperature, wind, and runway gradients) are those at which compliance with the applicable provisions of this part is shown.

MARKINGS AND PLACARDS

§ 25.1541 General.

(a) The airplane must contain—

(1) The specified markings and placards; and

(2) Any additional information, instrument markings, and placards required for the safe operation if there are unusual design, operating, or handling characteristics.

(b) Each marking and placard prescribed in paragraph (a) of this section—

(1) Must be displayed in a conspicuous place; and

(2) May not be easily erased, disfigured, or obscured.

§ 25.1543 Instrument markings: general.

For each instrument—

(a) When markings are on the cover glass of the instrument, there must be means to maintain the correct alignment of the glass cover with the face of the dial; and

(b) Each arc and line must be wide enough, and located, to be clearly visible to the pilot.

§ 25.1545 Airspeed limitation information.

The airspeed limitations required by § 25.1583(a) must be easily read and understood by the flight crew.

§ 25.1547 Magnetic direction indicator.

(a) A placard meeting the requirements of this section must be installed on, or near, the magnetic direction indicator.

(b) The placard must show the calibration of the instrument in level flight with the engines operating.

(c) The placard must state whether the calibration was made with radio receivers on or off.

(d) Each calibration reading must be in terms of magnetic heading in not more than 45 degree increments.

§ 25.1549 Powerplant instruments.

For each required powerplant instrument—

(a) Each maximum and, if applicable, minimum safe operating limit must be marked with a red radial line;

(b) Each normal operating range must be marked with a green arc not extending beyond the maximum and minimum safe operating limits; and

(c) Each takeoff and precautionary range must be marked with a yellow arc.

(d) Each engine or propeller speed range that is restricted because of excessive vibration stresses must be marked with red arcs.

§ 25.1551 Oil quantity indicator.

Each oil quantity indicator must be marked with enough increments to indicate readily and accurately the quantity of oil.

§ 25.1553 Fuel quantity indicator.

If the unusable fuel supply for any tank exceeds one gallon, or five percent of the tank capacity, whichever is greater, a red arc must be marked on its indicator extending from the calibrated zero reading to the lowest reading obtainable in level flight.

§ 25.1555 Control markings.

(a) Each cockpit control, other than primary flight controls and controls whose function is obvious, must be plainly marked as to its function and method of operation.

(b) Each aerodynamic control must be marked under the requirements of §§ 25.677 and 25.699.

(c) For powerplant fuel controls—

(1) Each fuel tank selector control must be marked to indicate the position corresponding to each tank and to each existing cross feed position;

(2) If safe operation requires the use of any tanks in a specific sequence, that sequence must be marked on, or adjacent to, the selector for those tanks; and

(3) Each valve control for each engine must be marked to indicate the position corresponding to each engine controlled.

(d) For accessory, auxiliary, and emergency controls—

(1) Each emergency control (including each fuel jettisoning and fluid shutoff control) must be colored red; and

(2) Each visual indicator required by § 25.729(e) must be marked so that the pilot can determine at any time when the wheels are locked in either extreme position, if retractable landing gear is used.

§ 25.1557 Miscellaneous markings and placards.

(a) *Baggage and cargo compartments, and ballast location.* Each baggage and cargo compartment, and each ballast location must have a placard stating any limitations on contents, including weight, that are necessary under the loading requirements.

(b) *Fuel and oil filler openings.* The following must be marked on, or near, each appropriate filler cover:

(1) The word "fuel", the minimum fuel grade or designation for the engines, and the usable fuel tank capacity.

(2) The word "oil" and the oil tank capacity.

(c) *Emergency exit placards.* Each emergency exit placard must meet the requirements of § 25.811.

(d) *Doors.* Each door that must be used in order to reach any required emergency exit must have a suitable placard stating that the door is to be latched in the open position during takeoff and landing.

§ 25.1561 Safety equipment.

(a) Each safety equipment control to be operated by the crew in emergency, such as controls for automatic liferaft releases, must be plainly marked as to its method of operation.

(b) Each location, such as a locker or compartment, that carries any fire extinguishing, signaling, or other life saving equipment must be marked accordingly.

(c) Stowage provisions for required emergency equipment must be conspicuously marked to identify the contents and facilitate removal of the equipment.

(d) Each liferaft must have obviously marked operating instructions.

(e) Approved survival equipment must be marked for identification and method of operation.

§ 25.1563 Airspeed placard.

A placard showing the maximum airspeeds for flap extension for the takeoff, approach, and landing positions must be installed in clear view of each pilot.

AIRPLANE FLIGHT MANUAL

§ 25.1581 General.

(a) An Airplane Flight Manual must be furnished with each airplane, unless otherwise prescribed.

(b) Each part of the manual listed in §§ 25.1583 through 25.1587, that is appropriate to the airplane, must be furnished, verified, and approved, and must be segregated, identified, and clearly distinguished from each unapproved part of that manual.

(c) Any information not specified in §§ 25.1583 through 25.1587 that is required for safe operation because of unusual design, operating, or handling characteristics, must be furnished.

§ 25.1583 Operating limitations.

(a) *Airspeed limitations.* The following airspeed limitations and any other information necessary to meet the requirements of § 25.1545 must be furnished:

(1) The maximum operating limit speed V_{MO}/M_{MO} and a statement that this speed limit may not be deliberately exceeded in any regime of flight (climb, cruise, or descent) unless a higher speed is authorized for flight test or pilot training.

(2) If an airspeed limitation is based upon compressibility effects, a statement to this effect and information as to any symptoms, the probable behavior of the airplane, and the recommended recovery procedures.

(3) The maneuvering speed V_A and a statement that full application of rudder and aileron controls, as well as maneuvers that involve angles of attack near the stall, should be confined to speeds below this value.

(4) The flap extended speed V_{FE} and the pertinent flap positions and engine powers.

(5) The landing gear operating speed V_{LO} and a statement that this is the maximum speed at which it is safe to extend or retract the landing gear.

(6) The landing gear extended speed V_{LE}, if greater than V_{LO}, and a statement that this is the maximum speed at which the airplane can be safely flown with the landing gear extended.

(b) *Powerplant limitations.* Information must be furnished to explain the powerplant limitations and to allow

marking the instruments under §§ 25.-1549 through 25.1553.

(c) *Weight and loading distribution.* The weight and center of gravity limits required by §§ 25.25 and 25.27 must be furnished, together with the items included in the empty weight in § 25.29(a). In addition—

(1) There must be loading instructions, for each loading condition within these limits, that affect weight and center of gravity;

(2) If certification for more than one center of gravity range is requested, the appropriate limitations, with regard to weight and loading procedures, for each separate center of gravity range, must be furnished; and

(3) The positive maneuvering limit load factors for which the structure is proven, described in terms of accelerations, and a statement that these accelerations limit the angle of bank in turns and limit the severity of pull-up maneuvers, must be furnished.

(d) *Flight crew.* The number and functions of the minimum flight crew determined under § 25.1523 must be furnished.

(e) *Kinds of operation.* The kinds of operation approved under § 25.1525 must be furnished.

(f) *Altitudes.* The altitude established under § 25.1527 and an explanation of the limiting factors must be furnished.

(g) *Usable fuel.* A statement that the fuel remaining in fuel tanks when the quantity indicator reaches "zero" is not usable in flight must be furnished.

(h) *Turbine engine powered airplanes.* For turbine engine powered airplanes, the operation limitations established under § 25.1533 must be furnished.

§ 25.1585 Operating procedures.

(a) Information and instructions regarding the peculiarities of normal operations (including starting and warming the engines, taxiing, operation of wing flaps, landing gear, and the automatic pilot) must be furnished, together with recommended procedures for—

(1) Engine failure (including minimum speeds, trim, operation of the remaining engines, and operation of flaps);

(2) Stopping the rotation of propellers in flight;

(3) Restarting turbine engines in flight (including the effects of altitude);

(4) Fire, decompression, and similar emergencies;

(5) Ditching (including the procedures based on the requirements of §§ 25.801, 25.807(d), 25.1411, and 25.1415 (a) through (e)); and

(6) Use of ice protection equipment.

§ 25.1587 Performance information.

(a) *Each airplane.* For each airplane, the Airplane Flight Manual must contain information to warn flight crewmembers against jettisoning fuel when any means (including flaps, slots, and slats) for changing the airflow across or around the wing are being used.

(b) *Reciprocating engine powered airplanes.* For each reciprocating engine powered airplane, the Airplane Flight Manual must contain a summary of any pertinent performance data, including data necessary for the application of any operating rule of this chapter, together with descriptions of the conditions, such as airspeeds, under which these data were determined, and must contain—

(1) The indicated airspeeds, corresponding to those determined for takeoff, and the procedures to be followed if a critical engine fails during takeoff;

(2) Instructions for use and adjustment of flap controls necessary to obtain the pertinent performance data specified in this paragraph;

(3) An explanation of significant or unusual flight or ground handling characteristics; and

(4) Operating correction factors that are determined under § 25.61, and that are approved.

(c) *Turbine engine powered airplanes.* For each turbine engine powered airplane, the Airplane Flight Manual must contain the performance information computed under the applicable provisions of this part (including §§ 25.115, 25.123, and 25.125 for the weights, altitudes, temperatures, wind components, and runway gradients, as applicable) within the operational limits of the airplane, and must contain the following:

(1) The conditions under which the performance information was obtained.

(2) The following performance information (determined by extrapolation and computed for the range of weights between the maximum landing and maximum takeoff weights):

(i) Climb in the landing configuration.

(ii) Climb in the approach configuration.

(iii) Landing distance.

(3) Procedures established under § 25.101(c) that are related to the limitations and information required by § 25.1533 and by this paragraph. These procedures must be in the form of guidance material, including any relevant limitations or information.

(4) An explanation of significant or unusual flight or ground handling characteristics of the airplane.

Appendix A

FIGURE 1—Basic landing gear dimension data.

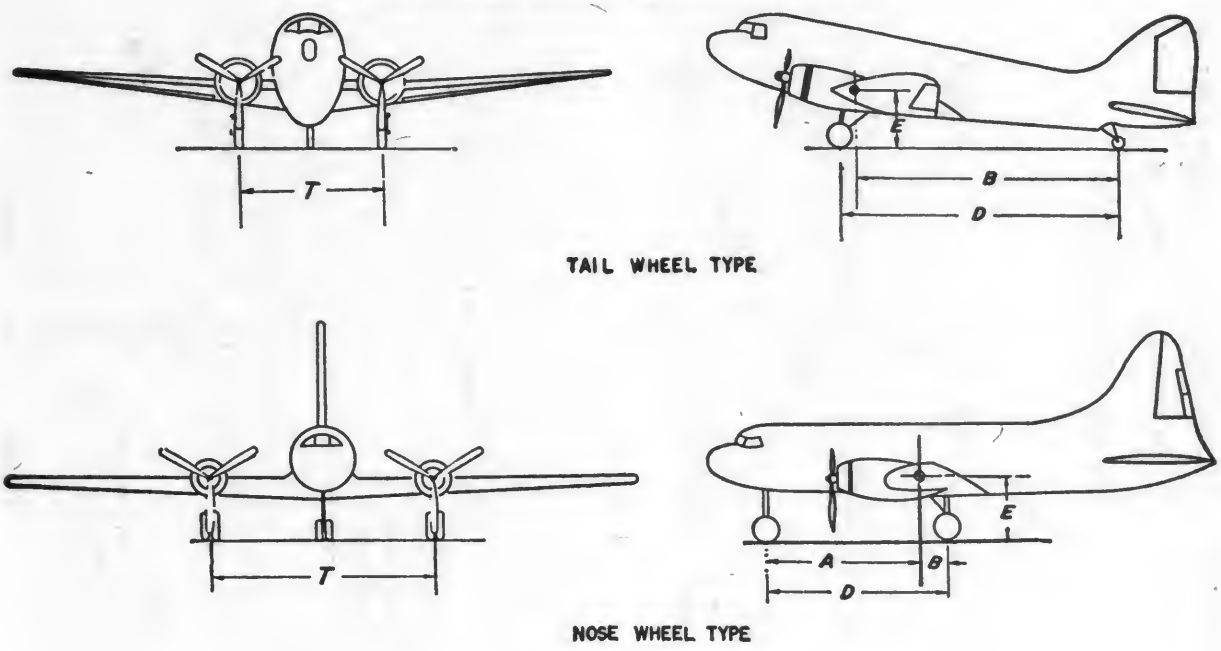


FIGURE 2—Level landing.

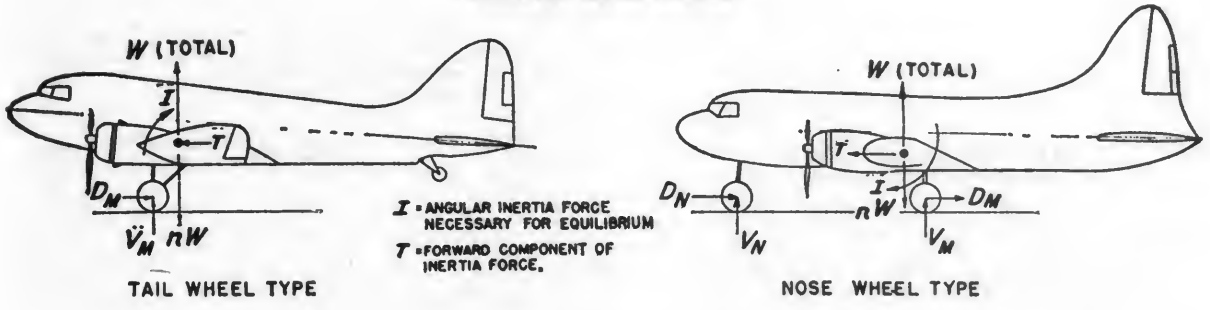
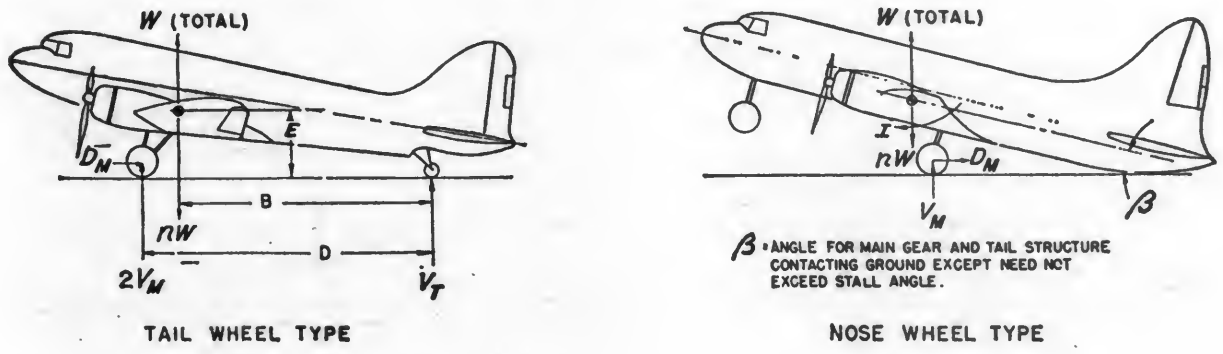


FIGURE 3—Tail-down landing.



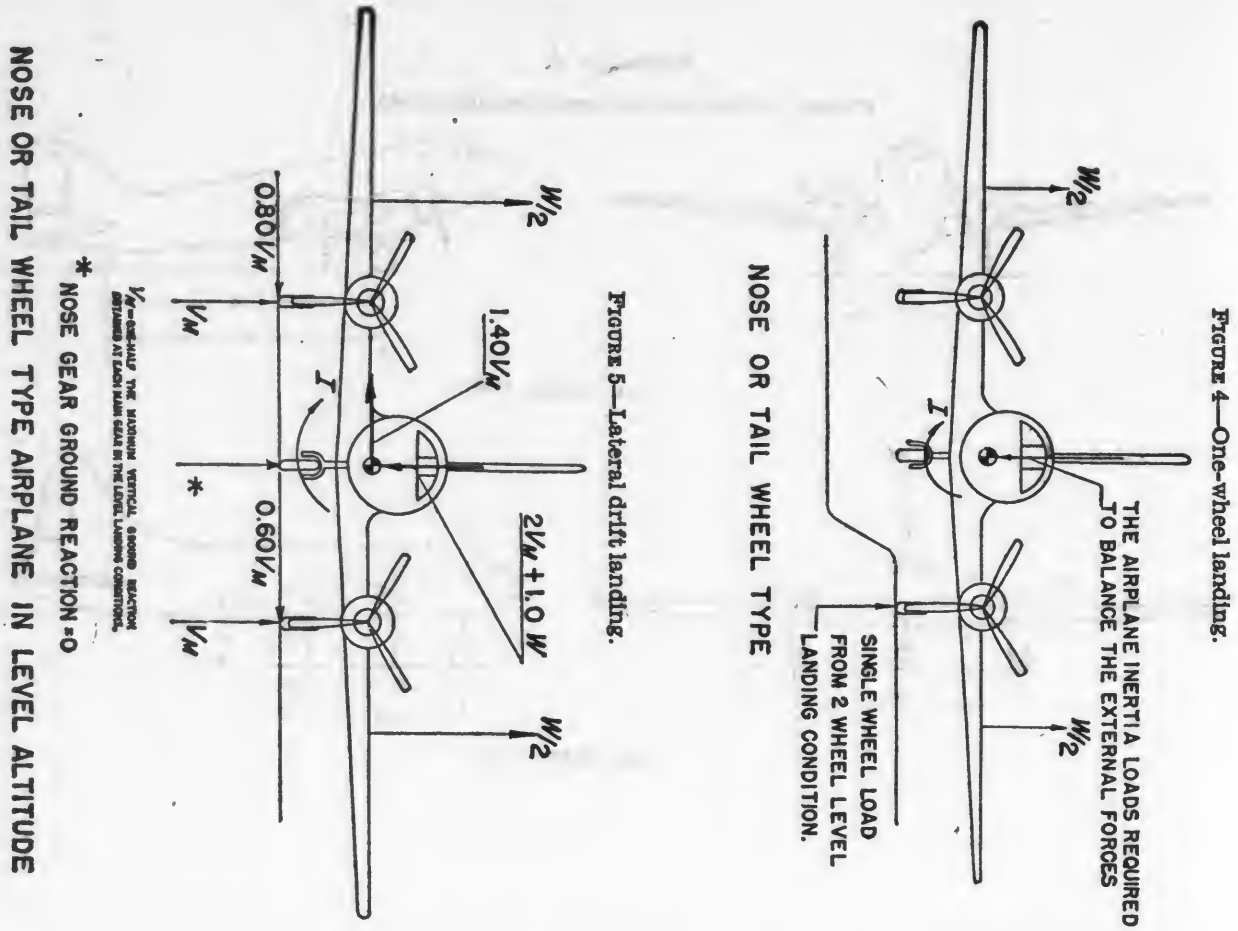


FIGURE 5—Lateral drift landing.

FIGURE 4—One-wheel landing.

FIGURE 6—Braked roll.

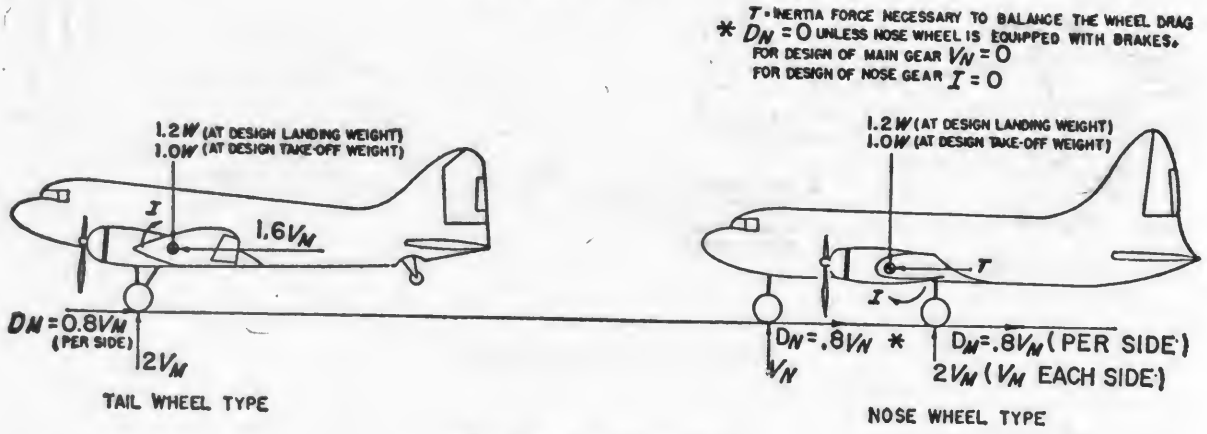


FIGURE 7—Ground turning.

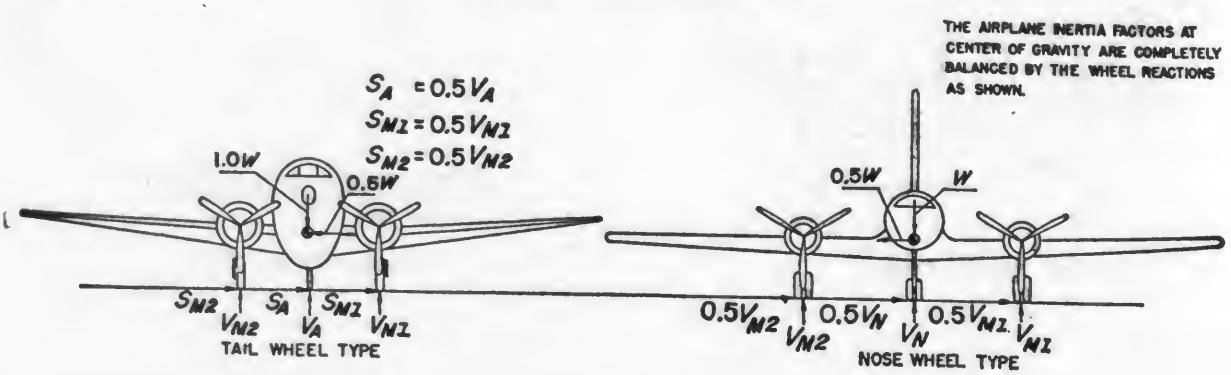
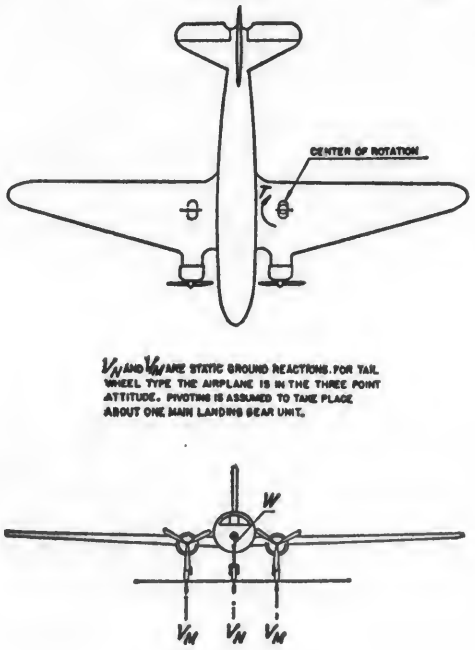


FIGURE 8—Pivoting, nose or tail wheel type.



V_N AND V_M ARE STATIC GROUND REACTIONS. FOR TAIL WHEEL TYPE THE AIRPLANE IS IN THE THREE POINT ATTITUDE. PIVOTING IS ASSUMED TO TAKE PLACE ABOUT ONE MAIN LANDING GEAR UNIT.

Appendix B

FIGURE 1—Pictorial definition of angles, dimensions, and directions on a seaplane.

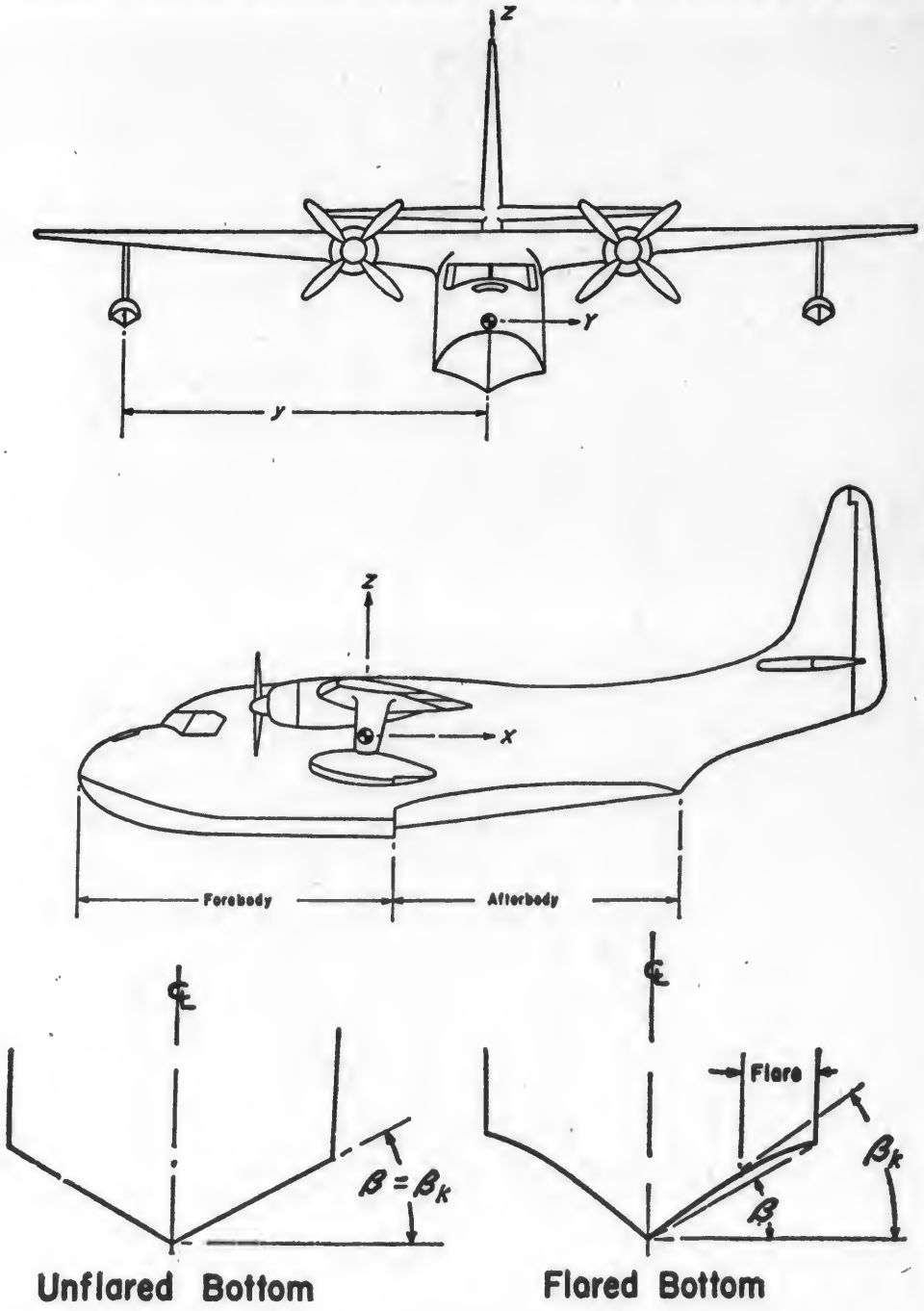


FIGURE 2—Hull station weighing factor.

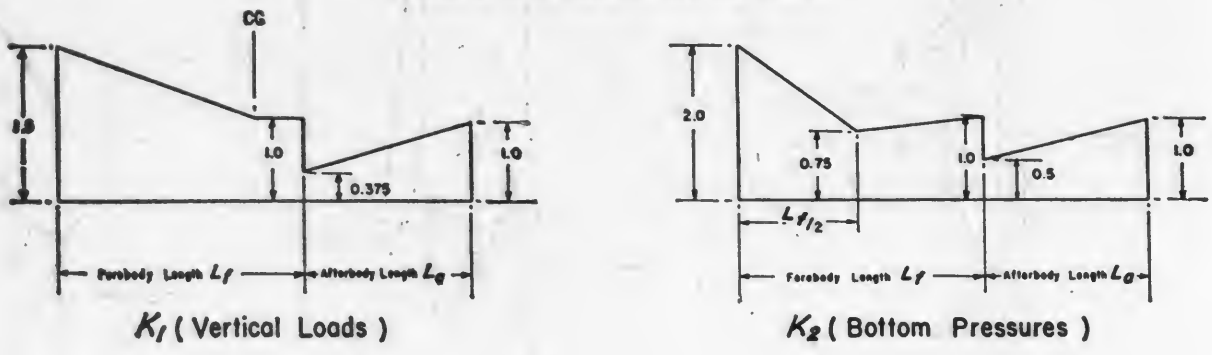
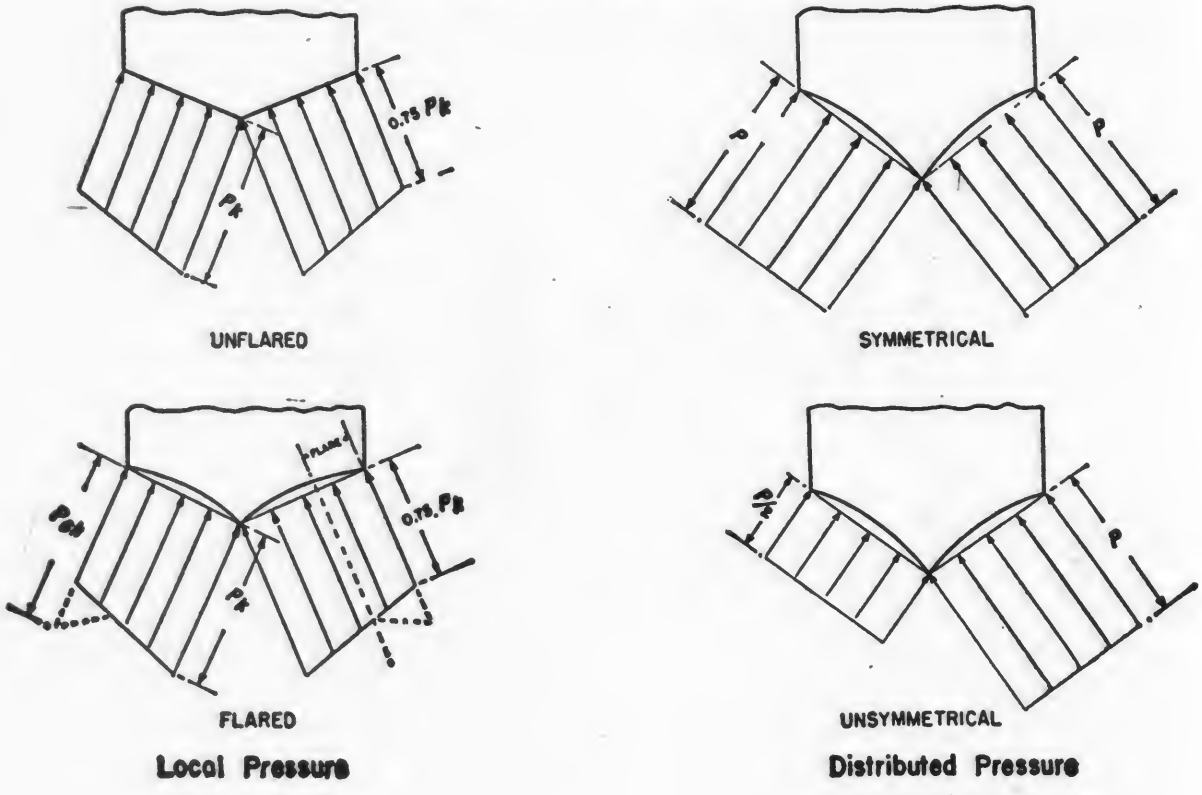


FIGURE 3—Transverse pressure distributions.



Appendix C

(a) *Continuous maximum icing.* The maximum continuous intensity of atmospheric icing conditions (continuous maximum icing) is defined by the variables of the cloud liquid water content, the mean effective diameter of the cloud droplets, the ambient air temperature, and the inter-relationship of these three variables as shown in figure 1 of this appendix. The limiting icing envelope in terms of altitude and temperature is given in figure 2 of this appendix. The inter-relationship of cloud liquid water content with drop diameter and altitude is determined from figures 1 and 2. The cloud liquid water content for continuous maximum icing conditions of a horizontal extent, other than 17.4 nautical miles, is determined by the value of liquid water content of figure 1, multiplied by the appropriate factor from figure 3 of this appendix.

(b) *Intermittent maximum icing.* The intermittent maximum intensity of atmospheric icing conditions (intermittent maximum icing) is defined by the variables of the cloud liquid water content, the mean effective diameter of the cloud droplets, the ambient air temperature, and the inter-relationship of these three variables as shown in figure 4 of this appendix. The limiting icing envelope in terms of altitude and temperature is given in figure 5 of this appendix. The inter-relationship of cloud liquid water content with drop diameter and altitude is determined from figures 4 and 5. The cloud liquid water content for intermittent maximum icing conditions of a horizontal extent, other than 2.6 nautical miles, is determined by the value of cloud liquid water content of figure 4 multiplied by the appropriate factor in figure 6 of this appendix.

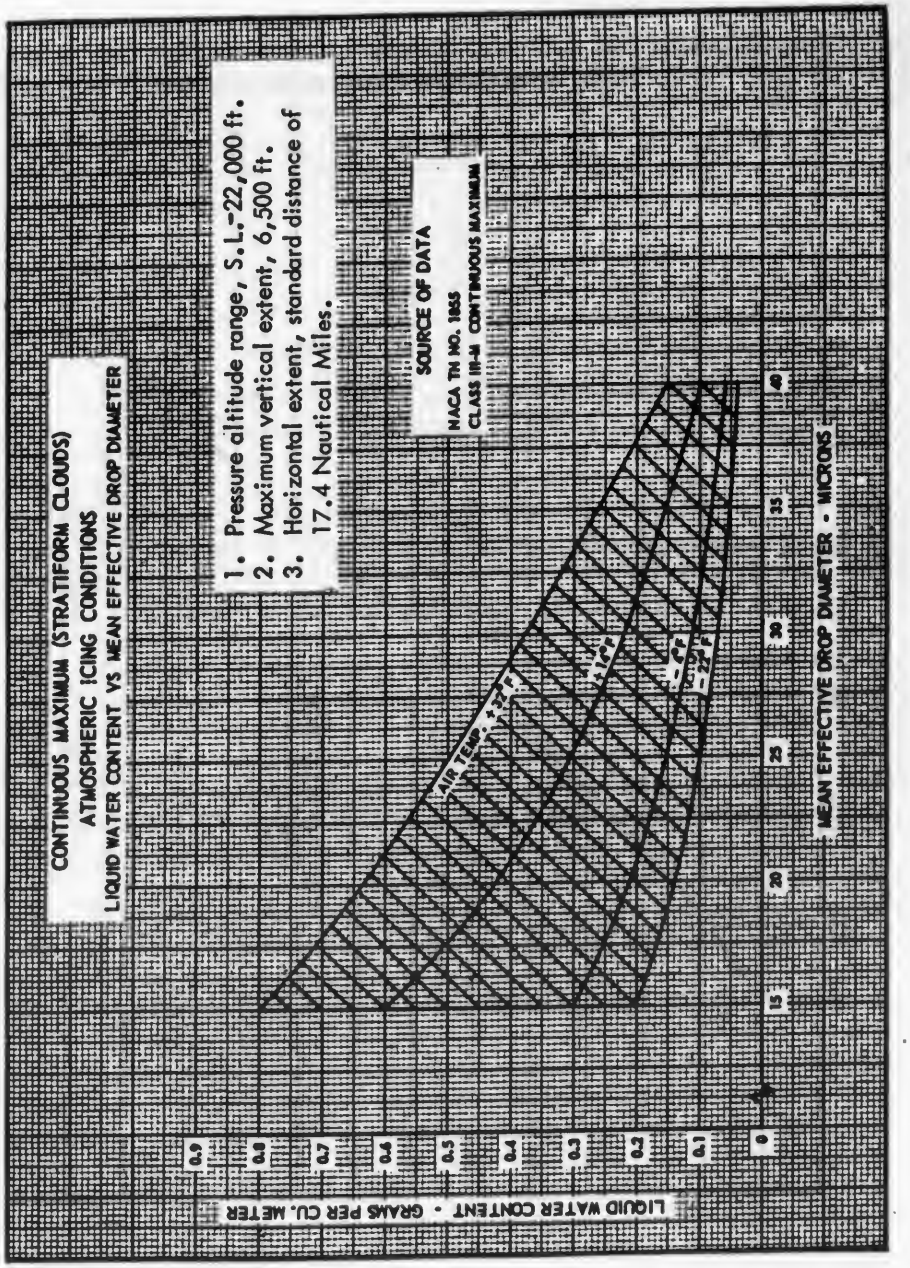


FIGURE 1.

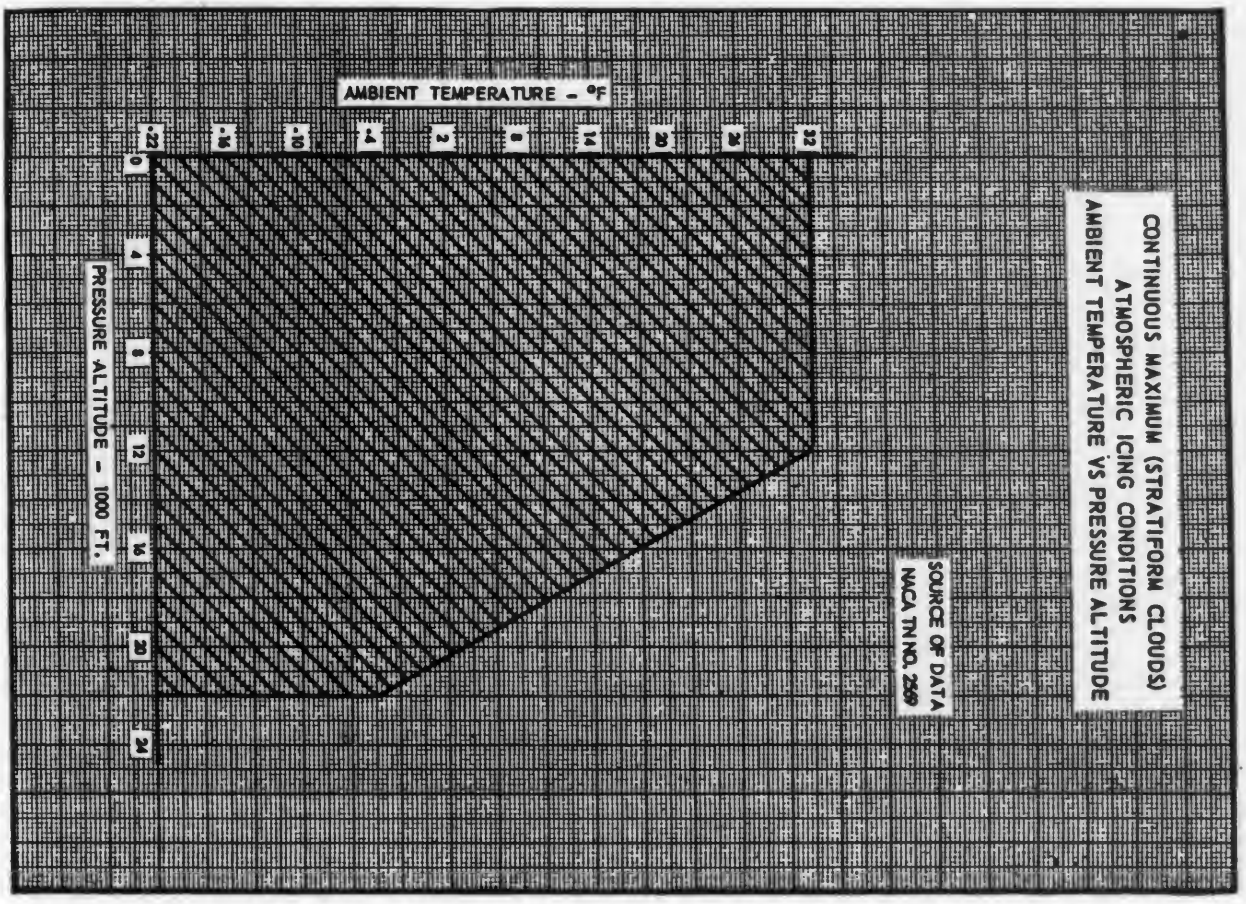
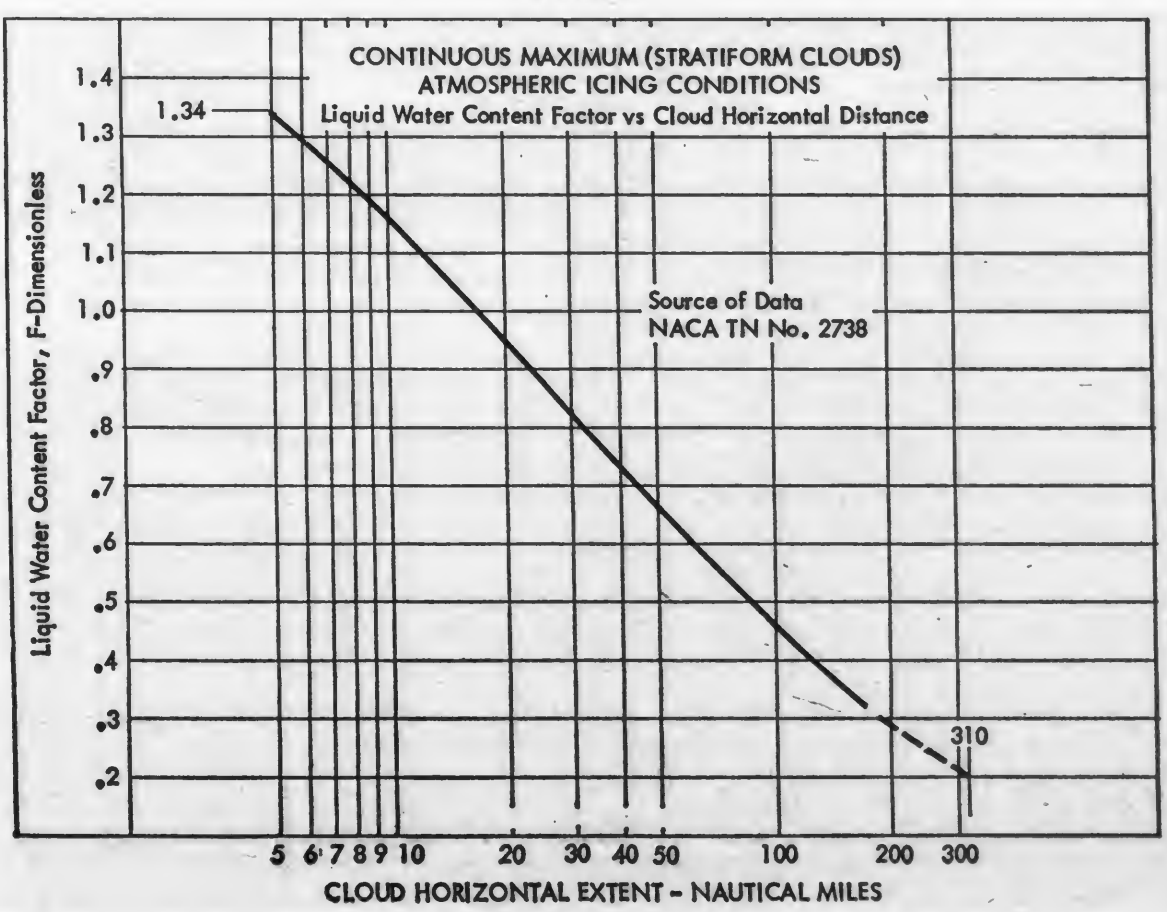


FIGURE 2.

FIGURE 3.



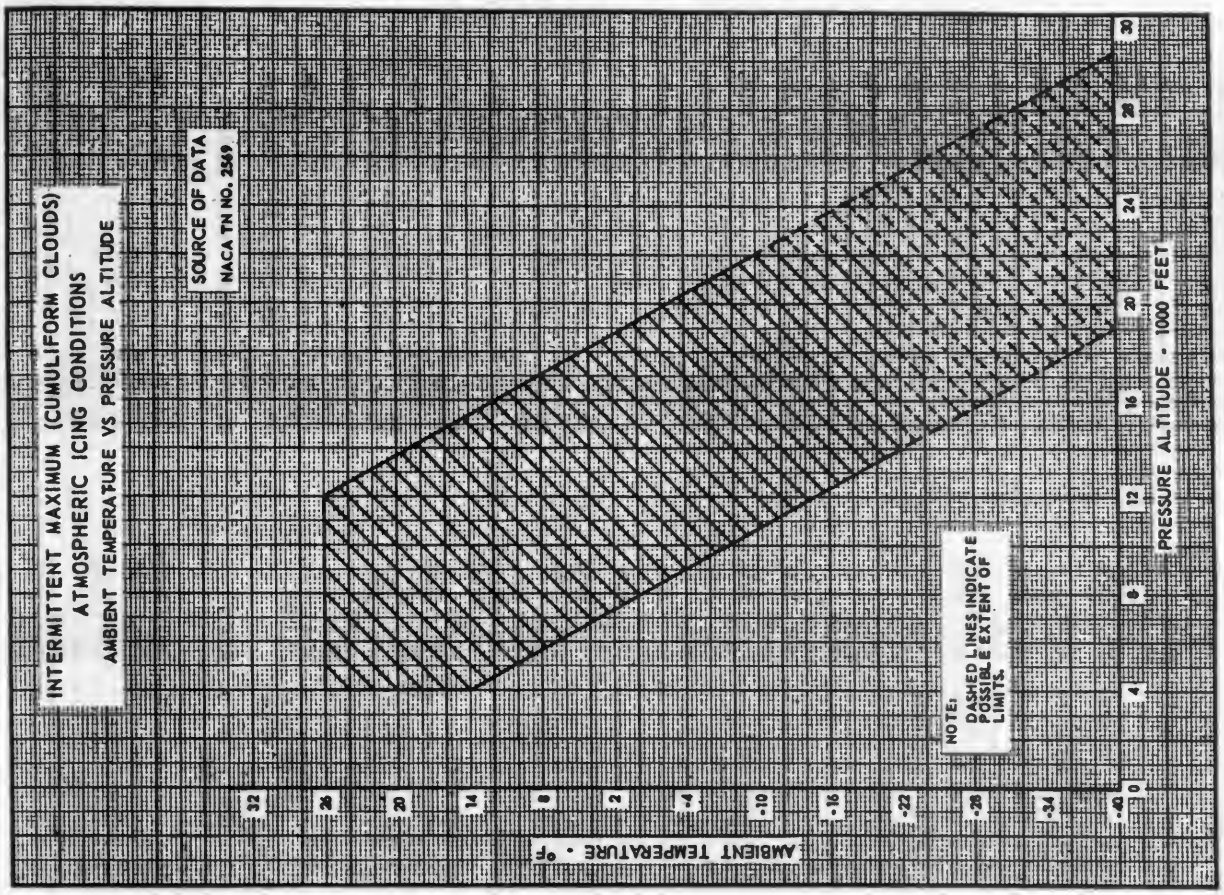


FIGURE 3.

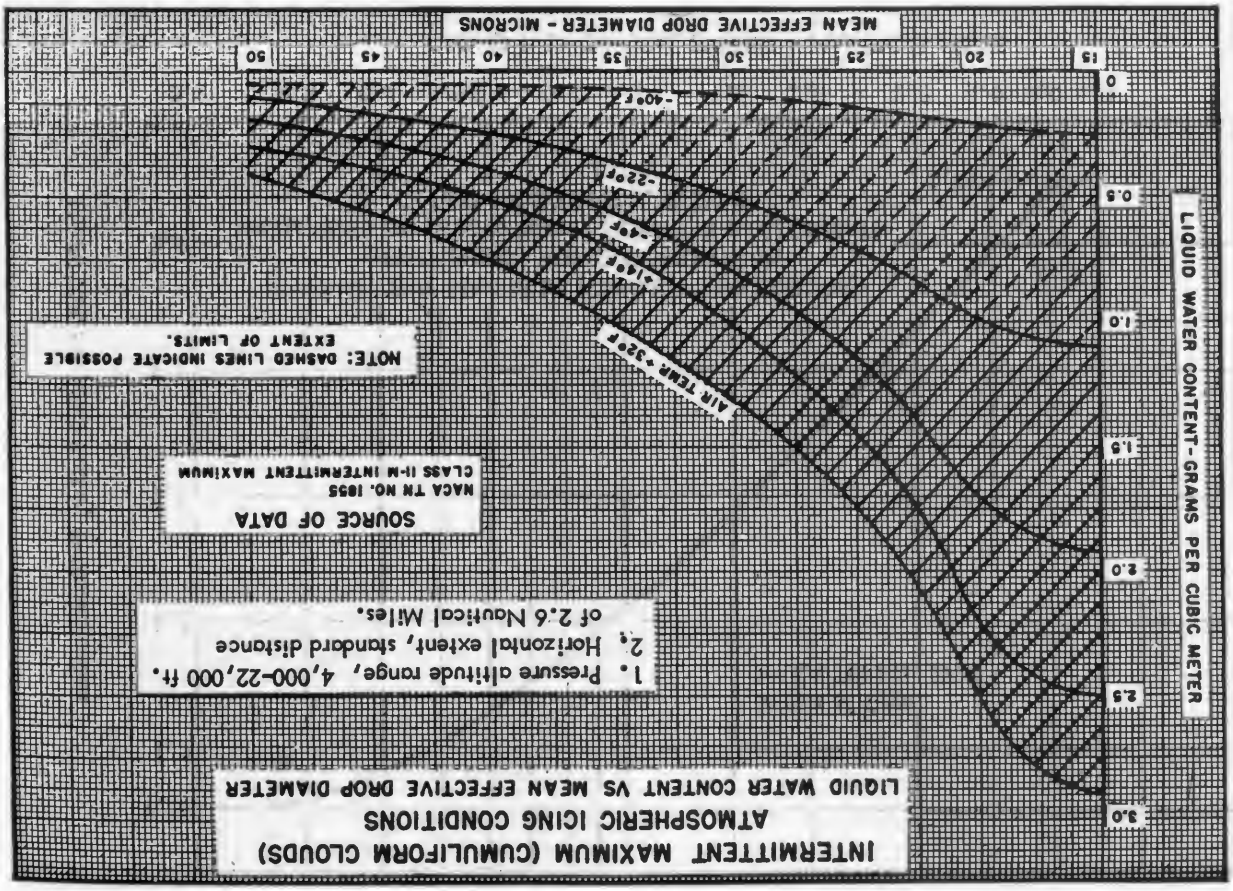


FIGURE 4.

DISTRIBUTION TABLE

Former section	Revised section
4b.0	25.1.
4b.1	Transferred to Part 1 [New] or executed.
4b.10 through 4b.19	Transferred to Part 21 [New].
4b.100 (less (d)–(g))	25.21.
4b.100(d)–(g)	Transferred to Part 21 [New].
4b.100–1 (less 1st sentence of (b)(1)).	Not a rule.
4b.100–1 (1st sentence of (b)(1)).	25.21.
4b.100–1 (less (b)(2))	Not a rule.
4b.100–1(b)(2)	25.21.
4b.100–2	Not a rule.
4b.100–3 (less 1st sentence).	Not a rule.
4b.100–3 (1st sentence)	25.21.
4b.101	25.25.
4b.102	25.27.
4b.103	25.23.
4b.104	25.29.
4b.105	25.31.
4b.105–1	Not a rule.
4b.110	25.45.
4b.110–1 (less (a))	Not a rule.
4b.110–1(a)	25.45.
4b.110–2	Not a rule.
4b.111	25.47.
4b.111–1	Not a rule.
4b.112	25.49.
4b.112–1	Not a rule.
4b.113	25.51.
4b.113–1	Not a rule.
4b.113–2	Not a rule.
4b.114	25.55.
4b.114–1	Not a rule.
4b.115(a)	Transferred to Part 1 [New].
4b.115 (less (a))	25.57.
4b.115–1	Not a rule.
4b.115–2	Not a rule.
4b.115–3	Not a rule.
4b.115–4	Not a rule.
4b.116	25.59.
4b.116–1	25.59.
4b.116–2	Not a rule.
4b.117 (introductory paragraph) (21st–35th words).	25.1587.
4b.117 (less intro. para. (21st–35th words)).	25.61.
4b.118	Surplusage.
4b.118–1	Not a rule.
4b.119	25.65.
4b.119–1	Not a rule.
4b.120	25.67.
4b.120–1	25.67.
4b.120–2	Not a rule.
4b.121	25.69.
4b.121–1	Not a rule.
4b.122	25.75.
4b.122–1	Not a rule.
4b.122–2	Not a rule.
4b.122–3	Not a rule.
4b.122–4	Not a rule.
4b.123	25.75.
4b.123–1	25.75.
4b.123–2	Not a rule.
4b.123–3	Not a rule.
4b.123–4	Not a rule.
4b.124	25.75.
4b.124–1	Not a rule.
4b.125	25.75.
4b.125–1	Not a rule.
4b.130	25.143.
4b.130–1	Not a rule.
4b.131	25.145.
4b.131–1	Not a rule.
4b.132	25.147.
4b.132–1	Not a rule.
4b.133	25.149.
4b.133–1	Not a rule.
4b.140	25.161.
4b.140–1	Not a rule.
4b.141	25.161.
4b.141–1	Not a rule.
4b.142	25.161.
4b.142–1	Not a rule.
4b.143	25.161.
4b.143–1	Not a rule.
4b.144	25.161.
4b.144–1	Not a rule.
4b.150	25.171.
4b.151	25.173.
4b.152	25.175.
4b.153	25.175.
4b.154	25.175.
4b.155	25.175.
4b.156	25.187.
4b.156–1	Not a rule.
4b.157	25.177.
4b.157–1	Not a rule.
4b.158	25.181.
4b.158–1	Not a rule.
4b.160(a)–(c)	25.201.
4b.160 (less (a)–(c))	25.203.
4b.160–1	Not a rule.
4b.161	25.205.
4b.161–1	Not a rule.
4b.162	25.207.
4b.162–1 (less last sentence).	Not a rule.
4b.162–1 (last sentence).	25.207.
4b.170	25.231.
4b.170–1	Not a rule.
4b.170–2	Not a rule.
4b.170–3	Not a rule.
4b.171	25.233.
4b.171–1	25.233.
4b.171–2	Not a rule.
4b.171–3	Not a rule.
4b.172	25.235.
4b.172–1	Not a rule.
4b.173	25.237.

FIGURE 6.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b.173–1	Not a rule.
4b.173–2	Not a rule.
4b.180	25.231.
4b.180–1	Not a rule.
4b.181	25.237.
4b.181–1	Not a rule.
4b.182	25.239.
4b.182–1	Not a rule.
4b.182–2	Not a rule.
4b.190 (as applicable to flutter).	Surplusage.
4b.190 (less applicability to flutter).	25.251.
4b.190–1	Not a rule.
4b.191	25.253.
4b.200 (less (a))	25.301.
4b.200(a)	25.303.
4b.201	25.305.
4b.202	25.307.
4b.210 (less (b) and (c)).	25.321.
4b.210(b)	25.335.
4b.210(c)	25.343.
4b.211 (less (a) and (b)).	25.333.
4b.211(a)	25.337.
4b.211(b)	25.341.
4b.212	25.345.
4b.213	25.331.
4b.214	25.349.
4b.215	25.351.
4b.216 (less (b)–(e))	25.361.
4b.216(b)	25.363.
4b.216(c)	25.365.
4b.216(d)	25.367.
4b.216(e)	25.371.
4b.217	25.373.
4b.220 (less (a)–(e))	25.391.
4b.220(a)	25.397.
4b.220(b)	25.407.
4b.220(c)	25.427.
4b.220(d)	25.445.
4b.220(e)	25.393.
4b.221	25.457.
4b.222	25.409.
4b.223	25.459.
4b.224 (less last two sentences of (a)).	25.395.
4b.224 (last two sentences of (a)).	25.397.
4b.225	25.399.
4b.226	25.415.
4b.227	25.405.
4b.230 (less (b))	25.471.
4b.230(b)(3) (1st sentence).	25.477.
4b.230 (less (b)(3) (1st sentence)).	25.473.
4b.231	25.479.
4b.232	25.481.
4b.233	25.483.
4b.234	25.485.
4b.234a	25.487.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b.235 (introductory paragraph) (less last sentence).	25.489.
4b.235 (introductory paragraph) (last sentence).	25.493 and 25.499.
4b.235(a)	25.491.
4b.235(b)	25.493.
4b.235(c)	25.495.
4b.235(d)	25.503.
4b.235(e)	25.499.
4b.235(f)	25.497.
4b.235(g)	25.507.
4b.235 (less introductory paragraph and (a) through (g)).	25.509.
4b.236	25.511.
4b.250	25.521.
4b.250–1	25.521.
4b.251	25.523.
4b.252	25.525.
4b.253	25.527.
4b.254	25.529.
4b.255	25.531.
4b.256	25.533.
4b.257	25.535.
4b.258	25.537.
4b.260	25.561.
4b.261	25.563.
4b.270	25.571.
4b.270–1	25.571.
4b.270–2	Not a rule.
4b.271	25.573.
4b.300	25.601.
4b.300–1	Not a rule.
4b.301	25.603.
4b.301–1 (less 1st sentence).	Not a rule.
4b.301–1 (1st sentence)	25.603.
4b.302	25.605.
4b.303 (last sentence)	25.607.
4b.303 (less last sentence).	Not a rule.
4b.304	25.609.
4b.305	25.611.
4b.306 (less (d))	25.613.
4b.306(d)	25.615.
4b.306–1 (less (c))	25.615.
4b.306–1(c)	Not a rule.
4b.307 (less (a)–(c))	25.619.
4b.307(a)	25.621.
4b.307(b)	25.623.
4b.307(c)	25.625.
4b.308 (less (c) and (d) as appropriate to vibration).	25.629.
4b.308 (c) and (d) (as appropriate to vibration).	25.251.
4b.310	Surplusage.
4b.311	25.651.
4b.312	25.655.
4b.313	25.657.
4b.320 (less (b))	25.671.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b.320(b)	25.695.
4b.321	25.673.
4b.322	25.677.
4b.323 (less (e) and (f)).	25.697.
4b.323 (e) and (f)	25.699.
4b.324	25.701.
4b.324–1	Not a rule.
4b.325	25.675.
4b.326	25.679.
4b.327	25.681.
4b.328	25.683.
4b.329 (less (a) and (b)).	25.685.
4b.329(a)	25.689.
4b.329(b)	25.693.
4b.329–1	Not a rule.
4b.329–2	Not a rule.
4b.329–3	Not a rule.
4b.329–4	Not a rule.
4b.329–5	Not a rule.
4b.329–6	25.693.
4b.330	25.721.
4b.331	25.721.
4b.332 (introductory paragraph).	25.721.
4b.332 (less introductory paragraph, (a) and (b)).	25.727.
4b.332(a)	25.723.
4b.332(b)	25.625.
4b.333	25.625.
4b.334	25.729.
4b.334–1	Not a rule.
4b.334–2	25.729.
4b.335 (a) and (b)	25.731.
4b.335 (less (a) and (b)).	25.735.
4b.336	25.733.
4b.337	25.735.
4b.337–1	Not a rule.
4b.337–2	Not a rule.
4b.337–3	Not a rule.
4b.337–4 (less 1st sentence).	Not a rule.
4b.337–4 (1st sentence)	25.735.
4b.338	25.737.
4b.340	Surplusage.
4b.341 (less (a) and (b)).	25.753.
4b.341 (a) and (b)	25.751.
4b.342	25.755.
4b.350	25.771.
4b.350–1	Not a rule.
4b.351	25.773.
4b.351–1	Not a rule.
4b.351–2	Not a rule.
4b.351–3	Not a rule.
4b.352	25.775.
4b.353	25.777.
4b.353–1	Not a rule.
4b.354	Surplusage.
4b.355	Surplusage.
4b.356	25.783.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b.356–1 (less last sentence).	Not a rule.
4b.356–1 (last sentence).	25.783.
4b.356–2 (less (a) (1st sentence)).	Not a rule.
4b.356–2(a) (1st sentence).	25.783.
4b.356–3	Not a rule.
4b.356–4	Not a rule.
4b.356–5	Not a rule.
4b.356–6	Not a rule.
4b.358	25.785.
4b.358–1 (less 2d and 3d sentences).	Not a rule.
4b.358–1 (2d and 3d sentences).	25.785.
4b.359	25.787.
4b.360	Surplusage.
4b.361 (introductory paragraph) (last sentence).	25.1585.
4b.361 (less introductory paragraph (last sentence)).	25.801.
4b.362 (introductory paragraph).	25.803.
4b.362(a)	25.805.
4b.362(b)	25.807.
4b.362(c)	25.807.
4b.362(d)	25.807.
4b.362(e)	25.809.
4b.362(f)	25.811.
4b.362(g) (last sentence).	25.1557.
4b.362(g) (less last sentence).	25.813.
4b.362 (less introductory paragraph and (a)–(g)).	25.815.
4b.362–1 (less (a))	25.809 and 25.811.
4b.362–1(a)	25.805.
4b.362–2	25.807.
4b.362–3 (less (a))	25.807.
4b.362–3(a)	Surplusage.
4b.362–4	25.809.
4b.362–5 (less (c))	25.811.
4b.362–5(c)	Not a rule.
4b.362–6	Not a rule.
4b.362–7	Not a rule.
4b.370	Surplusage.
4b.371	25.831.
4b.371–1	25.831.
4b.372	25.833.
4b.372–1	Not a rule.
4b.373	Surplusage.
4b.374	25.841.
4b.375	25.841.
4b.375–1	25.841.
4b.376	25.843.
4b.380 (less (c))	25.851.
4b.380(c)	25.1439.
4b.380–1	Not a rule.
4b.380–2	Not a rule.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b.381	25.853.
4b.381–1	Not a rule.
4b.382	25.855.
4b.383 (less 2d sentence of (a) and (b)(3)).	25.857.
4b.383 (2d sentence of (a) and (b)(3)).	25.851.
4b.384	25.855.
4b.384–1	Not a rule.
4b.385	25.863.
4b.386	25.859.
4b.390	25.875.
4b.391	25.871.
4b.400	25.901.
4b.400–1	Not a rule.
4b.400–2	Surplusage.
4b.401	25.903.
4b.401–1	Not a rule.
4b.401–2	Not a rule.
4b.401–3	Not a rule.
4b.401–4	Not a rule.
4b.402	25.905.
4b.402–1	Not a rule.
4b.403	25.907.
4b.404	25.33.
4b.405	25.925.
4b.406	25.929.
4b.406–1	Not a rule.
4b.407	25.933.
4b.407–1 (less 1st sentences of (b) and (c)).	25.933.
4b.407–1 (1st sentence of (b) and (c)).	Not a rule.
4b.408	25.937.
4b.409	25.939.
4b.410	25.951.
4b.411	25.953.
4b.413	25.955.
4b.416	25.959.
4b.417	25.961.
4b.417–1	Not a rule.
4b.418	25.957.
4b.420	25.963.
4b.420–1	Not a rule.
4b.421	25.965.
4b.422	25.967.
4b.423	25.969.
4b.424	25.971.
4b.425	25.973.
4b.426	25.975.
4b.427	25.977.
4b.428	25.979.
4b.430	25.991.
4b.430–1	25.991.
4b.432	25.993.
4b.433	25.1183.
4b.434	25.995.
4b.435	25.997.
4b.436	25.999.
4b.437 (less (e) (last sentence)).	25.1001.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b.437(e) (last sentence).	25.1587.
4b.437–1	Not a rule.
4b.440	25.1011.
4b.441	25.1013.
4b.442	25.1015.
4b.443	25.1013.
4b.444	25.1017.
4b.445	25.1025.
4b.446	25.1023.
4b.447	25.1019.
4b.448	25.1021.
4b.449	25.1027.
4b.449–1	25.1027.
4b.450	25.1041.
4b.451	25.1043.
4b.452	25.1045.
4b.454	25.1045.
4b.460	25.1091.
4b.461	25.1093.
4b.461–1	Not a rule.
4b.462	25.1101.
4b.463	25.1103.
4b.464	25.1105.
4b.466	25.1107.
4b.467(a)	25.1121.
4b.467(b)	25.1123.
4b.467(c)	25.1125.
4b.467(d)	25.1125.
4b.467 (less (a)–(d))	25.1127.
4b.467–1 (less 1st sentence).	Not a rule.
4b.467–1 (1st sentence)	25.1121.
4b.467–2	Not a rule.
4b.470	25.1141.
4b.471	25.1143.
4b.472	25.1145.
4b.473	25.1147.
4b.474(a)	25.1149.
4b.474 (less (a))	25.1153.
4b.474–1	Not a rule.
4b.474a	25.1155.
4b.475	25.1161.
4b.476	25.1157.
4b.476a	25.1159.
4b.477	25.1163.
4b.478	25.1165.
4b.480 (less 21–49 words of (a)(7)).	25.1181.
4b.480 (21–49 words of (a)(7)).	25.1195.
4b.481	25.1185.
4b.482	25.1189.
4b.483	25.1183.
4b.484(a)	25.1195.
4b.484(b)	25.1197.
4b.484(c)	25.1199.
4b.484(d)	25.1199.
4b.484 (less (a)–(d))	25.1201.
4b.484–1 (less 18th–30th words of paragraph (a) and subparagraphs (a) (1) and (2)).	Not a rule.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b.484–1 (18th–30th words of paragraph (a) and subparagraphs (a) (1) and (2)).	25.1197.
4b.485	25.1203.
4b.485–1	Not a rule.
4b.486	25.1191.
4b.487	25.1193.
4b.489	25.1187.
4b.490	25.1205.
4b.600	25.1301.
4b.601	25.1301.
4b.602	Surplusage.
4b.603	25.1303.
4b.604	25.1305.
4b.605	25.1307.
4b.606	25.1309.
4b.606–1	Not a rule.
4b.606–2	Not a rule.
4b.610	25.1321.
4b.611	25.1321.
4b.611–1	Not a rule.
4b.612(a)	25.1323.
4b.612(b)	25.1325.
4b.612(c)	25.1327.
4b.612(d)	25.1329.
4b.612(e)	25.1331.
4b.612 (less (a)–(c))	25.1333.
4b.612–1	Not a rule.
4b.612–2	Not a rule.
4b.612–3	Not a rule.
4b.612–4	Not a rule.
4b.612–5	Not a rule.
4b.613	25.1337.
4b.620	Surplusage.
4b.621	25.1351.
4b.622	25.1351.
4b.622–1	Not a rule.
4b.623	25.1355.
4b.624	25.1357.
4b.624–1 (1st sentence)	Not a rule.
4b.624–1 (less 1st sentence).	25.1357.
4b.625	25.1353.
4b.625–1 (introductory paragraph) (1st sentence).	25.1353.
4b.625–1 (less introductory paragraph) (1st sentence).	Not a rule.
4b.626	25.1359.
4b.626–1	Not a rule.
4b.627	25.1363.
4b.628	25.1369.
4b.630	25.1387.
4b.631	25.1383.
4b.632	25.1385.
4b.632–1 (1st sentence)	25.1385.
4b.632–1 (less 1st sentence).	Not a rule.
4b.633	25.1387.
4b.634	25.1389.
4b.634–1	25.1389.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b.635	25.1397.
4b.636	25.1399.
4b.637	25.1401.
4b.640 (less introductory paragraph) (third sentence).	25.1419.
4b.640 (introductory paragraph) (third sentence).	25.1585.
4b.641	Surplusage.
4b.642	Obsolete.
4b.642–1	Not a rule.
4b.643	25.1413.
4b.644	25.1413.
4b.645 (less (e) and applicability to marking).	25.1415.
4b.645 (less (e) as applicable to marking).	25.1561.
4b.645(e)	25.1411.
4b.646 (less 4th sentence of introductory paragraph).	25.1411.
4b.646 (4th sentence of introductory paragraph).	25.1561.
4b.647	25.1415.
4b.650	25.1431.
4b.651(a)	25.1441.
4b.651(b)	25.1443.
4b.651(c)	25.1445.
4b.651(d)	25.1447.
4b.651(e)	25.1449.
4b.651(f)	25.1451.
4b.651(g)	25.1453.
4b.651 (less (a)–(g))	25.1439.
4b.651–1	Not a rule.
4b.651–2	Not a rule.
4b.651–3	Not a rule.
4b.651–4	Not a rule.
4b.651–5(a)	25.1445.
4b.651–5 (less (a))	Not a rule.
4b.651–6	Not a rule.
4b.651–7	Not a rule.
4b.651–8	Not a rule.
4b.651–9	Not a rule.
4b.651–10	Not a rule.
4b.651–11	Not a rule.
4b.651–12	Not a rule.
4b.653	25.1435.
4b.654	25.1435.
4b.655	25.1435.
4b.656	25.1457.
4b.658	25.1433.
4b.660	25.1455.
4b.700	25.1501.
4b.700–1	Not a rule.
4b.710	25.1503.
4b.711	25.1505.
4b.713	25.1507.
4b.714	25.1511.
4b.715	25.1515.
4b.716	25.1515.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b.717	25.1513.
4b.718	25.1521.
4b.718–1	Not a rule.
4b.719 (1st sentence)	25.1519.
4b.719 (less 1st sentence).	25.1583.
4b.720	25.1523.
4b.721	25.1525.
4b.722	25.1527.
4b.723	25.1531.
4b.730	25.1541.
4b.730–1	Not a rule.
4b.731	25.1543.
4b.732	25.1545.
4b.733	25.1547.
4b.734	25.1549.
4b.735	25.1551.
4b.736 (less last sentence).	25.1553.
4b.736 (last sentence)	25.1583.
4b.737	25.1555.
4b.738(a)	25.1557.
4b.738(b)	25.1557.
4b.738(c)	25.1557.
4b.738(d)	25.1561.
4b.738 (less (a)–(d))	25.1563.
4b.740	25.1581.
4b.740–1	Not a rule.
4b.740–2	Not a rule.
4b.741	25.1583.
4b.742	25.1585.
4b.743	25.1587.
4b.750	Transferred to Part 45 [New].
4b.751	Transferred to Part 45 [New].
Figures	
4b–1	Not a rule.
4b–2	25.333.
4b–3	25.333.
4b–4	25.415.
4b–5	25.397.
4b–6	25.405.
4b–7	Fig. 1 of Appendix A.
4b–8	Fig. 2 of Appendix A.
4b–9	Fig. 3 of Appendix A.
4b–10	Fig. 4 of Appendix A.
4b–11	Fig. 5 of Appendix A.
4b–12	Fig. 6 of Appendix A.
4b–13	Fig. 7 of Appendix A.
4b–14	Fig. 8 of Appendix A.
4b–15a	Fig. 1 of Appendix B.
4b–15b	Fig. 2 of Appendix B.

DISTRIBUTION TABLE—Continued

Former section	Revised section
4b–15c	Fig. 3 of Appendix B.
4b–16	25.779.
4b–17	25.779.
4b–18	25.1391.
4b–19	25.1393.
4b–20	25.1395.
4b–21	Previously deleted.
4b–22	25.781.
4b–23	Previously deleted.
4b–24a	Fig. 1 of Appendix C.
4b–24b	Fig. 2 of Appendix C.
4b–24c	Fig. 3 of Appendix C.
4b–25a	Fig. 4 of Appendix C.
4b–25b	Fig. 5 of Appendix C.
4b–25c	Fig. 6 of Appendix C.
4b–26	25.509.
4b–27	25.1401.
SR 422B	
Item 1	Surplusage.
Item 2, comprised of an introductory paragraph, §§ 4T.110–4T.123, and § 4T.743, distributed as follows:	
Introductory paragraph.	25.101.
4T.110(a)	Surplusage.
4T.110 (less (a))	25.101.
4T.111	25.101.
4T.112 (a) and (b)	25.103.
4T.112 (less (a) and (b)).	25.149.
4T.113	25.105.
4T.114	25.107.
4T.115	25.109.
4T.116	25.111.
4T.117	25.113.
4T.117a	25.115.
4T.118	25.117.
4T.119	25.119.
4T.120	25.121.
4T.121	25.123.
4T.122	25.125.
4T.123(a)	25.1533.
4T.123 (less (a))	25.1587.
4T.743(a)	25.1583.
4T.743 (less (a))	25.1587.
Item 3	Transferred to Part 121 [New].
Item 4	Transferred to Part 91 [New].
SR 422B (less items 1–4).	Transferred to Part 1 [New].

[F.R. Doc. 64–13261; Filed, Dec. 23, 1964; 8:48 a.m.]

[Docket No. 6102; Amdt. 39–16]

PART 39—AIRWORTHINESS DIRECTIVES [NEW]

Boeing Models 707 and 720 Series Aircraft

A proposal to amend Part 507 of the Regulations of the Administrator to include an airworthiness directive requiring the installation of a placard on the cockpit fuel dump chute panel prohibiting speed brake actuation during fuel jettisoning and a notation in the limitations section of the Airplane Flight Manual to this effort on Boeing Models 707 and 720 Series aircraft was published in 29 F.R. 10523. Since the publication of that proposal, Part 507 has been recodified into Part 39 of the Federal Aviation Regulations, effective November 20, 1964, therefore this amendment is being made to Part 39.

Interested persons have been afforded an opportunity to participate in the making of the amendment. Comments received objected to the placard, feeling that the Airplane Flight Manual notation would be sufficient. Both a placard and an Airplane Flight Manual notation are required by the Civil Air Regulations with respect to the prohibition against dumping fuel with the speed brakes extended since this prohibition is an operating limitation of the airplane. A placard is not required regarding the use of full and rapid aileron control while dumping fuel since this is only a precautionary note in the Airplane Flight Manual. In addition, the manufacturer has already accomplished a Flight Manual change to include the note regarding the use of ailerons while dumping fuel and the limitation prohibiting the use of speedbrakes while dumping fuel. As a result of a comment received, the AD has been revised to allow a compliance time of 500 flight hours to be compatible with scheduled routing maintenance periods.

In consideration of the foregoing, and pursuant to the authority delegated to me by the Administrator (25 F.R. 6489), § 39.13 of Part 39 (14 CFR Part 39), is hereby amended by adding the following new airworthiness directive:

BOEING. Applies to Models 707 and 720 Series aircraft.

Compliance required as indicated.

Flight tests have disclosed that speed brake actuation during fuel jettisoning causes fuel to impinge on the horizontal stabilizer. To correct this condition, accomplish the following:

(a) Within 500 hours' time in service after the effective date of this AD, unless already accomplished:

(1) Install a placard on the fuel dump chute panel in the cockpit that reads,

"Do not dump fuel with the speed brakes extended."

(2) Amend the limitations section of the FAA approved Airplane Flight Manual by adding the following two statements under fuel dumping limitations:

(i) "Do not dump fuel with speed brakes extended."

(ii) "NOTE: Do not use full and rapid aileron control while dumping fuel."

(b) Equivalent wording, subject to prior approval by the Chief, Aircraft Engineering Division, FAA Western Region, may be used in lieu of that specified in this AD.

This amendment shall become effective January 23, 1965.

(Secs. 313(a), 601, 603; 72 Stat. 752, 775, 776; 49 U.S.C. 1354(a), 1421, 1423)

Issued in Washington, D.C., on December 17, 1964.

C. W. WALKER,
Acting Director,
Flight Standards Service.

[F.R. Doc. 64–13194; Filed, Dec. 23, 1964; 8:45 a.m.]

[Docket No. 6393; Amdt. 39–15]

PART 39—AIRWORTHINESS DIRECTIVES [NEW]

Piper Model PA–30 Aircraft

Amendment 769, 29 F.R. 9823, AD 64–16–7, as revised by Amendment 798, 29 F.R. 11971, requires the installation of a placard which restricts the airspeed limits until a new design stabilator torque tube is installed on Piper Model PA–30 aircraft. This was to be accomplished on an optional basis. As the result of an additional failure, it has now been determined that the installation of the heavy-walled torque tube should be mandatory, and Amendment 769 is being superseded by a new directive to specify this installation.

As a situation exists which demands 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 (25 F.R. 6489), § 39.13 of Part 39 [New] (14 CFR Part 39 [New]), is hereby amended by adding the following new airworthiness directive:

PIPER. Applies to Model PA–30 aircraft, serial numbers 30–1 through 30–565.

Compliance required within 30 hours' time in service after the effective date of this AD, unless already accomplished:

As a result of instances of progressively stronger stabilator vibration, accomplish the following:

Install a new design stabilator torque tube, Piper P/N 22655–07, in accordance with the instructions attached to Piper Service Bulletin No. 222A, dated August 10, 1964, or an equivalent modification approved by the Engineering and Manufacturing Branch, FAA Eastern Region and then remove the "Do not exceed 205 m.p.h. IAS" placard.

Note: The original stabilator torque tube removed during compliance with this AD should be destroyed to avoid inadvertent reinstallation.

(Piper Service Letter No. 428, dated June 30, 1964, and Piper Service Bulletin No. 222A, dated August 10, 1964, pertains to this subject.)

This supersedes Amendment 769, 29 F.R. 9823, AD 64–16–7, as revised by Amendment 798, 29 F.R. 11971.

This amendment shall become effective December 24, 1964.

(Secs. 313(a), 601, 603; 72 Stat. 752, 775, 776; 49 U.S.C. 1354(a), 1421, 1423)

Issued in Washington, D.C., on December 17, 1964.

C. W. WALKER,
Acting Director,
Flight Standards Service.

[F.R. Doc. 64–13195; Filed, Dec. 23, 1964; 8:45 a.m.]

[Airspace Docket No. 64–WE–73]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS [NEW]

Alteration of Control Zone

The purpose of this amendment to Part 71 [New] of the Federal Aviation Regulations is to alter the description of the Salt Lake City, Utah, control zone.

The Salt Lake City control zone extensions are presently designated with reference to the Salt Lake City radio beacon. However, the Federal Aviation Agency is decomissioning the radio beacon as it is no longer required for air traffic control purposes. Since a requirement remains for the retention of the control zone extensions, action is taken herein to substitute geographical coordinates for the radio beacon in the description of the Salt Lake City control zone.

A comprehensive review of the controlled airspace requirements in the Salt Lake City area is presently being conducted under the CAR Amendments 60–21/60–29 implementation program and further alteration of the Salt Lake City control zone will be made upon the completion of this review.

Since this amendment is editorial in nature and imposes no additional burden on any person, notice and public procedure hereon is unnecessary. In consideration of the foregoing, Part 71 [New] of the Federal Aviation Regulations is amended effective March 4, 1965, as hereinafter set forth.

In § 71.171 (28 F.R. 966), the Salt Lake City, Utah, control zone is amended to read:

SALT LAKE CITY, UTAH

Within a 5-mile radius of Salt Lake City Municipal Airport No. 1 (latitude 40°47'10" N., longitude 111°58'05" W.); within 2 miles each side of the 346° bearing from latitude 40°49'45" N., longitude 111°57'39" W., extending from the 5-mile radius zone to the Layton FM and within 2 miles each side of the 263° bearing from latitude 40°49'45" N., longitude 111°57'39" W., extending from the 5-mile radius zone to 10 miles W. of latitude 40°49'45" N., longitude 111°57'39" W.

(Sec. 307(a), Federal Aviation Act of 1958, as amended; 72 Stat. 749; 49 U.S.C. 1348)

Issued in Los Angeles, Calif., on December 16, 1964.

A. E. HORNING,
Acting Director,
Western Region.

[F.R. Doc. 64–13196; Filed, Dec. 23, 1964; 8:45 a.m.]

[Airspace Docket No. 64–WE–74]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS [NEW]

Alteration of Control Zone

The purpose of this amendment to Part 71 [New] of the Federal Aviation Regulations is to alter the description of the Laramie, Wyo., control zone.

The Laramie control zone is presently designated, in part, with reference to the Laramie nondirectional radio beacon. The Federal Aviation Agency plans to decommission this facility on March 4, 1965. Therefore, action is taken herein to redescribe the control zone extension based entirely on the Laramie VOR.

Since the change effected by this amendment is less restrictive in nature than at present, notice and public procedure hereon are unnecessary. However, since it is necessary that sufficient time be allowed to permit the appropriate changes to be made on aeronautical charts, this amendment will become effective more than 30 days after publication.

In consideration of the foregoing, Part 71 [New] of the Federal Aviation Regulations is amended, effective March 4, 1965, as hereinafter set forth.

In § 71.171 (28 F.R. 10563), the Laramie, Wyoming, control zone is altered as follows: Within a 5-mile radius of General Brees Field, Laramie, Wyo. (latitude 41 18'50" N., longitude 105°40'25" W.); within 2 miles each side of the Laramie VOR 332° radial, extending from the 5-mile radius zone to 8 miles NW of the VOR.

(Sec. 307(a), Federal Aviation Act of 1958, as amended; 49 U.S.C. 1348)

Issued in Los Angeles, Calif., on December 16, 1964.

A. E. HORNING,
Acting Director.

[F.R. Doc. 64–13197; Filed, Dec. 23, 1964; 8:45 a.m.]

[Airspace Docket No. 64–CE–51]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS [NEW]

Alteration of Control Zone and Transition Area

On October 7, 1964, a notice of proposed rule making was published in the FEDERAL REGISTER (29 F.R. 13828) stating that the Federal Aviation Agency proposed to alter the control zone and transition area at Bozeman, Montana.

Interested parties were afforded an opportunity to participate in the rule making through submission of comments. All comments received were favorable.

In consideration of the foregoing, Part 71 [New] of the Federal Aviation Regulations is amended, effective 0001 e.s.t., March 4, 1965, as hereinafter set forth.

In § 71.171 (29 F.R. 1101) the Bozeman, Mont., control zone is amended to read:

BOZEMAN, MONTANA

Within a 5-mile radius of Gallatin-Bozeman Airport (latitude 45°46'50" N., longitude 111°09'20" W.), and within 2 miles each side of the Bozeman VOR 277° radial extending from the 5-mile radius zone to 6 miles W of the VOR.

In § 71.181 (29 F.R. 1160) the Bozeman, Mont., transition area is amended to read:

BOZEMAN, MONTANA

That airspace extending upward from 700 feet above the surface within a 7-mile radius of Gallatin-Bozeman Airport (latitude 45°46'50" N., longitude 111°09'20" W.), and that airspace extending upward from 1,200 feet above the surface within 6 miles S and 8 miles N of the Bozeman VOR 097° and 277° radials extending from 8 miles E to 13 miles W of the VOR.

(Sec. 307(a), Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued at Kansas City, Mo., on December 15, 1964.

EDWARD C. MARSH,
Director, Central Region.

[F.R. Doc. 64–13198; Filed, Dec. 23, 1964; 8:45 a.m.]

[Airspace Docket No. 64–SW–23]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS [NEW]

PART 73—SPECIAL USE AIRSPACE [NEW]

Modification of Restricted Area

On September 25, 1964, a notice of proposed rule making was published in the FEDERAL REGISTER (29 F.R. 13349) stating that the Federal Aviation Agency proposed to change the time of use of Restricted Area R–6303 from "sunrise to sunset" to "continuous" and to designate the area as joint-use.

Interested persons were afforded an opportunity to participate in the proposed rule making through submission of comments. All comments received were favorable.

In consideration of the foregoing, Parts 71 and 73 [New] are amended, ef-

fective 0001 e.s.t., February 4, 1965, as hereinafter set forth.

1. In § 71.151 (29 F.R. 17550), add the following:

R-6303 Matagorda Island, Tex.

2. In § 73.63 (29 F.R. 17766), the Matagorda Island, Tex., Restricted Area R-6303 is amended to read as follows:

Boundaries. Beginning at latitude 28°15'-20" N., longitude 96°26'50" W.; to latitude 28°18'55" N., longitude 96°27'45" W.; to latitude 28°20'55" N., longitude 96°29'15" W.; to latitude 28°12'00" N., longitude 96°-46'00" W.; to latitude 28°07'00" N., longitude 96°42'00" W.; thence 3 nautical miles from and parallel to the shoreline to the point of beginning.

Designated altitudes. Surface to flight level 600.

Time of designation. Continuous.

Controlling agency. Federal Aviation Agency, San Antonio ARTC Center.

Using agency. Commander, Second Air Force, Barksdale AFB, La.

(Sec. 307(a), Federal Aviation Act of 1958;

Issued in Washington, D.C., on December 17, 1964.

CLIFFORD P. BURTON,
Acting Director,
Air Traffic Service.

[F.R. Doc. 64-13199; Filed, Dec. 23, 1964; 8:45 a.m.]

Title 26—INTERNAL REVENUE

Chapter I—Internal Revenue Service, Department of the Treasury

SUBCHAPTER A—INCOME TAX

[T.D. 6782]

PART 1—INCOME TAX; TAXABLE YEARS BEGINNING AFTER DECEMBER 31, 1953

Treatment of Nonresident Alien Individuals Who Participate in Certain Exchange or Training Programs

On December 17, 1963, notice of proposed rule making with respect to the amendment of the Income Tax Regulations (26 CFR Part 1) under sections 117, 871, and 872 of the Internal Revenue Code of 1954 to conform the regulations to subsections (a) through (c) of section 110 of the Mutual Educational and Cultural Exchange Act of 1961 (75 Stat. 535), was published in the FEDERAL REGISTER (28 F.R. 13749). After consideration of all such relevant matter as was presented by interested persons regarding the rules proposed, the amendment of the regulations as proposed is hereby adopted, except that the amendment of paragraph (b) of § 1.871-2, as set forth in paragraph 4 of the notice of proposed rule making, is hereby deleted.

[SEAL] BERTRAND M. HARDING,
Acting Commissioner
of Internal Revenue.

Approved: December 21, 1964.

STANLEY S. SURREY,
Assistant Secretary of the
Treasury.

In order to conform the Income Tax Regulations (26 CFR Part 1) under sections 117, 871, and 872 of the Internal Revenue Code of 1954 to subsections (a) through (c) of section 110 of the Mutual Educational and Cultural Exchange Act of 1961 (75 Stat. 535), such regulations are amended as follows:

PARAGRAPH 1. Section 1.117 is amended by revising section 117(b)(2)(A) and by adding a historical note. These revised and added provisions read as follows:

§ 1.117 Statutory provisions; scholarships and fellowship grants.

Sec. 117. *Scholarships and fellowship grants*—* * *

(b) *Limitations*—* * *

(2) *Individuals who are not candidates for degrees.* * * *

(A) *Conditions for exclusion.* The grantor of the scholarship or fellowship grant is—

(i) An organization described in section 501(c)(3) which is exempt from tax under section 501(a),

(ii) A foreign government,

(iii) An international organization, or a binational or multinational educational and cultural foundation or commission created or continued pursuant to the Mutual Educational and Cultural Exchange Act of 1961, or

(iv) The United States, or an instrumentality or agency thereof, or a State, a territory, or a possession of the United States, or any political subdivision thereof, or the District of Columbia.

* * * * *

[Sec. 117 as amended by sec. 110(a), Mutual Educational and Cultural Exchange Act 1961 (75 Stat. 535)]

PAR. 2. Paragraph (b)(1) of § 1.117-2 is amended to read as follows:

§ 1.117-2 Limitations.

* * * * *

(b) *Individuals who are not candidates for degrees*—(1) *Conditions for exclusion.* In the case of an individual who is not a candidate for a degree at an educational institution, the exclusion from gross income of an amount received as a scholarship or a fellowship grant shall apply (to the extent provided in subparagraph (2) of this paragraph) only if the grantor of the scholarship or fellowship grant is—

(i) An organization described in section 501(c)(3) which is exempt from tax under section 501(a),

(ii) The United States or an instrumentality or agency thereof, or a State, a territory, or a possession of the United States, or any political subdivision thereof, or the District of Columbia, or

(iii) For taxable years beginning after December 31, 1961, a foreign government, an international organization, or a binational or multinational educational and cultural foundation or commission created or continued pursuant to section 103 of the Mutual Educational and Cultural Exchange Act of 1961 (22 U.S.C. 2453).

PAR. 3. Section 1.871 is amended by redesignating paragraph (d) as paragraph (e), by inserting after paragraph (c) a new paragraph (d), and by revising the historical note. These added and revised provisions read as follows:

§ 1.871 Statutory provisions; tax on nonresident alien individuals.

Sec. 871. *Tax on nonresident alien individuals*—* * *

(d) *Participants in certain exchange or training programs.* For purposes of this section, a nonresident alien individual who (without regard to this subsection) is not engaged in trade or business within the United States and who is temporarily present in the United States as a nonimmigrant under subparagraph (F) or (J) of section 101(a)(15) of the Immigration and Nationality Act, as amended, shall be treated as a nonresident alien individual engaged in trade or business within the United States.

(e) *Cross references.* (1) For doubling of tax on citizens of certain foreign countries, see section 891.

(2) For tax treatment of certain amounts distributed by the United States to nonresident alien individuals, see section 402(a)(4).

[Sec. 871 as amended by secs. 40(a) and 41(a), Technical Amendments Act 1958 (72 Stat. 1638, 1639); sec. 2(b), Act of April 22, 1960 (Pub. Law 86-437, 74 Stat. 79); sec. 110(b), Mutual Educational and Cultural Exchange Act 1961 (75 Stat. 535)]

PAR. 4. Section 1.871-7 is amended by revising subparagraph (3) of paragraph (a), and by revising subparagraphs (1) and (4) of paragraph (d). These amended provisions read as follows:

§ 1.871-7 Tax on nonresident alien individuals.

(a) *Classes of nonresident aliens*—* * *

(3) *Class 3.* Nonresident alien individuals who at any time during the taxable year are engaged in trade or business within the United States and, for taxable years beginning after December 31, 1961, nonresident alien individuals who are deemed to be engaged in trade or business for purposes of section 871 because they are temporarily present in the United States as nonimmigrants under subparagraph (F) or (J) of section 101(a)(15) of the Immigration and Nationality Act (8 U.S.C. 1101). A nonresident alien individual who is temporarily present in the United States as a nonimmigrant under such subparagraph (J) includes a nonresident alien individual admitted to the United States as an "exchange visitor" under section 201 of the United States Information and Educational Exchange Act of 1948 (22 U.S.C. 1446); and

* * * * *

(d) *United States business*—(1) *Imposition of tax.* Except as otherwise provided by paragraph (e) of this section, a nonresident alien individual within class 3 is, in accordance with the provisions of subsections (c) and (d) of section 871, subject to tax under section 1 or, in the alternative, under section 1201(b) upon his taxable income.

* * * * *

(4) *Inapplicable provisions.* The provisions of paragraphs (b) and (c) of this section have no application in determining the tax of nonresident alien individuals described in paragraph (a)(3) of this section.

PAR. 5. Section 1.871-8 is amended by adding a new paragraph (d) which reads as follows:

§ 1.871–8 Definition of engaging in trade or business within the United States.

* * * * *

(d) *Participants in certain exchange or training programs.* For taxable years beginning after December 31, 1961, a nonresident alien individual who is temporarily present in the United States as a nonimmigrant under subparagraph (F) or (J) of section 101(a)(15) of the Immigration and Nationality Act (8 U.S.C. 1101), and who is not engaged in trade or business within the United States, shall be deemed to be engaged in trade or business within the United States for purposes of section 871.

PAR. 6. Section 1.872 is amended by adding a paragraph (3) to section 872 (b) and by adding a historical note. These added provisions read as follows:

§ 1.872 Statutory provisions; gross income.

Sec. 872. *Gross income*—* * *

(b) *Exclusions.* * * *

(3) *Compensation of participants in certain exchange or training programs.* Compensation paid by a foreign employer to a nonresident alien individual for the period he is temporarily present in the United States as a nonimmigrant under subparagraph (F) or (J) of section 101(a)(15) of the Immigration and Nationality Act, as amended. For purposes of this paragraph, the term "foreign employer" means—

(A) A nonresident alien individual, foreign partnership, or foreign corporation, or

(B) An office or place of business maintained in a foreign country or in a possession of the United States by a domestic corporation.

[Sec. 872 as amended by sec. 110(c), Mutual Educational and Cultural Exchange Act 1961 (75 Stat. 536)]

PAR. 7. Section 1.872–2 is amended by redesignating paragraphs (b) and (c) as paragraphs (c) and (d), respectively, and by inserting a new paragraph (b). These amended provisions read as follows:

§ 1.872–2 Exclusions from gross income of nonresident alien individuals.

* * * * *

(b) *Compensation of participants in certain exchange or training programs.* For taxable years beginning after December 31, 1961, compensation paid to a nonresident alien individual for the period that the nonresident alien individual is temporarily present in the United States as a nonimmigrant under subparagraph (F) or (J) of section 101(a)(15) of the Immigration and Nationality Act (8 U.S.C. 1101) shall be excluded from gross income if the compensation is paid to such alien by his foreign employer. A nonresident alien individual who is temporarily present in the United States as a nonimmigrant under such subparagraph (J) includes a nonresident alien individual admitted to the United States as an "exchange visitor" under section 201 of the United States Information and Educational Exchange Act of 1948 (22 U.S.C. 1446). For purposes of this paragraph, a foreign employer means a nonresident alien individual, a foreign partnership, a foreign corporation, and an office or place of business maintained in a foreign country or in a possession of the United States by a domestic corporation. Thus, if a French citizen employed in the Paris branch of a banking company incorporated in the State of New York was admitted to the United States under section 101(a)(15)(J) of the Immigration and Nationality Act to study monetary theory and continued to receive a salary from such foreign branch while studying in the United States, such salary would not be includible in his gross income.

(c) *Tax conventions.* Income of any kind which is exempt from United States tax under the provisions of a tax convention or treaty to which the United States is a party shall not be included in the gross income of a nonresident alien individual. Income on which the tax is limited by tax convention shall, however, be included in the gross income of such an individual if it is not otherwise excluded from gross income. See paragraph (e) of §§ 1.871–7 and 1.894–1.

(d) *Other exclusions.* Income which is from sources without the United States, as determined under the provisions of part I (section 861 and following), subchapter N, chapter 1 of the Code, and the regulations thereunder, or under the provisions of an applicable tax convention, shall not be included in the gross income of a nonresident alien individual. To determine specific exclusions in the case of other items which are from sources within the United States, see the applicable sections of the Code.

(Sec. 7805 of the Internal Revenue Code of 1954, 68A Stat. 917; 26 U.S.C. 7805)

[F.R. Doc. 64–13240; Filed, Dec. 23, 1964; 8:46 a.m.]

[T.D. 6783]

PART 1—INCOME TAX; TAXABLE YEARS BEGINNING AFTER DECEMBER 31, 1953

Annuity Contracts

On August 27, 1963, notice of proposed rule making with respect to amendment of the Income Tax Regulations (26 CFR Part 1) under sections 72, 101, 402, 403, and 404 of the Internal Revenue Code of 1954 to reflect the amendments made by section 23 (a), (b), (c), and (d) and section 24 of the Technical Amendments Act of 1958 (72 Stat. 1620 and 1623), by section 3 of the Act of October 4, 1961 (Pub. Law 87–370, 75 Stat. 801), was published in the FEDERAL REGISTER (28 F.R. 9389). After consideration of all such relevant matter as was presented by interested persons regarding the rules proposed, the amendment of the regulations as proposed is hereby adopted, subject to the changes set forth below. These regulations supersede § 18.1–5 of Treasury Decision 6335 (26 CFR Part 18), approved November 18, 1958 (23 F.R. 8979, 8980).

Section 1.403(b)–1, as set forth in the notice of proposed rule making, is revised.

[SEAL] BERTRAND M. HARDING,
Acting Commissioner of Internal Revenue.

Approved: December 21, 1964.

STANLEY S. SURREY,
Assistant Secretary of the Treasury.

The Income Tax Regulations (26 CFR Part 1) under sections 72, 101, 402, 403, and 404 of the Internal Revenue Code of 1954 are hereby amended to reflect the amendments made by section 23 (a), (b), (c), and (d) and section 24 of the Technical Amendments Act of 1958 (72 Stat. 1620 and 1623) and section 3 of the Act of October 4, 1961 (Pub. Law 87–370, 75 Stat. 801).

PARAGRAPH 1. Section 1.72–8 is amended by adding a new paragraph (d) at the end thereof. This amended provision reads as follows:

§ 1.72–8 Effect of certain employer contributions with respect to premiums or other consideration paid or contributed by an employee.

* * * * *

(d) *Amounts includible in gross income of employee when his rights under annuity contract change to nonforfeitable rights.* Any amount which, by reason of section 403(d) and after the application of paragraph (b) of § 1.403(b)–1, is required to be included in an employee's gross income for the year when his rights under an annuity contract change from forfeitable to nonforfeitable rights shall be considered an amount contributed by the employee and shall be aggregated with amounts, if any, to which paragraphs (a), (b), and (c) of this section apply for the purpose of determining the aggregate amount of premiums or other consideration paid or contributed by the employee for such annuity contract. In other words, if, under section 403(d), an employee of an organization exempt from tax under section 501(a) of 521(a) is required to include an amount in gross income by reason of his rights under an annuity contract changing from forfeitable to nonforfeitable rights, such amount, to the extent it is not excludable from gross income under paragraph (b) of § 1.403(b)–1, shall be considered an amount contributed by such employee for the annuity contract.

PAR. 2. Paragraph (a) of § 1.101–1 is amended to read as follows:

§ 1.101–1 Exclusion from gross income of proceeds of life insurance contracts payable by reason of death.

(a)(1) *In general.* Section 101(a)(1) states the general rule that the proceeds of life insurance policies, if paid by reason of the death of the insured, are excluded from the gross income of the recipient. Death benefit payments having the characteristics of life insurance proceeds payable by reason of death under contracts, such as workmen's

compensation insurance contracts, endowment contracts, or accident and health insurance contracts, are covered by this provision. For provisions relating to death benefits paid by or on behalf of employers, see section 101(b) and § 1.101–2. The exclusion from gross income allowed by section 101(a) applies whether payment is made to the estate of the insured or to any beneficiary (individual, corporation, or partnership) and whether it is made directly or in trust. The extent to which this exclusion applies in cases where life insurance policies have been transferred for a valuable consideration is stated in section 101(a)(2) and in paragraph (b) of this section. In cases where the proceeds of a life insurance policy, payable by reason of the death of the insured, are paid other than in a single sum at the time of such death, the amounts to be excluded from gross income may be affected by the provisions of section 101(c) (relating to amounts held under agreements to pay interest) or section 101(d) (relating to amounts payable at a date later than death). See §§ 1.101–3 and 1.101–4. However, neither section 101(c) nor section 101(d) applies to a single sum payment which does not exceed the amount payable at the time of death even though such amount is actually paid at a date later than death.

(2) *Cross references.* For rules governing the taxability of insurance proceeds constituting benefits payable on the death of an employee—

(i) Under pension, profit-sharing, or stock bonus plans described in section 401(a) and exempt from tax under section 501(a), or under annuity plans described in section 403(a), see section 72(m)(3) and paragraph (c) of § 1.72–16; or

(ii) Under annuity contracts to which paragraph (a) or (b) of § 1.403(b)–1 applies, see paragraph (c)(3) of § 1.403(b)–1.

For the definition of a life insurance company, see section 801.

PAR. 3. Section 1.101–2 is amended (A) by revising the third sentence of paragraph (a)(3), (B) by revising the last sentence of paragraph (b), (C) by revising the first sentence of paragraph (d)(1), (D) by revising the first sentence of paragraph (d)(2), (E) by revising the first sentence of paragraph (d)(3)(i) and by adding a new sentence at the end of such paragraph, and (F) by adding a new subparagraph (4) at the end of paragraph (d). These revised and added provisions read as follows:

§ 1.101–2 Employees' death benefits.

(a) *In general.* * * *

(3) The total amount excludable with respect to any employee may not exceed $5,000, regardless of the number of employers or the number of beneficiaries. For allocation of the exclusion among beneficiaries, see paragraph (c) of this section. For rules governing the taxability of benefits payable on the death of an employee under pension, profit-sharing, or stock bonus plans described in section 401(a) and exempt under section 501(a), under annuity plans described in section 403(a), or under annuity contracts to which paragraph (a) or (b) of § 1.403(b)–1 applies, see sections 72(m)(3), 402(a), and 403 and the regulations thereunder.

(b) *Payments under certain employee benefit plans*—(1) *In general.* Where a payment is made by reason of the death of an employee by an employer-provided welfare fund or a trust, including a stock bonus, pension, or profit-sharing trust described in section 401(a), or by an insurance company (if such payment does not constitute "life insurance" within the purview of section 101(a)), the payment shall be considered to have been made by or on behalf of the employer to the extent that it exceeds amounts contributed by, or deemed contributed by, the deceased employee.

(2) *Cross references.* For provisions governing the taxability of distributions payable on the death of an employee participant—

(i) Under a trust described in section 401(a) and exempt from tax under section 501(a), see paragraph (c) of § 1.72–16 and paragraph (a)(5) of § 1.402(a)–1;

(ii) Under an annuity plan described in section 403(a), see paragraph (c) of § 1.72–16 and paragraph (c) of § 1.403(a)–1;

(iii) Under annuity contracts to which paragraph (a) or (b) of § 1.403(b)–1 applies, see paragraph (c)(2) and (3) of § 1.403(b)–1.

* * * * *

(d) *Nonforfeitable rights.* (1) Except as provided in subparagraphs (3) and (4) of this paragraph, the exclusion provided by section 101(b) does not apply to amounts with respect to which the deceased employee possessed, immediately before his death, a nonforfeitable right to receive the amounts while living. Section 101(b)(2)(B). For the purpose of section 101(b) and this paragraph, an employee shall be considered to have had a nonforfeitable right with respect to—

* * * * *

(2) The application of subparagraph (1) of this paragraph may be illustrated by the following examples, in which it is assumed that the plans are not "qualified" plans and that the employers are not organizations referred to in section 503(b)(1), (2), or (3) and exempt under section 501(a):

* * * * *

(3)(i) Notwithstanding the rule stated in subparagraph (1) of this paragraph and illustrated in subparagraph (2) of this paragraph, the exclusion from gross income provided by section 101(b) applies to the receipt of certain amounts, paid under "qualified" plans, with respect to which the deceased employee possessed, immediately before his death, a nonforfeitable right to receive the amounts while living (see section 101(b)(2)(B)(i) and (ii)). The payments to which this exclusion applies are—

(*a*) "Total distributions payable" by a stock bonus, pension, or profit-sharing trust described in section 401(a) which is exempt from tax under section 501(a), and

(*b*) "Total amounts" paid under an annuity contract under a plan described in section 403(a),

provided such distributions or amounts are paid in full within one taxable year of the distributee (see example (3) of subdivision (ii) of this subparagraph). For the purposes of applying section 101(b), "total distributions payable" means the balance to the credit of an employee which becomes payable to a distributee on account of the employee's death, either before or after separation from the service (see section 402(a)(3)(C), the regulations thereunder, and examples (2) and (4) of subdivision (ii) of this subparagraph); and "total amounts" means the balance to the credit of an employee which becomes payable to the payee by reason of the employee's death, either before or after separation from the service (see section 403(a)(2)(B), the regulations thereunder, and example (1) of subdivision (ii) of this subparagraph). See subparagraph (4) of this paragraph relating to the exclusion of amounts which are received under annuity contracts purchased by certain exempt organizations and with respect to which the deceased employee possessed, immediately before his death, a nonforfeitable right to receive the amounts while living.

* * * * *

(4)(i) Notwithstanding the rule stated in subparagraph (1) of this paragraph and illustrated in subparagraph (2) of this paragraph, the exclusion from gross income under section 101(b) also applies (but only to the extent provided in the next sentence) to amounts with respect to which the deceased employee possessed, immediately before his death, a nonforfeitable right to receive the amounts while living—

(*a*) If such amounts are paid under an annuity contract purchased by an employer which is an organization referred to in section 503(b)(1), (2), or (3) and which is exempt from tax under section 501(a);

(*b*) If such amounts are paid as part of a "total payment" with respect to the deceased employee; and

(*c*) If such "total payment" is paid in full within one taxable year of the payee beginning after December 31, 1957.

However, the amount that is excludable under section 101(b) by reason of this subparagraph shall not exceed an amount which bears the same ratio to the amount which would be includible in the payee's gross income if it were not for the second sentence of section 101(b)(2)(B) and this subparagraph, as the amount contributed by the employer for the annuity contract that was excludable from the deceased employee's gross income under paragraph (b) of § 1.403(b)–1 bears to the total amount contributed by the employer for the annuity contract. See section 101(b)(2)(B)(iii). For purposes of this subparagraph, a "total payment" means a payment of the balance to the credit of an employee with re-

spect to all "section 403(b) annuities" purchased by the employer which becomes payable to the payee by reason of the employee's death, either before or after separation from the service. An annuity contract will be regarded as a "section 403(b) annuity" if any amount contributed (or considered as contributed under paragraph (b)(2) of § 1.403(b)-1) by the employer for such contract was excludable from the employee's gross income under paragraph (b) of § 1.403(b)-1. Under this definition, therefore, an annuity contract may be regarded as a "section 403(b) annuity" even though some of the employer's contributions for the contract were not excludable from the employee's gross income under paragraph (b) of § 1.403(b)-1 because, for example, the employer was not an exempt organization when such contributions were paid. For purposes of computing the ratio described in this subdivision in such a case, the total amount contributed by the employer for the contract includes the amounts contributed by the employer when it was not an exempt organization.

(ii) This subparagraph does not relate to any amounts with respect to which the deceased employee did not possess, immediately before his death, a nonforfeitable right to receive the amounts while living. Such amounts are excludable under the provisions of section 101(b) without regard to section 101(b)(2)(B) and this subparagraph. Thus, if a "total payment" received by a beneficiary of a deceased employee under an annuity contract purchased by an organization described in subdivision (i)(*a*) of this subparagraph consists both of amounts with respect to which the deceased employee possessed, immediately before his death, a nonforfeitable right to receive the amounts while living and of amounts with respect to which the deceased employee did not possess such a nonforfeitable right, only those amounts with respect to which the deceased employee possessed such a nonforfeitable right are amounts to which this subparagraph applies. Therefore, for purposes of computing the ratio described in subdivision (i) of this subparagraph in such a case, there shall be taken into account only the employer contributions attributable to those amounts with respect to which the deceased employee possessed, immediately before his death, a nonforfeitable right to receive the amounts while living. See example (3) of subdivision (v) of this subparagraph. In no event, however, may the total amount excludable under section 101(b) with respect to any employee exceed $5,000 (see paragraph (a)(3) of this section).

(iii)(*a*) In any case when the deceased employee's interest in the employer's contributions for an annuity contract was forfeitable at the time the contributions were made but, at a subsequent date prior to his death, such interest changed to a nonforfeitable interest, then, for purposes of computing the ratio described in subdivision (i) of this subparagraph, the cash surrender value of the contract on the date of the change (except to the extent attributable to employee contributions) shall be considered as the amount contributed by the employer for the contract. In such a case, if only part of the deceased employee's interest in the annuity changed from a forfeitable to a nonforfeitable interest, then only the corresponding part of the cash surrender value of the contract on the date of the change shall be considered as the amount contributed by the employer for the contract. Similarly, if part of the deceased employee's interest in the annuity contract changed from a forfeitable to a nonforfeitable interest on a particular date and another part of his interest so changed on a subsequent date, it is necessary, in order to compute the amount contributed by the employer for the contract, to first determine (under the rules in the preceding sentence) the amount that is considered as the amount contributed by the employer with respect to each change, and then to add these amounts together. For purposes of computing the ratio described in subdivision (i) of this subparagraph in all of the above cases, the amount contributed by the employer that was excludable from the employee's gross income under paragraph (b) of § 1.403(b)-1 is that amount which, under paragraph (b)(2) of such section, was considered as employer contributions and which, under such paragraph (b) of § 1.403(b)-1, was excludable from the deceased employee's gross income for the taxable year in which the change occurred.

(*b*) This subdivision (iii) may be illustrated by the following examples:

Example (1). X Organization contributed $4,000 toward the purchase of an annuity contract for A, an employee who died in 1970. At the time they were made, A's interest in such contributions was forfeitable. A made no contributions toward the purchase of the annuity contract. On January 1, 1960, A's entire interest in the annuity contract changed to a nonforfeitable interest. At the time of such change, the cash surrender value of the contract was $5,000. For purposes of the ratio described in subdivision (i) of this subparagraph, the total amount contributed by X Organization for the annuity contract is $5,000. If any part of such $5,000 was excludable under paragraph (b) of § 1.403(b)-1 from A's gross income for his taxable year in which the change occurred, the amount so excludable shall be considered as the amount contributed for the contract by the employer that was excludable from the employee's gross income under paragraph (b) of § 1.403(b)-1.

Example (2). Assume the same facts as in example (1) except that only one-half of A's interest in the annuity contract changed to a nonforfeitable interest on January 1, 1960, and that no other part of his interest so changed during his lifetime. For purposes of the ratio described in subdivision (i) of this subparagraph, the total amount contributed by X Organization for the annuity contract is $2,500 (½ of the cash surrender value of the annuity contract on the date of the change). To the extent such $2,500 was, under paragraph (b) of § 1.403(b)-1, excludable from A's gross income for the taxable year of the change, it is considered as the amount contributed by the employer that was excludable under paragraph (b) of § 1.403(b)-1.

Example (3). Assume the same facts as in example (1) except that one-half of A's interest in the annuity contract changed to a nonforfeitable interest on January 1, 1960, and the other half of his interest changed to a nonforfeitable interest on January 1, 1965. On January 1, 1965, the cash surrender value of the annuity contract was $6,000. For purposes of the ratio described in subdivision (i) of this subparagraph, the total amount contributed by X organization for the annuity contract is $5,500 (*i.e.*, ½ x $5,000 plus ½ x $6,000). The amount contributed by the employer that was excludable from A's gross income under paragraph (b) of § 1.403(b)-1 is an amount equal to the sum of the amount that was, under such paragraph, excludable from A's gross income for the taxable year during which the first change occurred and the amount that was, under such paragraph, excludable from A's gross income for the taxable year in which the second change occurred.

(iv) For purposes of this subparagraph, an annuity contract will be considered to have been purchased by an employer which is an organization referred to in section 503(b)(1), (2), or (3) and which is exempt from tax under section 501(a), if any of the contributions paid toward the purchase of such contract by the employer were paid at a time when the employer was such an organization referred to in section 503(b)(1), (2), or (3) and exempt from tax under section 501(a). Thus, an annuity contract may be regarded as purchased by an organization referred to in section 503(b)(1), (2), or (3) and exempt from tax under section 501(a) even though part of the organization's contributions for such annuity contract were paid at a time when the organization was not such an exempt organization.

(v) The application of this subparagraph may be illustrated by the following examples:

Example (1). The widow of A, a deceased employee, elects, under an annuity contract purchased for A by X Organization, to receive in a lump sum the present value of such annuity contract as of the date of A's death. Such present value is $6,000 and is received by the widow in a taxable year beginning after December 31, 1957. X Organization contributed $3,000 toward the purchase of the annuity contract and A contributed $2,000 toward such purchase. A's interest in X Organization's contributions was nonforfeitable at the time such contributions were made. Thus, just before his death, A's entire interest in the annuity contract was a nonforfeitable interest and, if he had retired at that time, he could have received the present value of $6,000. The whole amount of the $3,000 contributed by X Organization for the annuity contract was excludable from A's gross income under paragraph (b) of § 1.403(b)-1. This annuity contract was the only annuity contract purchased by X Organization for A and was not purchased as part of a qualified plan. However, all the contributions paid by X Organization were paid at a time when X Organization was an organization referred to in section 503(b)(1) and exempt from tax under section 501(a). The amount that A's widow may exclude from gross income (assuming no other death benefits) is computed in the following manner:

(*a*) Amount includible in gross income without regard to second sentence of section 101(b)(2)(B) ($6,000 minus $2,000 contributed for contract by A)	$4,000
(*b*) Total employer contributions for the contract	$3,000
(*c*) Amount of employer contributions for the contract that was excludable under paragraph (b) of § 1.403(b)-1	$3,000

(d) Percent of total employer contributions for the contract that were excludable under paragraph (b) of § 1.403(b)-1 ((c) ÷ (b)) ---------- 100%
(e) Amount to which section 101(b) exclusion applies ((d) × (a)) -- $4,000

Example (2). The facts are the same as in example (1) except that only $2,000 of X Organization's contributions for the annuity contract was excludable from A's gross income under paragraph (b) of § 1.403(b)-1 and that the remaining $1,000 was includible in A's gross income for the taxable years during which such amounts were contributed by X Organization. The amount that A's widow may exclude from gross income (assuming no other death benefits) is computed in the following manner:

(a) Amount includible in gross income without regard to second sentence of section 101(b)(2)(B) ($6,000 minus $2,000 contributed for contract by A and $1,000 of X Organization's contributions includible in A's gross income) ---------- $3,000
(b) Total employer contributions for the contract ---------- $3,000
(c) Amount of employer contributions for the contract that was excludable under paragraph (b) of § 1.403(b)-1 ---------- $2,000
(d) Percent of total employer contributions for the contract that were excludable under paragraph (b) of § 1.403(b)-1 ((c) ÷ (b)) ---------- 67%
(e) Amount to which section 101(b) exclusion applies ((d) × (a)) -- $2,000

Example (3). The widow of B, a deceased employee, elects, under an annuity contract purchased for B by Y Organization, to receive in a lump sum the present value of such annuity contract as of the date of B's death. Such present value is $6,000 and is received by the widow in a taxable year beginning after December 31, 1957. Y Organization contributed $4,000 toward the purchase of the contract; whereas B made no contributions toward the purchase of the contract. This annuity contract was the only annuity contract purchased by Y Organization for B and was not purchased as part of a "qualified" plan. However, all the contributions paid by Y Organization were paid at a time when it was an organization referred to in section 503(b)(1) and exempt from tax under section 501(a). B's interest in Y Organization's contributions was, at the time they were paid, forfeitable. However, prior to his death, one-half of B's interest in the annuity contract changed from a forfeitable to a nonforfeitable interest. Therefore, just before his death, B could have obtained $3,000 under the annuity contract if he had retired at that time. On the date of the change, the cash surrender value of the annuity contract was $5,000. As a result of the change, $1,500 was, under paragraph (b) of § 1.403(b)-1, excludable from B's gross income, and $600 was includible in his gross income for the taxable year in which the change occurred. Part of the value of the annuity contract on the date of the change was attributable to contributions made by Y Organization prior to January 1, 1958, and, consequently, was neither excludable from B's gross income under paragraph (b) of § 1.403(b)-1 nor includible in B's gross income (see paragraph (b) of § 1.403(d)-1. The amount that B's widow may exclude from gross income (assuming no other death benefits) is computed in the following manner:

(a) Amount of "total payment" with respect to which A had a forfeitable right at time of death. (½ × $6,000) ---------- $3,000
(b) Amount includible in gross income without regard to second sentence of section 101(b)(2)(B) (½ × $6,000 less $600 includible in B's gross income for year when his rights changed to nonforfeitable rights) ----- $2,400
(c) Total employer contributions for the contract (½ of cash surrender value of contract on date B's rights changed to nonforfeitable rights) ---------- $2,500
(d) Amount of employer contributions for the contract that was excludable under paragraph (b) of § 1.403(b)-1 ---- $1,500
(e) Percent of total employer contributions for the contract that were excludable under paragraph (b) of § 1.403(b)-1 ((d) ÷ (c)) ---------- 60%
(f) Amount to which setcion 101(b) exclusion applies by reason of the second sentence of section 101(b)(2)(B) ((e) × (b)) ---- $1,440
(g) Total amount to which section 101(b) exclusion applies ((a) + (f)) ---------- $4,440

PAR. 4. Paragraph (a)(2)(i) of § 1.402(b)-1 is amended to read as follows:

§ 1.402(b)-1 Treatment of beneficiary of a trust not exempt under section 501(a).

(a) *Taxation by reason of employer contributions.* * * *

(2)(i) An employee's beneficial interest in the contribution is nonforfeitable within the meaning of sections 402(b), 403(b), 403(c), and 404(a)(5) at the time the contribution is made if there is no contingency under the plan which may cause the employee to lose his rights in the contribution. Similarly, an employee's rights under an annuity contract purchased for him by his employer change from forfeitable to nonforfeitable rights within the meaning of section 403(d) at that time when, for the first time, there is no contingency which may cause the employee to lose his rights under the contract. For example, if under the terms of a pension plan, an employee upon termination of his services before the retirement date, whether voluntarily or involuntarily, is entitled to a deferred annuity contract to be purchased with the employer's contributions made on his behalf, or is entitled to annuity payments which the trustee is obligated to make under the terms of the trust instrument based on the contributions made by the employer on his behalf, the employee's beneficial interest in such contributions is nonforfeitable.

PAR. 5. Paragraph (a) of § 1.402(d)-1 is amended to read as follows:

§ 1.402(d)-1 Effect of section 402(d).

(a) If the requirements of section 402(d) are met, a contribution made by an employer on behalf of an employee to a trust which is not exempt under section 501(a) shall not be included in the income of the employee in the year in which the contribution is made. Such contribution will be taxable to the employee, when received in later years, as provided in section 72 (relating to annuities), except that section 72(e)(3) shall not apply. See paragraph (b) of § 1.403(c)-1. The intent and purpose of section 402(d) is to give those employees, covered under certain non-exempt trusts to which such section applies, essentially the same tax treatment as those covered by trusts described in section 401(a) and exempt under section 501(a), except that the capital gains treatment referred to in section 402(a)(2) does not apply.

PAR. 6. Section 1.403(a) is amended (A) by revising section 403(a)(1) and (B) by adding a historical note at the end thereof. These revised and added provisions read as follows:

§ 1.403(a) Statutory provisions; taxation of employee annuities; qualified annuity plan.

SEC. 403. *Taxation of employee annuities*—(a) *Taxability of beneficiary under a qualified annuity plan*—(1) *General rule.* Except as provided in paragraph (2), if an annuity contract is purchased by an employer for an employee under a plan which meets the requirements of section 404(a)(2) (whether or not the employer deducts the amounts paid for the contract under such section), the employee shall include in his gross income the amounts received under such contract for the year received as provided in section 72 (relating to annuities) except that section 72(e)(3) shall not apply.

* * * * *

[Sec. 403(a) as amended by sec. 23(b), Technical Amendments Act 1958 (72 Stat. 1622)]

PAR. 7. Paragraph (a) of § 1.403(a)-1 is amended to read as follows:

§ 1.403(a)-1 Taxability of beneficiary under a qualified annuity plan.

(a) An employee or retired or former employee for whom an annuity contract is purchased by his employer is not required to include in his gross income the amount paid for the contract at the time such amount is paid, whether or not his rights to the contract are forfeitable, if the annuity contract is purchased under a plan which meets the requirements of section 404(a)(2). For purposes of the preceding sentence, it is immaterial whether the employer deducts the amounts paid for the contract under such section 404(a)(2). See § 1.403(b)-1 for rules relating to annuity contracts which are not purchased under qualified plans but which are purchased by organizations described in section 501(c)(3) and exempt under section 501(a) or which are purchased for employees who perform services for certain public schools.

PAR. 8. Section 1.403(b) is amended to read as follows:

§ 1.403(b) Statutory provisions; taxation of employee annuities; taxability of beneficiary under annuity purchased by section 501(c)(3) organization or public school.

SEC. 403. *Taxation of employee annuities.* * * *

(b) *Taxability of beneficiary under annuity purchased by section 501(c)(3) organization or public school*—(1) *General rule.* If—

(A) An annuity contract is purchased—

(i) For an employee by an employer described in section 501(c)(3) which is exempt from tax under section 501(a), or

(ii) For an employee (other than an employee described in clause (i)), who performs services for an educational institution (as defined in section 151(e)(4)), by an employer which is a State, a political subdivision of a State, or an agency or instrumentality of any one or more of the foregoing,

(B) Such annuity contract is not subject to subsection (a), and

(C) The employee's rights under the contract are nonforfeitable, except for failure to pay future premiums,

then amounts contributed by such employer for such annuity contract on or after such rights become nonforfeitable shall be excluded from the gross income of the employee for the taxable year to the extent that the aggregate of such amounts does not exceed the exclusion allowance for such taxable year. The employee shall include in his gross income the amounts received under such contract for the year received as provided in section 72 (relating to annuities) except that section 72(e)(3) shall not apply.

(2) *Exclusion allowance.* For purposes of this subsection, the exclusion allowance for any employee for the taxable year is an amount equal to the excess, if any, of—

(A) The amount determined by multiplying (i) 20 percent of his includible compensation, by (ii) the number of years of service, over

(B) The aggregate of the amounts contributed by the employer for annuity contracts and excludable from the gross income of the employee for any prior taxable year.

(3) *Includible compensation.* For purposes of this subsection, the term "includible compensation" means, in the case of any employee, the amount of compensation which is received from the employer described in paragraph (1)(A), and which is includible in gross income (computed without regard to sections 105(d) and 911) for the most recent period (ending not later than the close of the taxable year) which under paragraph (4) may be counted as one year of service. Such term does not include any amount contributed by the employer for any annuity contract to which this subsection applies.

(4) *Years of service.* In determining the number of years of service for purpose of this subsection, there shall be included—

(A) One year for each full year during which the individual was a full-time employee of the organization purchasing the annuity for him, and

(B) A fraction of a year (determined in accordance with regulations prescribed by the Secretary or his delegate) for each full year during which such individual was a part-time employee of such organization and for each part of a year during which such individual was a full-time or part-time employee of such organization.

In no case shall the number of years of service be less than one.

(5) *Application to more than one annuity contract.* If for any taxable year of the employee this subsection applies to 2 or more annuity contracts purchased by the employer, such contracts shall be treated as one contract.

(6) *Forfeitable rights which become nonforfeitable.* For purposes of this subsection and section 72(f) (relating to special rules for computing employees' contributions to annuity contracts), if rights of the employee under an annuity contract described in subparagraphs (A) and (B) of paragraph (1) change from forfeitable to nonforfeitable rights, then the amount (determined without regard to this subsection) includible in gross income by reason of such change shall be treated as an amount contributed by the employer for such annuity contract as of the time such rights become nonforfeitable.

[Sec. 403(b) as added by sec. 23(a), Technical Amendments Act 1958 (72 Stat. 1620) and amended by sec. 3, Act of October 4, 1961 (Pub. Law 87-370, 75 Stat. 801)]

PAR. 9. Section 1.403(b)-1 is amended to read as follows:

§ 1.403(b)-1 Taxability of beneficiary under annuity purchased by a section 501(c)(3) organization or public school.

(a) *Amounts paid by employer during taxable years beginning before January 1, 1958*—(1) *In general.* If an amount is paid during a taxable year of an employee (or a retired or former employee) beginning before January 1, 1958, toward the purchase for such employee of an annuity contract and such purchase is not part of an annuity plan which meets the requirements of section 404(a)(2), then such amount is not required to be included in the gross income of such employee for such taxable year—

(i) If such amount is paid by an employer which, at the time of the payment, is an organization described in section 501(c)(3) and exempt from tax under section 501(a), and

(ii) If the purchase of the annuity contract is merely a supplement to the past or current compensation of such employee (within the meaning of subparagraph (2) of this paragraph).

For purposes of this paragraph, it is immaterial whether or not the employee's rights to the annuity contract are forfeitable.

(2) *Supplement to past or current compensation.* For purposes of this paragraph, whether the purchase of an annuity contract is merely a "supplement to past or current compensation" is to be determined by all the surrounding facts and circumstances. One of the pertinent facts to be taken into consideration is the ratio of the consideration paid by the employer for an employee's contract to the amount of his past or current compensation. For example, if the annual premium paid for an employee's contract is $1,000 and his annual salary is $10,000, the ratio indicates that the premium paid for the contract is merely a supplement to the employee's current compensation. If, however, an employee receives no current compensation, or the annual premiums paid for his annuity contract approximate his annual salary, the amount paid for his contract will be considered to be current compensation and taxable to the employee in the year in which it is paid by the employer. Other pertinent considerations are whether the annuity contract is purchased as a result of an agreement for a reduction of the employee's annual salary, or whether it is purchased at his request in lieu of an increase in current compensation to which he otherwise might be entitled. In such cases, the amount paid for the contract shall also be considered to be current compensation.

(b) *Amounts paid by employer during taxable years beginning after December 31, 1957*—(1) *In general.* If amounts are contributed by an employer during a taxable year of an employee (or a retired or former employee) beginning after December 31, 1957, toward the purchase for such employee of an annuity contract and such purchase is not part of an annuity plan which meets the requirements of section 404(a)(2), then, to the extent such amounts do not exceed the exclusion allowance for such taxable year, they are not required to be included in the gross income of such employee for such taxable year, if at the time of the contribution—

(i) The employer is an organization described in section 501(c)(3) and exempt from tax under section 501(a), or

(ii) The employer is a State, a political subdivision of a State, or an agency or instrumentality of any one or more of the foregoing, and the employee is performing (or has performed) services for an educational institution (as defined in section 151(e)(4)), and

(iii) The employee's rights under the annuity contract are nonforfeitable except for failure to pay future premiums.

See paragraph (d) of this section for rules relating to the computation of an employee's exclusion allowance for a taxable year.

(2) *Forfeitable rights which change to nonforfeitable rights.* If an employee's rights under an annuity contract change from forfeitable to nonforfeitable rights, the amount which, under section 403(d), is includible in the gross income of such employee by reason of such change (computed without regard to subparagraph (1) of this paragraph) shall, for purposes of subparagraph (1) of this paragraph, be considered an amount contributed by the employer for such annuity contract as of the time the employee's rights under the contract change to nonforfeitable rights. Such amount will, therefore, be excludable from the employee's gross income for the taxable year in which the change occurs to the extent that it is so excludable under the rules contained in this section. In determining the extent to which such amount is excludable, this section shall be applied in the same manner as in the case of current employer contributions. Thus, no part of such amount is excludable if the employer is not an employer described in subparagraph (1) of this paragraph at the time the employee's rights under the annuity contract change from forfeitable to nonforfeitable rights. In addition, such amount will be excludable only to the extent it does not exceed the employee's exclusion allowance for the taxable year in which the change occurs. Since such an amount is considered as an amount contributed by the employer at the time the change occurs, it is immaterial whether the employer was an employer described in subparagraph (1) of this paragraph at the time the actual contributions were made.

(3) *Agreement to take a reduction in salary or to forego an increase in salary.* (i) There is no requirement that the purchase of an annuity contract for an employee must be merely a "supplement to past or current compensation" in order for the exclusion provided by this paragraph to apply to employer contributions for such annuity contract. Thus, the exclusion provided by this paragraph is applicable to amounts contributed by an employer for an annuity contract as a result of an agreement with an employee to take a reduction in salary, or to forego an increase in salary, but only

to the extent such amounts are earned by the employee after the agreement becomes effective. Such an agreement must be legally binding and irrevocable with respect to amounts earned while the agreement is in effect. The employee must not be permitted to make more than one agreement with the same employer during any taxable year of such employee beginning after December 31, 1963; the exclusion provided by this paragraph shall not apply to any amounts which are contributed under any further agreement made by such employee during the same taxable year beginning after such date. However, the employee may be permitted to terminate the entire agreement with respect to amounts not yet earned.

(ii) The rules of this subparagraph may be illustrated by the following example:

Example. A is an employee of X Organization (an employer described in section 501(c)(3) and exempt from tax under section 501(a)) for the entire calendar year 1964. A uses the calendar year as a taxable year. A's annual salary as of January 1, 1964, is $12,000. On February 1, 1964, A and his employer enter a binding and irrevocable agreement whereby A is to take a 10-percent reduction in salary (from $1,000 per month to $900 per month) and X Organization is to contribute $100 per month for an annuity contract described in section 403(b). The agreement also provides that A may terminate the entire agreement with respect to amounts not yet earned. Since the agreement to reduce A's salary and invest the amount of such reduction in an annuity contract was made after A earned his salary for January, A's current compensation for January is $1,000 even though the agreement may provide that X Organization shall contribute $100 with respect to January for the benefit of A for an annuity contract described in section 403(b). For February and subsequent months ending before July 1, 1964, X Organization contributes $100 per month for A's annuity. Thus, A's current compensation for each of these months is $900, and the $100 which is contributed during such months by X Organization for an annuity contract for A is an employer contribution to which the exclusion provided in this paragraph applies. On July 1, 1964, A becomes entitled to a salary increase of $200 per month and, pursuant to the agreement of February 1, 1964, X Organization contributes 10 percent of such increase or an additional $20 per month for a section 403(b) annuity. For July and subsequent months ending before October 1, 1964, X Organization contributes $120 per month for A's annuity. Thus, A's current compensation for each of these months is $1,080, and the $120 which is contributed during such months by X Organization for an annuity contract for A is an employer contribution to which the exclusion provided in this paragraph applies. On November 1, 1964, A terminates the entire agreement with respect to amounts not yet earned. Since the termination occurred after A earned his salary for the month of October, the contribution for October is an employer contribution to which the exclusion provided in this paragraph applies. For the months November and December, A's full salary of $1,200 per month is includible in his gross income whether or not his employer makes contributions for a section 403(b) annuity.

(4) *Two or more annuity contracts.* If, during a taxable year of an employee, this paragraph applies to amounts contributed (including amounts which are considered to be contributed under subparagraph (2) of this paragraph) by his employer for two or more annuity contracts for such employee, such two or more annuity contracts shall, for such taxable year, be considered a single contract for purposes of applying the rules contained in this paragraph.

(5) *Employees performing services for public schools.* For purposes of this section, a person shall be considered an employee who performs services for an educational institution (as defined in section 151(e)(4)) if he is performing services as an employee directly or indirectly for such an institution. Thus, for example, the principal, clerical employees, custodial employees, and teachers at a public elementary school are employees performing services directly for such an educational institution. An employee who performs services involving the operation or direction of a State's, or political subdivision's, education program as carried on through educational institutions (as defined in section 151(e)(4)) is an employee performing services indirectly for such institutions. An employee participating in an "in-home" teaching program is included since such program is merely an extension of the activities carried on by such educational institutions. On the other hand, a person occupying an elective or appointive public office is not an employee performing services for an educational institution unless such office is one to which an individual is elected or appointed only if he has received training, or is experienced, in the field of education. The term "public office" includes any elective or appointive office of a State, a political subdivision of a State, or an agency or instrumentality of any one or more of the foregoing. Thus, for example, a regent or trustee of a State university or a member of a board of education is not an employee performing services for an educational institution. On the other hand, a commissioner or superintendent of education will generally be considered an employee performing services for an educational institution.

(c) *Taxation of amounts received under annuity contracts*—(1) *In general.* The amounts received by or made available to any employee under an annuity contract to which paragraph (a) or (b) of this section applies shall be included in the gross income of the employee for the taxable year in which received or made available, as provided in section 72 (relating to annuities), except that section 72(e)(3) shall not apply.

(2) *Taxation of beneficiaries.* If, upon the death of an employee or of a retired employee, the widow or other beneficiary of such employee is paid, in accordance with the terms of the annuity contract relating to the deceased employee, an annuity or other death benefit, the extent to which the amounts received by or made available to the beneficiary must be included in the beneficiary's income under subparagraph (1) of this paragraph shall be determined in accordance with the rules presented in paragraph (a)(5) of § 1.402(a)-1.

(3) *Life insurance protection.* An individual contract issued after December 31, 1962, or a group contract, which provides incidental life insurance protection may be purchased as an annuity contract to which paragraph (a) or (b) of this section applies. For the rules as to nontransferability of such contracts issued after December 31, 1962, see § 1.401-9. For the rules relating to the taxation of the cost of the life insurance protection and the proceeds thereunder, see § 1.72-16. Section 403(b) is not applicable to premiums paid after October 26, 1956, for individual contracts which were issued prior to January 1, 1963, and which provide life insurance protection.

(d) *Exclusion allowance*—(1) *In general.* For purposes of paragraph (b) of this section, an employee's exclusion allowance for a taxable year is an amount equal to the excess, if any, of—

(i) The amount determined by multiplying (*a*) 20 percent of such employee's includible compensation in respect of such taxable year, by (*b*) such employee's total number of years of service as of the close of such taxable year, over

(ii) The aggregate of the amounts which have been contributed by the employer for annuity contracts for such employee and which were excludable from the gross income of the employee for any taxable year prior to the taxable year for which the exclusion allowance is being determined.

See paragraph (e) of this section for the definition of an employee's includible compensation in respect of a taxable year and paragraph (f) of this section for rules for computing an employee's total number of years of service for an employer.

(2) *More than one employer.* If, during a taxable year of an employee, amounts are contributed for annuity contracts for such employee by two or more employers described in paragraph (b)(1)(i) or (ii) of this section, a separate exclusion allowance shall be computed with respect to each employer. In such a case, therefore, there shall not be taken into account, in computing the exclusion allowance with respect to one employer, the "includible compensation" received by the employee from any other employer, the employee's years of service with any other employer, or amounts which have been contributed by any other employer for annuity contracts for such employee.

(3) *Amounts previously contributed by the employer which were excludable from the employee's gross income.* In computing, for purposes of subparagraph (1)(ii) of this paragraph, the aggregate of the amounts which have been contributed by an employer for annuity contracts for an employee and which were excludable from the gross income of the employee for any taxable year prior to the taxable year for which the exclusion allowance is being determined, there shall be included all contributions made by the employer for the benefit of the employee—

(i) Which, under section 402(a) or section 403(a), were excludable from the employee's gross income for any such prior taxable year by reason of being contributions to a trust described in section 401(a) and exempt from tax under section 501(a) or contributions toward

the purchase of an annuity contract under a plan which meets the requirements of section 404(a)(2) (whether forfeitable or nonforfeitable); or

(ii) Which, under section 405(d), were excludable from the employee's gross income for any such prior taxable year by reason of being contributions toward the purchase of United States bonds under a plan which meets the requirements of section 405(a)(1); or

(iii) Which were excludable from the employee's gross income for any such prior taxable year by reason of being contributions described in paragraph (a) or (b) of this section; or

(iv) (*a*) Which were excludable from the employee's gross income for the taxable year when made solely by reason of the fact that the employee's rights to such contributions were forfeitable at the time they were made (and not for any of the reasons described in subdivisions (i), (ii), and (iii) of this subparagraph);

(*b*) With respect to which the employee's rights changed to nonforfeitable rights prior to the taxable year for which the exclusion allowance is being determined; and

(c) Which were not, under section 403(d) and without regard to paragraph (b) of this section, includible in the employee's gross income for the taxable year in which his rights to such contributions changed from forfeitable to nonforfeitable rights.

For purposes of subdivisions (i) and (iii) of this subparagraph, all references to provisions of the Internal Revenue Code of 1954 and to provisions of the regulations under such Code shall also be considered references to the corresponding provisions of prior law and regulations. See subparagraph (4) of this paragraph for rules relating to the allocation of employer contributions to an employee where the actual contributions are not allocated among individual employees.

(4) *Determination of excludable amounts by allocation of contributions.* If, for any employee, the actual amounts of employer contributions described in subparagraph (3) of this paragraph are not known, such amounts shall be determined under the formula described in this subparagraph or under any other method utilizing recognized actuarial principles which are consistent with the provisions of the plan under which such contributions are made and the method adopted by the employer for funding the benefits under the plan. If the formula described in this subparagraph is to be used, the contributions made by the employer for the benefit of the employee as of the end of any taxable year shall be deemed to be the product of the quantities described in subdivisions (i), (ii), (iii), and (iv) of ths subparagraph. Such quantities are—

(i) The projected annual amount of the employee's pension (as of the end of the taxable year) to be provided at normal retirement age from employer contributions, based upon the provisions of the plan in effect at such time and upon the assumption of the employee's continued employment with his present employer at his then current salary rate.

(ii) The value, from Table I below, at normal retirement age of an annuity of $1.00 per annum payable in equal monthly installments during the life of the employee, based upon the employee's sex and the normal retirement age as defined in the plan.

(iii) The amount from Table II below (representing the level annual contribution which will accumulate to $1.00 at normal retirement age) for the sum of (*a*) the number of years remaining from the end of the taxable year to normal retirement age and (*b*) the lesser of the number of years of service credited through the end of the taxable year or the number of years that the plan has been in existence at such time.

(iv) The lesser of the number of years of service credited through the end of the taxable year or the number of years that the plan has been in existence at such time.

TABLE I

[Value at normal retirement ages of annuity of $1.00 per annum payable in equal monthly installments during life of employee based upon employee's sex]

Normal retirement age	Value	
	Sex	
	Male	Female
60	$12.57	$14.36
62	11.80	13.55
65	10.63	12.31

NOTE. If the normal form of retirement benefit under the plan is other than a straight life annuity, the value from Table I above should be divided by the figure set forth below opposite the normal form of retirement benefit provided by the plan:

Annuity for 5 years certain and life thereafter	0.97
Annuity for 10 years certain and life thereafter	.90
Annuity for 15 years certain and life thereafter	.80
Annuity for 20 years certain and life thereafter	.70
Life annuity with installment refund	.80
Life annuity with cash refund [1]	.75

[1] The term "cash refund" refers to refund of accumulated employer contributions, and does not refer to refund of employee contributions only, often referred to as "modified cash refund".

TABLE II

[Level annual contribution which will accumulate to $1.00 at end of number of years]

Number of years:	*Amount*	Number of years:	*Amount*
1	$1.0000	26	$0.0242
2	.4914	27	.0229
3	.3219	28	.0216
4	.2373	29	.0204
5	.1865	30	.0194
6	.1527	31	.0184
7	.1285	32	.0174
8	.1105	33	.0166
9	.0964	34	.0158
10	.0852	35	.0150
11	.0761	36	.0143
12	.0685	37	.0136
13	.0621	38	.0130
14	.0566	39	.0124
15	.0518	40	.0118
16	.0477	41	.0113
17	.0440	42	.0108
18	.0408	43	.0103
19	.0379	44	.0099
20	.0354	45	.0095
21	.0330	46	.0091
22	.0309	47	.0087
23	.0290	48	.0083
24	.0273	49	.0080
25	.0257	50	.0076

(e) *Includible compensation*—(1) *In general.* For purposes of computing, under paragraph (d) of this section, an employee's exclusion allowance for a taxable year, such employee's includible compensation in respect of such taxable year means the amount of compensation from the employer—

(i) Which was earned during the most recent period (ending not later than the close of the employee's taxable year for which the exclusion allowance is being determined) that, under paragraph (f) of this section, may be counted as one year of service,

(ii) Which is includible in the employee's gross income, and

(iii) In the case of an employee of an employer described in paragraph (b)(1)(ii) of this section, which is attributable to services performed for an educational institution (as defined in section 151(e)(4)).

See subparagraph (2) of this paragraph for special rules for determining the amount of compensation which is includible in the employee's gross income.

(2) *Special rules for determining the amount of compensation includible in the employee's gross income.* For purposes of subparagraph (1) of this paragraph, the amount of compensation which is includible in the employee's gross income shall be computed without regard to the exclusions allowed by section 105(d) (relating to wage continuation plans) and section 911 (relating to earned income from sources without the United States). Therefore, although amounts received by the employee from the employer while he is absent from work on account of personal injuries or sickness may be excludable from his gross income under section 105(d), such amounts are, nevertheless, considered as includible in his gross income for purposes of computing his includible compensation. On the other hand, in computing the amount which is includible in the gross income of the employee for purposes of subparagraph (1) of this paragraph, there shall not be included any amount which is contributed by the employer for an annuity contract to which paragraph (b) of this section applies. Thus, although the amount of any employer contributions for an annuity contract to which paragraph (b) of this section applies is, to the extent it exceeds in any taxable year the employee's exclusion allowance for such year, includible in the employee's gross income for that year, such amount is not considered as includible in the employee's gross income for purposes of computing his includible compensation for that year.

(3) *Period during which compensation must be earned.* For purposes of computing an employee's exclusion allowance for a taxable year, there may not be taken into account, as includible compensation, any compensation which was earned by the employee during a taxable year ending after the taxable year for which the exclusion allowance is being determined. On the other hand, an employee's includible compensation may include all or part of his compensation earned during a taxable year prior to the taxable year for which the exclusion allowance is being determined. Such a

situation can occur, for example, when an employer purchases an annuity contract for a retired employee, or when an employer purchases an annuity contract for a part-time employee whose most recent one-year period of service (within the meaning of paragraph (f) of this section) extends over more than one taxable year of such employee. For purposes of this subparagraph, it is immaterial when the compensation is actually received by the employee or for what taxable year it is includible in his gross income.

(4) *Status of employer.* In computing an employee's exclusion allowance for a taxable year, there is not taken into account, as includible compensation, any compensation which was earned during a period when the employer was not an employer described in paragraph (b)(1)(i) or (ii) of this section since under paragraph (f)(2) of this section an employee is not considered to be in the service of the employer for any such period. On the other hand, it is immaterial whether the employer is an employer described in paragraph (b)(1)(i) or (ii) of this section at the time the compensation is actually received by the employee. Thus, if an employee receives compensation during his 1961 taxable year for services performed during his 1960 taxable year, such compensation can qualify as includible compensation if his employer was an employer described in paragraph (b)(1)(i) or (ii) of this section during 1960, even though such employer was not such an employer during 1961. See, also, paragraph (b) of this section which provides that the exclusion allowance is only applicable with respect to contributions which are made by an employer at a time when such employer is an employer described in paragraph (b)(1)(i) or (ii) of this section.

(f) *Years of service*—(1) *In general.* In computing an employee's exclusion allowance for a taxable year, it is necessary to determine such employee's number of years of service for the employer as of the close of such taxable year. For this purpose, the number of years of service of an employee for an employer shall be determined in accordance with the rules set forth in this paragraph. In addition, such rules are applicable in determining, for purposes of paragraph (e) of this section, an employee's most recent one-year period of service.

(2) *Exempt status requirement.* For purposes of determining an employee's number of years of service for an employer and his most recent one-year period of service for such employer, an employee shall not be considered to be employed by the employer, or to be in the service of the employer, during any period that the employer is not an employer described in paragraph (b)(1)(i) or (ii) of this section, or, in the case of an employee of an employer described in paragraph (b)(1)(ii) of this section, during any period when the employee is not performing services for an educational institution (as defined in section 151(e)(4)). The rule in this subparagraph may be illustrated by the following example: A was employed on a full-time basis by the X scientific organization during the whole of 1959 and 1960 and during half of 1961. Both A and the X Organization use the calendar year as their taxable year. The X Organization was an organization described in section 501(c)(3) and exempt from tax under section 501(a) during the years 1959 and 1961, but not during the year 1960. For purposes of determining A's exclusion allowance for 1961, he is considered to have 1½ years of service (his service during 1959 and 1961) and his most recent one-year period of service ending not later than the close of 1961 consists of his service during 1961 (which is equal to ½ year of service) and his service during the last half of 1959 (which is equal to another ½ year of service).

(3) *Service included.* For purposes of computing an employee's exclusion allowance for a taxable year, there may be taken into account, in determining his number of years of service, all service performed by him as of the close of such taxable year. Therefore, whenever possible, service performed during each of the employee's taxable years should be considered separately in arriving at his total number of years of service. For example, if an employee who reports his income on a calendar year basis is employed on a full-time basis on July 1, 1959, and continues on a full-time basis through December 31, 1960, his number of years of service as of the close of his 1960 taxable year should, if possible, be computed as follows:

(*a*) Number of years of service performed during 1959 taxable year	½
(*b*) Number of years of service performed during 1960 taxable year	1
(*c*) Total number of years of service as of close of 1960 taxable year ((*a*)+(*b*))	1½

However, in determining what constitutes a full year of service, the employer's annual work period, and not the employee's taxable year, is the standard of measurement. For example, in determining whether a professor is employed full time, the number of months in the school's academic year shall be the standard of measurement.

(4) *Full-time employee for full year.* (i) Each full year during which an individual was employed full time shall be considered as one year of service. In determining whether an individual is employed full-time, the amount of work which he is required to perform shall be compared with the amount of work which is normally required of individuals holding the same position with the same employer and who generally derive the major portion of their personal service income from such position.

(ii) (*a*) In measuring the amount of work required of individuals holding a particular position, any method that reasonably and accurately reflects such amount may be used. For example, the number of hours of classroom instruction is only an indication of the amount of work required, but it may be used as a measure.

(*b*) In determining whether positions with the same employer are the same, all of the facts and circumstances concerning the positions shall be considered, including the work performed, the methods by which compensation is computed, and the descriptions (or titles) of the positions. For example, an assistant professor employed in the English department of a university will be considered a full-time employee if the amount of work that he is required to perform is the same as the amount of work normally required of assistant professors of English at that university who derive the main portion of their personal service income from such position.

(*c*) In case an individual's position is not the same as another with his employer, the rules of this paragraph shall be applied by considering the same position with similar employers or similar positions with the same employer.

(iii) A full year of service for a particular position means the usual annual work period of individuals employed full-time in that general type of employment at the place of employment. For example, if a doctor employed by a hospital works throughout the 12 months of a year except for a one-month vacation, such doctor will be considered as being employed for a full year, if the other doctors at that hospital work 11 months of the year with a one-month vacation. Similarly, if the usual annual work period at a university consists of the fall and spring semesters, an instructor at that university who teaches those semesters will be considered as working a full year.

(5) *Other employees.* (i) An individual shall be treated as having a fraction of a year of service for each year during which he was a full-time employee for part of the year or for each year during which he was a part-time employee for the entire year or for a part of the year.

(ii) In determining the fraction which represents the fractional year of service for an individual employed full time for part of a year, the numerator shall be the number of weeks (or months) during which the individual was a full-time employee in a position during that year, and the denominator shall be the number of weeks (or months) which is considered under subparagraph (4)(iii) of this paragraph as the usual annual work period for that position. For example, if an instructor is employed full time by a university for the 1959 spring semester (which lasts from February 1959 through May 1959), and the academic year of the university is 8 months long, beginning in October 1958, and ending in May 1959, then he is considered as having completed ⅝ of a year of service.

(iii) In determining the fraction which represents the fractional year of service of an individual who is employed part time for a full year, the numerator shall be the amount of work required to be performed by the individual, and the denominator shall be the amount of work normally required of individuals who hold the same position. The amount of work required to be performed by the individual and the amount of work normally required of individuals holding the same position shall be deter-

mined in accordance with the principles of subparagraph (4) of this paragraph. Thus, if a practicing physician teaches one course at a local medical school 3 hours per week for two semesters and other faculty members at that medical school teach 9 hours per week for two semesters, then the practicing physician is considered as having completed ⅜ of a year of service.

(iv) In determining the fraction representing the fractional year of service of an individual who is employed part time for part of a year, it is necessary to compute the fractional year of service if the individual were a part-time employee for a full year, and the fractional year of service if the individual were a full-time employee for the part of a year. The two fractions shall be multiplied and the product is the fractional year of service of such individual who is employed part time for part of a year. For example, if an attorney who is a specialist in a subject teaches a course in that subject for 3 hours per week for one semester at a nearby law school, and the full-time instructors at that law school teach 12 hours per week for two semesters, then the fractional part of a year of service for such part-time instructor is computed as follows: The fractional year of service if the instructor were a part-time employee for a full year is $\frac{3}{12}$ (number of hours employed divided by the usual number of hours of work required for that position); the fractional year of service if the instructor were a full-time employee for part of a year is ½ (period worked or one semester, divided by usual work period, or 2 semesters). These fractions are multiplied to obtain the fractional year of service: $\frac{3}{12}$ times ½, or $\frac{3}{24}$ (⅛).

(6) *Less than one year of service considered as one year.* If, at the close of a taxable year, an employee has, under the rules in this paragraph, a period of service of less than one year, such employee shall, nevertheless, be considered to have one year of service for purposes of computing his exclusion allowance for that taxable year. Such period of service of less than one year shall also be considered to be such employee's most recent one-year period of service for purposes of determining his includible compensation.

(7) *Most recent one-year period of service.* (i) In determining, for purposes of paragraph (e) of this section (relating to includible compensation), an employee's most recent one-year period of service, there is first taken into account all service performed by the employee during the taxable year for which the exclusion allowance is being determined. For this purpose, therefore, an employee's most recent one-year period of service may not be the same as his employer's most recent annual work period. The rule in this subdivision may be illustrated by the following example: A, a professor who reports his income on a calendar year basis, is employed by a university on a full-time basis during the university's 1959–1960 and 1960–1961 academic years (October through May). For purposes of computing A's exclusion allowance for his 1960 taxable year, his most recent one-year period of service consists of his service performed during January through May, 1960 (which is part of the 1959–1960 academic year) and his service performed during October through December 1960 (which is part of the 1960–1961 academic year).

(ii) In the case of a part-time employee or a full-time employee who is employed for only part of a year, it will be necessary to aggregate his most recent periods of service to determine his most recent one-year period of service. In such a case, there is first taken into account his service during the taxable year for which the exclusion allowance is being determined; then there is taken into account his service during his next preceding taxable year and so forth until his service equals, in the aggregate, one year of service. For example, if an employee, who reports his income on the calendar year basis, is employed on a full-time basis during the months July through December 1959 (½ year of service), July through December 1960 (½ year of service), and October through December 1961 (¼ year of service), his most recent one-year period of service for purposes of computing his exclusion allowance for 1961 consists of his service during 1961 (¼ year of service), his service during 1960 (½ year of service), and his service during the months October through December 1959 (¼ year of service).

(g) *Illustration of computation of exclusion allowance.* The exclusion provided under paragraph (b) of this section may be illustrated by the following example: A, a professor who reports his income on the calendar year basis, became a full-time employee of X University on October 1, 1958 (beginning of X University's 1958–1959 academic year) and continued as a full-time employee for the academic years 1958–1959, 1959–1960, and 1960–1961. X University was, during all such academic years, an organization described in section 501(c)(3) and exempt from tax under section 501(a). X University's academic year runs for a period of 8 months: October through May. A received an annual salary, all of which was includible in his gross income, of $8,000 for the 1958–1959 academic year, $8,800 for the 1959–1960 academic year, and $9,600 for the 1960–1961 academic year. Starting in 1958, X University contributed amounts toward the purchase of annuity contracts for A and such purchase was not part of a qualified annuity plan. X University paid, as premiums for such contracts, $1,000 in 1958, $2,000 in 1959, $2,400 in 1960, and $1,400 in 1961. The amount of such premiums which is excludable from A's gross income for the year in which paid is computed as follows:

1958

(1) Amount contributed by employer for annuity contracts in 1958	$1,000.00
(2) Includible compensation for most recent one-year period of service (since A was employed for only ⅜ of a year at the close of 1958, this period is counted as most recent one-year period of service) ⅜ × $8,000	$3,600.00
(3) 20% x includible compensation	$600.00
(4) Number of years of service (although A was employed for less than a year, he is considered to have one-year of service)	1
(5) Item (4) x item (3)	$600.00
(6) Contributions excludable in prior taxable years of A	None
(7) Amount excludable from A's gross income for 1958 ((5)−(6))	$600.00
(8) Amount includible in A's gross income for 1958 ((1)−(7))	$400.00

1959

(9) Amount contributed by employer for annuity contracts in 1959	$2,000.00
(10) Includible compensation for most recent one-year period of service. (⅜ × $8,800+⅝ × $8,000)	$8,300.00
(11) 20% x includible compensation	$1,660.00
(12) Number of years of service	1⅜
(13) Item (12) x item (11)	$2,282.50
(14) Contributions excludable in prior taxable years of A (item (7))	$600.00
(15) Amount excludable from A's gross income for 1959 ((13)−(14))	$1,682.50
(16) Amount includible in A's gross income for 1959 ((9)−(15))	$317.50

1960

(17) Amount contributed by employer for annuity contracts in 1960	$2,400.00
(18) Includible compensation for most recent one-year period of service (⅜ × $9,600 +⅝ × $8,800)	$9,100.00
(19) 20% x includible compensation	$1,820.00
(20) Number of years of service	2⅜
(21) Item (20) x item (19)	$4,322.50
(22) Contributions excludable in prior taxable years ((7)+(15))	$2,282.50
(23) Amount excludable from A's gross income for 1960 ((21)−(22))	$2,040.00
(24) Amount includible in A's gross income for 1960 ((17)−(23))	$ 360.00

1961

(25) Amount contributed by employer for annuity contracts in 1961	$1,400.00
(26) Includible compensation for most recent one-year period of service (⅝ × $9,600+⅜ × $8,600)	$9,600.00
(27) 20% x includible compensation	$1,920.00
(28) Number of years of service	3
(29) Item (28) x item (27)	$5,760.00
(30) Contributions excludable in prior taxable years ((7)+(15)+(23))	$4,322.50
(31) Amount excludable from A's gross income for 1961 (item (25) since it is less than (29)−(30))	$1,400.00
(32) Amount includable in A's gross income for 1961 ((25)−(31))	None

PAR. 10. There are inserted immediately after § 1.403(b)–1 the following new sections:

§ 1.403(c) Statutory provisions; taxation of employee annuities; taxability of beneficiary under a nonqualified annuity.

SEC. 403. *Taxation of employee annuities.* * * *

(c) *Taxability of beneficiary under a nonqualified annuity.* If an annuity contract purchased by an employer for an employee is not subject to subsection (a) and the employee's rights under the contract are nonforfeitable, except for failure to pay future premiums, the amount contributed by the employer for such annuity contract on or after such rights become nonforfeitable shall be included in the gross income of the employee in the year in which the amount is contributed. The employee shall include in his gross income the amounts received under such contract for the year received as provided in section 72 (relating to annuities) except that section 72(e)(3) shall not apply.

[Sec. 403(c) as relettered by sec. 23(a), Technical Amendments Act 1958 (72 Stat. 1620)]

§ 1.403(c)-1 Taxability of beneficiary under a nonqualified annuity.

(a) Except as provided in section 402(d), if an employer purchases an annuity contract and if the amounts paid for the contract are not subject to paragraph (a) of § 1.403(a)-1 or paragraph (a) of § 1.403(b)-1, the amount of such contribution shall, to the extent it is not excludable under paragraph (b) of § 1.403(b)-1, be included in the income of the employee for the taxable year during which such contribution is made if, at the time the contribution is made, the employee's rights under the annuity contract are nonforfeitable, except for failure to pay future premiums. If the annuity contract was purchased by an employer which is not exempt from tax under section 501(a) or section 521(a), and if the employee's rights under the annuity contract in such a case were forfeitable at the time the employer's contribution was made for the annuity contract, even though they become nonforfeitable later, the amount of such contribution is not required to be included in the income of the employee at the time his rights under the contract become nonforfeitable. On the other hand, if the annuity contract is purchased by an employer which is exempt from tax under section 501(a) or section 521(a), all or part of the value of the contract may be includible in the employee's gross income at the time his rights under the contract become nonforfeitable (see section 403(d) and the regulations thereunder). As to what constitutes nonforfeitable rights of an employee, see § 1.402(b)-1. The amounts received by or made available to the employee under the annuity contract shall be included in the gross income of the employee for the taxable year in which received or made available, as provided in section 72 (relating to annuities) except that section 72(e)(3) shall not apply. For rules relating to the treatment of employer contributions as part of the consideration paid by the employee, see section 72(f). See also section 101(b)(2)(D) for rules relating to the treatment of the limited exclusion provided thereunder as part of the consideration paid by the employee.

(b) If an employer has purchased annuity contracts and transferred the same to a trust or if an employer has made contributions to a trust for the purpose of providing annuity contracts for his employees as provided in section 402(d) (see paragraph (a) of § 1.402(d)-1), the amount so paid or contributed is not required to be included in the income of the employee, but any amount received by or made available to the employee under the annuity contract shall be includible in the gross income of the employee for the taxable year in which received or made available, as provided in section 72 (relating to annuities), except that section 72(e)(3) shall not apply. In such case the amount paid or contributed by the employer shall not constitute consideration paid by the employee for such annuity contract in determining the amount of annuity payments required to be included in his gross income under section 72 unless the employee has paid income tax for any taxable year beginning before January 1, 1949, with respect to such payment or contribution by the employer for such year and such tax is not credited or refunded to the employee. In the event such tax has been paid and not credited or refunded the amount paid or contributed by the employer for such year shall constitute consideration paid by the employee for the annuity contract in determining the amount of the annuity required to be included in the income of the employee under section 72.

(c) For taxable years beginning before January 1, 1958, the provisions contained in section 403(c) were included in section 403(b) of the Internal Revenue Code of 1954. Therefore, the regulations contained in this section shall, for such taxable years, be considered as the regulations under section 403(b) as in effect for such taxable years.

§ 1.403(d) Statutory provisions; taxation of employee annuities; taxability of beneficiary under certain forfeitable contracts purchased by exempt organizations.

SEC. 403. *Taxation of employee annuities* * * *

(d) *Taxability of beneficiary under certain forfeitable contracts purchased by exempt organizations.* Notwithstanding the first sentence of subsection (c), if rights of an employee under an annuity contract purchased by an employer which is exempt from tax under section 501(a) or 521(a) change from forfeitable to nonforfeitable rights, the value of such contract on the date of such change (to the extent attributable to amounts contributed by the employer after December 31, 1957) shall, except as provided in subsection (b), be included in the gross income of the employee in the year of such change.

[Sec. 403(d) as added by sec. 23(c), Technical Amendments Act 1958 (72 Stat. 1622)]

§ 1.403(d)-1 Taxability of employee when rights under contracts purchased by exempt organizations change from forfeitable to nonforfeitable rights.

(a) *In general.* If, during a taxable year of an employee beginning after December 31, 1957, the rights of such employee under an annuity contract (other than an annuity contract purchased as part of a plan which meets the requirements of section 404(a)(2)) purchased for him by an employer which is exempt from tax under section 501(a) or 521(a) change from forfeitable to nonforfeitable rights, then the value of such annuity contract on the date of such change shall, to the extent provided in paragraph (b) of this section, be included in the employee's gross income for such taxable year. For purposes of this section, the value of an annuity contract on the date the employee's rights change from forfeitable to nonforfeitable rights means the cash surrender value of such contract on such date. As to what constitutes nonforfeitable rights of an employee, see § 1.402(b)-1.

(b) *Extent to which value of annuity contract is includible in employee's gross income.* For purposes of paragraph (a) of this section, there shall be included in the gross income of an employee for his taxable year in which his rights under an annuity contract change from forfeitable to nonforfeitable rights only an amount equal to the portion of the value of such contract on the date of such change (1) that is attributable to contributions:

(i) Which were made by the employer while it was exempt from tax under section 501(a) or 521(a);

(ii) Which were made after December 31, 1957; and

(iii) Which were not, at the time they were made, excludable from the employee's gross income under paragraph (a) of § 1.403(b)-1;

and (2) that is not excludable from the employee's gross income under paragraph (b) of § 1.403(b)-1. Thus, although amounts are contributed by an employer after December 31, 1957, toward the purchase for an employee of an annuity contract and, at the time of the contribution, such employer is an organization described in section 501(c)(3) and exempt from tax under section 501(a), the value of such annuity contract attributable to such contributions would not be includible in the employee's gross income for the taxable year in which his rights under the contract change to nonforfeitable rights if such amounts were contributed during a taxable year of the employee beginning before January 1, 1958, and were, therefore, excludable from the employee's gross income under paragraph (a) of § 1.403(b)-1. Similarly, the value of such an annuity contract is not includible in the gross income of the employee for the year in which the change occurs to the extent that it is excludable under paragraph (b) of § 1.403(b)-1. See paragraph (b)(2) of § 1.403(b)-1 which provides that the amount otherwise includible in gross income under section 403(d) is considered to be a contribution by the employer for purposes of the exclusion provided in paragraph (b) of § 1.403(b)-1. In addition, the portion of the value of an annuity contract attributable to contributions made by the employer while it was not exempt from tax under either section 501(a) or 521(a) is not includible in the gross income of the employee at the time

his rights under the contract change to nonforfeitable rights even though the employer is exempt from tax under section 501(a) or 521(a) at the time of such change. On the other hand, the value of the annuity contract purchased by an organization exempt from tax under section 501(a) or 521(a) may be includible in the gross income of an employee for the year during which his rights under the contract change to nonforfeitable rights even though such organization is not exempt on the date of such change.

(c) *Partial vesting*—(1) *General rule.* If, during any taxable year of an employee, only part of his beneficial interest in an annuity contract changes from a forfeitable to a nonforfeitable interest, then only the corresponding part of the value of the annuity contract on the date of such change is includible in the employee's gross income for such taxable year. In such a case, it is first necessary to compute, under the rules in paragraphs (a) and (b) of this section but without regard to any exclusion allowable under paragraph (b) of § 1.403(b)–1, the amount which would be includible in the employee's gross income for the taxable year if his entire beneficial interest in the annuity contract had changed to a nonforfeitable interest during such year. The amount that is includible (without regard to any exclusion allowed by paragraph (b) of § 1.403(b)–1) in the gross income of the employee for the taxable year in which the change occurs is an amount equal to the amount determined under the preceding sentence multiplied by the percent of the employee's beneficial interest which changed to a nonforfeitable interest during the taxable year. If at the time the employee's interest changes to a nonforfeitable interest, the employer is an organization described in section 501(c)(3) and exempt from tax under section 501(a), then the amount that is includible in the employee's gross income under this subparagraph is considered as an employer contribution to which the exclusion provided in paragraph (b) of § 1.403(b)–1 applies (see paragraph (b)(2) of § 1.403(b)–1).

(2) *Example.* The provisions in subparagraph (1) of this paragraph may be illustrated by the following example:

X Organization purchased an annuity contract for A, one of its employees who reports his income on a calendar year basis. X contributed ⅓ of the amount necessary to purchase the contract before January 1, 1958, and the remaining ⅔ after December 31, 1957. At the time of the contributions, X was an organization exempt from tax under section 501(a) and A's rights under the contract were forfeitable. The annuity contract was not purchased as part of a qualified plan and A made no contributions toward the purchase of the contract. On December 31, 1965, 50 percent of A's interest in the contract changed from a forfeitable to a nonforfeitable interest, and on December 31, 1970, the remaining 50 percent of A's interest in the contract changed to a nonforfeitable interest. The cash surrender value of the contract was $9,900 on December 31, 1965, and $12,000 on December 31, 1970. The amount includible in A's gross income for 1965 and 1970 is computed as follows—

1965

(i) Amount which would have been includible if A's entire interest had changed to a nonforfeitable interest (cash surrender value of contract on Dec. 31, 1965, attributable to contributions made after Dec. 31, 1957) ⅔×$9,900	$6,600
(ii) Percent of A's interest that changed to a nonforfeitable interest on Dec. 31, 1965	50%
(iii) Amount includible in A's gross income for 1965 ((ii)×(i))	$3,300

1970

(iv) Amount which would have been includible if A's entire interest had changed to a nonforfeitable interest (cash surrender value of contract on Dec. 31, 1970, attributable to contributions made after Dec. 31, 1957) ⅔×$12,000	$8,000
(v) Percent of A's interest that changed to a nonforfeitable interest on Dec. 31, 1970	50%
(vi) Amount includible in A's gross income for 1970 ((v)×(iv))	$4,000

If, on December 31, 1965, X is an organization described in section 501(c)(3) and exempt from tax under section 501(a), then only so much of the $3,300 as is not excludable under paragraph (b) of § 1.403(b)–1 is includible in A's gross income for 1965. Similarly, if, on December 31, 1970, X is an organization described in section 501(c)(3) and exempt from tax under section 501(a), then only so much of the $4,000 as is not excludable under paragraph (b) of § 1.403(b)–1 is includible in A's gross income for 1970.

PAR. 11. Section 1.404(a) is amended (A) by revising so much of section 404(a) as precedes paragraph (1) thereof and (B) by adding a historical note at the end thereof. These revised and added provisions read as follows:

§ 1.404(a) Statutory provisions; deduction for contributions of an employer to an employees' trust or annuity plan and compensation under a deferred-payment plan; general rule.

SEC. 404. *Deduction for contributions of an employer to an employees' trust or annuity plan and compensation under a deferred-payment plan*—(a) *General rule.* If contributions are paid by an employer to or under a stock bonus, pension, profit-sharing, or annuity plan, or if compensation is paid or accrued on account of any employee under a plan deferring the receipt of such compensation, such contributions or compensation shall not be deductible under section 162 (relating to trade or business expenses) or section 212 (relating to expenses for the production of income); but, if they satisfy the conditions of either of such sections, they shall be deductible under this section, subject, however, to the following limitations as to the amounts deductible in any year:

* * * * *

[Sec. 404(a) as amended by sec. 24, Technical Amendments Act 1958 (72 Stat. 1623)]

(Sec. 7805 of the Internal Revenue Code of 1954; (68A Stat. 917; 26 U.S.C. 7805))

[F.R. Doc. 64-13241; Filed, Dec. 23, 1964; 8:46 a.m.]

[T.D. 6784]

PART 1—INCOME TAX; TAXABLE YEARS BEGINNING AFTER DECEMBER 31, 1953

Rents or Royalties Derived in the Active Conduct of a Trade or Business

On May 15, 1964, notice of proposed rule making was published in the FEDERAL REGISTER (29 F.R. 6403) regarding the amendment of the Income Tax Regulations (26 CFR Part 1) so as to provide specific cases in which rents or royalties will be considered to be derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A) of the Internal Revenue Code of 1954, as added by section 12(a) of the Revenue Act of 1962 (76 Stat. 1006). After consideration of all such relevant matter as was presented by interested persons regarding the rules proposed, § 1.954–2 of such regulations is amended by adding subdivisions (ii) and (iii) to paragraph (d)(1), effective for taxable years of foreign corporations beginning after December 31, 1962, and for taxable years of United States shareholders within which or with which such taxable years of such corporations end. These added provisions read as follows:

§ 1.954–2 Foreign personal holding company income.

* * * * *

(d) *Certain income received from unrelated persons in the active conduct of a trade or business*—(1) *Rents and royalties*— * * *

(ii) *Rents*—(*a*) *Trade or business cases.* In every case rents will be considered for purposes of this subparagraph to be derived in the active conduct of a trade or business by a controlled foreign corporation which is a lessor of property if such rents are derived from the leasing of—

(*1*) Property which the lessor has manufactured or produced, or has acquired and added substantial value to, but only so long as the lessor is regularly engaged in the manufacture or production of, or in the acquisition and addition of substantial value to, and leasing of, property of such kind,

(*2*) Real property with respect to which the lessor performs active and substantial management and operational functions while the property is leased,

(*3*) Personal property ordinarily used by the lessor in the active conduct of a trade or business and such leasing occurs during a temporary period when the property would, but for such leasing, be idle in the active conduct of such trade or business, or

(*4*) Property which is leased as a result of the performance of marketing functions by such lessor and the lessor, through its own staff of employees located in a foreign country, maintains and operates an organization in such country which is regularly engaged in the business of marketing, or of marketing and servicing, the leased property

and which is substantial in relation to the amount of rents derived from the leasing of such property.

(b) *Special rules*—(1) *Adding substantial value.* For purposes of subdivision (a)(1) of this subdivision (ii), the performance of marketing functions will not be considered to add substantial value to property.

(2) *Substantiality of foreign organization.* Whether an organization in a foreign country will be considered substantial in relation to the amount of rents, for purposes of subdivision (a)(4) of this subdivision (ii), is to be determined from the facts and circumstances of each case. In every case involving the leasing of personal property, however, an organization in a foreign country will be considered substantial in relation to the amount of rents, for such purposes, if the sum of the deductions incurred by such organization of the lessor which are properly allocable to such rental income and which would be allowable under section 162 to the lessor (were the lessor a domestic corporation) other than—

(i) Deductions for compensation for personal services rendered by shareholders of, or related persons with respect to, the lessor,

(ii) Deductions for rents paid or accrued, and

(iii) Deductions which would be specifically allowable to the lessor under sections other than section 162 (were the lessor a domestic corporation)

equals or exceeds 25 percent of the amount by which the gross income of the lessor from such rental income exceeds the sum of the rents paid or accrued and the amounts which would be allowable to such lessor as deductions under section 167 (were the lessor a domestic corporation) with respect to such rental income.

(3) *Activities of an independent contractor.* (i) In determining under subdivision (a)(4) of this subdivision (ii) whether a lessor maintains and operates an organization in a foreign country which is regularly engaged in the business of marketing, or of marketing and servicing, leased property, the activities of an independent contractor shall not be taken into account.

(ii) Compensation for the services of an independent contractor may be taken into account under, and subject to the limitations imposed by, subdivision (2) of this subdivision (b) in determining whether the sum of deductions incurred equals or exceeds 25 percent of the amount by which the gross income exceeds certain deductions.

(c) *Illustrations.* The application of this subdivision may be illustrated by the following examples:

Example (1). Controlled foreign corporation A is regularly engaged in the production of office machines which it leases to others and services. The rental income of A Corporation from such leases is derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (2). Controlled foreign corporation B leases to others motion picture films, some of which it acquires by purchase and some of which it acquires by lease. Corporation B, through its own staff of employees located in a foreign country, maintains and operates an office in such foreign country at which a complete sales force, composed of its own employees, actively solicits customers to lease such films, conducts advertising and sales promotion campaigns intended to increase attendance at the showing of films which it leases, and engages in other promotional activities directed at increasing its contracts for the leasing of such films to others. Corporation B maintains an inventory of films in such country from which its customers may make selections. Corporation B, by its office, sales force, and inventory, maintains and operates an organization in a foreign country which is regularly engaged in the business of marketing motion picture films. The deductions incurred by such organization abroad are such as to satisfy the 25-percent test of subdivision (b)(2) of this subdivision (ii); thus such organization is substantial in relation to the rents B Corporation receives from leasing the films. The rental income of B Corporation from such leases is derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (3). Controlled foreign corporation D purchases motor vehicles which it leases to others. In the conduct of its short-term leasing of such vehicles in foreign country X, D Corporation owns a large number of motor vehicles in country X which it services and repairs, leases motor vehicles to customers on an hourly, daily, or weekly basis, maintains offices and service facilities in country X from which to lease and service such vehicles, and maintains therein a sizable staff of its own administrative, sales, and service personnel. Corporation D also leases in country X on a long-term basis, generally for a term of one year, motor vehicles which it owns. Under the terms of the long-term leases, D Corporation is required to repair and service, during the term of the lease, the leased motor vehicles without cost to the lessee. By the maintenance in country X of office, sales, and service facilities and its complete staff of administrative, sales, and service personnel, D Corporation maintains and operates an organization therein which is regularly engaged in the business of marketing and servicing the motor vehicles which are leased. Since such organization is substantial in relation to the rents D Corporation receives from leasing the motor vehicles, such rents are derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (4). Controlled foreign corporation E owns a complex of apartment buildings which it has acquired by purchase. Corporation E engages a real estate management firm to lease the apartments, manage the buildings and pay over the net rents to the owner. The rental income of E Corporation from such leases is not derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (5). Controlled foreign corporation F owns a twenty-story office building in a foreign country, three floors of which it occupies and the rest of which it leases. Corporation F, which has acquired this property by purchase, acts as rental agent for the leasing of offices in the building and employs a substantial staff to perform other management and maintenance functions. The rents received by F corporation from such leasing operations are derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (6). Controlled foreign corporation G owns drilling equipment which it ordinarily uses to perform contracts in foreign countries to drill oil wells. For occasional temporary periods it is unable to obtain contracts requiring immediate performance sufficient to employ all such equipment. During such a period it sometimes leases such idle equipment temporarily. After the expiration of such temporary leasing of the property, G Corporation continues the use of such equipment in the performance of its own drilling contracts. Rents received from the temporary leasing of such idle equipment are derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (7). Controlled foreign corporation H is organized on January 1, 1963, to make and lease motion pictures. In January 1964, H Corporation completes its first picture and shortly thereafter begins to lease such picture. During the succeeding months, the company investigates several scripts, choosing a promising one in September 1964. Thereafter, the star planned for the leading role in the proposed motion picture is found to be unavailable, so the project is discontinued in January 1965. Another period of search for a suitable script is terminated in May 1965, by commissioning an author to write one. The writing requires 7 months, and thereafter H Corporation contracts with performers, prepares filming plans, and makes other preliminary arrangements for the filming of the script. The filming is done during the 6 months ending in January 1967, and leasing of the second completed picture begins shortly thereafter. Corporation H is regularly engaged in the production and leasing of motion pictures, and rents derived by such corporation during this period from the leasing of these two motion pictures are derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

(iii) *Royalties*—(a) *Trade or business cases.* In every case royalties will be considered for purposes of this subparagraph to be derived in the active conduct of a trade or business by a controlled foreign corporation which is a licensor of property if such royalties are derived from the licensing of—

(1) Property which the licensor has developed, created, or produced, or has acquired and added substantial value to, but only so long as the licensor is regularly engaged in the development, creation, or production of, or in the acquisition and addition of substantial value to, and licensing of, property of such kind, or

(2) Property which is licensed as a result of the performance of marketing functions by such licensor and the licensor, through its own staff of employees located in a foreign country, maintains and operates an organization in such country which is regularly engaged in the business of marketing, or of marketing and servicing, the licensed property and which is substantial in relation to the amount of royalties derived from the licensing of such property.

(b) *Special rules*—(1) *Adding substantial value.* For purposes of subdivision (a)(1) of this subdivision (iii), the performance of marketing functions will not be considered to add substantial value to property.

(2) *Substantiality of foreign organization.* Whether an organization in a foreign country will be considered substantial in relation to the amount of royalties, for purposes of subdivision (a)(2) of this subdivision (iii), is to be determined from the facts and circumstances of each case. In every case involving the leasing of personal property, however, an organization in a foreign country will be considered substantial in relation to the amount of royalties, for

such purposes, if the sum of the deductions incurred by such organization of the licensor which are properly allocable to such royalty income and which would be allowable under section 162 to the licensor (were the licensor a domestic corporation) other than—

(*i*) Deductions for compensation for personal services rendered by shareholders of, or related persons with respect to, the licensor,

(*ii*) Deductions for royalties paid or accrued, and

(*iii*) Deductions which would be specifically allowable to the licensor under sections other than section 162 (were the licensor a domestic corporation)

equals or exceeds 25 percent of the amount by which the gross income of the licensor from such royalty income exceeds the sum of the royalties paid or accrued and the amounts which would be allowable to such licensor as deductions under section 167 (were the licensor a domestic corporation) with respect to such royalty income.

(3) *Activities of an independent contractor.* (*i*) In determining under subdivision (*a*)(2) of this subdivision (iii) whether a licensor maintains and operates an organization in a foreign country which is regularly engaged in the business of marketing, or of marketing and servicing, licensed property, the activities of an independent contractor shall not be taken into account.

(*ii*) Compensation for the services of an independent contractor may be taken into account under, and subject to the limitations imposed by, subdivision (2) of this subdivision (*b*) in determining whether the sum of deductions incurred equals or exceeds 25 percent of the amount by which the gross income exceeds certain deductions.

(*c*) *Illustrations.* The application of this subdivision may be illustrated by the following examples:

Example (*1*). Controlled foreign corporation A, through its own staff of employees, maintains and operates a research facility in foreign country X. At the research facility, owned by A Corporation, employees of such corporation who are full-time scientists, engineers, and technicians regularly perform experiments, tests, and other technical activities, which ultimately result in the issuance of patents which are licensed. Royalties received by A Corporation for the privilege of using patented rights which it develops as a result of such research activity are derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (*2*). Assume that A Corporation in example (1), in addition to receiving royalties for the use of patents which it develops, receives royalties for the use of patents which it acquires by purchase and licenses to others without adding any value thereto. Corporation A generally consummates royalty agreements on such purchased patents as the result of inquiries received by it from prospective licensees when the fact becomes known in the business community, as a result of the filing of a patent, advertisements in trade journals, announcements, and contacts by employees of A Corporation, that A Corporation has acquired rights under a patent and is interested in licensing its rights. Corporation A does not, however, maintain and operate an organization in a foreign country which is regularly engaged in the business of marketing the purchased patents. The royalties received by A Corporation for the use of the purchased patents are not derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (*3*). Controlled foreign corporation B receives royalties for the use of patents which it acquires by purchase. The primary business of B Corporation, operated on a regular basis, consists of licensing patents which it has purchased "raw" from inventors and, through the efforts of a substantial staff of employees consisting of scientists, engineers, and technicians, made susceptible to commercial application. For example, B Corporation, after purchasing patent rights covering a chemical process, designs specialized production equipment required for the commercial adaptation of the process and, by so doing, substantially increases the value of the patent. Royalties received by B Corporation from the use of such patent are derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (*4*). Controlled foreign corporation D finances independent persons in the development of patented items in return for an ownership interest in such items from which it derives a percentage of royalty income, if any, subsequently derived from the use by others of the protected right. Corporation D also attempts to increase its royalty income from such patents by contacting prospective licensees and rendering to licensees advice which is intended to promote the use of the patented property. Corporation D does not, however, maintain and operate an organization in a foreign country which is regularly engaged in the business of marketing the patents. Royalties received by D Corporation for the use of such patents are not derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

Example (*5*). Controlled foreign corporation E, incorporated under the laws of foreign country X, is engaged in the music publishing business and derives substantially all of its income from the licensing and turning to account of musical compositions. The rights to exploit such compositions are acquired by license, some from related persons and some from unrelated persons. Corporation E, through its own staff of employees located in country X, maintains and operates an office at which is located its own staff of managerial, technical, administrative, and sales employees. The technical staff translates the lyrics into the language of country X or creates new and different lyrics if the original lyrics are unsuitable in such language or do not appeal to the tastes of the people of country X; the staff then prepares musical arrangements of the composition. The sales force has professional copies of the musical product printed for distribution to professional users; and, in many instances, popular copies printed for sale to the public. The sales force also advertises the musical composition, promotes its use by artists, orchestras, radio and television stations, and phonograph recording companies. Although some of its income is derived from the sale of sheet music, the bulk of its income is from its membership in the performing rights society of country X (from which E Corporation could not derive full benefit were it not incorporated in country X) and from royalties resulting from sales of records. Corporation E, by its staff of managerial, technical, administrative, and sales employees located in country X, maintains and operates an organization in such country which is regularly engaged in the business of marketing such compositions. Since such organization is substantial in relation to the royalties received by E Corporation from the licensing of such musical compositions, such royalties are derived in the active conduct of a trade or business for purposes of section 954(c)(3)(A).

(Sec. 7805 of the Internal Revenue Code of 1954; (68A Stat. 917; 26 U.S.C. 7805))

[SEAL] BERTRAND M. HARDING,
Acting Commissioner of Internal Revenue.

Approved: December 21, 1964.

STANLEY S. SURREY,
Assistant Secretary of the Treasury.

[F.R. Doc. 64-13242; Filed, Dec. 23, 1964; 8:46 a.m.]

Title 32A—NATIONAL DEFENSE, APPENDIX

Chapter I—Office of Emergency Planning

[DMO I-1]

DMO I-1—REGIONAL COORDINATION

Revocation

Defense Mobilization Order I-1, Regional Coordination, dated July 9, 1956 (21 F.R. 5191) is hereby revoked. The responsibilities prescribed by this order have been assigned to Regional Preparedness Committees by OEP Circular 1200.7, which is available from the Office of Emergency Planning.

Dated: December 18, 1964.

EDWARD A. MCDERMOTT,
Director,
Office of Emergency Planning.

[F.R. Doc. 64-13219; Filed, Dec. 23, 1964; 8:46 a.m.]

Title 41—PUBLIC CONTRACTS

Chapter 11—Coast Guard, Department of the Treasury

[CGFR 64-69]

PART 11-60—CONTRACT DISPUTE APPEALS

Contract Dispute Appeal Requirements

This document revises the Coast Guard's contract dispute appeal regulations and supersedes the regulations published as 41 CFR Part 11-60, containing §§ 11-60.000 to 11-60.117, inclusive, in the FEDERAL REGISTER of May 26, 1964 (29 F.R. 6856 et seq.). The procurement of most items other than land by the Coast Guard is subject to the statutory provisions in Title 10, U.S. Code, sections 2301 to 2314, inclusive; 70A Stat. 127-133. Under the provisions in Title 40, U.S. Code, section 486(c), 63 Stat. 390, the Administrator, General Services Administration, has prescribed regulations concerning contracts. In addition, this law requires that "* * * the head of each executive agency shall cause to be

issued such orders and directives as such head deems necessary to carry out such regulations." The regulations for the Coast Guard in 41 CFR Part 11–60 give effect to the contract "disputes" clause in 41 CFR 1–7.101–12, which is also printed in Coast Guard contracts, and establishes the procedures for processing appeals on disputed questions arising out of Coast Guard contracts.

This document contains the detailed regulations regarding Coast Guard contract dispute appeals and does the following:

a. Establishes a permanent Coast Guard Board of Contract Appeals to serve in lieu of a panel from which individual boards are now selected by the Comptroller to hear assigned contractor dispute appeals.

b. Formalizes and clarifies appeals procedures.

c. Delegates to the Coast Guard Board of Contract Appeals the authority to take final action in contract dispute appeal cases in lieu of the present practice of having the Secretary of the Treasury review the Findings of Fact and Recommendations of individual boards and render decision on the appeal, in which he accepts or rejects, in whole or in part, the Findings and Recommendations of the Board.

Pursuant to the authority vested in the Secretary of the Treasury by Title 40, U.S. Code section 486(c), 63 Stat. 390, and other statutes, the Coast Guard contract dispute appeal regulations presently designated §§ 11–60.000 to 11–60.117, inclusive, are amended, as follows:

Subpart 11–60.1—Introduction

Subpart 11–60.2—Coast Guard Board of Contract Appeals; Organization and Procedures

Subpart 11–60.3—General Rules

Subpart 11–60.4—Appeals Hearings

AUTHORITY: The provisions of this Part 11–60 are prescribed by the Secretary of the Treasury pursuant to sec. 633, 63 Stat. 545, secs. 2301–2314, 70A Stat. 127–133, as amended; 14 U.S.C. 633, 10 U.S.C. 2301–2314. Interpret or apply sec. 205(c), 63 Stat. 390; 40 U.S.C. 486(c); and Treasury Department Orders 167–17 (20 F.R. 4976) and 167–50 (28 F.R. 530).

Subpart 11–60.1—Introduction

§ 11–60.100 Scope of part.

This part establishes the rules, policies and procedures regarding the administrative review and determination of disputed questions arising under Coast Guard contracts.

§ 11–60.103 Creation and authority of Coast Guard Board of Contract Appeals.

(a) The Coast Guard Board of Contract Appeals, hereinafter referred to as the "Board", is hereby created and designated as the authorized representative of the Secretary of the Treasury in hearing, considering and determining, as fully and finally as might the Secretary, all appeals by contractors (hereinafter referred to as appellants), from final decisions by contracting officers (hereinafter referred to as appellees) on disputed questions pursuant to the "disputes" provisions of Coast Guard contracts requiring the determination of appeals by the head of the department or his duly authorized representatives.

(b) The Board shall function as an independent and impartial body.

(c) The Secretary of the Treasury shall appoint and terminate appointments of the members.

(d) The Board shall have authority to establish additional rules not inconsistent with the rules contained in this part.

§ 11–60.106 Establishment and purpose.

(a) The rules in this part shall govern the appeals procedure and the respective rights and duties of the Board and the parties, i.e., the appellants and appellees.

(b) Except as otherwise provided in a specific contract, any dispute concerning a question of fact arising under a contract, which is not disposed of by agreement between the contractor and the contracting officer, shall be decided by the contracting officer. In each instance the contracting officer shall reduce his decision to writing, state in the document that it is his final decision and forward it together with a copy of this part (Part 11–60) to the contractor. Should the contractor appeal that decision, the issues raised thereby shall be determined by the Board in an impartial manner consistent with principles of fairness and the rules in this part.

(c) It is the purpose of the rules in this part to facilitate resolution of disputes arising out of government contracts. It is impracticable to articulate a rule to fit every possible circumstance which may be encountered. Therefore, the rules will be interpreted so as to secure just and inexpensive determination of appeals without unnecessary delay.

(d) Whenever reference is made to the contractor or appellant, contracting officer or appellee, or parties, this shall include their respective counsel.

§ 11–60.109 Effective date and applicability.

(a) The regulations in this part become effective on the 30th day following the date of publication in the FEDERAL REGISTER and shall apply to all contract "dispute" cases wherein appeal from the contracting officer's decision is taken on and after such effective date. The superseded regulations,[1] i.e., the regulations in effect prior to the effective date of the regulations in this part, shall be applicable to all cases pending prior to said effective date except to the extent that the Board determines that the regulations in this part shall apply.

Subpart 11–60.2—Coast Guard Board of Contract Appeals; Organization and Procedures

§ 11–60.200 Appointment of Board members, alternate members and recorder.

(a) The Secretary of the Treasury shall appoint as members of the Board; a chairman, two regular members, either of whom shall be designated vice chairman by the chairman for a particular case; and, two alternates to serve as members in the absence of regular members. He shall also designate a recorder who shall maintain a suitable docket of contract appeal cases and shall be charged with custody of all papers, documents, exhibits, and materials relating to appeal cases. The appointees shall be officers or employees of the Coast Guard.

(b) If for any reason other than malfeasance or misconduct in office an appointment shall be terminated, such termination shall not be effective to disqualify a member to render a decision in any case being considered by him on the record in accordance with section 11–60.336 or being heard by him, except that if an appointment shall terminate by reason of retirement or resignation of a regular member, a new member shall be appointed or an alternate member shall be qualified in accordance with § 11–60.209(c).

(c) The chairman, or, in his stead, the vice chairman for a particular case, shall preside at all hearings and executive sessions convened to deliberate on each con-

[1] Regulations published as 41 CFR Part 11–60, containing §§ 11–60.000 to 11–60.117, inclusive, in the FEDERAL REGISTER of May 26, 1964 (29 F.R. 6856, et seq.).

tract appeal case referred to the Board.

(d) The recorder shall not be a member of the Board.

§ 11–60.203 Function and jurisdiction.

(a) The Board shall hear, consider and determine contract appeals in accordance with the rules in this part. The Board shall, inter alia, have the authority to conduct hearings, take official notice of facts within general knowledge, dismiss proceedings and decide cases. Testimony shall be taken under oath or affirmation, except as otherwise provided in § 11–60.412. Cases shall be decided on the facts and on such questions of law as may be necessary to reach a determination.

(b) The Board shall not have jurisdiction to consider and determine claims which are not cognizable under the terms of the contract.

(c) Decisions of the Board shall be by a majority of the members. The Board's decision shall constitute the final administrative action in each case, except that those decisions may be reconsidered upon motion therefor pursuant to § 11–60.433.

§ 11–60.206 Authority to call witnesses.

(a) Either party, at his own expense, may invite witnesses to attend and tesitify.

(b) The Board may also invite such witnesses as it deems necessary.

§ 11–60.209 Quorum.

(a) Either party, at his own expense, or vice chairman for a particular case) and two members shall constitute a quorum.

(b) Should any member determine that he is unable to participate in a particular case due to some disability, he shall disqualify himself and the presiding officer shall designate an alternate to serve.

(c) If for any reason an alternate is designated or if a new member is appointed to a Board convened to hear an appeal case during the course of the appeal, that part of the record of the proceedings which was not attended by the new designee or appointee shall be read by him and he shall so certify in writing, which certification shall become a part of the case record. No member or alternate member of a Board shall partcipate in the decision in a particular case unless he has attended the hearing or has read or heard the entire record of the proceedings.

§ 11–60.212 Appeals docket and public inspection of cases.

(a) The appeals docket shall be maintained in the office of the Board. Each appeal shall be assigned a number in the order of filing. Appeals shall be heard in their order on the docket unless advanced or delayed pursuant to § 11–60.400.

(b) The docket and the decisions (except those required for good cause to be held confidential) on completed cases shall be available for public inspection at the Board's offices at Coast Guard Headquarters, Washington, D.C., during regular business hours.

(c) Appeals record files will be maintained for a period of 10 years from the date of the Board's decision.

Subpart 11–60.3—General Rules

§ 11–60.300 Preliminary procedures and time limitations.

(a) Preliminary procedures shall be used to encourage full disclosure of relevant and material facts and to discourage unwarranted surprise.

(b) All time limitations specified herein for various procedural actions shall be considered as maximums. If the action described in this part can be or is accomplished in a lesser period, the Board shall take necessary action without waiting for such time period to lapse.

(c) On good cause shown, the Board shall have authority to extend the various time limits specified in this part, except that the time limit established for the filing of notices of appeals may not be extended. (See § 11–60.303.)

§ 11–60.303 Appeals, how taken.

(a) Notice of an appeal must be in writing, and the original, together with four copies, shall be filed with the office of the contracting officer from whose decision the appeal is taken.

(b) The notice of appeal must be mailed or otherwise filed within 30 days of receipt of the contracting officer's decision unless otherwise required by the contract or any provision of law.

§ 11–60.306 Notice of appeal, contents of.

(a) A notice of appeal should indicate that an appeal is thereby intended, and should identify the contract (by number), the name and duty station of the contracting officer cognizant of the dispute, and the decision from which the appeal is taken. The notice of appeal should be signed personally by the appellant or by an officer of the appellant corporation or member of the appellant firm, or by the appellant's duly authorized representative or attorney.

(b) The complaint referred to in § 11–60.318 may be filed with the notice of appeal, or the appellant may designate the notice of appeal as a complaint, if it otherwise fulfills the requirements of a complaint.

§ 11–60.309 Forwarding of appeals.

(a) When a notice of appeal in any form has been received by the contracting officer, he shall endorse thereon the date of mailing (or date of receipt, if otherwise conveyed) and within 20 days shall forward said notice of appeal to the Board.

(b) Following receipt by the Board of the original notice of an appeal the appellant and appellee will be promptly advised of its receipt, and a copy of any Board rules governing the conduct of hearings shall be furnished to the appellant.

§ 11–60.312 Duties of the Contracting Officer (appellee).

(a) Following the filing of a notice of appeal (§ 11–60.306) the appellee shall, within sixty days, transmit to the Board all documents (or copies thereof) pertinent to the appeal including the following:

(1) The findings of fact and the decision from which the appeal is taken, and the letter or letters or other documents of claim in response to which the decision was issued;

(2) The contract, and pertinent plans, specifications, amendments, and change orders;

(3) Correspondence between the parties pertinent to the appeal;

(4) Transcripts of any testimony taken and affidavits or statements of any witnesses on the matter in dispute made prior to the filing of the notice of appeal with the Board;

(5) Such additional information as may be considered material.

(b) Upon completion of the compilation of documents described in paragraph (a) of this section, and at least ten days prior to forwarding the documents to the Board, the appellee shall provide the appellant with a listing of the documents contained therein, and afford him an opportunity to examine the complete compilation at the office of the appellee, for the purpose of satisfying himself as to the contents, and furnishing or suggesting any additional documentation deemed pertinent to the appeal. Following receipt of this compilation, as it may be augmented, the Board shall promptly advise the parties of the docketing and such other information as may be necessary in the case.

§ 11–60.315 Dismissal for lack of jurisdiction.

(a) Any motion addressed to the jurisdiction of the Board shall be promptly filed. Hearing on the motion shall be afforded on application of either party, unless the Board determines that its decision on the motion should be deferred pending hearing on both the merits and the motion.

(b) The Board shall have the right at any time and on its own motion to raise the issue of its jurisdiction to proceed with a particular case, and shall do so by an appropriate order, affording the parties an opportunity to be heard thereon.

§ 11–60.318 Pleadings.

(a) Within 30 days after the date of the notice of docketing of the appeal, the appellant shall file with the Board an original and four copies of a complaint setting forth simple, concise and direct statements of each of his claims, alleging the basis, with appropriate reference to contract provisions, for each claim, and the dollar amount claimed. This pleading shall fulfill the generally recognized requirements of a complaint, although, no particular form or formality is required. Upon receipt thereof, the Recorder of the Board shall serve a copy upon the counsel for the appellee. Should the complaint not be received within 30 days, and if in the opinion of the Board the appellant's claims are sufficiently defined, the counsel for the appellee and the appellant shall be so notified.

(b) Within 45 days from receipt of said complaint, or the aforesaid notice from the Recorder of the Board, the

counsel for the appellee shall prepare and file with the Board an original and four copies of an answer thereto, setting forth simple, concise, and direct statements of any defenses to each claim asserted by appellant. This pleading shall fulfill the generally recognized requirements of an answer, and shall set forth any affirmative defenses or counterclaims, as appropriate. Upon receipt thereof, the Recorder shall serve a copy upon appellant. Should the answer not be received within 45 days, it will be deemed that a general denial on behalf of the appellee has been entered and the appellant shall be so notified.

§ 11–60.321 Amendments of pleadings or record.

(a) The Board upon its own initiative or upon application by a party may, in its discretion, order a party to make a more definite statement of the complaint or answer, or to reply to an answer.

(b) The Board may, in its discretion, and within the proper scope of the appeal, permit either party to amend his pleading upon conditions just to both parties. When issues within the proper scope of the appeal, but not raised by the pleadings or the documentation described in § 11–60.312 are tried by express or implied consent of the parties, or by permission of the Board, they shall be treated in all respects as if they had been raised therein. In such instances motions to amend the pleadings to conform to the proof may be entered, but are not required. If evidence is objected to at a hearing on the ground that it is not within the issues raised by the pleadings or the § 11–60.312 documentation (which shall be deemed part of the pleadings for this purpose), it may be admitted within the proper scope of the appeal, provided, however, that the objecting party may be granted a continuance if necessary to enable him to meet such evidence.

§ 11–60.324 Election between hearing and submission on the record.

(a) Upon receipt of appellee's answer or the notice referred to in the last sentence of § 11–60.318(b), appellant shall advise whether he desires a hearing, as prescribed in Subpart 11–60.4 of this part, or whether in the alternative he elects to submit his case on the record without a hearing, as prescribed in § 11–60.336.

§ 11–60.327 Pre-hearing briefs.

(a) Based on an examination of the documentation described in § 11–60.312 and the pleadings, the Board may in its discretion require the parties to submit pre-hearing briefs in any case in which a hearing has been elected pursuant to § 11–60.324. In the absence of a Board requirement therefor either party may in its discretion, and upon appropriate and sufficient notice to the other party, furnish a pre-hearing brief to the Board. In any case where a pre-hearing brief is submitted, it shall be furnished so as to be received by the Board at least 15 days prior to the date set for hearing, and a copy shall simultaneously be furnished to the other party.

§ 11–60.330 Preliminary review by Board.

(a) In order to expedite the appeal and to eliminate unnecessary proceedings with respect thereto, the Chairman shall set a date for, and the Board, sitting in executive session, shall conduct a preliminary review of the case.

(b) The Board shall:

(1) Consider the appeal on the record, which shall include all pleadings, briefs, documents, exhibits and materials submitted by the parties.

(2) Determine which claims of the appellant in the Board's judgment find support in the record and are prima facie allowable and in what amount and submit preliminary findings with respect to those claims to the appellee and its counsel. Within 10 days appellee's counsel shall notify the Board whether or not the appellee accepts the Board's determination with respect to specific claims or whether the appellee believes that further proceedings thereon are required.

(3) Note whether certain claims require clarification.

(4) Notify the appellant in writing, with a copy to the appellee, regarding the following:

(i) Each claim referred to in subparagraph (2) of this paragraph and the amount thereof not contested by the appellee.

(ii) That further proceedings before the Board with respect to any particular claim allowed in full shall not be had unless the appellant is of the view that further proceedings thereon are relevant and pertinent to the appeal as a whole.

(iii) That certain issues are still in controversy.

§ 11–60.333 Response to notification of results of pre-hearing review.

(a) Upon receipt of the pre-hearing advice specified in § 11–60.330(b)(4), the parties shall:

(1) Advise the estimated length of time required for their presentations at an oral hearing before the Board.

(2) Furnish the names, addresses, and capacities of persons, including witnesses, expected to be present in their behalf.

(3) Provide any additional substantiating matter relative to the appeal which they may wish to have reviewed prior to a hearing.

§ 11–60.336 Submission without a hearing.

(a) The parties by agreement may elect to waive a hearing and to submit the case upon the Board record, as settled pursuant to § 11–60.339. In the event of such election to submit, the submission may be supplemented by oral argument (transcribed if requested), and/or by briefs.

§ 11–60.339 Settling of the record.

(a) A case submitted on the record pursuant to § 11–60.336 shall be ready for decision when the parties are so notified by the Board.

(b) A case which is heard shall be ready for decision 10 days after receipt of transcript, or upon receipt of post-hearing briefs when such briefs are to be submitted.

(c) At any time prior to the date that a case is ready for decision, either party upon notice to the other, may supplement the record with documents and exhibits deemed relevant and material by the Board. The Board upon its own initiative may call upon either party, with appropriate notice to the other, for evidence deemed by it to be relevant and material. The weight to be attached to any evidence of record shall rest within the sound discretion of the Board.

(d) At any time prior to the date that a case is ready for decision either party may at any stage of the proceeding, on notice to the other party, raise objection to material in the record or offered into the record, on the grounds of relevancy and materiality.

(e) The Board record shall consist of documentation described in § 11–60.312 and any additional material received by the Board pursuant to the rules in this part including pleadings, pre-hearing briefs, record of preliminary review or pre-submission conferences, depositions, interrogatories, admissions, transcripts of hearing, hearing exhibits, and post-hearing briefs.

(f) This record will at all times be available for inspection by the parties at the office of the Board at Coast Guard Headquarters, Washington, D.C. In the interest of convenience, prior arrangements for inspection of the record should be made with the Recorder of the Board. Copies of material in the record may, if practicable, be furnished to appellant at the cost of reproduction.

§ 11–60.342 Depositions.

(a) *When depositions may be taken.* After an appeal has been docketed the Board may, upon application of either party or upon agreement by the parties, permit the taking of the testimony of any person, by deposition upon oral examination or written interrogatories, for use as evidence in the appeal proceedings. Leave to take a deposition will ordinarily be granted when it appears that it is impracticable to present deponent's testimony at the hearing of the appeal, or when a hearing has been waived and the case submitted pursuant to § 11–60.336.

(b) *Before whom taken.* Depositions to be offered in evidence before the Board may be taken before and authenticated by any person authorized by the laws of the United States, or by the laws of the place where the deposition is taken, to administer oaths, or by a Coast Guard officer under authority in Article 10–1–9 of U.S. Coast Guard Regulations promulgated pursuant to section 636 of title 14 U.S. Code, 63 Stat. 545, and Article 136, Uniform Code of Military Justice, 10 U.S.C. 936, 70A Stat. 77.

(c) *By oral examinations.* When either party desires to take the testimony of any person by deposition upon oral examination, the moving party shall give the other party at least 15 days written notice of the time and place where such deposition is proposed to be taken, the name, address, and title of the person before whom it is proposed to be taken, and

the name and address of the witness. This notice is unnecessary in any case where the deposition has been scheduled by mutual agreement. If the party so served finds it impracticable to appear at the taking of the deposition, in person or by counsel, he shall promptly so notify the moving party who shall make available to him a copy of the evidence given at the deposition. Within 15 days after receipt of such copy, the proceedings shall be had thereon as provided in paragraph (d) of this section.

(d) *By written interrogatories.* When either party desires to take the testimony of any person by deposition upon written interrogatories, the moving party shall serve them upon the other party with a notice stating the name and address of the person who is to answer them and the name, address and title of the person before whom the deposition is to be taken. Within 15 days thereafter, the party so served may serve cross-interrogatories upon the moving party. A copy of the notice and copies of all interrogatories served shall be delivered by the moving party to the person before whom the deposition is to be taken, and the latter shall proceed promptly to take the testimony of the witness in response to the interrogatories.

(e) *Form and return of deposition.* Each deposition should show the docket number and the caption of the proceedings, the place and date of taking, the name of the witness, and the names of all persons present. The person taking the deposition shall certify thereon that the witness was duly sworn by him and that the deposition is a true record of the testimony given by the witness, and he shall enclose the original deposition and exhibits in a sealed package which he shall promptly forward at the expense of the moving party, to the Recorder, Coast Guard Board of Contract Appeals, Coast Guard Headquarters, Washington, D.C., 20226.

(f) *Introduction in evidence.* No testimony taken by deposition shall be considered as part of the evidence in the hearing of an appeal unless and until such testimony is offered and received in evidence at the hearing. It will not ordinarily be received in evidence if the deponent is present and can testify personally at the hearing. In such case, it can, however, be utilized to contradict or impeach the testimony of deponent as a witness. If the opportunity to be heard has been waived and the case submitted pursuant to § 11–60.336, the deposition shall be deemed to be part of the record before the Board.

§ 11–60.345 Interrogatories to parties: inspection of documents; admission of facts.

(a) Under appropriate circumstances, but not as a matter of course, the Board will entertain applications for permission to serve written interrogatories upon the opposing party, applications for an order to produce and permit the inspection of designated documents, and applications for permission to serve upon the opposing party a request for the admission of specified facts. Such applications shall be reviewed and approved only to the extent and upon such terms as the Board in its discretion considers to be consistent with the objective of securing just and inexpensive determination of appeals without unnecessary delay, and essential to the proper pursuit of the objective in the particular case.

§ 11–60.348 Service of papers.

(a) Service of papers in all proceedings pending before the Board, may be made personally, or by mailing the same in a sealed envelope, registered, or certified, postage prepaid, addressed to the party upon whom service shall be made and the date of delivery as shown by return receipt shall be the date of service. Waiver of the service of any papers may be noted thereon or on a copy thereof or on a separate paper, signed by the parties and filed with the Board.

Subpart 11–60.4—Appeals Hearings

§ 11–60.400 Where and when held.

(a) Hearings will ordinarily be held in Washington, D.C., except that upon request seasonably made and upon good cause shown, the Board may in its discretion set the hearing at another location. Hearings will be scheduled at the discretion of the Board with due consideration to the regular order of appeals and other pertinent factors. However, the Board may, on its own motion, or on the motion of a party, advance or defer a scheduled hearing.

§ 11–60.403 Notice of hearings.

(a) The parties shall be given at least 15 days notice of the time and place set for hearings. In scheduling hearings, the Board will give due regard to the desires of the parties, and to the requirement for just and inexpensive determination of appeals without unnecessary delay.

§ 11–60.406 Unexcused absence of a party.

(a) The unexcused absence of a party at the time and place set for hearing will not be occasion for delay. In the event of such absence, the hearing will proceed and the case will be regarded as submitted by the absent party without a hearing, as provided in § 11–60.336.

§ 11–60.409 Nature of hearings.

(a) Hearings shall be as informal as may be reasonable and appropriate under the circumstances. Appellant and appellee may offer at a hearing on the merits such evidence as they deem appropriate, subject however, to the sound discretion of the Board. In general, admissibility will hinge on relevancy and materiality. Letters or copies thereof, affidavits, or other evidence not ordinarily admissible under the generally accepted rules of evidence, may be admitted in the discretion of the Board. The weight to be attached to evidence presented in any particular form will be with the discretion of the Board, taking into consideration all circumstances of the particular case.

(b) Stipulations of fact agreed upon by the parties may be regarded and used as evidence at the hearing. The parties may stipulate the testimony that would be given by a witness if the witness were present. The Board may in any case require evidence in addition to that offered by the parties.

§ 11–60.412 Examination of witnesses.

(a) Witnesses before the Board will be examined orally under oath or affirmation, unless the facts are stipulated, or the Board shall otherwise order.

(b) If the testimony of a witness is not given under oath, the Board may, if it seems expedient, warn the witness that his statements are subject to the provisions of Title 18, United States Code, sections 287 and 1001, and any other provisions of law imposing penalties for knowingly making false representations in connection with claims against the United States or in any matter within the jurisdiction of any department or agency thereof.

§ 11–60.415 Copies of papers.

(a) When books, records, papers, or documents have been received in evidence, a true copy thereof or of such part thereof as may be material or relevant may be substituted therefor, during the hearing or at the conclusion thereof.

§ 11–60.418 Post-hearing briefs.

(a) Post-hearing briefs may be submitted upon such terms as may be agreed upon by the parties and the Board at the conclusion of the hearing. Ordinarily they will be simultaneous briefs, exchanged within 20 days after receipt of transcript.

§ 11–60.421 Transcript of proceedings.

(a) Testimony and argument at hearings shall be reported verbatim, unless the Board otherwise orders. Transcripts of the proceedings shall be supplied to the appellant at such rates as may be fixed by contract between the Board and the independent reporter. If the proceedings are reported by an employee of the Government, the appellant may receive transcripts thereof under the conditions set forth in Subpart 1.25 of Title 33, Code of Federal Regulations.

§ 11–60.424 Withdrawal of exhibits.

(a) After a decision has become final the Board may, upon request and after notice to the other party, in its discretion permit the withdrawal of original exhibits, or any part thereof, by the party entitled thereto. The substitution of true copies of exhibits or any part thereof may be required by the Board in its discretion as a condition of granting permission for such withdrawal.

§ 11–60.427 Representation of parties.

(a) An individual appellant may appear before the Board in person, a corporation, by an officer thereof; a partnership or joint venture, by a member thereof; or any of these, by an attorney at law duly licensed in any State, Commonwealth, Territory, or in the District of Columbia.

(b) The appellee's counsel shall file notices of appearance with the Board, and notice thereof will be given appellant or his attorney in the form specified by the Board from time to time.

§ 11–60.430 Decisions.

(a) Decisions of the Board shall be made in writing and authenticated copies

thereof will be forwarded simultaneously to both parties. The rules under which the Board functions and the Board's final orders and decisions (except those required for good cause to be held confidential and not cited as precedents) shall be open for public inspection at the offices of the Board, at Coast Guard Headquarters, in Washington, D.C.

(b) Decisions of the Board will be based upon the record.

(c) Whenever at any time it appears that the parties are in agreement as to the disposition of the controversy, the Board may in its discretion, dispose of the controversy in accordance with that agreement.

§ 11–60.433 Motion for reconsideration.

(a) A motion for reconsideration, if filed by either party, shall set forth specifically the ground or grounds relied upon to sustain the motion and shall be filed within 30 days from the date of the receipt of a copy of the decision of the Board by the party filing the motion.

Dated: December 17, 1964.

[SEAL] JAMES POMEROY HENDRICK,
Acting Assistant Secretary of the Treasury.

[F.R. Doc. 64–13223; Filed, Dec. 23, 1964; 8:46 a.m.]

Title 47—TELECOMMUNICATION

Chapter I—Federal Communications Commission

[FCC 64–1149]

PART 0—COMMISSION ORGANIZATION

Delegation of Authority To Grant Requests for Waiver of Type Acceptance Requirements

Order. At a session of the Federal Communications Commission held at its offices in Washington, D.C. on the 16th day of December 1964:

In the matter of amendment of Part 0 of the Commission's rules to delegate authority to the staff to grant requests for waiver of the type acceptance requirements as set forth in § 89.117 for a period not to extend beyond January 1, 1967.

The Commission having under consideration an additional delegation of authority to the staff; and

It appearing, that it is desirable to delegate to the Chief, Safety and Special Radio Services Bureau the authority to grant requests for waiver of the type acceptance requirements of § 89.117 for a period not to extend beyond January 1, 1967; and

It further appearing, that such delegation of authority will result in a more efficient administration of the Commission's functions; and

It further appearing, that the amendment herein ordered is non-substantive in that it relates to organizational and procedural matters and, therefore, the Public Notice and effective date provisions of section 4 of the Administrative Procedure Act are not applicable; and

It further appearing, that the authority for the delegation herein ordered is contained in sections 4(i) and 5(d)(1) of the Communications Act of 1934, as amended:

It is ordered, Effective December 28, 1964, that Part 0 of the Commission's rules is amended as set forth below.

(Sec. 4, 48 Stat. 1066, as amended; 47 U.S.C. 154. Interpret or apply sec. 5, 66 Stat. 713; 47 U.S.C. 155)

Released: December 18, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

Part 0 is amended as follows:

1. Section 0.331(b) is amended by adding a new subparagraph (17) as follows:

§ 0.331 Authority delegated.

* * * * * * *

(b) * * *

(17) To grant waivers of the type acceptance requirements of § 89.117 of this chapter for a period not to extend beyond January 1, 1967, in cases substantially the same as those in which the Commission en banc has taken similar action.

* * * * * * *

[F.R. Doc. 64–13309; Filed, Dec. 23, 1964; 8:49 a.m.]

[Docket No. 15512; FCC 64–1169]

PART 73—RADIO BROADCAST SERVICES

Miscellaneous Amendments

In the matter of amendment of § 73.606, Table of Assignments Television Broadcast Stations (Rhinelander, Wis.; Ironwood, Mich.); Docket No. 15512, RM–518.

Report and order. 1. On June 18, 1964, the Commission released a notice of proposed rule making which invited comments on the following alternative proposals to amend § 73.606 of the rules (the television table of assignments):

ALTERNATIVE No. 1

City	Channel No.	
	Present	Proposed
Ironwood, Mich.	12+, 31–	31–
Rhinelander, Wis.	22	12+, 22

ALTERNATIVE No. 2

Rhinelander, Wis.	22	4+, 22

2. Alternative No. 1 derives from a petition for rule making (and amendment thereto) filed by Alvin E. O'Konski (petitioner), who holds a construction permit for Station WAEO–TV at Hurley, Wisconsin, using the Channel 12 assignment of Ironwood which is less than 15 miles from Hurley. The petition requested reassignment of Channel 12 from Ironwood to Rhinelander (located about 70 miles southeast of Hurley) and an order to show cause why his permit should not be modified to specify operation at the latter city instead of at Hurley. Alternative No. 2 was suggested by the M & M Broadcasting Company (M & M), licensee of Station WLUK–TV, Channel 11, Green Bay, Wisconsin, in a statement directed at petitioner's proposal. Comments and reply comments have been duly filed,[1] and the matter is now before the Commission for decision.

3. In his comments, petitioner states that he was diligent in his plans to construct Station WAEO–TV, until he learned from a thorough study that a TV station in Hurley would not be economically feasible. He says that he was in contact with every business and wholesale establishment in the area, which he states is classed as a deeply depressed one, and that the businessmen informed him that they could not undertake the additional expense of advertising costs sufficient to support a TV station. In addition, he mentions that all the networks stated that it was not practical to affiliate with a TV station that would serve only 8,000 TV sets or 28,417 persons in its coverage area.[2] Moreover, it is averred that twenty advertising representatives for regional and national businesses stated that it would be impossible to obtain business for a TV station with such coverage.

4. He further mentions that he has received several thousand letters from persons, most of whom reside in areas that would be served by a Rhinelander station (operating with antenna height of 1,000 feet and maximum power of 316 kw), stating that they do not obtain even fair television reception in spite of large expenditure for outdoor antennas, and requesting him to increase his facilities and locate Station WAEO–TV where they might get "their first primary, or at least Class B coverage."[3] Petitioner indicates that, in view of the foregoing, he explored the possibility of expanding the facilities specified in his construction permit and relocating the station so that he could make maximum use of the channel and bring the first acceptable television service to about 107,000 persons and 30,000 TV sets by means of a station that would be financially viable.

5. This study led to his subsequent petition for rule making to reassign Channel 12 to Rhinelander and his request for modification of his permit to

[1] Comments were filed by the following: Alvin E. O'Konski; Association of Maximum Service Telecasters, Inc. (AMST); The Journal Company, licensee of Station WTMJ–TV, Channel 4, Milwaukee, Wis.; Midwest Radio-Television, Inc. (Midwest), licensee of Station WCCO–TV, Channel 4, Minneapolis, Minn.; and M & M. Reply comments were filed by all of the foregoing except AMST.

[2] Petitioner's construction permit for WAEO–TV authorizes antenna height of 420 feet above average terrain and power of 1.7 kw; hence the small coverage area.

[3] The term "primary coverage" is not used in the television broadcast service. Whether the meaning here is that the persons writing desired to be within the Grade A contour of a television station or that they wished to receive a signal not less than that required over a principal community is not clear. In any event, it would appear that the thrust of their pleas was that they desired better service than they were receiving or would receive if Station WAEO at Hurley were ultimately to go on the air with the facilities mentioned in footnote 2.

specify operation there at antenna height of 1000 feet and maximum power of 316 kw. He states that such a facility would bring acceptable television to a "white" area of about 83,000 persons. His comments also incorporate by reference the statements of his amended petition for rule making concerning the Rhinelander area, which include the following: Statements of merchants in the area and of advertising representatives, plus the indications of two networks point to the fact that such a Rhinelander station might be successful. Rhinelander (population 9,200) is the county seat and largest city of Oneida County (population 22,600) which is situated in north-central Wisconsin. The city is a wholesale center for six counties in the proposed coverage area, as well as a center for forestry activity. It has numerous industrial, manufacturing, wholesale, and retail establishments, a daily newspaper, and a radio station. It is the hospital and medical center for northern Wisconsin, and is served by one airline and two railroads. In the summer, its population multiplies ten times. It is the focal point of all activities of northern Wisconsin and would be an ideal focal point of all activities for a television station, in an area which is largely underserved.

6. Engineering statements submitted by various parties show a wide area in which a transmitter may be located if Channel 12 is assigned to Rhinelander, whereas there is a limited area southeast of Rhinelander, roughly rectangular (about 60 miles from east to west and 15 miles from north to south), in which a Channel 4 transmitter would have to be located in order to meet Commission spacing requirements. Petitioner submitted an engineering statement which maintains that, because of air space problems, the nearest point at which a high tower could be built in that rectangle is located 25 miles from Rhinelander.[4]

7. M & M, The Journal Company, Midwest and AMST take no position on whether any channel should be added to Rhinelander. However, in the event that a VHF channel is assigned, M & M urges that it be Channel 4, and The Journal Company and Midwest urge that it be Channel 12. Regardless of the channel assigned, the single concern of AMST is the strict enforcement of the mileage spacing requirements of the rules. These parties state their arguments accordingly.

8. The principal line of argument followed by M & M, Midwest, and The Journal Company is directed at the amount of interference and resulting loss of service that a Rhinelander Channel 4 station would cause to viewers of co-channel Stations WCCO–TV and WTMJ–TV, or that a Rhinelander Channel 12 station would cause to viewers of adjacent channel Station WLUK–TV. Claims and counterclaims are made concerning the methods used by the parties in calculating loss of service, and by various lines of reasoning it is urged that it is in the public interest to assign Channel 4 or Channel 12 as the case may be. Because of our decision (see paragraphs 20–21) we find it unnecessary to evaluate the details of these arguments.

9. AMST urges that regardless of which channel may be assigned to Rhinelander, there should be strict enforcement of the Commission mileage spacing requirements. It observes that if Channel 4 were assigned to Rhinelander, there would be a co-channel short separation of about 4 miles between the Rhinelander reference point and the new transmitter site proposed by WCCO–TV, Channel 4, Minneapolis, in its pending application, File No. BPCT–3292, filed by Midwest Radio-Television, Inc. (on January 30, 1964). It urges that, although there is an area of substantial size east of Rhinelander in which a transmitter for a Channel 4 operation could be located, the Commission should not assign Channel 4 to Rhinelander unless and until it has determined that there would be no air space or other practical obstacles to the location of a Channel 4 transmitter in the area meeting all mileage requirements. It also argues that if Channel 4 is assigned to Rhinelander, the order assigning the channel should make clear that any application for use of the channel will be granted only on condition that the transmitter site meets the separation requirements with respect to all other stations and allocations including the new WCCO–TV transmitter site requested.

The need for service in the area involved. 10. As stated above, no party except petitioner has taken a position on the need of the area involved for an additional channel. Thus the only material in the record directed at this point is that supplied by petitioner, who has stated that it is not economically feasible to operate a station at Hurley, that it is economically feasible to operate one at Rhinelander, and that there is a need for service in the latter area. (See paragraphs 3–5, above.) We are of the opinion that there is a substantial need for a television service in the area which a Rhinelander station would serve. The numerous letters received by petitioner are additional evidence of this fact. Also, it is evident that there is a large "white area" to the north of Rhinelander that lies outside the Grade B contour of any television station, and Rhinelander itself lies within the Grade B contour of only one station—WSAU–TV, at Wausau.[5] Except for WSAU–TV, the television stations nearest to Rhinelander are WBAY–TV, WFRV, and WLUK–TV at Green Bay, Wisconsin, about 115 miles away; and WEAU–TV at Eau Claire, Wisc., and WLUC–TV, Marquette, Mich., both about 120 miles distant. Although there are four UHF translator broadcast stations at Rhinelander,[6] as well as a CATV system,[7] and a CATV system at Merrill[8] (which would lie within the Grade B contour of the proposed station at Rhinelander), these services are local to the communities named and serve only about 4,300 homes. Our determination of the need for service in the area is buttressed by the 1960 ARB Television Coverage Survey mentioned in the following paragraph.

11. The 1960 ARB Television Coverage Study shows the number of services received in 1960 by the counties that that would lie within the Grade B contour of the proposed VHF station at Rhinelander. Assuming that a station rendered "substantial service" to a county if it had a net weekly circulation of 75 percent or more within that county, 1960 ARB figures indicate that of all the TV households in the counties under consideration, 4 percent received no substantial service, 56 percent received 1 substantial service, 15 percent received 2 substantial services and 25 percent received 3 substantial services. Under this criterion, three-fourths of the TV households did not receive three substantial services.

12. Having determined a need, the question remains whether the public interest in satisfying that need would best be served by reassigning Channel 12 from Ironwood to Rhinelander, by leaving Channel 12 at Ironwood and assigning Channel 4 to Rhinelander, or by assigning neither of those channels to Rhinelander, leaving the community with its presently assigned Channel 22. An essential consideration in arriving at an answer is that of the impact which assignment of a VHF channel to Rhinelander would have on UHF development in the area.

Impact of a VHF assignment on UHF development. 13. It is the policy of the Commission to foster UHF development. Consistent with that policy, we stated in paragraph 15 of the Report and Order (FCC 63–501) in the "drop-in" cases (Docket Nos. 14231–8, Oklahoma City, etc.) released May 31, 1963, that all new VHF assignments and applications would be scrutinized as to their likely effect on UHF development. We therefore proceed to examine the impact that the assignment of a VHF channel at Rhinelander might have on UHF development in the area.

14. Rhinelander is the county seat and largest city of Oneida County. Neither the population of Rhinelander nor of the county has changed significantly since 1940 (county population: 1940—18,938; 1950—20,648; 1960—22,112; Rhinelander population: 1940—8,501; 1950—8,774; 1960—8,790). As previously stated, the nearest television stations are at Wausau (WSAU–TV, Channel 7) about 50 miles away; at Green Bay, about

[4] Petitioner also states that a transmitter might be located about 16 miles from Rhinelander and give principal city service to both Rhinelander and Merrill, but that a question of antenna height exists because the site is close to the junction of two airways.

[5] When the permittee of Station WAOW–TV, Channel 9, at Wausau builds, Rhinelander will also lie within the Grade B contour of that station. WAOW–TV is the former WCWT (see par. 22).

[6] W76AB, W71AC, W80AC, and W73AD. One of these picks up the signal of the Wausau station. Each of the others picks up the signals of one of the three Green Bay stations.

[7] Television Factbook, 1964 Edition, No. 34, p. 144–c.

[8] Information from FCC Survey of CATV Systems.

115 miles away; and at Eau Claire about 120 miles away. The nearest UHF stations are at Madison and Milwaukee, some 180 miles and 200 miles from Rhinelander respectively.

15. Within the Grade B contour of the proposed Rhinelander station, the following situation prevails: There are four UHF assignments: Channel *18 at Park Falls, Channel 22 at Rhinelander, and Channels 16 and *46 at Wausau. All of these channels are unused. In Docket No. 14229 which is concerned with expanded use of UHF channels throughout the country, Channel 62 is proposed for Antigo, and Channel 73 for Merrill. In addition, VHF channels 7 and 9 are assigned at Wausau, the former being occupied by a licensee and the latter by a permittee.

16. Not counting new all-channel sets purchased recently, it would appear that, with the exception of Rhinelander and the area nearby, there is no UHF conversion in the area because of the great distances to the nearest UHF stations.* Commission license files indicate that there are four UHF television translator broadcast stations at Rhinelander (see footnote 5) with about 1,850 all-channel UHF converters being used by those who receive service from them. These converters are located in and near Rhinelander, almost entirely within Oneida County, because of the limited range of the translator signals. According to the Standard Rate & Data Service, Inc., 1963 estimate, there are 6,000 households in Oneida County, of which 5,800 are TV households. A VHF station operating at Rhinelander with a tower of 1,000 feet and maximum power (as proposed by petitioner) would serve the 5,800 households in Oneida County, and 74,200 TV households outside that county but within the Grade B contour of the station (based on Standard Rate & Data Service Inc., 1963 estimates), almost none of which apparently are UHF converted. Thus, it would appear that UHF conversion in Oneida County is 32 percent and that conversion in the Grade B contour of the proposed station is 2.3 percent.

17. It appears that while the UHF conversion within Oneida County is considerable, that county alone cannot support a television station. Since the UHF conversion within the general area of the proposed station is minimal, we believe that the chances of having a UHF station at Rhinelander or in the area in the fairly near future are small, and that there would therefore be no adverse impact on UHF in the near future if a VHF channel were assigned to the community. The possible adverse effect that assignment of a VHF channel might have on UHF development in the area in the more distant future is a matter of speculation. If eventually, when all-channel sets become prevalent in the area, the market would support two television stations, the existence of a VHF station would presumably not have an adverse impact on UHF. If the market at that time would only support one station, the existence of a VHF station which might be constructed as a result of a present VHF assignment would effectively preclude the establishment of a UHF station and to that extent would have an adverse impact on UHF development. As to the area generally other than Rhinelander, that substantial long-range impact on UHF development would occur is not sufficiently clear that we would be justified in withholding an otherwise desirable assignment on that basis alone.

A VHF channel would fulfill the needs of the area sooner. 18. We have seen that an immediate need for an additional service presently exists in the Rhinelander area. Although Channel 22 has been assigned to Rhinelander since the Sixth Report and Order, that channel has not been used to satisfy the need. Petitioner indicates a desire to fulfill it by use of a VHF channel. Whether he or someone else would fulfill it by use of Channel 22 in the immediate future if a VHF channel were not assigned to Rhinelander is questionable, especially to the extent that lack of UHF conversion in the area acts as a deterrent. It would appear that the best chance to satisfy the need would be by the assignment of a VHF channel to the community. We have found that such an assignment would not have an adverse impact on UHF development in the near future. Although it might have such an effect in the distant future, the matter is speculative, and we believe that, on balance, the public interest will be better served by assigning a VHF channel which shows promise of being used in the near future.

Channel 12 is the better assignment. 19. Such a channel could be assigned either by dropping in Channel 4 or by reassigning Channel 12 from Ironwood. The latter course would remove from Ironwood (to which Channel 31 is also assigned) a channel that was assigned to that community about 10 years ago. Two permits for its use have been granted. The first was deleted, and it now appears that the present permit, held by petitioner, will also not be used. Nor is there any evidence that the channel would be used at Ironwood in the foreseeable future. In fact, the statements of petitioner indicate that it would not be. Reassignment of the channel to Rhinelander would, therefore, not appear to be contrary to the public interest, especially since use of the channel at the latter community could also give considerable service in the Ironwood area, and since if in the distant future a station at Ironwood might be viable, Channel 31 remains available for use.

20. We believe that it is in the public interest to reassign Channel 12. This decision is based on the fact that although it is possible to assign either Channel 4 or 12 and meet the mileage spacing requirements of the rules, and provide the required field strength over the principal community, there is substantially more flexibility in the location of a transmitter site for a Channel 12 station than for a Channel 4 station, and this flexibility makes for a more efficient use of that channel than could be made of Channel 4. This greater flexibility also increases the possibility that a tall tower may be erected at a site reasonably close to Rhinelander and still not present air space problems. A transmitter location 25 miles or more from the principal community should be avoided if possible.

21. Two stations have filed comments urging the assignment of Channel 12. One urges the assignment of Channel 4. Their positions are based almost entirely on alleged loss of service to listeners of their stations. Arguments are raised about the amount of loss and the methods used in calculating alleged losses, but we base our selection of Channel 12 on the consideration of transmitter site flexibility. At best, the evidence given concerning losses of service is only fragmentary. If we were to give consideration to the matter of interference and loss of service, far more would have to be considered than loss of service of the three parties which filed comments herein. Interference and loss of service to all existing or potential co-channel and adjacent channel stations in the region, as well as the interference of the signals of such stations with the signal of a Rhinelander station, would have to be taken into account in arriving at a decision in the public interest concerning the proper channel to assign to Rhinelander. Consideration would also have to be given to the other services available to the interference areas. In any event, as we have stated before, our assignment table, which is subject to modification from time to time, is based on the concept of mileage separations, these separations representing a necessary compromise between protection from interference and the making of an adequate number of assignments. Stations are not protected from interference from assignments made in accordance with the separation rules. See § 73.612. Here, in fact, selection of Channel 12 does tend to cause less total interference than would a Channel 4 assignment, since the general degree of separations on the channel to all co-channel and adjacent-channel assignments is greater as shown by the much larger area available for transmitter location. Moreover, since the "interference" claimed is adjacent-channel, there will be substitution of service instead of the loss of service in the area which would be affected by co-channel interference from a Channel 4 assignment.

Miscellaneous matters. 22. Two matters mentioned in the comments may be disposed of briefly: (1) The arguments of AMST are directed primarily toward the possible assignment of Channel 4 to Rhinelander and need no consideration in view of our decision to assign Channel 12. (2) WLUK–TV suggests that we may wish to give consideration to the possibility of reserving a VHF channel at Rhinelander for educational use in view of the Commission decision in Docket Nos. 14933–4 on July 24, 1964 (37 F.C.C. 257), which granted applications

*The 1960 ARB Television Study showed no UHF conversion in any of the counties involved except for 100 UHF homes in Lincoln County contiguous to Oneida County. Except with respect to Rhinelander and Oneida County, there is no reason to believe that this has substantially changed.

of Central Wisconsin Television, Inc., for assignment of its construction permit for Station WCWT (Channel 9, Wausau) to Midcontinent Broadcasting Company and for extension of time in which to construct the station. Those actions had been opposed by an educational group which has pending before the Commission a petition for rule making (RM-321) to reserve Channel 9 in "central Wisconsin" for educational use. Since comments herein were not addressed to the question of need for an educational reservation at Rhinelander, and there has therefore been no showing of need in this respect, we give no consideration to it here, but will deal with it elsewhere. Educational groups are of course free to apply for Channel 12.

Request for order to show cause. 23. Petitioner has requested an order to show cause why his construction permit should not be modified to specify operation at Rhinelander on Channel 12 rather than at Hurley, tower height of 1,000 feet, and power of 316 kw. Under special circumstances in one of the "drop-in" cases mentioned above, we have reassigned a channel from one city to another and modified the license of a station operating on that channel accordingly. In the instant case, however, the record shows that the petitioner holds a construction permit for a station of very low power and low antenna height, and that there has been no construction. We therefore believe that no order to show cause should issue. The channel will accordingly be open to all applicants including petitioner.

24. As stated in the notice herein, since Rhinelander is within 250 miles of the U.S.-Canadian border, concurrence of the Canadian authorities in accordance with the provisions of the U.S.-Canadian Agreement of 1952 was necessary before final action on either proposal could be taken. Such concurrence to assignment of Channel 12+ to Rhinelander has been obtained.

25. Authority for the adoption of the amendment herein is contained in sections 4(i), 303, and 307(b) of the Communications Act of 1934, as amended.

26. In view of the foregoing: *It is ordered,* Effective January 25, 1965, that the Table of Assignments contained in § 73.606 of the Commission rules and regulations is amended insofar as the communities named are concerned, to read as follows:

City	Channel No.
Ironwood, Mich	31—
Rhinelander, Wis	12+, 22

27. *It is further ordered,* That the request of Alvin E. O'Konski for an order to show cause why the construction permit for Station WAEO-TV, Hurley, Wis., should not be modified to specify operation on Channel 12 at Rhinelander, Wis., with antenna height of 1,000 feet and power of 316 kilowatts is denied.

28. *It is further ordered,* That this proceeding is terminated.

Adopted: December 16, 1964.

Released: December 18, 1964.

NOTE: Rules changes herein will be covered by T.S. III(64)-5.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 64-13256; Filed, Dec. 23, 1964; 8:47 a.m.]

[FCC 64-1168]

PART 73—RADIO BROADCAST SERVICES

Multiple Ownership

In the matter of amendment of §§ 73.35, 73.240, and 73.636 of the Commission's rules relating to multiple ownership of standard, FM and television broadcast stations.

Order. At a session of the Federal Communications Commission held at its offices in Washington, D.C., on the 16th day of December, 1964;

On June 9, 1964, we released our Report and Order in Docket No. 14711 amending the so-called "duopoly" sections of the multiple ownership rules. In the Report and Order, we stated that the rules would apply to assignments and transfers but that "pro-forma transfers and other transfers coming about by operation of law" would be exempted.[1] However, the rules as finally adopted (Sections 73.35, 73.240 and 73.636) specifically exempted only those pro-forma transfers listed in § 1.540(b) of the Commission's rules and failed to provide a specific exemption for other transfers coming about by operation of law. (See § 1.541(b).)

The revised rules contained in the attached Appendix are intended to remedy this omission. As revised, the rules will now provide additional exemptions for involuntary assignments or transfers made necessary by reason of death or legal disability, and for assignments or transfers to beneficiaries under a will or by intestacy where no new or increased overlap would be created between commonly owned stations. Thus, stations with presently overlapping service contours will be able to pass at the death of the owner without coming into conflict with the rules—so long as no new overlap problems are created involving other stations owned by the beneficiaries.

The rule changes adopted here are intended solely to grant an exemption we had intended to create in the original Report and Order in Docket 14711. For this reason and because they relax existing restrictions, we find that formal rule making proceedings described in section 4(a) of the Administrative Procedure Act are unnecessary and that the effective date provisions of section 4(c) are inapplicable.

In view of the foregoing: *It is ordered,* That Part 73 of the Commission's rules and regulations is amended as set forth below.

It is further ordered, That the amended sections shall be effective on December 28, 1964.

[1] FCC 64-445, p. 11, footnote 20; 2 Pike & Fischer R.R. 2d 1588, 1602.

Authority for the adoption of the above-amended rules is contained in sections 4(i) and (j), and 303 of the Communications Act of 1934, as amended.

(Sec. 4, 48 Stat. 1066, as amended; 47 U.S.C. 154. Interprets or applies sec. 303, 48 Stat 1082, as amended; 47 U.S.C. 303)

Released: December 18, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

1. Note 3 to § 73.35 is amended to read as follows:

§ 73.35 Multiple ownership.

* * * * *

NOTE: 1. * * *

3. Paragraph (a) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities. Said paragraph will not apply to applications for increased power for Class IV stations, to applications for assignment of license or transfer of control filed in accordance with §§ 1.540(b) or 1.541(b) of this chapter, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy where no new or increased overlap would be created between commonly owned stations. Said paragraph will apply to all applications for new stations, to all other applications for assignment or transfer, and to all applications for major changes in existing stations except major changes that will result in overlap no greater than that already existing. (The resulting overlap areas in such major change cases may consist partly or entirely of new terrain. However, if the population in the resulting overlap areas substantially exceeds that in the previously existing overlap areas, the Commission will not grant the application if it finds that to do so would be against the public interest, convenience, and necessity.) Commonly owned stations with overlapping contours prohibited by paragraph (a) of this section may not be assigned or transferred to a single person, group, or entity, except as provided in this Note.

2. Note 3 to § 73.240 is amended to read as follows:

§ 73.240 Multiple ownership.

* * * * *

NOTE: 1. * * *

3. Paragraph (a)(1) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities. Said paragraph will not apply to applications for assignment of license or transfer of control filed in accordance with §§ 1.540(b) or 1.541(b) of this chapter, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy where no new or increased overlap would be created between commonly owned stations. Said paragraph will apply to all applications for new stations, to all other applications for assignment or transfer, and to all applications for major changes in existing stations except major changes that will result in overlap no greater than that already existing. (The resulting overlap areas in such major change cases may consist partly or entirely of new terrain. However, if the population in the resulting overlap areas substantially exceeds that in the previously existing overlap areas, the Commission will not grant the application if it finds that to do so would be against the public interest, convenience, and necessity.) Commonly owned stations with overlapping contours prohibited by paragraph (a)(1) of this section may not be assigned or transferred to a single person,

group, or entity, except as provided in this Note.

3. Note 3 to § 73.636 is amended to read as follows:

§ 73.636 **Multiple ownership.**

* * * * *

NOTE: 1. * * *

3. Paragraph (a)(1) of this section will not be applied so as to require divestiture, by any licensee, of existing facilities. Said paragraph will not apply to applications for assignment of license or transfer of control filed in accordance with §§ 1.540(b) or 1.541 (b) of this chapter, or to applications for assignment of license or transfer of control to heirs or legatees by will or intestacy where no new or increased overlap would be created between commonly owned stations. Said paragraph will apply to all applications for new stations, to all other applications for assignment or transfer, and to all applications for major changes in existing stations except major changes that will result in overlap no greater than that already existing. (The resulting overlap areas in such major change cases may consist partly or entirely of new terrain. However, if the population in the resulting overlap areas substantially exceeds that in the previously existing overlap areas, the Commission will not grant the application if it finds that to do so would be against the public interest, convenience, and necessity.) Commonly owned stations with overlapping contours prohibited by paragraph (a)(1) of this section may not be assigned or transferred to a single person, group, or entity, except as provided in this Note.

[F.R. Doc. 64-13209; Filed, Dec. 23, 1964; 8:45 a.m.]

[Docket No. 14524; FCC 64-1148]

PART 87—AVIATION SERVICES

Frequencies Available

In the matter of amendment of Part 87 (formerly Part 9), § 87.293 (formerly § 9.432), to reflect discontinuance of the use of high frequencies for aeronautical mobile (R) communications in the Domestic Service within the continental United States; docket No. 14524.

Order. At a session of the Federal Communications Commission held at its offices in Washington, D.C., on the 16th day of December 1964;

The Commission having under consideration action taken by the Report and Order (FCC 62-919) in this Docket which was adopted September 5, 1962, with respect to the determination whether a limited number of high frequencies should be retained for emergency or back-up use; and,

It appearing, that such determination was to be made by January 1, 1965, which would have allowed the Commission to take into consideration information gathered in preparation for an Aeronautical Extraordinary Administrative Radio Conference, tentatively scheduled to convene in January 1965; and,

It further appearing, that the next session of the ITU Extraordinary Administrative Radio Conference (EARC) to consider the Aeronautical Mobile Allotment Plan is now scheduled to be held early in 1966 and information gathered in preparation for this Conference will be helpful in determining whether a limited number of high frequencies for aeronautical mobile (R) communications should be retained; and,

It further appearing, that any selection of frequencies that may be made should be in accordance with the new plan; and,

It further appearing, that the note following § 87.293(f) should reflect a date that will allow sufficient time for Commission action after the Conference and should make provision for emergency and back-up use until a final determination is made; and,

It further appearing, that authority for this action is contained in sections 4(i), 303 (c), (f) and (r), of the Communications Act of 1934, as amended:

It is ordered, That effective December 31, 1964, Part 87 of the Commission's rules is amended as set forth below.

(Sec. 4, 48 Stat. 1066, as amended; 47 U.S.C. 154. Interprets or applies sec. 303, 48 Stat. 1082, as amended; 47 U.S.C. 303)

Released: December 18, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

The Note following Section 87.293(f) is amended to read as follows:

§ 87.293 **Frequencies available.**

* * * * *

NOTE: The Commission in Docket 14524 provided for discontinuance of the use of HF for aeronautical mobile (R) communications in the Domestic Service within the continental U.S. (excluding Alaska) as of January 1, 1965. However, it will be determined, prior to June 1, 1966, if a limited number of high frequencies should be retained for Domestic use. It should be noted that if certain frequencies are retained, their use will not be on a regular basis. Until final determination is made, the high frequencies presently provided for use in the domestic operation in the aeronautical mobile (R) service may continue to be authorized in this service for emergency and back-up use.

[F.R. Doc. 64-13210; Filed, Dec. 23, 1964; 8:45 a.m.]

Title 49—TRANSPORTATION

Chapter I—Interstate Commerce Commission

SUBCHAPTER A—GENERAL RULES AND REGULATIONS

[S.O. 935; Amdt. 4]

PART 95—CAR SERVICE

Appointment of Embargo Agent

DECEMBER 18, 1964.

At a session of the Interstate Commerce Commission, Safety and Service Board No. 1, held in Washington, D.C., on the 16th day of December A.D. 1964.

Upon further consideration of Service Order No. 935 (25 F.R. 6760, 26 F.R. 12166, 28 F.R. 263, 13936), and good cause appearing therefor:

It is ordered, That:

Section 95.935 *Appointment of embargo agent.* Service Order No. 935, be and it is hereby amended by substituting the following paragraph (f) for paragraph (f) thereof.

§ 95.935 **Appointment of embargo agent.**

* * * * *

(f) *Expiration date.* This order shall expire at 11:59 p.m., December 31, 1965, unless otherwise modified, changed, suspended or annulled by order of this Commission.

Effective date: This amendment shall become effective at 11:59 p.m., December 31, 1964.

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

It is further ordered, That a copy of this order and direction shall be served upon each State railroad regulatory body, the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and per diem agreement under the terms of that agreement; and 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, Safety and Service Board No. 1.

[SEAL] HAROLD D. MCCOY,
Secretary.

[F.R. Doc. 64-13230; Filed, Dec. 23, 1964; 8:46 a.m.]

[S.O. 940; Amdt. 3]

PART 95—CAR SERVICE

Chicago, Milwaukee, St. Paul and Pacific Railroad Company Authorized To Operate Over Certain Trackage of Fort Dodge, Des Moines & Southern Railway Company

DECEMBER 18, 1964.

At a Session of the Interstate Commerce Commission, Safety and Service Board No. 1, held in Washington, D.C., on the 16th day of December A.D. 1964.

Upon further consideration of Service Order No. 940 (27 F.R. 6235, 12894, 28 F.R. 13936) and good cause appearing therefore:

It is ordered, That:

Section 95.940(a) *The Chicago, Milwaukee, St. Paul and Pacific Railroad Company authorized to operate over certain trackage of Fort Dodge, Des Moines & Southern Railway Company* of Service Order No. 940 be, and it is hereby, amended by substituting the following paragraph (d) for paragraph (d) thereof:

§ 95.940 **The Chicago, Milwaukee, St. Paul and Pacific Railroad Company authorized to operate over certain trackage of Fort Dodge, Des Moines & Southern Railway Company.**

* * * * *

(d) *Expiration date.* This order shall expire at 11:59 p.m., December 31, 1965,

unless otherwise modified, changed, suspended, or annulled by order of this Commission.

Effective date: This amendment shall become effective at 11:59 p.m., December 31, 1964.

(Secs. 1, 12, 15, 24 Stat. 279, 383, 384, as amended; 49 U.S.C. 1, 12, 15. Interprets or applies sec. 1(10–17), 15(4), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10–17), 15(4))

It is further ordered, That a copy of this amendment shall be served upon the Iowa State Commerce Commission, the Illinois Commerce Commission, and upon the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and per diem agreement under the terms of that agreement; and that notice of this amendment be given to the general public by depositing a copy in the office of the Secretary of the Commission at Washington, D.C., and filing it with the Director, Office of the Federal Register.

By the Commission, Safety and Service Board No. 1.

[SEAL] HAROLD D. McCOY, *Secretary.*

[F.R. Doc. 64–13231; Filed, Dec. 23, 1964; 8:46 a.m.]

[S.O. 941; Amdt. 4]

PART 95—CAR SERVICE

Chicago and North Western Railway Company Authorized To Operate Over Certain Trackage of the Chicago North Shore and Milwaukee Railway

DECEMBER 18, 1964.

At a session of the Interstate Commerce Commission, Safety and Service Board No. 1, held in Washington, D.C., on the 16th day of December A.D. 1964.

Upon further consideration of Service Order No. 941 (28 F.R. 645, 3917, 14225, 29 F.R. 8419) and good cause appearing therefor:

It is ordered, That:

Section 95.941(a) *Chicago and North Western Railway Company authorized to operate over certain trackage of the Chicago North Shore and Milwaukee Railway* of Service Order No. 941, be, and it is hereby amended by substituting the following paragraph (g) for paragraph (g) thereof:

§ 95.941 Chicago and North Western Railway Company authorized to operate over certain trackage of the Chicago North Shore and Milwaukee Railway.

* * * * *

(g) *Expiration date.* This order shall expire at 11:59 p.m., June 30, 1965, unless otherwise modified, changed, suspended, or annulled by order of this Commission.

(f) Effective date: This amendment shall become effective at 11:59 p.m., December 31, 1964.

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

It is further ordered, That a copy of this amendment shall be served upon the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and per diem agreement under the terms of that agreement; and that notice of this amendment 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, Safety and Service Board No. 1.

[SEAL] HAROLD D. McCOY, *Secretary.*

[F.R. Doc. 64–13232; Filed, Dec. 23, 1964; 8:46 a.m.]

[S.O. 942; Amdt. 4]

PART 95—CAR SERVICE

Feather River Railway Company Authorized To Operate Over Certain Trackage Formerly Operated by the Western Pacific Railroad Company

DECEMBER 18, 1964.

At a session of the Interstate Commerce Commission, Safety and Service Board No. 1, held in Washington, D.C., on the 16th day of December A.D. 1964.

Upon further consideration of Service Order No. 942 (28 F.R. 826, 6016, 14225, 29 F.R. 8420), and good cause appearing therefor:

It is ordered, That:

Section 95.942(a) *Feather River Railway Company authorized to operate over certain trackage formerly operated by the Western Pacific Railroad Company* of Service Order No. 942, be, and it is hereby amended by substituting the following paragraph (e) for paragraph (e) thereof:

§ 95.942 Feather River Railway Company authorized to operate over certain trackage formerly operated by the Western Pacific Railroad Company.

* * * * *

(d) *Expiration date.* This order shall expire at 11:59 p.m., June 30, 1965, unless otherwise modified, changed, suspended, or annulled by order of this Commission.

(e) Effective date: This amendment shall become effective at 11:59 p.m., December 31, 1964.

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

It is further ordered, That copies of this amendment shall be served upon the Feather River Railway Company, the Public Utilities Commission of the State of California, and upon the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and per diem agreement under the terms of that agreement; 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, Safety and Service Board No. 1.

[SEAL] HAROLD D. McCOY, *Secretary.*

[F.R. Doc. 64–13233; Filed, Dec. 23, 1964; 8:46 a.m.]

Title 50—WILDLIFE AND FISHERIES

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

PART 32—HUNTING

Parker River National Wildlife Refuge, Massachusetts

In F.R. Doc. 64–10082, appearing on page 13642 of the issue for Tuesday, October 6, 1964, and in F.R. Doc. 64–12930 appearing on page 17906 of the issue for Thursday, December 17, 1964, subparagraph (2) under special conditions should read as follows to suspend hunting on certain refuge lands after December 23, 1964 because there is no longer a huntable population of Canada geese on the refuge.

(2) The open season for hunting geese (except snow geese) on the Canada Goose Hunting Area is from December 1, 1964 through December 5, 1964, inclusive, and from December 15, 1964 through December 23, 1964, inclusive.

FRED L. JACOBSON, *Acting Regional Director, Boston, Massachusetts.*

DECEMBER 18, 1964.

[F.R. Doc. 64–13218; Filed, Dec. 23, 1964; 8:45 a.m.]

Proposed Rule Making

DEPARTMENT OF THE TREASURY

Internal Revenue Service

[26 CFR Part 170]

MISCELLANEOUS REGULATIONS RELATING TO LIQUOR

Notice of Proposed Rule Making

Notice is hereby given, pursuant to the Administrative Procedure Act, approved June 11, 1946, that the regulations set forth in tentative form below are proposed to be prescribed by the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury or his delegate. Prior to final adoption of such regulations, consideration will be given to any data, views, or arguments pertaining thereto which are submitted in writing, in duplicate, to the Director, Alcohol and Tobacco Tax Division, Internal Revenue Service, Washington, D.C., 20224, within the period of 30 days from the date of publication of this notice in the FEDERAL REGISTER. Any person submitting written comments or suggestions who desires an opportunity to comment orally at a public hearing on these proposed regulations should submit his request, in writing, to the Director within the 30-day period. In such a case, a public hearing will be held and notice of the time, place, and date will be published in a subsequent issue of the FEDERAL REGISTER. The proposed regulations are to be issued under the authority contained in section 7805 of the Internal Revenue Code of 1954 (68A Stat. 917; 26 U.S.C. 7805).

[SEAL] BERTRAND M. HARDING,
Acting Commissioner of Internal Revenue.

The purpose of this Treasury decision is to revise the regulations in Subpart B of 26 CFR Part 170 to change the requirements for the submission by surety companies of authorizations for agents and officers to execute bonds on their behalf. The provisions for submission of continuing authorizations are changed to provide for separate submission of authority with each bond and each consent to changes in the terms of a bond. Subpart B, 26 CFR Part 170, is revised to read as follows:

Sec.
170.21 Scope of subpart.
170.22 General.
170.23 Filing of powers of attorney.
170.24 Execution of powers of attorney.

§ 170.21 Scope of subpart.

This subpart relates to the submission of powers of attorney given in support of bonds required or provided for by regulations prescribed in this part, and in Parts 197 to 245, inclusive, and in Part 252 of this chapter, authorizing agents and officers to execute bonds or to consent to changes in the terms of bonds on behalf of corporate sureties.

§ 170.22 General.

Notwithstanding any other provisions of the regulations in this part, or in Parts 197 to 245, inclusive, and in Part 252 of this chapter, powers of attorney authorizing agents or officers to execute bonds or to consent to changes in the terms of bonds on behalf of corporate sureties shall be submitted and passed on as provided in this subpart.

§ 170.23 Filing of powers of attorney.

Each bond, and each consent to changes in the terms of a bond, shall be accompanied by a power of attorney authorizing the agent or officer who executed the bond or consent to so act on behalf of the surety. The assistant regional commissioner, alcohol and tobacco tax, who is authorized to approve the bond, may, when he deems it necessary, require additional evidence of the authority of the agent or officer to execute the bond or consent. (61 Stat. 648; 6 U.S.C. 6, 7)

§ 170.24 Execution of powers of attorney.

The power of attorney shall be prepared on a form provided by the surety company and executed under the corporate seal of the company. If the power of attorney submitted is other than a manually signed original, it shall be accompanied by certification of its validity. (61 Stat. 648; 6 U.S.C. 6, 7)

[F.R. Doc. 64-13250; Filed, Dec. 23, 1964; 8:46 a.m.]

[26 CFR Part 296]

MISCELLANEOUS REGULATIONS RELATING TO TOBACCO MATERIALS, TOBACCO PRODUCTS, AND CIGARETTE PAPERS AND TUBES

Notice of Proposed Rule Making

Notice is hereby given, pursuant to the Administrative Procedure Act, approved June 11, 1946, that the regulations set forth in tentative form below are proposed to be prescribed by the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury or his delegate. Prior to final adoption of such regulations, consideration will be given to any data, views, or arguments pertaining thereto which are submitted in writing, in duplicate, to the Director, Alcohol and Tobacco Tax Division, Internal Revenue Service, Washington, D.C., 20224, within the period of 30 days from the date of publication of this notice in the FEDERAL REGISTER. Any person submitting written comments or suggestions who desires an opportunity to comment orally at a public hearing on these proposed regulations should submit his request, in writing, to the Director within the 30-day period. In such a case, a public hearing will be held, and notice of the time, place, and date will be published in a subsequent issue of the FEDERAL REGISTER. The proposed regulations are to be issued under the authority contained in section 7805 of the Internal Revenue Code of 1954 (68A Stat. 917; 26 U.S.C. 7805).

[SEAL] BERTRAND M. HARDING,
Acting Commissioner of Internal Revenue.

The purpose of this Treasury decision is to revise the regulations in Subpart D of 26 CFR Part 296 to change the requirements for the submission by surety companies of authorizations for agents and officers to execute bonds on their behalf. The provisions for submission of continuing authorizations are changed to provide for separate submission of authority with each bond and each extension of coverage of bond. Subpart D, 26 CFR Part 296, is revised to read as follows:

Sec.
296.91 Scope of subpart.
296.92 General.
296.93 Filing of powers of attorney.
296.94 Execution of powers of attorney.

§ 296.91 Scope of subpart.

This subpart relates to the submission of powers of attorney given in support of bonds required or provided for by regulations prescribed in this part, and in Parts 270, 280, 285, and 290 of this chapter, authorizing agents and officers to execute bonds or extensions of coverage of bonds on behalf of corporate sureties.

§ 296.92 General.

Notwithstanding any other provisions of the regulations in this part, or in Parts 270, 280, 285, and 290 of this chapter, powers of attorney authorizing agents or officers to execute bonds or extensions of coverage of bonds on behalf of corporate sureties shall be submitted and passed on as provided in this subpart.

§ 296.93 Filing of powers of attorney.

Each bond, and each extension of coverage of bond, shall be accompanied by a power of attorney authorizing the agent or officer who executed the bond or extension of coverage of bond to so act on behalf of the surety. The assistant regional commissioner, alcohol and tobacco tax, who is authorized to approve the bond, may, when he deems it necessary, require additional evidence of the authority of the agent or officer to execute the bond or extension of coverage of bond. (61 Stat. 648; 6 U.S.C. 6, 7)

§ 296.94 Execution of powers of attorney.

The power of attorney shall be prepared on a form provided by the surety company and executed under the corporate seal of the company. If the power of attorney submitted is other than a manually signed original, it shall be ac-

companied by a certification of its validity. (61 Stat. 648; 6 U.S.C. 6, 7)

[F.R. Doc. 64-13239; Filed, Dec. 23, 1964; 8:46 a.m.]

POST OFFICE DEPARTMENT

[39 CFR Part 96]

INTERNATIONAL AIR TRANSPORTATION

Notice of Proposed Rule Making

The Post Office Department has determined that the principles and procedures applicable to the dispatch and division of airmail in overseas and foreign air transportation should be restated in the form of rules and regulations which will provide for the expeditious carriage of airmail by aircraft. Accordingly, the memorandum issued by the Assistant Postmaster General, Bureau of Transportation and International Services, dated May 7, 1964, subject: Dispatch of mail by air to other countries, has been rescinded.

The Post Office Department desires to afford to interested persons an opportunity to present data, views, or arguments for consideration in formulating rules and regulations setting forth the principles and procedures to be applicable in the future in the dispatch and division of airmail to be transported by aircraft in overseas or foreign transportation. In this connection the Department tentatively proposes to amend paragraph (d) of § 96.30 of Title 39, Code of Federal Regulations, to read as follows:

§ 96.30 Authority.

* * * * *

(d) *Dispatch and division of airmail.* (1) United States air carriers shall have first priority to traffic whenever practicable.

(2) Airmail shall be dispatched by the most expeditious service to the airport of destination.

(3) Airmail for competitive points shall be divided equally between competitive flights if such flights arrive at the airport of destination within one hour of each other. When one carrier operates multiple competitive flights scheduled to arrive at an airport within one hour of a competitive flight or flights of another carrier, the airmail shall be divided equally between air carriers rather than by flights.

(4) The use of a flight or flights may be suspended in the event of cancellation, unduly delayed departure, frequent failure of schedule performance, abnormal mail backlog, or other unusual or unanticipated condition which would otherwise delay the dispatch of airmail or impair the service to be accorded the mail.

* * * * *

Accordingly, notice is hereby given that interested persons may submit in writing to the Assistant Postmaster General, Bureau of Transportation and International Services, Post Office Department, Washington, D.C., 20260, at any time prior to January 25, 1965, data, views, or arguments concerning the proposed rules and regulations. All statements submitted in writing pursuant to this notice will be made available for inspection at Room 5000, Post Office Department, after the closing date for submission thereof. Not later than February 5, 1965, interested persons may submit in writing to the Assistant Postmaster General, Bureau of Transportation and International Services, Post Office Department, Washington, D.C., 20260, data, views, or arguments limited in scope to rebuttal of any data, views, or arguments initially presented in writing pursuant to this notice.

The original and 11 copies of any paper or document containing data, views, or arguments shall be furnished for use of the Post Office Department.

(R.S. 161, as amended; sec. 405 (a), (d), 72 Stat. 760, 761; 5 U.S.C. 22, 39 U.S.C. 501, 49 U.S.C. 1375 (a), (d))

LOUIS J. DOYLE,
General Counsel.

[F.R. Doc. 64-13249; Filed, Dec. 23, 1964; 8:46 a.m.]

DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

[7 CFR Part 1135]

[Docket No. AO-300-A8]

MILK IN COLORADO SPRINGS-PUEBLO MARKETING AREA

Notice of Recommended Decision and Opportunity To File Written Exceptions on Proposed Amendment to Tentative Marketing Agreement and to Order

Pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601 et seq.), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900), notice is hereby given of the filing with the Hearing Clerk of this recommended decision with respect to a proposed amendment to the tentative marketing agreement and order regulating the handling of milk in the Colorado Springs-Pueblo marketing area. Interested parties may file written exceptions to this decision with the Hearing Clerk, United States Department of Agriculture, Washington, D.C., 20250, by the 5th day after publication of this decision in the FEDERAL REGISTER. The exceptions should be filed in quadruplicate. 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)).

Preliminary statement. The hearing on the record of which the proposed amendment as hereinafter set forth, to the tentative marketing agreement and to the order as amended, was formulated, was conducted at Colorado Springs, Colorado, on December 2, 1964, pursuant to notice thereof which was issued November 21, 1964 (29 F.R. 15656).

The material issue on the record of the hearing relates to continuing the Class I price at its present level.

Findings and conclusions. The following findings and conclusions on the material issue are based on evidence presented at the hearing and the record thereof:

The present Class I pricing provisions of the order should be continued. These provide for a differential of $2.10 over the basic formula price (Minnesota-Wisconsin price series) subject to a supply-demand adjustor. The $2.10 Class I price differential has been in the order since November 1, 1961. Prior to that date the differential was $2.20. The supply-demand adjustor was incorporated in the order, effective August 1, 1963.

The Class I pricing provisions expire on January 31, 1965. This termination date was provided as a means of insuring that the pricing mechanism would be reviewed after the supply-demand adjustor had been in effect for a sufficient period of time to judge its effect on marketing conditions.

The principal cooperative association supplying the market proposed that the present Class I pricing provisions be continued without change. Handlers supported this position as it applied to the immediate future. They noted, however, that they have requested that a hearing be held at which consideration would be given to a substantial revision of the Colorado Springs-Pueblo order. They indicated that when such a hearing was held, it would be desirable to review again the level of the Class I price.

In recent years, the market generally has been supplied with an adequate, but not excessive, quantity of milk to meet its fluid requirements. In 1962, producer receipts were 122.4 percent of the Class I utilization, and in 1963 were 121.4 percent. During the first 10 months of 1964, receipts were 119.4 percent of Class I utilization. This compares favorably to percentages of 120.9 and 121.3 percent in like periods of 1962 and 1963, respectively.

A supply-demand adjustor was incorporated in the order on August 1, 1963. It is designed to increase the Class I price automatically whenever the supplies of producer milk available to the three Colorado markets (Eastern Colorado, Colorado Springs-Pueblo, and Western Colorado) are insufficient for the fluid needs plus a reasonable reserve, and to decrease the Class I price if supplies become excessive. Since its adoption, the supply-demand adjustor has been operative in only three months. It increased the Class I price by two cents per hundredweight in each of the months of February, March and April 1964. The Class I price under the Colorado Springs-Pueblo order is directly related to the Class I prices in the Eastern Colorado and Western Colorado markets. Thus it is clear that the present Class I differential has tended to maintain supplies in balance with the needs of the Colorado markets.

The present Class I pricing provisions have also maintained appropriate price

alignment with markets in surrounding states. The differences in price that have existed between the Colorado Springs-Pueblo market and surrounding markets have been insufficient to cause any appreciable intermarket shift of producers. Few, if any, producers have transferred to the Colorado Springs-Pueblo market from surrounding milksheds. Likewise, the market has experienced little or no loss of producers to surrounding areas. The loss of producers which has occurred in recent months is due to their having given up dairying rather than to their having transferred to other markets.

The Class I price herein provided is necessary to maintain an adequate, but not excessive, supply of milk for the Colorado Springs-Pueblo marketing area. At the same time it will maintain an appropriate price alignment between the Colorado Springs-Pueblo market and surrounding markets.

No briefs or proposed findings and conclusions were filed on behalf of interested parties.

General findings. The findings and determinations hereinafter set forth are supplementary and in addition to the findings and determinations previously made in connection with the issuance of the aforesaid order and of the previously issued amendments thereto; and all of said previous findings and determinations are hereby ratified and affirmed, except insofar as such findings and determinations may be in conflict with the findings and determinations set forth herein.

(a) The tentative marketing agreement and the order, as hereby proposed to be amended, and all of the terms and conditions thereof, will tend to effectuate the declared policy of the Act;

(b) The parity prices of milk as determined pursuant to section 2 of the Act are not reasonable in view of the price of feeds, available supplies of feeds, and other economic conditions which affect market supply and demand for milk in the marketing area, and the minimum prices specified in the proposed marketing agreement and the order, as hereby proposed to be amended, are such prices as will reflect the aforesaid factors, insure a sufficient quantity of pure and wholesome milk, and be in the public interest; and

(c) The tentative marketing agreement and the order, as hereby proposed to be amended, will regulate the handling of milk in the same manner as, and will be applicable only to persons in the respective classes of industrial and commercial activity specified in, a marketing agreement upon which a hearing has been held.

Recommended marketing agreement and order amending the order. The following order amending the order as amended regulating the handling of milk in the Colorado Springs-Pueblo marketing area is recommended as the detailed and appropriate means by which the foregoing conclusions may be carried out. The recommended marketing agreement is not included in this decision because the regulatory provisions thereof would be the same as those contained in the order, as hereby proposed to be amended:

In § 1135.51(a), delete the following: "During the period of August 1, 1963, through January 31, 1965, the Class I price shall be".

Signed at Washington, D.C., on December 21, 1964.

CLARENCE H. GIRARD,
Deputy Administrator.

[F.R. Doc. 64-13251; Filed, Dec. 23, 1964; 8:47 a.m.]

[7 CFR Part 1137]

[Docket No. AO-326-A6]

MILK IN EASTERN COLORADO MARKETING AREA

Notice of Recommended Decision and Opportunity To File Written Exceptions on Proposed Amendment to Tentative Marketing Agreement and to Order

Pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601 et seq.), and the applicable rules of practice and procedure governing the formulation of marketing agreements and marketing orders (7 CFR Part 900), notice is hereby given of the filing with the Hearing Clerk of this recommended decision with respect to a proposed amendment to the tentative marketing agreement and order regulating the handling of milk in the Eastern Colorado marketing area. Interested parties may file written exceptions to this decision with the Hearing Clerk, United States Department of Agriculture, Washington, D.C., 20250, by the 5th day after publication of this decision in the FEDERAL REGISTER. The exceptions should be filed in quadruplicate. 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)).

Preliminary statement. The hearing on the record of which the proposed amendment as hereinafter set forth, to the tentative marketing agreement and to the order as amended, was formulated, was conducted at Denver, Colo., on December 1, 1964, pursuant to notice thereof which was issued November 21, 1964 (29 F.R. 15656).

The material issue on the record of the hearing relates to continuing the Class I price at its present level.

Findings and conclusions. The following findings and conclusions on the material issue are based on evidence presented at the hearing and the record thereof:

The present Class I pricing provisions of the order should be continued. These provide for a differential of $2.10 over the basic formula price (Minnesota-Wisconsin price series) subject to a supply-demand adjustor. The $2.10 Class I price differential has been in the order since its inception. The supply-demand adjustor was incorporated in the order effective August 1, 1963.

The Class I pricing provisions expire on January 31, 1965. This termination date was provided as a means of insuring that the pricing mechanism would be reviewed after the supply-demand adjustor had been in effect for a sufficient period of time to judge its effect on marketing conditions.

Cooperative associations supplying the market proposed that the present Class I pricing provisions be continued without change. Handlers supported this position as it applied to the immediate future. They noted, however, that they have requested that a hearing be held at which consideration would be given to a substantial revision of the Eastern Colorado order. They indicated that when such a hearing was held, it would be desirable to review again the level of the Class I price.

Since the inception of the order, the market generally has been supplied with an adequate, but not excessive, quantity of milk to meet its fluid requirements. In 1962, producer receipts were 134 percent of the Class I utilization, and in 1963 were 131 percent. During the first 10 months of 1964, receipts were 137 percent of Class I utilization. This compares favorably to percentages of 136 and 134 percent in like periods of 1962 and 1963, respectively.

A supply-demand adjustor was incorporated in the order on August 1, 1963. It is designed to increase the Class I price automatically whenever the supplies of producer milk available to the three Colorado markets (Eastern Colorado, Colorado Springs-Pueblo, and Western Colorado) are insufficient for the fluid needs plus a reasonable reserve, and to decrease the Class I price if supplies become excessive. Since its adoption, the supply-demand adjustor has been operative in only three months. It increased the Class I price by two cents per hundredweight in each of the months of February, March and April 1964. Class I prices in the Colorado Springs-Pueblo and Western Colorado markets are directly related to the Class I price in the Eastern Colorado market. Thus, it is clear that the present Class I differential has tended to maintain supplies in balance with the needs of the Colorado markets.

The present Class I pricing provisions have also maintained appropriate price alignment with markets in surrounding states. The differences in price that have existed between Eastern Colorado and surrounding markets have been insufficient to cause any appreciable intermarket shift of producers. Few, if any, producers have transferred to the Eastern Colorado market from surrounding milksheds. Likewise, the market has experienced little or no loss of producers to surrounding areas.

The Class I price herein provided is necessary to maintain an adequate, but not excessive, supply of milk for the Eastern Colorado marketing area. At the same time it will maintain an appropriate price alignment between Eastern Colorado and surrounding markets.

The only brief filed supported the findings and conclusions contained herein.

General findings. The findings and determinations hereinafter set forth are supplementary and in addition to the

findings and determinations previously made in connection with the issuance of the aforesaid order and of the previously issued amendments thereto; and all of said previous findings and determinations are hereby ratified and affirmed, except insofar as such findings and determinations may be in conflict with the findings and determinations set forth herein.

(a) The tentative marketing agreement and the order, as hereby proposed to be amended, and all of the terms and conditions thereof, will tend to effectuate the declared policy of the Act;

(b) The parity prices of milk as determined pursuant to section 2 of the Act are not reasonable in view of the price of feeds, available supplies of feeds, and other economic conditions which affect market supply and demand for milk in the marketing area, and the minimum prices specified in the proposed marketing agreement and the order, as hereby proposed to be amended, are such prices as will reflect the aforesaid factors, insure a sufficient quantity of pure and wholesome milk, and be in the public interest; and

(c) The tentative marketing agreement and the order, as hereby proposed to be amended, will regulate the handling of milk in the same manner as, and will be applicable only to persons in the respective classes of industrial and commercial activity specified in, a marketing agreement upon which a hearing has been held.

Recommended marketing agreement and order amending the order. The following order amending the order as amended regulating the handling of milk in the Eastern Colorado marketing area is recommended as the detailed and appropriate means by which the foregoing conclusions may be carried out. The recommended marketing agreement is not included in this decision because the regulatory provisions thereof would be the same as those contained in the order, as hereby proposed to be amended:

In § 1137.51(a), delete the following: "During the period of August 1, 1963, through January 31, 1965, the Class I price shall be".

Signed at Washington, D.C., on December 21, 1964.

CLARENCE H. GIRARD,
Deputy Administrator.

[F.R Doc. 64-13252; Filed, Dec. 23, 1964; 8:47 a.m.]

FEDERAL AVIATION AGENCY

[14 CFR Part 71 [New]]

[Airspace Docket No. 63-WE-95]

CONTROL ZONE, CONTROL AREA, AND TRANSITION AREAS

Proposed Alteration, Revocation, Extension and Designation

The Federal Aviation Agency is considering amendments to Part 71 [New] of the Federal Aviation Regulations which would alter the controlled airspace in the Boise, Idaho, terminal area.

The following controlled airspace is presently designated in the Boise, Idaho, terminal area:

1. The Boise control zone is designated as that airspace within a 5-mile radius of Boise Air Terminal (latitude 44°33'55" N., longitude 116°13'35" W.).

2. The Boise control area extension is designated as that airspace within a 25-mile radius of the Boise VORTAC, extending clockwise from the 319° to the 130° radials; within a 40-mile radius of the Boise VORTAC, extending clockwise from the 130° to the 319° radials; within 5 miles either side of the Boise VORTAC 291° radial, extending from the VORTAC to 67 miles NW, and within a 10-mile radius of the Ontario Municipal Airport, Oreg, (latitude 44°01'15" N., longitude 117°00'43" W.), excluding the portion which coincides with the Mountain Home, Idaho, control area extension.

The FAA, having completed a comprehensive review of the terminal airspace structure requirements in the Boise, Idaho, terminal area, including studies attendant to the implementation of the provisions of CAR Amendments 60-21/60-29, has under consideration the following airspace actions:

1. Redesignate the Boise control zone as that airspace within a 5-mile radius of Boise Air Terminal (latitude 44°33'55" N., longitude 116°13'35" W.); within 2 miles each side of the Boise VORTAC 302° True radial, extending from the 5-mile radius zone to 12 miles NW of the VORTAC and within 2 miles each side of the Boise VORTAC 130° True radial, extending from the 5-mile radius zone to 12 miles SE of the VORTAC.

2. Revoke the Boise, Idaho, control area extension.

3. Designate the Boise, Idaho, transition area as that airspace extending upward from 700 feet above the surface within an 8-mile radius of the Boise VORTAC; within 2 miles each side of the 295° True bearing from the Boise ILS outer marker, extending from the 8-mile radius area to 12 miles NW of the LOM; within 2 miles each side of the 328° True bearing from the ILS OM, extending from the 8-mile radius area to the Eagle fan marker, and within 2 miles each side of the Boise VORTAC 130° True radial, extending from 12 miles to 15 miles SE of the VORTAC; that airspace extending upward from 1,200 feet above the surface within a 25-mile radius of the Boise VORTAC, extending clockwise from a line 8 miles NE of and parallel to the Boise VORTAC 319° True radial to the Boise VORTAC 204° True radial; within a 40-mile radius of the Boise VORTAC, extending clockwise from the Boise VORTAC 204° True radial to a line 8 miles NE of and parallel to the Boise VORTAC 319° True radial; within 8 miles S and 7 miles N of the Boise 269° True radial, extending from the 40-mile radius area to 57 miles W of the VORTAC; within 8 miles NE and 11 miles SW of the Boise VORTAC 294° True radial, extending from the 40-mile radius area to 75 miles NW of the VORTAC; within 8 miles NE and 16 miles SW of the Boise VORTAC 319° True radial, extending from the 40-mile radius area to 55 miles NW of the VORTAC; and that airspace extending upward from 10,500 feet MSL SE of Victor 507, within 5 miles each side of the Rome, Oreg., VORTAC 056° True radial, extending from 46 miles NE of the VORTAC to the Boise 40-mile radius area.

The actions proposed herein would, in part, increase the size of the Boise control zone by the addition of control zone extension northwest and southeast.

The control zone extension northwest of Boise, based on the VORTAC 302° True radial, is required to provide protection for aircraft executing prescribed JAL-57-VOR and TACAN-1 instrument approach procedures when these aircraft are less than 1,000 feet above the surface.

The control zone extension southeast of Boise, based on the VORTAC 130° True radial, is required to provide protection for aircraft executing prescribed instrument departures until aircraft reach 700 feet above the surface.

The portion of the proposed Boise transition area with a floor of 700 feet above the surface would provide protection for aircraft executing the portions of the prescribed instrument approach and departure procedures conducted beyond the limits of the Boise control zone and below the floor of the proposed 1,200-foot floor area.

The portion of the proposed Boise transition area with a floor of 1,200 feet above the surface would provide protection for aircraft executing prescribed instrument holding, jet penetration, approach and departure procedures conducted within the Boise and Ontario terminal areas above 1,500 feet above the surface.

The additional controlled airspace, with a floor of 10,500 feet MSL SW of Boise, would provide protection for aircraft executing the higher portion of a prescribed departure procedure via the Rome, Oreg., VORTAC 056° True radial to the high altitude route structure.

4. Designate the Ontario, Oreg., transition area as that airspace extending upward from 700 feet above the surface within a 5-mile radius of Ontario Municipal Airport (latitude 44°01'15" N., longitude 117°00'43" W.); within 2 miles each side of the Ontario radio beacon 159° True bearing, extending from the 5-mile radius area to 8 miles S of the radio beacon, and within 2 miles each side of the Ontario radio beacon 025° True bearing, extending from the 5-mile radius area to 8 miles NE of the radio beacon.

The designation of a 700-foot transition area at Ontario, Oreg., would provide protection for aircraft executing prescribed instrument approach and departure procedures at the Ontario Airport.

The floors of the airways that traverse the transition areas proposed herein would automatically coincide with the floor of the transition areas.

Certain minor revisions to prescribed instrument procedures have accompanied the actions proposed herein, but operational complexities have not been increased nor have aircraft performance characteristics or established landing minimums been adversely affected.

Interested persons may submit such written data, views or arguments as they

may desire. Communications should be submitted in triplicate to the Director, Western Region, Attn: Chief, Air Traffic Division, Federal Aviation Agency, 5651 West Manchester Avenue, Post Office Box 90007, Airport Station, Los Angeles, Calif., 90009.

All communications received within forty-five days after publication of this notice in the FEDERAL REGISTER will be considered before action is taken on the proposed amendment. No public hearing is contemplated at this time, but arrangements for informal conferences with Federal Aviation Agency officials may be made by contacting the Regional Air Traffic Division Chief. Any data, views or arguments presented during such conferences must also be submitted in writing in accordance with this notice in order to become part of the record for consideration. The proposal contained in this notice may be changed in the light of comments received.

A public Docket will be available for examination by interested persons in the office of the Regional Counsel, Federal Aviation Agency, 5651 West Manchester Avenue, Los Angeles, Calif., 90045.

These amendments are proposed under the authority of section 307(a) of the Federal Aviation Act of 1958, as amended (72 Stat. 749; 49 U.S.C. 1348).

Issued in Los Angeles, Calif., on December 16, 1964.

JOSEPH H. TIPPETS,
Director, Western Region.

[F.R. Doc. 64-13200; Filed, Dec. 23, 1964; 8:45 a.m.]

[14 CFR Part 71 [New]]

[Airspace Docket No. 63-WE-98]

CONTROL ZONE, TRANSITION AREA, AND CONTROL AREA EXTENSION

Proposed Alteration, Designation, and Revocation

The Federal Aviation Agency is considering amendments to Part 71 [New] of the Federal Aviation Regulations which would alter the controlled airspace in the Cheyenne, Wyoming, terminal area.

1. The Cheyenne, Wyo., control zone is presently designated as that airspace within a 5-mile radius of the Cheyenne Municipal Airport (latitude 41°09'25" N., longitude 104°48'25" W.); within 2 miles each side of a 296° bearing from the Cheyenne RBN, extending from the 5-mile radius zone to 12 miles NW of the RBN; within 2 miles each side of a 090° bearing from the Cheyenne RBN, extending from the 5-mile radius zone to 11.5 miles E of the RBN; within 2 miles each side of the Cheyenne ILS localizer E course extending from the 5-mile radius zone to 10 miles E of the airport and within 2 miles each side of the Cheyenne VORTAC 032° radial, extending from the 5-mile radius zone to 10 miles NE of the VORTAC.

2. The Cheyenne control area extension is presently designated as that airspace within 5 miles each side of the Cheyenne VORTAC 032° radial, extending from the VORTAC to 25 miles NE; the airspace bounded on the N by V-6, on the SE by V-207, on the S by V-138 and on the W by V-89E alternate; the airspace SE of Cheyenne within a 25-mile radius of the Cheyenne RBN extending clockwise from a 090° bearing to a 181° bearing from the Cheyenne RBN; and the airspace SW of Cheyenne bounded on the N by V-118, on the E by V-19 and on the SW by V-4N alternate.

The FAA, having completed a comprehensive review of the terminal airspace structure requirements in the Cheyenne area, including studies attendant to the implementation of the provisions of CAR amendments 60-21/60-29, has under consideration the following airspace actions:

1. Alter the Cheyenne, Wyoming, control zone by redesignating it as that airspace within a 5-mile radius of Cheyenne Municipal Airport (latitude 41°09'20" N., longitude 104°48'30" W.) and within 2 miles each side of the Cheyenne ILS localizer E course, extending from the 5-mile radius zone to the outer marker.

2. Revoke the Cheyenne, Wyoming, control area extension and designate the Cheyenne transition area as that airspace extending upward from 700 feet above the surface within a 14-mile radius of the Cheyenne Municipal Airport (latitude 41°09'20" N., longitude 104°48'30" W.); and that airspace extending upward from 1,200 feet above the surface bounded on the NE by Victor 6, on the southeast by Victor 207, on the southwest by Victor 4N alternate and on the NW by Victor 524; and that airspace NW of Cheyenne within 7 miles NE and 10 miles SW of the Cheyenne VORTAC 305° True radial, extending from the VORTAC to 47 miles NW of the VORTAC, excluding the portions within the Laramie, Wyo., Transition Area.

The floors of the airways which would traverse the transition area proposed herein would automatically coincide with the floors of the transition area.

The actions proposed herein would, in part, reduce the overall size of the presently designated control zone at the Cheyenne Municipal Airport by reducing the east extension and revoking the northwest and northeast extensions.

The portion of the Cheyenne transition area with a floor of 700 feet above the surface would provide protection for aircraft executing the portions of prescribed instrument approach and departure procedures conducted beyond the limits of the Cheyenne control zone and below the floor of the proposed 1,200-foot area.

The designation of the 1,200-foot portion of the proposed transition area and the revocation of the Cheyenne control area extension would raise the floor of controlled airspace beyond a 14-mile radius of the Cheyenne Municipal Airport from 700 to 1,200 feet above the surface. The portions of controlled airspace released by these actions are no longer required for air traffic control purposes. The portion retained would provide protection for aircraft executing prescribed instrument transition, holding, arrival and departure procedures in the Cheyenne terminal area.

Certain minor revisions to prescribed instrument procedures have been made but operational complexities have not been increased nor have aircraft performance characteristics or established landing minimums been adversely affected.

Interested persons may submit such written data, views or arguments as they may desire. Communications should be submitted in triplicate to the Director, Western Region, Attention: Chief, Air Traffic Division, Federal Aviation Agency, 5651 West Manchester Avenue, Post Office Box 90007, Airport Station, Los Angeles, Calif., 90009. All communications received within forty-five days after publication of this notice in the FEDERAL REGISTER will be considered before action is taken on the proposed amendment. No public hearing is contemplated at this time, but arrangements for informal conferences with Federal Aviation Agency officials may be made by contacting the Regional Air Traffic Division Chief. Any data, views or arguments presented during such conferences must also be submitted in writing in accordance with this notice in order to become part of the record for consideration. The proposal contained in this notice may be changed in the light of comments received.

The official Docket will be available for examination by interested persons at the office of the Regional Counsel, Federal Aviation Agency, 5651 West Manchester Avenue, Los Angeles, Calif., 90045.

This amendment is proposed under the authority of section 307(a) of the Federal Aviation Act of 1958, as amended (72 Stat. 749; 49 U.S.C. 1348).

Issued in Los Angeles, Calif., on December 16, 1964.

A. E. HORNING,
Acting Director, Western Region.

[F.R. Doc. 64-13201; Filed, Dec. 23, 1964; 8:45 a.m.]

[14 CFR Part 71 [New]]

[Airspace Docket No. 63-WE-127]

CONTROL ZONE, CONTROL AREA EXTENSION, AND TRANSITION AREA

Proposed Alteration, Revocation, and Designation

The Federal Aviation Agency is considering amendments to Part 71 [New] of the Federal Aviation Regulations which would alter the controlled airspace in the Mountain Home AFB, Idaho, terminal area.

The following controlled airspace is presently designated in the Mountain Home AFB, Idaho, terminal area:

1. The Mountain Home AFB control zone is designated as that airspace within a 5-mile radius of the Mountain Home AFB (latitude 43°02'35" N., longitude 115°52'05" W.), and within 2 miles either side of the 136° and 316° bearings from the AFB extending from the 5-mile radius zone to 8 miles NW and SE of the RR.

2. The Mountain Home control area extension is designated as that airspace within 5 miles either side of the Mountain Home VOR 178° and 208° radials extending from the VOR to 61 miles S and SW and that airspace S, SE and W of Mountain Home bounded by a line beginning at the INT of the SW boundary of V–253 and a line 5 miles S of and parallel to the Twin Falls, Idaho, VOR 269° radial, thence W along this line to its INT with a line 5 miles NW of and parallel to the Mountain Home VOR 208° radial, thence NE along this line to its INT with the arc of a 35-mile radius circle centered on Mountain Home AFB (latitude 43°02'30" N., longitude 115°51'50" W.), thence clockwise along this arc to its INT with the SW boundary of V–253, thence SE along this boundary to the point of beginning.

The FAA, having completed a comprehensive review of the terminal airspace structure requirements in the Mountain Home AFB terminal area, including studies attendant to the implementation of CAR Amendments 60–21/60–29, has under consideration the following airspace actions:

1. Redesignate the Mountain Home AFB, Idaho, control zone as that airspace within a 5-mile radius of Mountain Home AFB (latitude 43°02'35" N., longitude 115°52'05" W.); within 2 miles each side of the extended centerline of Runway 12, extending from the 5-mile radius zone to 7.5 miles SE of the liftoff end of Runway 12; within 2 miles each side of the extended centerline of Runway 30, extending from the 5-mile radius zone to 7.5 miles NW of the liftoff end of Runway 30; within 2 miles each side of the Mountain Home TACAN 129° True radial, extending from the 5-mile radius zone to 7 miles SE of the TACAN, and within 2 miles each side of the Mountain Home TACAN 321° True radial, extending from the 5-mile radius zone to 7 miles NW of the TACAN.

2. Revoke the present Mountain Home, Idaho, control area extension.

3. Designate the Mountain Home, Idaho, transition area as that airspace extending upward from 700 feet above the surface within 10 miles NE and 9 miles SW of the Mountain Home TACAN 135° and 315° True radials, extending from 18 miles SE to 18 miles NW of the TACAN; that airspace extending upward from 1,200 feet above the surface bounded on the NE by the SW boundary of Victor 4, on the SE, S and SW by the arc of a 35-mile radius circle centered on Mountain Home AFB (latitude 43°02'35" N., longitude 115°52'05" W.), on the W by the Boise, Idaho, VORTAC 204° True radial, and on the NW by the arc of a 25-mile radius circle centered on the Boise VORTAC; that airspace SE of Mountain Home, extending upward from 6,500 feet MSL, extending from the 35-mile radius area bounded on the NE by Victor 253, on the S by latitude 42°24'00" N., and on the W by longitude 115°39'00" W., excluding the portion within the Twin Falls, Idaho, transition area; that airspace S of Mountain Home, extending upward from 7,500 feet MSL, extending from the 35-mile radius area bounded on the E by longitude 115°39'00" W., on the S by the arc of a 46-mile radius circle centered on Mountain Home AFB, and on the NW by a line 5 miles NW of and parallel to the Mountain Home VOR 208° True radial; and that airspace S of Mountain Home, extending upward from 10,500 feet MSL within 5 miles each side of the Mountain Home VOR 178° and 208° True radials, extending from the 46-mile radius circle to 61 miles S and SW of the VOR.

west and southeast, based on the extended centerline of Runway 12/30, are required for the protection of aircraft departing Mountain Home AFB until aircraft reach 700 feet above the surface. In addition, these extensions also provide protection for aircraft executing prescribed ADF and ILS approach procedures.

The control zone extension southeast, based on the Mountain Home TACAN 129° True radial, provides protection for the AL and JAL–323–TACAN–1 instrument approach procedures.

The control zone extension northwest, based on the Mountain Home TACAN 321° True radial, provides protection for AL and JAL–323–TACAN–2 instrument approach procedures.

The 700-foot portion of the transition area is to provide protection to aircraft arriving and departing Mountain Home AFB when those aircraft are maneuvering outside of the control zone at altitudes between 1,500 and 1,000 feet above the surface. Additionally, radar service at Mountain Home regularly vectors aircraft in this area at altitudes less than 1,500 feet above the surface.

The 1,200-foot portion of the transition area is to provide protection to approach, departure and holding procedures when the aircraft are maneuvering at altitudes 1,500 feet and above the surface. In addition to standard instrument departure procedures, air traffic control may authorize random departures. The entire area is under radar coverage and aircraft may be random vectored through any portion of the area.

The portions of the transition area floored at 6,500, 7,500, and 10,500 feet MSL would provide protection to aircraft executing the higher portions of approach, departure, holding and radar vectoring procedures within the Mountain Home terminal area.

It is planned that, at a future date, after adjacent terminal areas have been examined, the floors of low altitude airways adjacent to Mountain Home will be raised to 1,200 feet or higher above the surface.

Certain minor revisions to prescribed instrument procedures would accompany the actions proposed herein, but operational complexities would not be increased nor would aircraft performance characteristics or established landing minimums be adversely affected.

Specific details of the changes to procedures and minimum instrument flight rules altitudes that would be required may be examined by contacting the Chief, Airspace Utilization Branch, Air Traffic Division, Western Region, Federal Aviation Agency, 5651 West Manchester Avenue, Los Angeles, Calif., 90045.

Interested persons may submit such written data, views or arguments as they may desire. Communications should be submitted in triplicate to the Director, Western Region, Attn: Chief, Air Traffic Division, Federal Aviation Agency, 5651 West Manchester Avenue, Post Office Box 90007, Airport Station, Los Angeles, Calif., 90009. All communications received within forty-five days after publication of this notice in the FEDERAL REGISTER will be considered before action is taken on the proposed amendment. No public hearing is contemplated at this time, but arrangements for informal conferences with Federal Aviation Agency officials may be made by contacting the Regional Air Traffic Division Chief. Any data, views or arguments presented during such conferences must also be submitted in writing in accordance with this notice in order to become part of the record for consideration. The proposal contained in this notice may be changed in the light of comments received.

A public docket will be available for examination by interested persons in the office of the Regional Counsel, Federal Aviation Agency, 5651 West Manchester Avenue, Los Angeles, Calif., 90045.

This amendment is proposed under the authority of section 307(a) of the Federal Aviation Act of 1958, as amended (72 Stat. 749; 49 U.S.C. 1348).

Issued in Los Angeles, Calif., on December 16, 1964.

JOSEPH H. TIPPETS,
Director, Western Region.

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FEDERAL COMMUNICATIONS COMMISSION

[47 CFR Part 73]

[Docket No. 15138; FCC 64–1165]

TELEVISION BROADCAST STATIONS

Proposed Table of Assignments

In the matter of amendment of § 73.606, Table of Assignments, Television Broadcast Stations (Staunton-Waynesboro, Virginia); Docket No. 15138, RM–262.

Report and order. 1. The Commission has under consideration the proposal of Charlottesville Broadcasting Corporation, licensee of Radio Stations WINA (AM) and WINA(FM), Charlottesville, Virginia, to assign Channel 11+ as a "drop-in" first VHF television assignment to Staunton-Waynesboro, Virginia, for commercial use, which involves a proposed change in the offset carrier requirement for Channel 11, Durham, North Carolina (WTVD), from 11+ to 11 even, with respect to which the Notice of Proposed Rule Making (FCC 63–725), released July 29, 1963, invited comments. A conflicting proposal to reserve this proposed assignment for noncommercial educational use is also before the Com-

mission, having been advanced in comments filed herein by the Advisory Council on Educational Television of the Commonwealth of Virginia, a statutory agency within the office of the Governor of Virginia, created and organized in 1962 to plan and further the development of educational television facilities and service on a state-wide basis.

2. Staunton is now assigned Channel 36; Waynesboro (about 15 miles southeast of Staunton), Channel 42. Neither channel is in use. The only television station now operating or that has ever operated in the central Shenandoah Valley area of western Virginia where these cities are located is Station WSVA–TV, which, since 1953, has been operating on the Harrisonburg, Virginia, Channel 3 assignment. Harrisonburg is about 25 miles northeast of Staunton and 30 miles north of Waynesboro. This Shenandoah Valley area relies mainly upon Station WSVA–TV for service—Staunton and Waynesboro are well within its predicted Grade B contour—but also receives some service from more distant VHF stations at Roanoke, Lynchburg, Richmond, and Petersburg, Virginia. Some residents of Staunton, Harrisonburg, and also of Charlottesville (about 25 miles east of Waynesboro), are also served by local CATV systems.[1] The 1960 U.S. Census Reports show a population of 22,232 for Staunton, the county seat of Augusta County; a population of 15,694 for Waynesboro, also in Augusta County, which had a population of 37,363, exclusive of Waynesboro and Staunton; a population of 11,916 for Harrisonburg, and a population of 29,427 for Charlottesville.

3. The Harrisonburg Channel 3 assignment is the only VHF channel now assigned to this Shenandoah Valley area, and Channel 11 is the only other VHF channel available which could be assigned consistent with Commission mileage spacing requirements. While a Channel 11 Staunton-Waynesboro assignment would be technically feasible, in order to meet the required 170-mile spacing from Channel 11 stations at Durham, North Carolina, Baltimore, Maryland, and Pittsburgh, Pennsylvania, it would be necessary to use Channel 11 at a transmitter site in a very small, triangular area, some 25 miles west-southwest of Staunton-and-Waynesboro. This area is within the "National Radio Quiet Zone", the radio interference protection zone that was established in 1958 by Commission action, and by parallel action of the Interdepartment Radio Advisory Committee for Government operations, for radio astronomy observations and research at the National Radio Astronomy Observatory (NRAO), Green Bank, West Virginia, and at the Naval Radio Research Station (NRRS), then called the Naval Radio Research Observatory, Sugar Grove, West Virginia.

[1] The 1964 Television Factbook reports that the Staunton CATV system, in operation since 1952, has 1,300 subscribers; the Harrisonburg system, in operation since 1952 also, 2,300 subscribers; and the Charlottesville system, which commenced operation in 1963, 600 subscribers.

4. In addition to Charlottesville Broadcasting[2] and the Advisory Council, Music Productions, Inc., permittee of Radio Station WBVA (AM), Waynesboro, filed comments and reply comments supporting a Channel 11 Staunton-Waynesboro assignment. Those of the Advisory Council, as above stated, also request and support its designation as a reserved educational assignment. A number of letters endorsing the assignment proposal and, in main, its use for an educational station, were also received (some were filed with the comments of Charlottesville Broadcasting and the Advisory Council rather than directly by the writers) from, among others, the Commonwealth's Superintendent of Public Instruction, two members of the Virginia House of Delegates, and officials of public and private educational institutions in the area. From Charlottesville's calculations, it appears that a Channel 11 station with maximum facilities at its assumed site, some 16 miles southwest of Staunton and 26 miles west of Waynesboro, would serve no area and population not now within the Grade B contour of one or more existing VHF stations but that it would provide a first signal of Grade A intensity to approximately 133,000 people within an area of 3,140 square miles.

5. The thrust of the commercial proponents' argument is that a Channel 11 assignment presents the only realistic means to meet the need of Staunton, Waynesboro, and Augusta County for a viable, competitive, local outlet and to expand and improve television service in the area under existing conditions (presence of VHF signals only, no UHF set conversion, the Staunton CATV system) which make UHF operation infeasible. Music Productions doubts that UHF can ever provide a full commercial service in this area. Charlottesville Broadcasting believes that sound UHF development in the area will be possible in the foreseeable future when, spurred by the all-channel receiver legislation, UHF conversion is sufficiently large to make UHF operations economically possible, and that, with large scale UHF conversion, a VHF Staunton-Waynesboro station would not materially deter UHF development. The Advisory Council urges that the Staunton-Waynesboro area's need for a VHF educational station is more pressing than for a VHF commercial station, arguing that it could best meet local educational needs, would be a vital link in a state-wide educational television system, and could equally serve as a means of local expression. It avers that educational use of Channel 11 is important to Virginia's planned state-wide educational television network because of VHF transmission advantages in the difficult Shenandoah Valley terrain and the savings that can be made in using one VHF Staunton-Waynesboro educational station instead of two UHF educational stations, which will otherwise be required, to serve the area.

[2] On September 28, 1964, Charlottesville Broadcasting also filed a petition requesting leave to file an accompanying "Additional Statement" in which it brings to the Commission's attention and April 1964, Report of the Comptroller General to the United States Congress, entitled "Unnecessary Costs Incurred for the Naval Radio Research Station Project" at Sugar Grove, West Virginia, which concerns the 600-foot radio telescope project at the NRRS which the Navy cancelled in July of 1962. A responsive pleading was filed October 12, 1964, by Shenandoah Valley. While the Report has no decisional significance herein, it is of interest and concerns a relevant factor. Both it and the responsive pleading have been considered.

6. With regard to a Channel 11 station's impact upon research operations at the NRAO, Green Bank, and the NRRS, Sugar Grove, the commercial proponents and the Advisory Council argue that a Channel 11 signal at both Green Bank and Sugar Grove would be comparable to that now received from the Harrisonburg VHF station, to which there has been no complaint; that the NRAO, Green Bank, interests do not oppose the Channel 11 assignment proposal; and that the opposing letters received by the Commission from the Department of the Navy and other governmental agencies concerned with research operations at the NRRS were not accompanied by supporting data or facts. They urge that, in these circumstances, and since a need exists for additional television service in the area, and the "Quiet Zone" was not established to hamper needed broadcast service development, it would not be in the public interest, or consistent with the standards laid down by the Commission in establishing the "Quiet Zone", to reject this proposal.

7. Comments and reply comments opposing a Channel 11 Staunton-Waynesboro assignment were filed by Shenandoah Valley Broadcasting (WSVA–TV and Staunton Video Corporation, which operates the Staunton CATV system. They urge that the public interest requires its rejection because of the protection needed for vital governmental research in the "Quiet Zone" and the harmful and aborting effect a Channel 11 assignment would have upon UHF development in this area. Shenandoah Valley also contends that this area cannot support two maximum facility VHF stations and that its Harrisonburg VHF station would suffer economic injury from a VHF Staunton-Waynesboro commercial station, but that, a VHF educational station would not be subject to these latter objections. An opposing letter was also filed by Havens & Martin, Inc., licensee of Station WTVR, Channel 6, Richmond, and an applicant for Channel 11 translators at Staunton, Waynesboro and Harrisonburg. It urges that the public interest would be better served by authorizing low power translators in these cities since their impact upon research in the "Quiet Zone" would be minor as compared to a high power VHF station, and they could make multiple new services available to them without retarding UHF development. Comments filed by WIIC, Inc., licensee of Station WIIC, Channel 11, Pittsburgh, give notice of its opposition to any change in the subject Channel 11 proposal which would cause objectionable interference to Station WIIC.

8. Comments filed by Associated Universities, Inc. (AUI), the private corporation that operates the NRAO at Green

Bank, report on the measurement studies AUI made on the interference effect of the proposed Channel 11 assignment upon its operations at the NRAO and indicate that AUI does not oppose a Channel 11 assignment and operation in the zoned area if certain conditions respecting harmonic radiation are met, none of which would deter effective broadcast use of the channel.

9. The Office of Emergency Planning (OEP), Executive Office of the President, by letter to the Chairman, dated August 22, 1963 and filed herein the next day, has advised that the Executive Branch of the Government remains opposed to a Channel 11 assignment in the "National Radio Quiet Zone" and that its position is still represented by the letter, dated April 12, 1963, from the OEP's Director of Telecommunications Management to the Chairman, and its enclosure, a copy of a letter, of the same date, to the OEP from the Department of Defense—both of which oppose the assignment. In its August 22, 1963 letter, the OEP states that those April 12, 1963, OEP and Department of Defense letters "emphasized the great scientific importance placed by the Executive Branch of the Government on radio astronomy and scientific research in the 'National Radio Quiet Zone'; the adverse effect of granting the petition and stated the criteria applied for protection within the Quiet Zone" and that "we wish to reaffirm the substance of that letter and its enclosure (The OEP and Department of Defense April 12, 1963 letters)". This August 22, 1963, OEP letter constitutes a firm, official statement which reaffirms the opposition of the OEP, Department of Defense and the Navy to a Channel 11 assignment in the "Quiet Zone" and their position that cancellation of the 600-foot radio telescope project at the NRRS, Sugar Grove, provides no valid reason for reducing the degree of protection required for governmental research in the protection zone.

10. These April 12, 1963, OEP and Department of Defense letters, the substance of which was given in the rule making notice herein, manifest that the Navy Sugar Grove site is uniquely suited and still essential to the Navy for scientific research to meet its planned and future requirements, including research in the field of low level radio signal detection "to meet highest priority national requirements". They also represent that the cumulative interference from a second VHF station, operating on Channel 11 in the restricted zone, is considered critical to the effectiveness of research essential to the national interest required in the "Quiet Zone", so much so, that the Department of Defense states that a Channel 11 station in the zoned area "is not considered to be in the best interests of the Navy or the United States". Considering the representations of the Department of Defense, and the backing accorded them by the Executive Office of the President, we believe it reasonable to conclude that a Channel 11 assignment has considerable potential for circumscribing and possibly doing irreparable harm to governmental research required in the restricted zone to implement national policies and objectives of benefit to the nation and the public at large. In these circumstances, and particularly since the "Quiet Zone" was established in light of the NRRS's special interference protection requirements for research, we could not reasonably decide that the paramount public interest nevertheless requires the assignment of Channel 11 for use in the zoned area.

11. While no UHF signals are presently received in this Shenandoah Valley area, there is today real prospect for the establishment of a first UHF station and service there in the near future, for on June 18, 1964, the Commission granted the application of Virginia Broadcasting Corporation for a first local Charlottesville station on Channel 64. Other evidence of developing interest in and demand for UHF assignments and facilities in this area exists. An application is pending for Channel 36 at Staunton, filed by Shenandoah Valley Broadcasting, Inc., the licensee of the Harrisonburg Channel 3 station. Virginia's Advisory Council on Educational Television also requests a number of new UHF educational assignments, and also a reserved Channel 11 Staunton-Waynesboro assignment, in a pending rule making petition (RM-494) for components of its planned educational television network for Virginia. If the VHF proposal is rejected, two additional UHF assignments, one each at Harrisonburg and Lexington, are alternatively requested. It is noted that components of the planned network include UHF educational stations at Charlottesville, Winchester and Roanoke, Virginia, whose service areas would be overlapped extensively by that of the planned Channel 11 educational station.

12. The Commission is therefore of the view that to authorize a second VHF channel assignment in this area for either commercial or educational use, would be a short-sighted approach to the problem of satisfying this area's need for additional local television outlets and services and would be at cross-purposes with the Commission's goal of fostering expanded use of UHF channels and optimum conditions for UHF growth. With the present all-VHF character of signals and receivers in this Shenandoah Valley area, a VHF channel has recognized advantages for bringing an immediate, additional local television service to the area. But it could not even meet the demand and need shown in the record for one commercial and one educational outlet at Staunton and Waynesboro, and no other VHF channels could be assigned to this area. One of the other needs would have to be met by UHF, as will all other developing needs for local commercial and educational television outlets and services in this area.

13. In view of the foregoing: *It is ordered*, That the proposal of Charlottesville Broadcasting Corporation for the assignment of Channel 11 to Staunton-Waynesboro, Virginia, and the conflicting proposal of the Advisory Council on Educational Television of the Commonwealth of Virginia for the reservation of Channel 11 at Staunton-Waynesboro for educational use, are denied; *And it is further ordered*, That this proceeding is terminated.

Adopted: December 16, 1964.

Released: December 18, 1964.

FEDERAL COMMUNICATIONS COMMISSION,[3]

[SEAL] BEN F. WAPLE, *Secretary.*

[F.R. Doc. 64-13208; Filed, Dec. 23, 1964; 8:45 a.m.]

SECURITIES AND EXCHANGE COMMISSION

[17 CFR Part 240]

[Release 34-7481]

PROXY RULES

Notice of Proposed Rule Making

Notice is hereby given that the Securities and Exchange Commission has under consideration certain proposed amendments to its proxy rules contained in Regulation 14 under the Securities Exchange Act of 1934 (CFR 240.14a-1 to 240.14a-11). That regulation (which would be redesignated "Regulation 14A") is applicable to the solicitation of proxies, authorizations and consents with respect to securities registered on a national securities exchange. Rules adopted under the Public Utility Holding Company Act of 1935 and the Investment Company Act of 1940 make the regulation applicable also to the solicitation of proxies, authorizations and consents with respect to the securities of certain companies subject to those statutes.

Certain amendments to the proxy rules are needed in order to make such rules applicable to solicitations with respect to securities registered under new section 12(g) of the Act. The proposed amendments accomplish this objective. It also appears desirable to include in the proposed amendments certain changes for the purposes of clarification and to embody in the rules certain long-standing practices of the Commission. A limited number of additional substantive changes in the rules are proposed, principally proposed amendments to Rule 14a-4 (17 CFR 240.14a-4) and to Item 7(f) of Schedule 14A.

On September 15, 1964, the Commission adopted its Rule 12g-1 (17 CFR 240.12g-1, 29 F.R. 13461), paragraph (b) of which exempts from the proxy rules any solicitation of proxies from the holders of any class of securities registered under section 12(g) of the Act, prior to the expiration of two months after the last date on which the registration statement is due, or December 31, 1965, whichever is earlier. Exception is made for solicitations from security holders of a holding company registered under the Public Utility Holding Company Act of 1935 or any subsidiary thereof. It should be emphasized that the exemption will not apply to solicitations of holders

[3] Commissioner Bartley concurring in the result.

of any class of security registered on a national securities exchange pursuant to section 12(b) of the Act.

Persons soliciting proxies with respect to a class of equity security should be aware that any such solicitation commenced before the proxy rules are applicable to such class constitutes a continuing solicitation and proxies received may not be voted after the proxy rules are applicable unless the solicitation was made in accordance with the proxy rules.

The changes involved are briefly described below. It is contemplated that the proposed amendments will be adopted sufficiently in advance of their effective date to give adequate notice to issuers who may be affected by the amended requirements.

Rule 14a–2 (17 CFR 240.14a–2). The amendment to this rule would provide that Regulation 14A shall also apply to solicitations with respect to securities registered pursuant to the new section 12(g) of the Act, as well as to those registered on a national securities exchange pursuant to section 12(b) of the Act.

Rule 14a–4 (17 CFR 240.14a–4). This rule, which sets forth certain requirements with respect to the form of proxy, would be amended to require that where a proxy is solicited for elections to office and for other specified matters, provision shall be made whereby the security holder may grant or withhold authority to vote for elections to office. This provision would not apply, however, in cases of a merger or consolidation involving elections to office where such elections are part of the plan and are not to be separately voted upon. The purpose of the new provision is to enable security holders to vote upon proposals submitted to them without authorizing the use of the proxy for elections to office.

Rule 14a–9 (17 CFR 240.14a–9). This rule, which relates to false or misleading statements in proxy solicitations, would be amended to state specifically that the filing of proxy material with the Commission or the examination of such material by the Commission is not to be deemed a finding by the Commission that such material is accurate or complete or not false or misleading or that the Commission has passed upon the merits of the statements contained therein or any matter to be acted upon by security holders. Representations to the contrary would be prohibited. The purpose of the new requirement would be to forestall representations that the Commission by its review and "clearing" of proxy material has approved the material or the proposals contained therein. The new provision merely makes explicit the Commission's longstanding construction of the proxy rules.

Rule 14a–11 (17 CFR 240.14a–11). This rule contains special provisions applicable to election contests. Under the existing rule, any person who takes the initiative in organizing, directing or financing any committee or group which solicits proxies is deemed to be a participant in the solicitation. It is proposed to amend this provision to include in the definition of "participant" any person who engages in organizing, directing or financing such a committee or group, even though such person may not have taken the initiative in so doing.

Rule 14a–12 (17 CFR 240.14a–12). The proxy rules provide, in general, that no solicitation may be made prior to furnishing to security holders a written proxy statement containing certain specified information pertinent to the solicitation. However, Rule 14a–11 which relates to contests involving elections to office permits such prior solicitations under certain conditions. The new Rule 14a–12 would permit such prior solicitations under similar conditions in the case of contests involving matters other than elections to office.

Schedule 14A. Schedule 14A specifies the information required to be set forth in the proxy statement required by Rule 14a–3 (17 CFR 240.14a–3). It is proposed to amend the following items of the schedule in the respects indicated below.

Item 2. This item requires a description of dissenters' rights of appraisal in connection with any matter to be acted upon. It is proposed to add an instruction which would require an indication whether a security holder's failure to vote against a proposal will constitute a waiver of his appraisal rights. This instruction would codify current administrative practice in requiring such information.

Item 5. This item requires certain information as to the voting securities of the issuer and the principal holders thereof. It is proposed to amend this item to require the disclosure of a change in control of the issuer and with respect to the pledging of or granting of options on securities which may result in a change in control of the issuer. The purpose of these requirements is to inform security holders, prior to their giving proxies, of changes or potential changes in control of the issuer which may not have been previously disclosed to them.

Item 7. It is proposed to amend Item 7(a) to provide that in initial filings under the proxy rules by new registrants under section 12 of the Act, the individual remuneration of directors and officers who ceased to be such prior to the time of filing for such registration would not have to be disclosed unless the same information must otherwise be disclosed in other material filed with the Commission. The item would also be clarified in certain respects and would provide that in showing the aggregate remuneration of all directors and officers as a group the number of persons in the group be stated.

Item 7(f) calls for a description of any material interest, direct or indirect, of directors, officers, nominees for election as directors and certain other specified persons in material transactions with the issuer or its subsidiaries. The item as presently in effect requires disclosure of an interest in a transaction only if both the interest and the transaction are material. The Commission's experience in recent years has indicated the need for clarification of the item and that it has fallen short of requiring adequate disclosure in some cases where insiders have had significant dealings with the issuer or its subsidiaries or have had a significant interest in dealings between third persons and the issuer or its subsidiaries.

It is proposed to amend this item to require disclosure with respect to a material interest of the insider in any transaction with the issuer or its subsidiaries. Where the amount involved in any such transaction does not exceed $30,000, the instructions would eliminate the requirement of disclosure. (Previously, the $30,000 amount was related to the interest of the insider rather than to the transaction.) Interpretation of the item is made easier and its scope reduced by eliminating the use of the term "associate" and limiting the categories of persons to whom the item would apply. Previously, by reason of the language of the item requiring disclosure of an indirect material interest of an "associate", the item might require disclose of transactions between a company and an associate of an associate of an insider.

It is contemplated that changes similar to those proposed for Item 7 would, in due course, be made in the corresponding requirements of the registration and reporting forms under both the Securities Act of 1933 and the Securities Exchange Act of 1934.

Items 9, 10 and 11. These items specify the information to be furnished where the matter to be acted upon pursuant to the proxy is a bonus, profit sharing or other remuneration plan, a pension or retirement plan or the granting of options, warrants or rights. It is proposed to amend these items to provide that in describing provisions already made for similar benefits for directors, officers and employees, information is to be given not only with respect to plans currently in effect but also with respect to benefits under plans in effect within the last five years. In the past, some persons have construed these items to relate only to plans currently in effect. Where security holders are asked to vote upon a proposed plan providing benefits for directors, officers or employees, the amended items would provide information as to the over-all benefits which have been provided under other plans in recent years.

Item 11(a) would be amended to require, in the case of options, warrants or rights to be granted or extended, a statement as to the tax consequences of the issuance and exercise thereof to the recipient and to the issuer. This proposed amendment codifies current administrative practice in requiring such disclosure.

Item 12. This item specifies the information to be furnished where proxies are solicited with respect to the authorization or issuance of securities. Among other things, the item requires a description of the transaction in which the securities are to be issued. It is proposed to amend the item to provide that where it is impracticable to describe the transaction there shall be stated the reason for the claimed impracticability, the purpose of the authorization and whether further authorization for the issuance will be submitted to a vote of security holders prior to the time the securities are issued.

Item 14. This item specifies the information to be furnished where proxies are solicited in regard to a proposed merger, consolidation, acquisition or similar matter. The item requires certain information to be furnished with respect to each person, other than the issuer, involved in the proposed transaction. It is proposed to amend this item to codify present administrative practice in requiring that such information be furnished for the issuer also in order that security holders may have a complete picture of the nature and effect of the proposed transaction. The amended item would also codify present administrative practice in requiring information with respect to the existing pro forma capitalization and appropriate summaries of earnings on an historical and pro forma basis for the persons involved in the proposed transaction.

Item 15. This item requires the furnishing of certified financial statements of the issuer and its subsidiaries, and uncertified statements for other persons involved in proposed transactions to be voted upon by security holders. It is proposed to amend this item to require that the financial statements furnished for persons other than the issuer shall also be certified where practicable. This is in accord with the present administrative practice of asking for certified statements of such persons where they are available or can be furnished without undue effort or expense.

It is also proposed to amend Item 15 to provide more flexibility in permitting the omission of required financial statements or in requiring additional financial statements where they are necessary to the exercise of prudent judgment in regard to any matter to be acted upon.

Item 17. This item specifies the information to be furnished when proxies are solicited with respect to a restatement of the accounts of the issuer. It would be amended to require a tabular presentation of amounts when appropriate, particularly in the case of a recapitalization. Such presentation would be required in the interest of greater clarity.

Item 22. It is proposed to amend Items 12(d), 13(c), 14(a) and 20 to delete the requirement for stating the voting needed for approval of the matter to be acted upon. This information would be required by a new Item 22 which would call for the vote required for approval of each matter to be submitted to a vote of security holders, other than elections to office. The new item would codify the current administrative practice of calling for such information with respect to all proposals, other than elections to office.

Schedule 14B. Schedule 14B specifies the information to be included in statements required by Rule 14a–11 to be filed for each participant in a contest involving elections to office. It is proposed to add a new general instruction to this schedule which would require that where the participant filing the schedule is a partnership, corporation, association or other business entity, the information required by certain items of the schedule shall be given with respect to each partner, officer and director of the organization and each person controlling the organization who is not a participant and is not required to file a schedule. The purpose of this instruction is to penetrate the organizational "veil" and require information with respect to the persons connected with the organization.

Item 3. This item calls for information with respect to a participant's interests in securities of the issuer. Among other things, this item requires information as to whether the participant is a party to any contract, arrangement or understanding with any person with respect to any securities of the issuer. It is proposed to amend this item to inquire also whether the participant was a party to any such contract, arrangement or understanding within the past year, the purpose being to obtain information as to transactions which may have been completed at the time of filing the schedule.

Item 4. This item calls for a description of certain additional matters involving the participant. It is proposed to amend the item to call also for a statement of the total amount contributed or proposed to be contributed in furtherance of the solicitation if such amendment exceeds or will exceed $500 in the aggregate. The purpose of this requirement is to reveal the extent to which participants are financing the solicitation.

The proposed amendments would be adopted pursuant to section 14(a) of the Securities Exchange Act of 1934, as amended (48 Stat. 895, as amended, 15 U.S.C. 78n(a)). The text of the proposed amendments are attached hereto.

All interested persons are invited to submit their views and comments on the proposed amendments, in writing, to the Securities and Exchange Commission, Washington, D.C. 20549, on or before January 4, 1965. Except where it is requested that such communications not be disclosed, they will be considered available for public inspection.

By the Commission.

[SEAL] ORVAL L. DUBOIS,
Secretary.

DECEMBER 7, 1964.

SOLICITATIONS OF PROXIES

§ 240.14a–2 Solicitations to which §§ 240.14a–1 to 240.14a–12 apply.

Sections 240.14a–1 to 240.14a–12 apply to every solicitation of a proxy with respect to securities registered pursuant to section 12 of the Act, whether or not trading in such securities has been suspended, except the following:

* * * * *

§ 240.14a–4 Requirements as to proxy.

(b)(1) Means shall be provided in the form of proxy whereby the person solicited is afforded an opportunity to specify by ballot a choice between approval or disapproval of each matter or group of related matters referred to therein as intended to be acted upon, other than elections to office. A proxy may confer discretionary authority with respect to matters as to which a choice is not so specified provided the form of proxy states in bold-face type how it is intended to vote the shares represented by the proxy in each such case.

(2) A form of proxy which provides both for elections to office and for action on other specified matters shall be prepared so as to enable the security holder to grant or withhold authority to vote for elections to office. Any such form of proxy which is executed by the security holder in such manner as not to withhold authority to vote for elections to office shall be deemed to grant such authority, provided the form of proxy so states in bold-face type.

NOTE: Paragraph (2) does not apply in the case of a merger or consolidation involving the issuer if the elections to office are an integral part of the plan and are not to be separately voted upon.

* * * * *

§ 240.14a–9 False or misleading statements.

(a) No solicitation subject to §§ 240.14a–1 to 240.14a–12 shall be made by means of any proxy statement, form of proxy, notice of meeting or other communication, written or oral, containing any statement which, at the time and in the light of the circumstances under which it is made, is false or misleading with respect to any material fact, or which omits to state any material fact necessary in order to make the statements therein not false or misleading or necessary to correct any statement in any earlier communication with respect to the solicitation of a proxy for the same meeting or subject matter which has become false or misleading.

(b) The fact that a proxy statement, form of proxy or other soliciting material has been filed with or examined by the Commission shall not be deemed a finding by the Commission that such material is accurate or complete or not false or misleading, or that the Commission has passed upon the merits of or approved any statement contained therein or any matter to be acted upon by security holders. No representation contrary to the foregoing shall be made.

NOTE: * * *

§ 240.14a–11 Special provisions applicable to election contests.

* * * * *

(b) *Participant or participant in a solicitation.* For purposes of this rule the terms "participant" and "participant in a solicitation" include the following:

* * * * *

(3) any committee or group which solicits proxies, any member of such committee or group, and any person whether or not named as a member who, acting alone or with one or more other persons directly or indirectly takes the initiative, or engages, in organizing, directing, or financing in excess of $500, any such committee or group;

* * * * *

§ 240.14a–12 Solicitation prior to furnishing required proxy statement.

(a) Notwithstanding the provisions of § 240.14a–3(a), a solicitation (other than one subject to § 240.14a–11) may

be made prior to furnishing security holders a written proxy statement containing the information specified in Schedule 14A with respect to such solicitation if:

(1) The solicitation is made in opposition to a prior solicitation:

(2) No form of proxy is furnished to security holders prior to the time the written proxy statement required by § 240.14a–3(a) is furnished to security holders: *Provided, however,* That this subparagraph (2) shall not apply where a proxy statement then meeting the requirements of Schedule 14A has been furnished to security holders;

(3) The nature of the interest of the person or persons making the solicitation is set forth in each communication sent or given to security holders in connection with the solicitation; and

(4) A written proxy statement meeting the requirements of this regulation is sent or given to security holders at the earliest practicable date.

(b) Three copies of any soliciting material proposed to be sent or given to security holders prior to the furnishing of the written proxy statement required by § 240.14a–3(a) shall be filed with the Commission in preliminary form at least five business days prior to the date definitive copies of such material are first sent or given to security holders, or such shorter period as the Commission may authorize upon a showing of good cause therefor.

NOTE: For the purpose of paragraph (a) (1), the term "prior solicitation" shall include an invitation for tenders or other publicized activity, which if successful, could reasonably have the effect of defeating the action proposed to be taken at the meeting.

SCHEDULE 14A—INFORMATION REQUIRED IN PROXY STATEMENT

Item 2. Dissenters' rights of appraisal. Outline briefly the rights of appraisal or similar rights of dissenters with respect to any matter to be acted upon and indicate any statutory procedure required to be followed by dissenting security holders in order to perfect such rights. Where such rights may be exercised only within a limited time after the date of adoption of a proposal, the filing of a charter amendment or other similar act, state whether the persons solicited will be notified of such date.

Instruction. Indicate whether a security holder's failure to vote against a proposal will constitute a waiver of his appraisal or similar rights and whether a vote against a proposal will be deemed to satisfy and notice requirements under State law with respect to appraisal rights.

Item 5. Voting securities and principal holders thereof. * * *

(e) If a change in control of the issuer has occurred since the beginning of its last fiscal year, state the name of the person or persons who acquired such control, the basis of such control, the date and a description of the transaction or transactions in which control was acquired and the percentage of voting securities of the issuer now owned by such person or persons.

Instruction. Include a description of any financing arrangements, the operation of the terms of which may at a subsequent date affect control of the registrant, directly or indirectly, including any pledge of securities of the issuer or any of its parents or subsidiaries.

* * * * *

Item 7. Remuneration and other transactions with management and others. * * *

(a) Furnish the following information in substantially the tabular form indicated below as to all direct remuneration paid by the issuer and its subsidiaries during the issuer's last fiscal year to the following persons for services in all capacities:

(1) Each director of the issuer whose aggregate direct remuneration exceeded $30,000, and each of the three highest paid officers of the issuer whose aggregate direct remuneration exceeded that amount, naming each such director and officer.

(2) All directors and officers of the issuer as a group, stating the number of persons in the group without naming them.

(A) Name of individual or number of persons in group	(B) Capacities in which remuneration was received	(C) Aggregate direct remuneration

Instructions. 1. Except as provided in Instruction 2, paragraph (a) of this item applies to any person who was a director or officer of the issuer at any time during the period specified. However, information need not be given for any portion of the period during which such person was not a director or officer of the issuer.

2. Paragraph (a) (1) of this item does not apply to any person who was not named as a director or officer of the issuer in the first application for registration or registration statement filed on Form 10 for the registration of a class of securities pursuant to section 12 of the Act, provided (i) such person has not been a director or officer of the issuer since the filing of such application or statement and (ii) the same information is not otherwise required to be disclosed in material filed with the Commission.

3. The information is to be given on an accrual basis if practicable. The tables required by this paragraph (a) and paragraph (b) below may be combined if the issuer so desires.

4. Do not include remuneration paid to a partnership to which any director or officer was a partner, but see paragraph (f) below.

* * * * *

(f) Describe briefly any transactions since the beginning of the issuer's last fiscal year or any proposed transactions, to which the issuer or any of its subsidiaries was or is to be a party, in which any of the following persons had or is to have a direct or indirect material interest, naming such person and stating his relationship to the issuer, the nature of his interest in the transaction and, where practicable, the amount of such interest:

(1) Any director or officer of the issuer;

(2) Any nominee for election as a director;

(3) Any security holder named in answer to Item 5(d); or

(4) Any relative or spouse of any of the foregoing persons, or any relative of such spouse, who has the same home as such person or who is a director or officer of any parent or subsidiary of the issuer.

Instructions. 1. This Item 7(f) applies to any person who held any of the positions or relationships specified at any time during the period specified. However, information need not be given for any portion of the period during which such person did not hold any such position or relationship.

2. No information need be given in answer to this Item 7(f) as to any remuneration or other transaction reported in response to Item 7 (a), (b), (c), (d), or (e).

3. No information need be given in answer to this Item 7(f) as to any transaction where—

(a) The rates or charges involved in the transaction are fixed by law or determined by competitive bids;

(b) The transaction involves services as a bank depositary of funds, transfer agent, registrar, trustee under a trust indenture, or similar services;

(c) The amount involved in the transaction, including all periodic installments in the case of any lease or other agreement providing for periodic payments or installments, does not exceed $30,000;

(d) The transaction involves only the purchase of products or services from the issuer or its subsidiaries in the ordinary course of business on terms not more favorable than those available to persons other than those specified in subparagraphs (1) through (4) above and the aggregate amount of such purchases during the issuer's last fiscal year did not exceed 15 percent of the total sales of the particular class of products or services by the issuer and its subsidiaries during such fiscal year; or

(e) the interest of the specified person arises solely from the ownership of securities of the issuer, the specified person receives no extra or special benefit not shared on a pro rata basis by all holders of securities of the class, and not more than 25 percent of the outstanding securities of such class is owned beneficially, in the aggregate by all of the persons specified in subparagraph (1) through (4) of this Item 7(f).

4. It should be noted that this item calls for disclosure of indirect, as well as direct, material interests in transactions. A person who has a position or relationship with a firm, corporation, or other entity, which engages in a transaction with the issuer or its subsidiaries may have an indirect interest in such transaction by reason of such position or relationship. However, a person shall be deemed not to have a material indirect interest in a transaction within the meaning of this Item 7(f) where:

(a) The interest arises only (i) from such person's position as a director of another corporation which is a party to the transaction, or (ii) from the direct or indirect ownership by such person and all other persons specified in subparagraphs (1) through (4) above, in the aggregate, of less than a 10 percent interest in another person which is a party to the transaction, or (iii) from both such position and ownership; or

(b) The interest of such person arises solely from an interest in another person which is a party to the transaction with the issuer of any of its subsidiaries and the transaction is not material to such other person.

5. The amount of the interest of any specified person shall be computed without regard to the amount of the profit or loss involved in the transaction. Where it is not practicable to state the approximate amount of the interest, the approximate amount involved in the transaction shall be indicated.

6. In describing any transaction involving the purchase or sale of assets by or to the issuer or any of its subsidiaries, otherwise than in the ordinary course of business, state the cost of the assets to the purchaser and, if acquired by the seller within two years prior to the transaction, the cost thereof to the seller.

Item 9. Bonus, profit sharing and other remuneration plans. If action is to be taken with respect to any bonus, profit sharing or other remuneration plan, furnish the following information:

* * * * *

(d) Describe the benefits received or to be received pursuant to all remuneration or incentive plans, now in effect or in effect

within the last five years, by (1) each director or officer named in answer to Item 7(a) who may participate in the plan to be acted upon; (2) all directors and officers as a group, if any of such directors or officers may participate in the plan; and (3) all employees, if employees may participate in the plan.

* * * * *

Instructions. 1. The term "plan" as used in this item means any plan as defined in Instruction 1 to Item 7(b).

2. Paragraph (d) applies to all bonus, profit sharing, pension, retirement, stock option, stock purchase, deferred compensation or other remuneration or incentive plans.

3. If the plan is set forth in a written document, three copies thereof shall be filed with the Commission at the time preliminary copies of the proxy statement and form of proxy are filed pursuant to paragraph (a) of § 240.14a–6.

Item 10. Pension and retirement plans. If action is to be taken with respect to any pension or retirement plan, furnish the following information:

* * * * *

(d) Describe the benefits received or to be received pursuant to all remuneration or incentive plans, now in effect or in effect within the last five years, by (1) each director or officer named in answer to Item 7(a) who may participate in the plan to be acted upon; (2) all directors and officers as a group, if any of such directors or officers may participate in the plan; and (3) all employees, if employees may participate in the plan.

* * * * *

Instructions. 1. The term "plan" as used in this item means any plan as defined in Instruction 1 to Item 7(b).

2. The information called for by paragraph (b)(3) or (c)(2) need not be given as to payments made on an actuarial basis pursuant to any group pension plan which provides for fixed benefits in the event of retirement at a specified age or after a specified number years of service.

3. Instruction 2 to Item 9 shall apply to paragraph (d) of this item.

4. Copies of the plan described in answer to this item, if set forth in a written document, shall be filed in accordance with Instruction 3 to Item 9.

Item 11. Options, warrants or rights. If action is to be taken with respect to the granting or extension of any options, warrants or rights to purchase securities of the issuer or any subsidiary, furnish the following information:

(a) State (i) the title and amount of securities called for or to be called for by such options, warrants or rights; (ii) the prices, expiration dates and other material conditions upon which the options, warrants or rights may be exercised; (iii) the consideration received or to be received by the issuer or subsidiary for the granting or extension of the options, warrants or rights; (iv) the market value of the securities called for or to be called for by the options, warrants or rights as of the latest practicable date; and (v) in the case of options, the tax consequences of the issuance and exercise of such options to the recipient and to the issuer.

* * * * *

(c) Describe the benefits received or to be received pursuant to all remuneration or incentive plans, now in effect or in effect within the last five years, by (1) each director or officer named in answer to Item 7(a) who may participate in the plan to be acted upon; (2) all directors and officers as a group, if any of such directors or officers may participate in the plan; and (3) all employees, if employees may participate in the plan.

Instructions. 1. The term "plan" as used in this item means any plan as defined in Instruction 1 to Item 7(b).

2. Paragraphs (b) and (c) do not apply to warrants or rights to be issued to security holders as such on a pro rata basis.

3. Instruction 2 to Item 9 shall also apply to paragraph (c) of this item.

4. Include in the answer to paragraph (c) as to each director or officer named in answer to Item 7(a) and as to all directors and officers as a group (i) the amount of securities acquired during the past five years through the exercise of options granted during the period of prior thereto, (ii) the amount of securities sold during such period of the same class as those acquired through the exercise of such options, and (iii) the amount of securities subject to all unexercised options held as of the latest practicable date.

5. Copies of the plan described in answer to this item, if set forth in a written document, shall be filed in accordance with Instruction 3 to Item 9.

NOTE. The Commission should be informed, as supplemental information, when the proxy statement in preliminary form is filed, as to when the options, warrants or rights and the shares called for thereby will be registered under the Securities Act of 1933, or if such registration is not contemplated the section of the Act or rule of the Commission under which exemption from such registration is claimed and the facts relied upon to make the exemption available.

Item 12. Authorization or issuance of securities otherwise than for exchange. If action is to be taken with respect to the authorization or issuance of any securities otherwise than for exchange for outstanding securities of the issuer, furnish the following information:

* * * * *

(c) Describe briefly the transaction in which the securities are to be issued, including a statement as to (1) the nature and approximate amount of consideration received or to be received by the issuer, and (2) the approximate amount devoted to each purpose so far as determinable for which the net proceeds have been or are to be used. If it is impracticable to describe the transaction in which the securities are to be issued, state the reason, indicate the purpose of the authorization of the securities, and state whether further authorization for the issuance of the securities by a vote of security holders will be solicited prior to such issuance.

(d) If the securities are to be issued otherwise than in a general public offering for cash, state the reasons for the proposed authorization or issuance and the general effect thereof upon the rights of existing security holders.

Item 13. Modification or exchange of securities. If action is to be taken with respect to the modification of any class of securities of the issuer, or the issuance or authorization for issuance of securities of the issuer in exchange for outstanding securities of the issuer, furnish the following information:

* * * * *

(c) State the reasons for the proposed modification or exchange and the general effect thereof upon the rights of existing security holders.

* * * * *

Item 14. Mergers, consolidations, acquisitions and similar matters. Furnish the following information if action is to be taken with respect to any plan for (i) the merger or consolidation of the issuer into or with any other person or of any other person into or with the issuer, (ii) the acquisition by the issuer or any of its security holders of securities of another issuer, (iii) the acquisition by the issuer of any other going business or of the assets thereof, (iv) the sale or other transfer of all or any substantial part of the assets of the issuer, or (v) the liquidation or dissolution of the issuer:

(a) Outline briefly the material features of the plan. State the reasons therefor and the general effect thereof upon the rights of existing security holders. If the plan is set forth in a written document, file three copies thereof with the Commission at the time preliminary copies of the proxy statement and form of proxy are filed pursuant to § 240.14a–6(a).

(b) Furnish the following information as to the issuer and each person (other than totally-held subsidiaries of the issuer) which is to be merged into the issuer or into or with which the issuer is to be merged or consolidated or the business or assets of which are to be acquired or which is the issuer of securities to be acquired by security holders of the issuer. What is required is information essential to an investor's appraisal of the action proposed to be taken.

* * * * *

(4) Furnish a tabulation in columnar form showing the existing and the pro forma capitalization.

(5) Furnish in columnar form for each of the last five fiscal years a historical summary of earnings and show per share amounts of net earnings, dividends declared for each year and book value per share at the end of the latest year.

(6) Furnish in columnar form for each of the last five fiscal years a combined pro forma summary of earnings, as appropriate in the circumstances, indicating the aggregate and per-share earnings for each such year and the pro forma book value per share. If the transaction establishes a new basis of accounting for assets of any of the persons included therein, the pro forma summary of earnings shall be furnished only for the most recent fiscal year.

* * * * *

Item 15. Financial statements. * * *

(b) If action is to be taken with respect to any matter specified in Item 14(b), furnish financial statements for each person specified therein, other than the issuer whose financial statements are required by Item 15(a), such as would currently be required in an original application by such person for registration of securities under the Act. Such statements shall be certified if practicable, but all schedules other than the schedules of supplementary profit and loss information may be omitted. However, such statements may be omitted for (i) a totally-held subsidiary of the issuer which is included in the consolidated statement of the issuer and its subsidiaries, or (ii) a person which is to succeed to the issuer and one or more of its totally-held subsidiaries under such circumstances that Form 8–B would be appropriate for registration of securities of such person issued in exchange for listed securities of the issuer.

Instruction. Such statements shall be prepared in accordance with Regulation S–X and, if certified, shall be certified in accordance with that regulation.

(c) The Commission may upon the request of the issuer, permit the omission of any of the statements herein required where such statements are not necessary for the exercise of prudent judgment in regard to any matter to be acted upon, or may permit the filing in substitution therefor of appropriate statements of comparable character. The Commission may also require the filing of other statements in addition to, or in substitution for, the statements herein required in any case where such statements are necessary or appropriate for an adequate presentation of the financial condition of any person whose financial statements are required, or whose statements are otherwise material for the

exercise of prudent judgment in regard to any matter to be acted upon. In the usual case, financial statements are deemed material to the exercise of prudent judgment where the matter to be acted upon is the authorization or issuance of a material amount of senior securities, but are not deemed material where the matter to be acted upon is the authorization or issuance of common stock, otherwise than in an exchange, merger or consolidation.

* * * * *

Item 17. Restatement of accounts. If action is to be taken with respect to the restatement of any asset, capital, or surplus account of the issuer, furnish the following information:

* * * * *

(c) State the name and amount of each account (including any reserve accounts) affected by the restatement thereon. Tabular presentation of the amounts shall be made when appropriate, particularly in the case of recapitalizations.

* * * * *

Item 20. Amendment of charter, bylaws or other documents. If action is to be taken with respect to any amendment of the issuer's charter, bylaws or other documents as to which information is not required above, state briefly the reasons for and general effect of such amendment.

Item 22. Vote required for approval. As to each matter which is being submitted to a vote of security holders, other than elections to office, state the vote required for its approval.

SCHEDULE 14B

Instructions. 1. The item numbers and captions of the items shall be included but the text of the items may be omitted if the answers thereto are so prepared as to indicate clearly the coverage of the items. Answer every item. If an item is inapplicable or the answer is in the negative, so state. The information called for by Items 2(a) and 3(a) or a fair summary thereof is required to be included in all preliminary soliciting material by § 240.14a–11(d)(3).

2. If the participant is a partnership, corporation, association or other business entity, the information called for by Items 2, 3 and 4 shall be given with respect to each partner, officer and director of such entity, and each person controlling such entity, who is not a participant.

Item 3. Interests in securities of the issuer. * * *

(e) State whether or not you are, or were within the past year, a party to any contract, arrangements or understandings with any person with respect to any securities of the issuer, including, but not limited to joint ventures, loan or option arrangements, puts or calls, guarantees against loss or guarantees of profit, division of losses or profits, or the giving or withholding of proxies. If so, name the parties to such contracts, arrangements or understandings and give the details thereof.

* * * * *

Item 4. Further matters. * * *

(d) State the total amount contributed and proposed to be contributed by you in furtherance of the solicitation, directly or indirectly, if such amount exceeds or will exceed $500 in the aggregate.

[F.R. Doc. 64–13224; Filed, Dec. 23, 1964; 8:46 a.m.]

Notices

DEPARTMENT OF STATE

Agency for International Development

CHRISTIAN REFORMED WORLD RELIEF COMMITTEE, INC.

Register of Voluntary Foreign Aid Agencies

In accordance with the regulations of the Agency for International Development concerning Registration of Agencies for Voluntary Foreign Aid (A.I.D. Regulation 3) 22 CFR, Part 203, promulgated pursuant to section 621 of the Foreign Assistance Act of 1961, as amended, notice is hereby given that a certificate of registration as a voluntary foreign aid agency has been issued by the Advisory Committee on Voluntary Foreign Aid of the Agency for International Development to the following agency:

Christian Reformed World Relief Committee, Inc.
2417 Eastern Avenue, Southeast
Grand Rapids, Michigan 49507

Dated: December 15, 1964.

WILLIAM S. GAUD,
Acting Administrator.

[F.R. Doc. 64–13221; Filed, Dec. 23, 1964; 8:45 a.m.]

[Delegation of Authority No. 57]

DELEGATION OF AUTHORITY

Miscellaneous Amendments

By virtue of the authority delegated to me by Delegation of Authority No. 104, as amended, dated November 3, 1961, from the Secretary of State (26 F.R. 10608), I hereby direct that Delegation of Authority Nos. 19 and 27 be, and they are hereby amended, as follows:

SECTION 1. Delegation of Authority No. 19: Insert the following new paragraph immediately preceding the last paragraph: "The Assistant Administrator for Latin America, notwithstanding the preceding limitation with respect to entering into agreements with agencies which do not have a basic agreement with A.I.D., may enter into and implement, agreements with any agency of the United States Government to undertake specific projects or programs financed in whole or in part by A.I.D., subject to the concurrence of the Assistant Administrator for Administration".

SEC. 2. Delegation of Authority No. 27: (a) Amend paragraph 12 of Section II by inserting before the semicolon the following: ", except that the Assistant Administrator for Latin America may detail or assign Foreign Service Reserve and Foreign Service Staff personnel of the Regional Bureau to the Bureau for Latin America, A.I.D./W". (b) Add the following new paragraph following paragraph 4 of Section III: "The Assistant Administrator for Latin America may exercise the following authorities, notwithstanding the foregoing limitations, for the countries or areas within his region: (1) approve the assignment or reassignment of persons employed as Chief of Mission, Deputy Chief of Mission and AID Representatives, subject to the concurrence of the Administrator, and (2) set or approve the grades of the positions of Mission Director, Deputy Director or AID Representative within the standards and criteria prescribed for the classification of such positions as agreed to between State and A.I.D. on April 22, 1963 and subject to the concurrence of the Assistant Administrator for Administration".

The foregoing authorities are to be exercised in accordance with the policies, procedures and regulations of the Agency including those which require the clearance of other offices prior to taking administrative action and those which require consultation with other offices.

This Delegation of Authority shall be effective immediately.

Dated: December 8, 1964.

DAVID E. BELL,
Administrator.

[F.R. Doc. 64–13222; Filed, Dec. 23, 1964; 8:45 a.m.]

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

NEVADA

Notice of Filing of Protraction Diagrams

DECEMBER 17, 1964.

Notice is hereby given that effective at and after 10:00 a.m. January 19, 1965, the following protraction diagrams are officially filed of record in the Nevada Land Office. In accordance with Title 43, Code of Federal Regulations, these protractions will become the basic record for describing the land for all authorized purposes. Until this date and time the diagrams have been placed in open files and are available to the public for information only.

NEVADA PROTRACTION DIAGRAMS
NOS. 137 THROUGH 145

MOUNT DIABLO MERIDIAN

No. 137

T. 48 N., R. 35 E.
T. 48 N., R. 36 E.
T. 46 N., R. 37 E.
T. 48 N., R. 37 E.

No. 138

T. 41 N., R. 23½ E.
T. 41½ N., R. 23½ E.
T. 41 N., R. 24 E.
T. 41½ N., R. 24 E.
T. 41 N., R. 25 E.
T. 41½ N., R. 25 E.

No. 139

T. 41 N., R. 27 E.
T. 42 N., R. 27 E.
T. 43 N., R. 27 E.
T. 43 N., R. 28 E.
T. 43 N., R. 29 E.

No. 140

T. 45 N., R. 26½ E.
T. 44 N., R. 27 E.
T. 45 N., R. 27 E.
T. 44 N., R. 28 E.
T. 45 N., R. 28 E.
T. 44 N., R. 29 E.
T. 45 N., R. 29 E.
T. 46 N., R. 29 E.

No. 141

T. 41 N., R. 29 E.
T. 42 N., R. 29 E.
T. 41 N., R. 30 E.
T. 42 N., R. 30 E.
T. 43 N., R. 30 E.
T. 42 N., R. 31 E.

No. 142

T. 45 N., R. 33 E.
T. 46 N., R. 33 E.
T. 45 N., R. 34 E.
T. 45 N., R. 35 E.

No. 143

T. 43 N., R. 32 E.
T. 43 N., R. 33 E.
T. 44 N., R. 33 E.
T. 43 N., R. 34 E.
T. 44 N., R. 34 E.

No. 144

T. 42 N., R. 35 E.

No. 145

T. 41 N., R. 32 E.
T. 42 N., R. 32 E.
T. 41 N., R. 33 E.
T. 42 N., R. 33 E.
T. 41 N., R. 34 E.

Copies of these diagrams are for sale at one dollar ($1.00) each by the Nevada Land Office, Bureau of Land Management, Post Office Box No. 1551, Reno, Nev.

DANIEL P. BAKER,
Manager.

[F.R. Doc. 64–13212; Filed, Dec. 23, 1964; 8:45 a.m.]

[Misc. NM 11]

NEW MEXICO

Order Providing for Opening of Public Lands

DECEMBER 15, 1964.

1. In exchange of lands made under the provisions of section 8 of the Act of June 28, 1934 (48 Stat. 1269), as amended June 26, 1936 (49 Stat. 1976; 43 U.S.C. 315g), the following-described lands have been reconveyed to the United States:

NEW MEXICO PRINCIPAL MERIDIAN

T. 10 N., R. 1 E.,
Sec. 4, lots 1 to 8, inclusive;
Sec. 5, lots 1 to 8, inclusive;
Sec. 6, lots 1 and 2.
T. 11 N., R. 1 E.,
Sec. 17, lots 2, 3, 4, 5;
Sec. 21;
Sec. 29, lots 1, 2, 3, E½, NE¼NW¼;
Sec. 31, lot 1;
Sec. 33.

T. 23 N., R. 8 W.,
Sec. 16.
T. 23 N., R. 9 W.,
Sec. 2, lots 1, 2, 3, 4, S½N½, SW¼.
T. 29 N., R. 10 W.,
Sec. 16, NE¼NE¼, S½NE¼, NW¼, S½.
T. 19 N., R. 12 W.,
Sec. 32.
T. 18 N., R. 13 W.,
Sec. 2, W½SE¼;
Sec. 16, W½SE¼, SE¼SE¼.
T. 19 N., R. 13 W.,
Sec. 2, lots 1, 2, 3, 4, S½N½, S½;
Sec. 36.

The areas described aggregate 5,758.15 acres.

2. The lands in Tps. 10 and 11 N., R. 1 E., have been classified for recreational and public purposes pursuant to the Act of June 14, 1926 (44 Stat. 741) as amended by the Act of June 4, 1954 (68 Stat. 173), and under authority of section 7 of the Taylor Grazing Act of June 28, 1934, as amended. This classification segregates the land from all appropriation under the public land laws, including location under the mining laws except as to applications under the Recreation and Public Purposes Act by qualified State and local governments.

3. The lands in Tps. 10 and 11 N., R. 1 E., are located 5 miles west of the City of Albuquerque, and are accessible from U.S. Highway 66 and unimproved dirt roads. The elevation is about 6,000 feet and the precipitation is approximately 8 inches. The lands are gently sloping and the west portion extends into the Rio Puerco drainage. The lands are not suitable for irrigation because of the lack of a known source of irrigation water. The lands in T. 23 N., Rs. 8 and 9 W. are rolling to rough; the vegetation is mostly sage-grass with a number of desert shrub species occurring at various intervals and scattered low-value pinon-juniper in limited amounts. The soil is sandy to sandy-loam in the upland portions and sandy-clay to heavy clay in the lower elevations. The elevation is from 6,700 to 6,800 feet. The land in T. 29 N., R. 10 W., is located about 4½ miles east of Bloomfield, New Mexico and is accessible over an improved dirt road. The terrain is rolling to hilly with gravel outcroppings along the slopes of the higher elevations. Sheet and rill erosion is evident over the entire area. Vegetation consists of annual grasses, scattered juniper and sparse browse. The lands in T. 19 N., R. 12 W. and Tps. 18 and 19 N., R. 13 W., are generally rolling at an elevation of approximately 5,000 feet; the average rainfall is 12 inches. The vegetation consists principally of blue gramma and blue grass with some stipa, rice grass, galleta and other grass types in lesser amounts.

4. Pursuant to authority delegated to me by Order No. 701 of July 23, 1964, section 1.5c, the land affected by this order is hereby restored to the operation of the public land laws, subject to any valid rights, the provisions of existing withdrawals, and the requirements of applicable law, rules and regulations, as of 10:00 a.m., January 20, 1965.

5. The United States did not acquire minerals in the lands described above.

6. Inquiries and applications concerning the lands above described shall be addressed to the Manager, Land Office, Bureau of Land Management, P.O. Box 1449, Santa Fe, New Mexico, 87501.

W. J. ANDERSON,
Acting State Director.

[F.R. Doc. 64-13213; Filed, Dec. 23, 1964; 8:45 a.m.]

[BLM 080188; Survey Group 95]

MINNESOTA

Notice of Filing of Plat of Survey

DECEMBER 18, 1964.

The plat of survey of an island in sec. 1, T. 46 N., R. 19 W., fourth principal meridian, Minnesota, containing 1.28 acres, accepted on November 23, 1964, will be officially filed in this office effective at 10 a.m., on January 22, 1965.

The character of the island and the timber growth thereon indicate its existence when Minnesota was admitted into the Union and at the time of the original survey. It is therefore determined to be public land.

The island is upland in character within the meaning of the swamp land acts.

Except for valid existing rights, the island will not be subject to use and/or disposition under the public land laws, including the mineral leasing and mining laws, until a further order is issued.

All inquiries relating to the island should be sent to the Manager, Eastern States Land Office, Bureau of Land Management, Washington, D.C., 20240.

DORIS A. KOIVULA,
Manager, Land Office.

[F.R. Doc. 64-13214; Filed, Dec. 23, 1964; 8:45 a.m.]

COLORADO

Notice of Filing of Colorado Protraction Diagrams

DECEMBER 15, 1964.

Notice is hereby given that effective February 1, 1965, the following approved protraction diagrams are officially filed of record in the Colorado Land Office. In accordance with Title 43 CFR, these protractions will become the basic record for describing the land for all authorized purposes at and after 10:00 a.m. on the above effective date. Until this date and time, the diagrams have been placed in the open files and are available to the public for information only.

COLORADO PROTRACTION DIAGRAM NO. 1

(Approved November 12, 1964)

SIXTH PRINCIPAL MERIDIAN

T. 3 N., R. 73 W.,
Sec. 4 and 5;
Sec. 6, N½, SE¼.
T. 4 N., R. 73 W.,
Sec. 19 through 21;
Sec. 28 through 33.
T. 5 N., R. 73 W.,
Sec. 4 through 9.
T. 5 N., R. 75 W.,
Sec. 1 through 5;
Sec. 8 through 17;
Sec. 20 through 29;
Sec. 32 through 36.
T. 5 N., R. 76 W.,
Sec. 2 through 11;
Sec. 14 through 23;
Sec. 26 through 35.

COLORADO PROTRACTION DIAGRAM NO. 7 WITH SUPPLEMENTAL SHEET SHOWING EXTERIOR BOUNDARIES OF MINERAL SURVEYS FOR LAND INDICATED BY ASTERISK

(Approved November 12, 1964)

SIXTH PRINCIPAL MERIDIAN

T. 2 S., R. 75 W.,* except Tract 37.
T. 2 S., R. 76 W.
T. 3 S., R. 73 W.,*
Sec. 5 through 8;
Sec. 11, S½, NE¼;
Sec. 12 through 36.
T. 3 S., R. 74 W.,*
Sec. 1 through 13;
Sec. 15 through 22;
Sec. 30 and 31.
T. 3 S., R. 75 W.*
T. 3 S., R. 76 W.
T. 4 S., R. 75 W.*
T. 4 S., R. 76 W.

COLORADO PROTRACTION DIAGRAM NO. 27

(Approved November 12, 1964)

NEW MEXICO PRINCIPAL MERIDIAN

T. 37 N., R. 7 W.,
Sec. 1 through 28;
Sec. 34 through 36.
T. 37 N., R. 8 W.,
Sec. 1 through 3;
Sec. 10 through 15;
Sec. 23 through 27;
Sec. 34 through 36.
T. 38 N., R. 6 W.
T. 38 N., R. 7 W.
T. 39 N., R. 6 W.
T. 39 N., R. 7 W.
T. 39 N., R. 8 W.
T. 40 N., R. 6 W.
T. 40 N., R. 7 W.
T. 40 N., R. 8 W.
T. 40 N., R. 9 W.

Copies of all diagrams are for sale for $1.50 each at the Colorado Land Office, Bureau of Land Management, Insurance Exchange Building, 910 15th Street, Denver, Colo., 80202.

EVERETT K. WEEDIN,
Acting Land Office Manager.

[F.R. Doc. 64-13216; Filed, Dec. 23, 1964; 8:45 a.m.]

[Bureau Order 701, Amdt. 1]

LANDS AND RESOURCES

Redelegations of Authorities

Order No. 701 of July 23, 1964 is amended, as follows: A new paragraph (k) is added to Secs. 1.2 and 2.2, and paragraph (p) of Sec. 1.9 is amended, as follows:

PART I—REDELEGATIONS OF AUTHORITY TO STATE DIRECTORS

* * * * *

SEC. 1.2 *General and miscellaneous matters.* * * *

(k) *Patents.* Issue patents and amendments of patents or their equivalent for grants of land under the authority of the government in the name of the United States other than conveyances which require the approval or signature of the President of the United States.

* * * * *

SEC. 1.9 *Land use.* * * *

(p) *State grants.* Take all actions on State grants and selections when authorized by law.

* * * * *

PART II—REDELEGATION TO LAND OFFICE MANAGERS

SEC. 2.2 *General and miscellaneous matters.* * * *

(k) *Patents.* Bureau Order No. 690 as amended is revoked.

* * * * *

L. T. HOFFMAN,
Acting Associate Director.

DECEMBER 18, 1964.

[F.R. Doc. 64–13215; Filed, Dec. 23, 1964; 8:45 a.m.]

Bureau of Reclamation

[No. 83]

YUMA IRRIGATION PROJECT, ARIZONA-CALIFORNIA RESERVATION DIVISION, CALIFORNIA

Public Notice of Annual Operation and Maintenance Charges and Annual Water Rental Charges

NOVEMBER 30, 1964.

1. *Annual operation and maintenance charges for lands under public notice, Reservation Division.* The minimum annual operation and maintenance charge for the Calendar Year 1965 and thereafter until further notice against all lands of the Reservation Division under public notice shall be $13.00 per irrigable acre, whether water is used or not, payment of which will entitle the water user to 7 acre-feet of water per acre on certain sandy areas shown on the list attached to Public Notice No. 72 dated December 1, 1955, as amended February 16, 1956, and to 5 acre-feet of water per irrigable acre on all other lands of the Division under public notice. Additional water, if available, will be furnished at the rate of $2.75 per acre-foot payable in advance. Credit equivalent to the amount paid for additional water unused prior to the end of any calendar year will be applied against the minimum charges for water for the following calendar year. No credit will be given for water purchased during any calendar year at the minimum charge but undelivered at the end of said calendar year.

The minimum annual operation and maintenance charge per calendar year for each parcel of land under public notice containing less than one acre shall be $13.00.

Where in the opinion of the Project Manager, Yuma Projects Office, it may be done without interference with other project requirements, upon written request filed in advance by a water user who is not delinquent in the payment of any operation and maintenance charges, water will be furnished free of charge for reclaiming lands by the usual methods: *Provided, however,* That lands for which free water was served during the preceding calendar year will not again be served free water in the absence of evidence satisfactory to the Project Manager that although the water so served free of charge during such preceding year was applied to the land in sufficient quantities over a period of not less than 3 months, the results accomplished during such preceding year were not satisfactory.

All minimum annual operation and maintenance charges shall be due and payable on January 1, 1965, and on January 1 of each year thereafter.

2. *Annual water rental charges for other lands, Reservation Division.* Irrigation water will be furnished during the Calendar Year 1965 and thereafter until further notice for lands in the Reservation Division not under public notice which can be irrigated from the present distribution system without further construction expense by the Bureau, upon a rental basis under approved applications for temporary water service, at the following rates: The minimum annual charge shall be $13.00 per irrigable acre, payment of which will entitle the applicant to 5 acre-feet of water per acre. Additional water, if available, will be furnished at the rate of $2.75 per acre-foot. All charges shall be payable in advance of the delivery of water. Credit will be given for additional water paid for but not used.

3. *Penalties.* On all payments not made on or before the due dates, there shall be added on the following day a penalty of one-half of one percent of the amount unpaid and a like penalty of one-half of one percent of the amount unpaid on the first day of each calendar month thereafter so long as such default shall continue.

4. *Place of payment.* All payments should be made to the Bureau of Reclamation, Marine Corps Auxiliary Air Station, or mailed to Bureau of Reclamation, Bin 151, Yuma, Arizona.

(Act of June 17, 1902, 32 Stat. 388, as amended or supplemented)

A. B. WEST,
Regional Director.

DECEMBER 18, 1964.

[F.R. Doc. 64–13217; Filed, Dec. 23, 1964; 8:45 a.m.]

DEPARTMENT OF AGRICULTURE

Office of the Secretary

TEXAS

Designation of Areas for Emergency Loans

For the purpose of making emergency loans pursuant to section 321 of the Consolidated Farmers Home Administration Act of 1961 (7 U.S.C. 1961), it has been determined that in the hereinafter-named county in the State of Texas a natural disaster has caused a need for agricultural credit not readily available from commercial banks, cooperative lending agencies, or other responsible sources.

TEXAS

Hockley

Pursuant to the authority set forth above, emergency loans will not be made in the above-named county after June 30, 1965, except to applicants who previously received emergency or special livestock loan assistance and who can qualify under established policies and procedures.

Done at Washington, D.C., this 21st day of December 1964.

ORVILLE L. FREEMAN,
Secretary.

[F.R. Doc. 64–13227; Filed, Dec. 23, 1964; 8:46 a.m.]

DEPARTMENT OF COMMERCE

Bureau of International Commerce

[Case No. 338]

JOSE LUIS MUSSOT AND YAMIL AMADO HARON KOURI Y PEREZ

Order Denying Export Privileges

In the matter of Jose Luis Mussot, Mexicali No. 53–2, Mexico City, Mexico, and Yamil Amado Haron Kouri y Perez, also known as Yamil Kouri, % Centro Nacional Cubano De Investigaciones Cientificas, Calle 21 No. 454, Vedado, Havana, Cuba, respondents; Case No. 338.

Separate charging letters were issued against the above named respondents by the Director of the Investigations Division, Office of Export Control, Bureau of International Commerce. The charging letter against Mussot is dated October 12, 1964 and that against Kouri is dated November 6, 1964. As to each respondent it is charged that in May 1964 he acted in concert with other persons in the execution of a scheme to obtain and ship to Cuba approximately $48,000 worth of U.S.-origin scientific research equipment obtained from a Mexican subsidiary of the U.S. supplier of the equipment. The manner in which each respondent participated is set forth in the respective charging letters.

Prior to the issuance of the charging letters a temporary denial order was issued against each respondent. The temporary order against Mussot for sixty days was issued on September 29, 1964 (29 F.R. 13615). On October 21, 1964 this was extended until the completion of compliance proceedings (29 F.R. 14757). The temporary order against Kouri for sixty days was issued on October 27, 1964 (29 F.R. 14861) and this expires on December 26, 1964.

Kouri has not responded to the charging letter and he is held to be in default. Mussot replied to the temporary denial order and also to the charging letter but he did not request a hearing. In accordance with the usual practice the cases were referred to the Compliance Commissioner. He reported that for the most part the evidence to support the charges against each respondent was identical. He combined the cases, held a joint informal hearing, and issued a single report covering the charges against both respondents.

The Compliance Commissioner has considered the evidence in the cases and has reported the facts to the undersigned with his recommendation that the sanc-

tions hereinafter set forth be imposed against respondents. In the circumstances I consider it appropriate to issue a single order covering charges against both respondents.

After reviewing the facts in the cases and considering the Compliance Commissioner's report and recommendations I hereby make the following findings of fact:

1. The respondent Jose Luis Mussot was a resident of Mexico City, Mexico, and was a registered commission agent. For some months prior to May 1964, and thereafter, he was an active commercial representative of the Cuban Embassy in Mexico City. The respondent Yamil Amado Haron Kouri y Perez, also known as Yamil Kouri, was a resident of Havana, Cuba. He holds a doctors degree and was an official in Centro Nacional Cubano de Investigaciones Cientificas (Cuban National Center of Scientific Research). In May 1964 Dr. Kouri was in Mexico City for the purpose of procuring equipment for use in the institution with which he was connected. He also visited other countries for this purpose.

2. The particular transactions in question took place in the period from May 20, 1964 through May 28, 1964. During this period, on several occasions, the respondent Kouri, accompanied by other individuals, visited the offices of a supplier of scientific research equipment in Mexico City. Said supplier was a subsidiary company of the U.S. supplier of such equipment. The respondent Kouri made arrangements with the Mexican supplier to purchase a wide variety of items of equipment for use in scientific research. He represented to employees of the Mexican supplier that the equipment was to be used in an educational institution in Mexico. These representations were false and Kouri knew them to be false. It was his purpose and intent to procure said equipment for exportation to Cuba.

3. At the time that Kouri was making the arrangements to purchase the equipment in question he knew that many of the items, including some of the most costly, were of U.S.-origin. He also knew that reexportation of U.S.-origin equipment from Mexico to Cuba without prior express approval of the United States Government was in contravention of U.S. laws and regulations.

4. The respondent Kouri purchased the equipment in question and the invoice price was approximately $48,000. On May 27, 1964 Kouri made a partial payment of $25,000 to the Mexican supplier and informed the company that Jose Mussot would pick up the merchandise on the following day and pay the balance due.

5. On May 28, 1964 the respondent Mussot called at the office of the Mexican supplier, paid the balance which was due for the merchandise and took delivery thereof. Mussot knew or had reason to know that many many of the items were of U.S.-origin and that reexportation of U.S.-origin equipment from Mexico to Cuba without prior express authorization from the United States Government was in contravention of U.S. laws and regulations.

6. Mussot arranged for the hire of two trucks to transport the goods from the warehouse of the Mexican supplier to the Cuban Embassy in Mexico City. Such transportation and delivery to the Cuban Embassy was accomplished under the supervision of said Mussot on May 28, 1964. Mussot knew or had reason to know that the goods were intended to be reexported from Mexico to Cuba. Such reexportation did in fact take place at a later date.

Based on the foregoing I have concluded that the respondents violated the U.S. Export Regulations in the following manner: Knowingly aided and abetted in the procurement of U.S.-origin commodities and in their reexportation to an unauthorized destination, in violation of § 381.2; acted in concert together and with other persons for the purpose of bringing about violations of said regulations, in violation of § 381.3; the respondent Kouri ordered, bought, financed, and otherwise serviced commodities exported from the United States with knowledge that a violation of said regulations was about to and intended to occur with respect to such transaction, in violation of § 381.4; the respondent Mussot received, transported, forwarded, and otherwise serviced commodities exported from the United States with knowledge that a violation of said regulations was about to and intended to occur with respect to such transaction, in violation of § 381.4.

As to the sanctions that should be imposed the Compliance Commissioner said:

> Kouri is a resident of Cuba and an official in a research institution there. He has visited various countries outside of the United States for the purpose of obtaining supplies and equipment, some of U.S.-origin, for reexportation to Cuba. To the extent that we can we should prevent him from obtaining U.S.-origin goods in violation of our regulations. I recommend that he be denied U.S. export privileges for the duration of export controls. Mussot is a resident of Mexico City and is a commercial representative of the Cuban Embassy there. He knowingly participated in a transaction in violation of the U.S. Export Regulations. I also recommend that he be denied U.S. export privileges for the duration of export controls. However, if he terminates whatever connection he has with the Cuban Embassy and is able to demonstrate after two years that he has complied with the terms of the order and discloses such details of his activities as may be necessary to determine such compliance and to show that he can be trusted to deal in U.S.-origin commodities, consideration can be given to an application for restoration of privileges under such conditions as may be considered appropriate.

On consideration of the foregoing and based on the entire record, and being of the view that the following order is calculated to achieve effective enforcement of the law and the purposes thereof: *It is hereby ordered:*

I. The restrictions of the temporary denial orders which were entered against the respondent Jose Luis Mussot on September 29, 1964 (29 F.R. 13615) and extended on October 21, 1964 (29 F.R. 14757), and against the respondent Yamil Amado Haron Kouri y Perez, also known as Yamil Kouri, on October 27, 1964 (29 F.R. 14861) are hereby continued in full force and effect.

II. So long as export controls are in effect the respondents, and each of them, are hereby denied all privileges of participating, directly or indirectly, in any manner or capacity, in any transaction involving commodities or technical data exported from the United States in whole or in part, or to be exported, or which are otherwise subject to the Export Regulations. Without limitation of the generality of the foregoing, participation prohibited in any such transaction, either in the U.S. or abroad, shall include participation, directly or indirectly, in any manner or capacity: (a) As parties or as representatives of a party to any validated export license application; (b) in the preparation or filing of any export license application or reexportation authorization, or any document to be submitted therewith; (c) in the obtaining or using of any validated or general export license or other export control document; (d) in the carrying on of negotiations with respect to, or in the receiving, ordering, buying, selling, delivering, storing, using, or disposing of any commodities or technical data in whole or in part exported or to be exported from the United States; and (e) in the financing, forwarding, transporting, or other servicing of such commodities or technical data.

III. Such denial of export privileges shall extend not only to the respondents, but also to their agents, employees, representatives, partners, and to any firm, corporation, or business organization with which they now or hereafter may be related by affiliation, ownership, control, position of responsibility, or other connection in the conduct of trade or services connected therewith.

IV. Two years after the effective date of this order the respondent Mussot may apply to have the effective denial of his export privileges held in abeyance while he remains on probation. Such application shall be supported by evidence showing compliance with the terms of this order and such disclosure of details of his activities during said two years as may be necessary to determine his compliance with this order and whether he may be trusted to participate in transactions involving U.S.-origin commodities and technical data. The application will be considered on its merits and in the light of conditions and policies existing at that time. His export privileges may be restored under such terms and conditions as appear to be appropriate.

V. No person, firm, corporation, partnership or other business organization, whether in the United States or elsewhere, without prior disclosure to and specific authorization from the Bureau of International Commerce, shall do any of the following acts, directly or indirectly, or carry on negotiations with respect thereto, in any manner or capacity, on behalf of or in any association with any such respondents or related party, or whereby any such respondent or related party may obtain any benefit therefrom or have any inter-

est or participation therein, directly or indirectly: (a) Apply for, obtain, transfer, or use any license, shipper's export declaration, bill of lading, or other export control document relating to any exportation, reexportation, transshipment, or diversion of any commodity or technical data exported or to be exported from the United States, by, to, or for any such respondent or related party denied export privileges; or (b) order, buy, receive, use, sell, deliver, store, dispose of, forward, transport, finance, or otherwise service or participate in any exportation, reexportation, transshipment, or diversion of any commodity or technical data exported or to be exported from the United States.

Dated: December 16, 1964.

WILSON E. SWEENEY,
Acting Director,
Office of Export Control.

[F.R. Doc. 64-13243; Filed, Dec. 23, 1964; 8:46 a.m.]

[File No. 23-992]

SHEPHERD EXPORT & TRADING CO. AND DENIS H. SHEPHERD

Order Denying Export Privileges for an Indefinite Period

In the matter of Shepherd Export & Trading Company, and Denis H. Shepherd also known as D. H. Shepherd, 6 Chichester Road and 19 Chepstow Road, Croydon, Surrey, England, respondents; File No. 23-992.

The Director, Investigations Division, Office of Export Control, Bureau of International Commerce, U.S. Department of Commerce, has applied for an order denying to the above named respondents all export privileges for an indefinite period because of the failure of said respondents to furnish responsive answers to interrogatories without good cause being shown. This application was made pursuant to § 382.15 of the Export Regulations (Title 15, Chapter III, Subchapter B, Code of Federal Regulations). A temporary denial order has been in effect against the above respondents since October 28, 1964 (29 F.R. 14897).

In accordance with the usual practice, the application for an indefinite denial order was referred to the Compliance Commissioner, Bureau of International Commerce, who after consideration of the evidence has recommended that the application be granted.

The report of the Compliance Commissioner and the evidence in support of the application have been considered. The evidence presented shows that Shepherd Export & Trading Company is a business organization with places of business in Croydon, Surrey, England; that said company is engaged in the import-export business; that Denis H. Shepherd, also known as D. H. Shepherd is the individual primarily responsible for the conduct and operations of said company; that the aforesaid Investigations Division is conducting an investigation into the respondents' receipt and disposition of U.S. origin commodities. It is impracticable to subpoena the respondents and relevant and material interrogatories were served on them pursuant to § 382.15 of the Export Regulations. Said respondents have failed to furnish responsive answers to said interrogatories as required by said section and they have not shown good cause for such failure. I find that an order denying export privileges to said respondents for an indefinite period is reasonably necessary to protect the public interest and to achieve effective enforcement of the Export Control Act of 1949, as amended.

Accordingly, it is hereby ordered:

I. This order supersedes the temporary denial order entered against the above named respondents on October 28, 1964.

II. The respondents, their successors or assigns, partners, directors, representatives, agents, and employees hereby are denied all privileges of participating, directly or indirectly, in any manner or capacity, in any transaction involving commodities or technical data exported from the United States in whole or in part, or to be exported, or which are otherwise subject to the Export Regulations. Without limitation of the generality of the foregoing, participation prohibited in any such transaction, either in the United States or abroad, shall include participation, directly or indirectly, in any manner or capacity: (a) As a party or as a representative of a party to any validated export license application; (b) in the preparation or filing of any export license application or reexportation authorization, or any document to be submitted therewith; (c) in the obtaining or using of any validated or general export license or other export control document; (d) in the carrying on of negotiations with respect to, or in the receiving, ordering, buying, selling, delivering, storing, using, or disposing of any commodities or technical data in whole or in part exported or to be exported from the United States; and (e) in the financing, forwarding, transporting, or other servicing of such commodities or technical data.

III. Such denial of export privileges shall extend not only to the respondents, but also to their agents and employees and to any successor and to any person, firm, corporation, or business organization with which they now or hereafter may be related by affiliation, ownership, control, position of responsibility, or other connection in the conduct of trade or services connected therewith.

IV. This order shall remain in effect until the respondents provide responsive answers, written information and documents in response to the interrogatories heretofore served upon them or give adequate reasons for failure to do so, except insofar as this order may be amended or modified hereafter in accordance with the Export Regulations.

V. No person, firm, corporation, partnership or other business organization, whether in the United States or elsewhere, without prior disclosure to and specific authorization from the Bureau of International Commerce, shall do any of the following acts, directly or indirectly, or carry on negotiations with respect thereto, in any manner or capacity, on behalf of or in any association with the respondents or any related party, or whereby the respondents or related party may obtain any benefit therefrom or have any interest or participation therein, directly or indirectly: (a) Apply for, obtain, transfer, or use any license, shipper's export declaration, bill of lading, or other export control document relating to any exportation, reexportation, transshipment, or diversion of any commodity or technical data exported or to be exported from the United States, by, to, or for any such respondent or related party denied export privileges; or (b) order, by, receive, use, sell, deliver, store, dispose of, forward, transport, finance, or otherwise service or participate in any exportation, reexportation, transshipment, or diversion of any commodity or technical data exported or to be exported from the United States.

VI. A copy of this order shall be served on respondents.

VII. In accordance with the provisions of § 382.15 of the Export Regulations, the respondents may move at any time to vacate or modify this indefinite denial order by filing with the Compliance Commissioner, Bureau of International Commerce, U.S. Department of Commerce, Washington, D.C., 20230, an appropriate motion for relief, supported by substantial evidence, and may also request an oral hearing thereon, which, if requested shall be held before the Compliance Commissioner at Washington, D.C. at the earliest convenient date.

This order shall become effective on publication in the FEDERAL REGISTER.

Dated: December 15, 1964.

WILSON E. SWEENEY,
Acting Director,
Office of Export Control.

[F.R. Doc. 64-13244; Filed, Dec. 23, 1964; 8:46 a.m.]

[Case No. 337]

P. J. MURPHY AND MURPHY BROTHERS, LTD.

Order Denying Export Privileges

In the matter of P. J. Murphy, Murphy Brothers, Ltd., Thurmaston, Liecester, England, respondents; Case No. 337.

By charging letter dated September 4, 1964 the Director, Investigations Division, Office of Export Control, Bureau of International Commerce, charged the above respondents with violations of the Export Control Act of 1949, as amended, and regulations thereunder. The respondents were served with the charging letter and have not responded or filed an answer and, in accordance with § 382.4 of the Export Regulations are held in default.

In accordance with the usual practice the case was referred to the Compliance Commissioner. He held an informal hearing on October 29, 1964, at which time counsel for the Investigations Division present evidence in support of the charges. The record was reopened on November 30, 1964 for the receipt of additional evidence.

It was charged that on or about March 7 or 8, 1964 respondents exported from England to Cuba three U.S.-origin motor scrapers and two U.S.-origin bulldozers and that respondents knew or had reason to know that the items were of U.S.-origin and that U.S. law prohibited their reexportation from England to Cuba without first obtaining authorization from the United States Government.

The Compliance Commissioner has reported the findings of fact and findings that violations have occurred and has recommended that sanctions, as hereinafter set forth be imposed.

After considering the entire record and the report and recommendations of the Compliance Commissioner, I hereby make the following findings of fact:

1. The respondent Murphy Brothers, Ltd. is a corporation with a place of business in Thurmaston, Leicester, England. The company is engaged in building and civil engineering and is also in the bulk transport and haulage business. The respondent Patrick J. Murphy, also known as P. J. Murphy, is an officer of Murphy Brothers, Ltd. and he acted for the company in the transaction in question.

2. Shortly before March 7, 1964 Murphy Brothers, Ltd. acquired title to two bulldozers located in England. Each bulldozer consisted of a tractor and bulldozer attachment. The tractors were manufactured in the United States. Bulldozer attachments of the make and type in question were manufactured in the United States and certain foreign countries and it is not established by the evidence that the attachments were of U.S.-origin. The tractor of each unit represented approximately 87 percent of the value of the combination.

3. Shortly before March 7, 1964 Murphy Brothers, Ltd. acquired title to three motor scrapers located in England. Each motor scraper consisted of a tractor and scraper attachment. The tractors were manufactured in the United States. Scraper attachments of the make and type in question were manufactured in the United States and certain foreign countries and it is not established by the evidence that the attachments were of U.S.-origin. The tractor of each unit represented approximately 60 percent of the value of the combination.

4. The respondent P. J. Murphy endeavored to obtain a certificate of origin showing that the tractors above referred to were manufactured in the United Kingdom and his request for such certificate was denied. The respondents knew or had reason to know that the said tractors were of U.S.-origin.

5. On or about March 7 or 8, 1964 the respondents exported from England to Cuba the bulldozers and motor scrapers referred to in Findings of Fact 2 and 3. The respondents knew or had reason to know that U.S. law prohibited such exportation without first obtaining authorization from the United States Government.

Based on the foregoing I have concluded that the respondents in violation of § 381.6 of the United States Export Regulations, without specific authorization from the United States Department of Commerce, Office of Export Control, knowingly reexported, transshipped, and diverted U.S.-origin commodities from England to Cuba contrary to the provisions of said regulations.

I have concluded that the recommendation of the Compliance Commissioner as to the sanction that should be imposed against the respondents is fair and just and necessary to achieve effective enforcement of the law.

Accordingly it is hereby ordered:

I. All outstanding validated export licenses in which respondents appears or participates in any manner or capacity are hereby revoked and shall be returned forthwith to the Bureau of International Commerce for cancellation.

II. Except as qualified in Part IV hereof, the respondents for the duration of export controls, are hereby denied all privileges of participating, directly or indirectly, in any manner or capacity, in any transaction involving commodities or technical data exported from the United States in whole or in part, or to be exported, or which are otherwise subject to the Export Regulations. Without limitation of the generality of the foregoing, participation prohibited in any such transaction, either in the United States or abroad, shall include participation: (a) As a party or as a representative of a party to any validated export license application; (b) in the preparation or filing of any export license application or reexportation authorization, or document to be submitted therewith; (c) in the obtaining or using of any validated or general export license or other export control documents; (d) in the carrying on of negotiations with respect to, or in the receiving, ordering, buying, selling, delivering, storing, using, or disposing of any commodities or technical data; (e) in the financing, forwarding, transporting, or other servicing of such commodities or technical data.

III. Such denial of export privileges shall extend not only to the respondents, but also to their representatives, agents, partners, and employees, and also to any person, firm, corporation, or other business organization with which they now or hereafter may be related by affiliation, ownership, control, position of responsibility, or other connection in the conduct of trade or services connected therewith.

IV. Two years after the date hereof, without further order of the Bureau of International Commerce, the respondents shall have their export privileges restored to them conditionally, the condition for such restoration being that, during the said two years following the date hereof, the said respondents shall comply in all respects with this order, and thereafter shall comply with all requirements of the Export Control Act of 1949, as amended, and all regulations, licenses and orders issued thereunder.

V. The privileges so conditionally permitted to the respondents herein under Part IV hereof may be revoked summarily and without notice upon a finding by the Director of the Office of Export Control, or such other official as may at that time be exercising the duties now exercised by him, that any respondent has knowingly failed to comply with the conditions applicable to him or it as set forth in Part IV hereof, in which event Part II hereof, insofar as it shall apply to such respondent, shall then be and become effective as to him or them without thereby precluding the Bureau of International Commerce from taking such other and further action based on such violation or violations as it shall deem warranted. In the event that such supplemental order is issued, such respondents as are involved therein shall have a right to review thereof, as provided in the Export Regulations.

VI. During the time when any respondent or other person within the scope of this order is prohibited from engaging in any activity within the scope of Part II hereof, no person, firm, corporation, partnership, or other business organization, whether in the United States or elsewhere, without prior disclosure to and specific authorization from the Bureau of International Commerce, shall do any of the following acts, directly or indirectly, in any manner or capacity, on behalf of or in any association with any respondent or other person denied export privileges within the scope of this order, or whereby any such respondent or such other person may obtain any benefit therefrom or have any interest or participation therein, directly or indirectly: (a) Apply for, obtain, transfer, or use any license, shipper's export declaration, bill of lading, or other export control document relating to any exportation, reexportation, transshipment, or diversion of any commodity or technical data exported or to be exported from the United States, by, to, or for any such respondent or other person denied export privileges within the scope of this order; or (b) order, buy, receive, use, sell, deliver, store, dispose of, forward, transport, finance, or otherwise service or participate in any exportation, reexportation, transshipment, or diversion of any commodity or technical data exported or to be exported from the United States.

This order shall become effective on December 22, 1964.

Dated: December 14, 1964.

WILSON E. SWEENEY,
Acting Director,
Office of Export Control.

[F.R. Doc. 64-13229; Filed, Dec. 23, 1964; 8:46 a.m.]

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Food and Drug Administration

S. E. MASSENGILL CO.

Notice of Filing of Petition for Food Additives for Use in Milk-Producing Animals

Pursuant to the provisions of the Federal Food, Drug, and Cosmetic Act (sec. 409(b)(5), 72 Stat. 1786; 21 U.S.C. 348(b)(5)), notice is given that a petition (FAP 5D1588) has been filed by the

S. E. Massengill Co., Bristol, Tenn., proposing an amendment to § 121.249 of the food additive regulations to provide for the safe use of a formulation for the treatment of bovine mastitis. Such formulation is to contain per treatment: neomycin (as neomycin sulfate), 70 milligrams; polymyxin B sulfate, 100,000 units.

Dated: December 17, 1964.

MALCOLM R. STEPHENS,
Assistant Commissioner for Regulations.

[F.R. Doc. 64-13246; Filed, Dec. 23, 1964; 8:46 a.m.]

ELANCO PRODUCTS CO., AND ELI LILLY AND CO.

Notice of Filing of Petition for Food Additive Tylosin

Pursuant to the provisions of the Federal Food, Drug, and Cosmetic Act (sec. 409(b)(5), 72 Stat. 1786; 21 U.S.C. 348(b)(5)), notice is given that a petition (FAP 5D1601) has been filed by Elanco Products Company, A Division of Eli Lilly and Company, Indianapolis 6, Indiana proposing an amendment to § 121.217 *Tylosin* to provide for the safe use of this food additive in a complete swine feed, as follows:

Principal ingredient	Grams per ton	Combined with—	Grams per ton	Limitations	Indications for use
Tylosin	100			For swine; as tylosin phosphate.	Maintaining weight gains and feed efficiency in the presence of atrophic rhinitis.

Dated: December 17, 1964.

MALCOLM R. STEPHENS,
Assistant Commissioner for Regulations.

[F.R. Doc. 64-13247; Filed, Dec. 23, 1964; 8:46 a.m.]

CIVIL AERONAUTICS BOARD

[Docket No. 11284]

WESTERN ALASKA AIRLINES, INC.

Notice of Prehearing Conference

Notice is hereby given that a prehearing conference on the above-entitled application is assigned to be held on January 6, 1965, at 10:00 a.m., e.s.t., in Room 925, Universal Building, Connecticut and Florida Avenues NW., Washington, D.C., before Examiner Merritt Ruhlen.

Dated at Washington, D.C., December 18, 1964.

[SEAL] FRANCIS W. BROWN,
Chief Examiner.

[F.R. Doc. 64-13255; Filed, Dec. 23, 1964; 8:47 a.m.]

FEDERAL COMMUNICATIONS COMMISSION

[Docket No. 15641; FCC 64M-1265]

INTERNATIONAL PANORAMA TV, INC.

Order Continuing Hearing

In re application of International Panorama TV, Inc., Fontana, California, Docket No. 15641, File No. BPCT-3181; for construction permit for new television broadcast station (Channel 40).

It is ordered, This 18th day of December 1964, on the Hearing Examiner's own motion, that hearing herein, presently scheduled to be convened in Los Angeles, California on January 13, 1965, is continued to 10:00 a.m., January 25, 1965, in Los Angeles, California.

Released: December 21, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 64-13258; Filed, Dec. 23, 1964; 8:47 a.m.]

[Docket Nos. 15745, 15746; FCC 64M-1267]

MIDWEST TELEVISION, INC. (WMBD-FM), AND PEORIA JOURNAL STAR, INC.

Order Scheduling Hearing

In re applications of Midwest Television, Inc. (WMBD-FM), Peoria, Ill., Docket No. 15745, File No. BPH-4277; The Peoria Journal Star, Inc., Peoria, Ill., Docket No. 15746, File No. BPH-4351; for construction permits.

It is ordered, This 18th day of December 1964, that Isadore A. Honig shall serve as the presiding officer in the above-entitled proceeding; that the hearings therein shall commence at 10:00 a.m. on February 17, 1965; and that a prehearing conference shall be convened at 9:00 a.m. on January 21, 1965; and, *it is further ordered,* That all proceedings shall be held in the Offices of the Commission, Washington, D.C.

Released: December 21, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 64-13259; Filed, Dec. 23, 1964; 8:47 a.m.]

[Docket Nos. 15442, 15443; FCC 64M-1253]

DUBUQUE BROADCASTING CO. AND TELEGRAPH-HERALD

Order Continuing Hearing

In re applications of Dubuque Broadcasting Company, Dubuque, Iowa, Docket No. 15442, File No. BPH-3920; Telegraph-Herald, Dubuque, Iowa, Docket No. 15443, Filed No. BPH-4288; for construction permits.

The Hearing Examiner having before him a letter from counsel for Telegraph-Herald, dated December 14, 1964, requesting postponement of hearing in the above-entitled matter now scheduled for December 17, 1964; and

It appearing that a petition for rule making looking toward a resolution of conflict has been filed and should it be approved need for hearing may be eliminated; and

It further appearing that both counsel for Dubuque Broadcasting Company and counsel for the Broadcast Bureau, the only other parties to the proceeding, join in the request:

It is ordered, This 15th day of December 1964, that the request for postponement described above is granted; and the hearing in the above-entitled proceeding now scheduled for Decembr 17, 1964, is continued to January 25, 1965.

Released: December 16, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 64-13203; Filed, Dec. 23, 1964; 8:45 a.m.]

[Docket No. 15658; FCC 64M-1254]

NAUGATUCK VALLEY SERVICE, INC. (WOWW)

Order Re Procedural Dates

In re application of Naugatuck Valley Service, Inc. (WOWW), Naugatuck, Conn., Docket No. 15658, File No. BP-14829; for construction permit.

The Hearing Examiner having under consideration a Motion to Postpone Exhibit Exchange Dates filed by applicant on December 11, 1964; and

It appearing that applicant seeks to have the dates governing various procedural steps in this proceeding advanced one month; and

It further appearing that applicant's newly hired engineer contemplates making changes in applicant's technical proposal and because of other commitments has not been able to effect those changes; and

It further appearing that the other participants in the proceeding have given their consent to grant of the subject motion and to its immediate consideration:

Accordingly, it is ordered, This 15th day of December 1964, that the calendar of procedural steps designated by Ex-

aminer's Order dated November 10, 1964, released November 12, 1964 (FCC 64M–1122) is amended in the following respects:

Procedural step	Present designation	Amended designation
Preliminary exchange of Applicant's technical presentation.	Dec. 14, 1964	Jan. 14, 1965
Final exchange of Applicant's technical presentation (if any) of Applicant's lay presentation.	Dec. 28, 1964	Jan. 28, 1965
Notification by Respondents of Applicant's witnesses it is desired be present at hearing for examination.	Jan. 4, 1965	Feb. 4, 1965
Notification by Respondents of Intention to make rebuttal presentation accompanied by recommended date for such presentation.	do	Do.
Freeze date—Date after which applicant agrees not to make, on own volition, substantial changes in presentation.	do	Do.
Hearing	Jan. 11, 1965	Feb. 11, 1965

Released: December 16, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 64–13204; Filed, Dec. 23, 1964; 8:45 a.m.]

[Docket Nos. 15741, 15742; FCC 64M–1262]

ROBERT J. MARTIN AND TALTON BROADCASTING CO.

Order Scheduling Hearing

In re applications of Robert J. Martin, Selma, Ala., Docket No. 15741, File No. BPH–4499; Talton Broadcasting Company, Selma, Ala., Docket No. 15742, File No. BPH–4572; for construction permits.

It is ordered, This 18th day of December 1964, that Sol Schildhause shall serve as the presiding officer in the above-entitled proceeding; that the hearings therein shall commence at 10:00 a.m. on February 16, 1965; and that a prehearing conference shall be convened at 9:00 a.m. on January 19, 1965; *and, It is further ordered,* That all proceedings shall be held in the Offices of the Commission, Washington, D.C.

Released: December 18, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 64–13205; Filed, Dec. 23, 1964; 8:45 a.m.]

[Docket Nos. 15701, 15702; FCC 64M–1261]

SOUTHERN NEWSPAPERS, INC., AND RADIO HOT SPRINGS CO.

Order Continuing Hearing

In re applications of Southern Newspapers, Inc., Hot Springs, Ark., Docket No. 15701, File No. BPH–3984; C. J. Dickson, Guy R. Beckham and James M. Alexander d/b as Radio Hot Springs Co., Hot Springs, Ark., Docket No. 15702, File No. BPH–4124; for construction permits.

Pursuant to agreement of counsel arrived at during the prehearing conference in the above-styled proceeding held on this date: *It is ordered,* This 16th day of December 1964, that the hearing presently scheduled to commence on January 25, 1965, be and the same is hereby continued to February 16, 1965, at 10 a.m., in Washington, D.C.

Released: December 17, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 64–13206; Filed, Dec. 23, 1964; 8:45 a.m.]

[Docket Nos. 15476, 15477; FCC 64M–1263]

WEZY, INC., AND WKKO RADIO, INC.

Order Continuing Hearing

In re applications of WEZY, Inc., Cocoa, Fla., Docket No. 15476, File No. BPH–4172; WKKO Radio, Inc., Cocoa, Fla., Docket No. 15477, File No. BPH–4173; for construction permits.

The Hearing Examiner having under consideration a joint motion filed December 16, 1964, by the above-entitled applicants requesting that the evidentiary hearing presently scheduled for December 21, 1964, be continued for thirty days or for such time as may be convenient to the Hearing Examiner; and

It appearing that the reason for the requested continuance is to give the Review Board time to act on an agreement entered into between the parties pursuant to which one of the applications is to be dismissed and the other retained in hearing; and

It further appearing that there are no objections to the immediate favorable consideration of the joint motion, and good cause for granting the same having been shown:

It is ordered, This the 17th day of December 1964, that the joint motion for continuance is granted, and the evidentiary hearing now scheduled for December 21, 1964 is continued to January 29, 1965.

Released: December 18, 1964.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] BEN F. WAPLE,
Secretary.

[F.R. Doc. 64–13207; Filed, Dec. 23, 1964; 8:45 a.m.]

[FCC 64–1171]

VHF STATIONS IN MAJOR MARKETS

Notice of Designation for Hearing of Applications To Acquire Interests

DECEMBER 18, 1964.

For many years the Commission has been concerned about the ownership or control of large numbers of broadcast facilities by a single person or entity. The reasons for this concern have been set forth many times, and need not be detailed at length here. Briefly, our purpose is to prevent undue concentration of control in the broadcasting industry, and to encourage the development of the greatest diversity and variety in the presentation of information, opinion, and broadcast material generally. In our actions in this area, we are guided by the Congressional policy against monopoly in the communications field (e.g., as expressed in section 313 of the Communications Act), and the concept (recognized by the courts) that the broadcasting business is, and should be, one of free competition. In the light of these considerations, in 1954 we adopted the present numerical limitations on broadcast holdings permitted a single individual or group—7 AM stations, 7 FM stations, and 7 television stations of which no more than 5 may be VHF stations.

In recent years, however, there has been a marked increase in the extent of multiple ownership, especially in television. This has been particularly true in the VHF, the older and more extensive service on which the great majority of the nation's viewers rely. Particularly evident is the concentration of such multiple ownership in the largest markets where the numbers of viewers reached are greatest and where diversity of interests and viewpoints should be maximized. Overall, the number of multiple TV station owners increased from 81 to 134 between 1956 and 1964, representing 23.3 and 40.9 percent, respectively, of all station owners. The number of TV stations owned by multiple owners increased from 203 to 372 during the same period, or from 43.4 to 65.7 percent of all stations, while the number of individually owned stations declined (265 to 194). There was an increase in the number of owners of six stations (3 to 5), of five stations (4 to 11), of 4 stations (5 to 20), of 3 stations (22 to 32), and of two stations (46 to 65).

The congealing of multiple ownership interests in the major centers can be summarized as follows:

The top 10 markets include almost 40 percent of all TV households (roughly 20 million homes). Within these markets are 40 VHF stations, of which 37 are held by multiple owners and the remaining 3 are licensed to companies owning daily newspapers in the same cities. Similarly, the top 50 markets include almost 75 percent of all TV homes: Within these markets are 156 VHF stations, of which 111 (71 percent) are licensed to multiple ownership interests while 17 of the remaining 45 stations have joint interests with daily newspapers in the same markets. Moreover, there is a clearly discernible pattern of the largest multiple owners concentrating their holdings in the largest markets. Thus, the eight multiple owners holding the maximum allowable number of 5 VHF stations have 40 VHF stations, of which 22 are located in the top 10 markets, 32 in the top 25 markets, and 38 in the top 50 markets.

We do not believe that this degree of multiple ownership concentration in the largest population centers is desirable.

While we do not now propose a divestiture of existing interests, we have determined that the trend toward concentration in the VHF service is sufficiently serious to require the immediate adoption of an interim policy. We are presently conducting an overall review of the problem of concentration and diversification of the broadcast media and of allied interests in other public opinion media. Pending the formulation of more comprehensive proposals, we are today adopting the following policy with respect to VHF stations:

Absent a compelling affirmative showing, we will designate for hearing any application filed after December 18, 1964 for the acquisition of a VHF station in one of the top 50 television markets, if the applicant or any party thereto already owns or has interests in one or more VHF stations in the top 50 markets; we shall treat likewise any application to acquire interests in two or more VHF stations in these markets if the applicant now has no interests in VHF stations in these 50 markets. We are adopting this policy because, under presently existing circumstances, we cannot normally make the required finding that grant of an application for a second VHF station in the top 50 markets will serve the public interest without giving the proposal the detailed scrutiny of a hearing.

In listing the largest 50 markets (See Att. 1) we have used the 1963 American Research Bureau ranking based on net weekly circulation.[1] Any party believing that this ranking describes his particular circumstances inaccurately, or wishing to suggest another ranking, may do so and such suggestions will be considered on their merits.

In emphasizing one particular aspect of the concentration problem, we do not mean to suggest lack of concern about others. We shall continue to give close examination to other applications presenting substantial multiple ownership considerations.

FEDERAL COMMUNICATIONS COMMISSION,[2]
[SEAL] BEN F. WAPLE,
Secretary.

TOP 50 TELEVISION MARKETS

1. New York, N.Y.
2. Los Angeles, Calif.
3. Chicago, Ill.
4. Philadelphia, Pa.
5. Boston, Mass.
6. Detroit, Mich.
7. San Francisco, Calif.
8. Cleveland, Ohio
9. Pittsburgh, Pa.
10. Washington, D.C.
11. Providence, R.I.
12. St. Louis, Mo.
13. Hartford-New Haven, Conn.
14. Dallas-Ft. Worth, Tex.
15. Cincinnati, Ohio
16. Minneapolis-St. Paul, Minn.
17. Baltimore, Md.
18. Indianapolis, Ind.
19. Kansas City, Mo.
20. Seattle-Tacoma, Wash.
21. Milwaukee, Wis.
22. Buffalo, N.Y.
23. Atlanta, Ga.
24. Miami, Fla.
25. Wheeling, W. Va.-Steubenville, Ohio
26. Houston, Tex.
27. Dayton, Ohio
28. Harrisburg-Lancaster-Lebanon-York, Pa.
29. Charlotte, N.C.
30. Sacramento-Stockton, Calif.
31. Columbus, Ohio
32. Portland, Oreg.
33. Toledo, Ohio
34. Grand Rapids-Kalamazoo, Mich.
35. Birmingham, Ala.
36. Memphis, Tenn.
37. Lansing, Mich.
38. Johnstown-Altoona, Pa.
39. Albany-Schenectady-Troy, N.Y.
40. Tampa-St. Petersburg, Fla.
41. Syracuse, N.Y.
42. Nashville, Tenn.
43. Louisville, Ky.
44. Charleston-Huntington, W. Va.
45. New Orleans, La.
46. Saginaw-Bay City-Flint, Mich.
47. Denver, Colo.
48. Greenville-Asheville, N.C. Spartanburg, S.C.
49. Oklahoma City, Okla.
50. Greensboro-Winston Salem, N.C.

DISSENTING STATEMENT OF COMMISSIONER ROSEL H. HYDE

I dissent to the issuance of Public Notice No. 60894. The stated purpose of the notice is to prevent undue concentration of control in the broadcast industry and to encourage the development of diversity and variety in presentation of information. I am concerned that the impact of the proposed new policy will have just the opposite effect.

The issues raised will, of course, be subject to further consideration in the light of the information and arguments submitted in response to a Notice of Proposed Rule Making which presumably will be issued. However, on the basis of present information it would appear that the new approach would tend to limit the effectiveness of the competition of other broadcast interests as against the national networks, the dominant forces in the industry. I see no reason why the Commission should feel that larger units should not be permitted to compete in the larger markets where the number of facilities is the greatest and the competition is the strongest. If the percentage of population theory now being advanced is to be followed to its logical conclusion, how can national networks, national publications, and other national services be justified?

I believe that there are serious questions which should receive further consideration before adoption of a policy to designate for hearing all applications for acquisition of VHF stations in the top 50 TV markets where the applicant or any party thereto already owns or has interest in one or more TV stations in the top 50 markets. I think the effect of this pronouncement is to establish what in operation will constitute a freeze against timely consideration of applications filed in accordance with substantive rules and policy.

[F.R. Doc. 64-13260; Filed, Dec. 23, 1964; 8:47 a.m.]

[1] Based on the circulation of the largest station in each market, the net weekly circulation in these markets ranges from over 5 million to 332,000 homes; assuming 3.3 persons per household, the 332,000 homes would include about 1 million persons.

[2] Commissioner Ford absent.

FEDERAL RESERVE SYSTEM

SUMMIT TRUST CO.

Order Approving Merger of Banks

In the matter of the application of The Summit Trust Company for approval of merger with The Elizabethport Banking Company.

There has come before the Board of Governors, pursuant to the Bank Merger Act of 1960 (12 U.S.C. 1828(c)), an application by The Summit Trust Company, Summit, New Jersey, a State member bank of the Federal Reserve System, for the Board's prior approval of the merger of that bank and The Elizabethport Banking Company, Elizabeth, New Jersey, under the charter of the former and the title of Summit and Elizabeth Trust Company. As an incident to the merger, the three offices of each bank would become offices of the resulting bank. Notice of the proposed merger, in form approved by the Board, has been published pursuant to said Act.

Upon consideration of all relevant material in the light of the factors set forth in said Act, including reports furnished by the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Department of Justice on the competitive factors involved in the proposed merger:

It is hereby ordered, For the reasons set forth in the Board's Statement[1] of this date, that said application be and hereby is approved, provided that said merger shall not be consummated (a) within seven calendar days after the date of this Order or (b) later than three months after said date.

Dated at Washington, D.C., this 17th day of December 1964.

By order of the Board of Governors.[2]

[SEAL] MERRITT SHERMAN,
Secretary.

[F.R. Doc. 64-13211; Filed, Dec. 23, 1964; 8:45 a.m.]

INTERAGENCY TEXTILE ADMINISTRATIVE COMMITTEE

CERTAIN COTTON TEXTILES AND COTTON TEXTILE PRODUCTS PRODUCED OR MANUFACTURED IN THE REPUBLIC OF THE PHILIPPINES

Restraint Levels

DECEMBER 22, 1964.

On February 24, 1964 the United States Government, in furtherance of the objectives of, and under the terms of, the Long Term Arrangement Regarding International Trade in Cotton Textiles done at Geneva on February 9, 1962, concluded a bilateral agreement with the Republic of the Philippines concerning exports of cotton textiles from the Republic of the Philippines to the United States over a four-year period (TIAS 5519). Under this agreement the Republic of the Philippines has undertaken to limit its exports to the United States

[1] Filed as part of the original document. Copies available upon request to the Board of Governors of the Federal Reserve System, Washington, D.C., 20551, or to the Federal Reserve Bank of New York.

[2] Voting for this action: Unanimous, with all members present.

of certain cotton textiles and cotton textile products to specified annual amounts. The second year of the agreement will commence on January 1, 1965, and extend through December 31, 1965. The categories which are subject to specific export limitation under the agreement are as follows: 32, 39, 45, 50, 51, 60, 61, and 64.

There is published below a letter of December 22, 1964, from the Chairman of the President's Cabinet Textile Advisory Committee to the Commissioner of Customs directing that the amounts of cotton textiles and cotton textile products in Categories 32, 39, 45, 50, 51, 60, 61, and 64 produced or manufactured in the Republic of the Philippines which may be entered, or withdrawn from warehouse, for consumption in the United States from January 1, 1965, through December 31, 1965, be limited to certain designated levels. The levels set forth in this letter are those designated under the bilateral agreement for the second calendar year with certain adjustments agreed to in subsequent arrangements between the United States and the Republic of the Philippines.

THOMAS JEFF DAVIS,
Acting Chairman, Interagency Textile Administrative Committee and Acting Deputy to the Secretary of Commerce for Textile Programs.

THE SECRETARY OF COMMERCE

PRESIDENT'S CABINET TEXTILE ADVISORY COMMITTEE

Washington 25, D.C., December 22, 1964.

COMMISSIONER OF CUSTOMS,
DEPARTMENT OF THE TREASURY
Washington, D.C.

DEAR MR. COMMISSIONER: Under the terms of the Long Term Arrangement Regarding International Trade in Cotton Textiles done at Geneva on February 9, 1962, and in accordance with the procedures outlined in Executive Order 11052 of September 28, 1962, you are directed to prohibit, effective January 1, 1965, and for the period extending through December 31, 1965, entry into the United States for consumption, and withdrawal from warehouse for consumption, of cotton textiles and cotton textile products in Categories 32, 39, 45, 50, 51, 60, 61, and 64, produced or manufactured in the Republic of the Philippines in excess of the following levels of restraint:

Category:	*12-month level of restraint*
32	3,307,500 dozen.
39	236,250 doz. pair.
45	23,615 dozen.
50	15,750 dozen.
51	15,750 dozen.
60	7,350 dozen.
61	1,260,000 dozen.
64	159,784 pounds.

In carrying out this directive, entries of cotton textiles and cotton textile products in Categories 32, 39, 45, 50, 51, 60, 61, and 64, produced or manufactured in the Republic of the Philippines, which have been exported to the United States from the Republic of the Philippines prior to January 1, 1965, shall, to the extent of any unfilled balances, be charged against the levels of restraint established for such goods during the period January 1, 1964, through December 31, 1964. In the event that the level of restraint established for the period January 1, 1964, through December 31, 1964, has been exhausted by previous entries, such goods shall be subject to the directives set forth in this letter.

A detailed description of Categories 32, 39, 45, 50, 51, 60, 61 and 64, in terms of T.S.U.S.A. numbers was published in the FEDERAL REGISTER on October 1, 1963 (28 F.R. 10551), and amendments thereto on March 24, 1964 (29 F.R. 3679).

In carrying out the above directions, 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 the Philippines and with respect to imports of cotton textiles and cotton textile products from the Republic of the Philippines have been determined by the President's Cabinet Textile Advisory Committee 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 notice provisions of section 4 of the Administrative Procedure Act. This letter will be published in the FEDERAL REGISTER.

Sincerely yours,

LUTHER H. HODGES,
Secretary of Commerce, and Chairman, President's Cabinet Textile Advisory Committee.

[F.R. Doc. 64-13301; Filed, Dec. 23, 1964; 8:48 a.m.]

SECURITIES AND EXCHANGE COMMISSION

[File No. 812-1723]

DOMINICK FUND, INC., ET AL.

Notice of Application for Temporary Exemption

DECEMBER 18, 1964.

Notice is hereby given that The Dominick Fund, Inc. ("Fund"), a Delaware corporation and a closed-end investment company registered under the Investment Company Act of 1940 ("Act"), Dominick & Dominick ("Dominick Partnership"), a New York limited partnership which has been the investment adviser of the Fund, and Dominick & Dominick, Incorporated ("Dominick Corporation"), 14 Wall Street, New York, N.Y., a Delaware corporation which proposes to become the investment adviser of the Fund, have filed an application pursuant to section 6(c) of the Act for an order exempting the Fund and Dominick Corporation from the provisions of sections 15(a) and 15(c) of the Act during the period from October 1, 1964, until the date of the annual meeting of the stockholders of the Fund scheduled to be held on February 23, 1965. All interested persons are referred to the application on file with the Commission for a complete statement of applicants' representations which are summarized below.

Dominick Partnership has served the Fund as investment adviser pursuant to a written contract dated February 19, 1945, which contract has been continued annually since that time. The contract provides that it will automatically terminate in the event of its assignment by Dominick Partnership. Dominick Partnership has proposed to transfer its business to Dominick Corporation on October 1, 1964, but pursuant to its terms, the contract cannot be assigned.

The application states that pursuant to the Fund's by-laws, the next annual meeting of the stockholders of the Fund is scheduled for February 23, 1965, and that it would be expensive to call a special meeting solely for the purpose of approving a new contract with Dominick Corporation. Therefore, Dominick Corporation proposes to serve the Fund as investment adviser without a written contract and without being paid any fee, except for regular and customary brokerage commissions on securities sold or purchased for the Fund, until the next annual meeting of the Fund's stockholders on February 23, 1965.

The application states that the persons who have been general partners of Dominick Partnership are officers and stockholders of Dominick Corporation, and that at the inception of Dominick Corporation's operations each of such persons will have substantially the same equity and voting power in Dominick Corporation as he had as a general partner in Dominick Partnership.

Notice is further given that any interested person may, not later than January 11, 1965, at 5:30 p.m. submit to the Commission in writing a request for a hearing on the matter accompanied by a statement as to the nature of his interest, the reason for such request and the issues of fact or law proposed to be controverted, or he may request that he be notified if the Commission should order a hearing thereon. Any such communication should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C., 20549. A copy of such request shall be served personally or by mail (air mail if the person being served is located more than 500 miles from the point of mailing) upon applicants at the address set forth above. Proof of such service (by affidavit or in case of an attorney-at-law by certificate) shall be filed contemporaneously with the request. At any time after said date, as provided by Rule 0-5 of the rules and regulations promulgated under the Act, an order disposing of the application herein may be issued by the Commission upon the basis of the information stated in said application, unless an order for hearing upon said application be issued upon request or upon the Commission's own motion.

For the Commission (pursuant to delegated authority).

[SEAL] ORVAL L. DUBOIS,
Secretary.

[F.R. Doc. 64-13225; Filed, Dec. 23, 1964; 8:46 a.m.]

[File No. 812-1722]

RIDC INDUSTRIAL DEVELOPMENT FUND

Notice of Filing of Application for Order Declaring Company Exempt From Act

DECEMBER 18, 1964.

Notice is hereby given that RIDC Industrial Development Fund ("Develop-

ment Fund"), 471 Union Trust Building, Pittsburgh 19, Pa., a Pennsylvania corporation organized under the Pennsylvania Business Development Credit Corporation Law, has filed an application pursuant to section 6(c) of the Investment Company Act of 1940 ("Act") for an order exempting Development Fund from the provisions of the Act. All interested persons are referred to the application, which is on file with the Commission, for a full statement of the representations therein, which are summarized below.

Development Fund's represents that the Business Development Credit Corporation Law of Pennsylvania has as its purpose, as part of an overall program, the encouragement of the location of new business in the State and the expansion of existing businesses. Its primary purpose is to provide money and credit to new and existing businesses located in 9 counties in the State by means of secured or unsecured loans or advances to a business unable to obtain desired financial assistance from financial institutions on reasonable terms, and, on a limited scale, the purchase of equity securities of such companies.

The authorized capital of Development Fund is $1,000,000 represented by its currently outstanding 100,000 shares of common stock, par value $10 per share. Development Fund obtained its capital through the sale of capital stock to 23 knowledgeable business organizations and has not sold, or offered to sell, and will not sell, or offer to sell, securities to individuals. Development Fund will also obtain funds through term loans from financial institutions within the region pursuant to lending agreements as contemplated by the Pennsylvania Business Development Credit Corporation Law. Development Fund has also obtained letters of commitment from approximately 33 financial institutions to enter into lending agreements under which they agree to loan Development Fund sums totaling $3,295,000. Under the lending agreements, Development Fund has the right to make pro-rata calls on the participating financial institutions for loans to it to be evidenced by promissory notes payable in five years at an interest rate expected to be the prime rate plus one-quarter per cent. Development Fund represents that the business organizations and financial institutions which have purchased the capital stock and entered into lending agreements are sophisticated in security matters and have purchased for investment only and not for resale.

Under the provisions of the Pennsylvania Business Development Credit Corporation Law, six of the fifteen members of the Board of Directors of Development Fund are elected by the shareholders, eight members by the financial institutions who are parties to loan agreements (with each such financial institution being given one vote for each $1,000 of loan obligation under its lending agreement with Development Fund), and the remaining director is ex officio the Secretary of Commerce of the Commonwealth of Pennsylvania.

Since Development Fund will be engaged in the business of investing and since it proposes to acquire investment securities having a value exceeding 40 percent of its total assets, Development Fund is an investment company within the definition of section 3(a)(3) of the Act and is required to register unless exempted pursuant to section 6(c) of the Act.

In support of its application, Development Fund states it will conduct its operations and business so as to implement the public purposes of the Pennsylvania Business Development Credit Corporation Law by seeking to alleviate a critical and chronic condition of unemployment which exists in various areas of the State; by promoting, attracting, stimulating, rehabilitating, and revitalizing commerce, industry, and manufacturing in such areas; and by providing to deserving borrowers financial assistance otherwise unavailable from conventional financial institutions. It also states that the Commonwealth of Pennsylvania will be involved in the management of Development Fund through membership of the Pennsylvania Secretary of Commerce on the board of directors; that neither Development Fund nor any of those to whom it offers its securities is motivated primarily by profit making prospects, but their interest is primarily one of civic responsibility and community service in fulfillment of the public purposes of the Pennsylvania Business Development Credit Corporation Law. The securities of Development Fund have been and will be sold only to corporations, financial institutions and other knowledgeable business entities for whom, it is alleged, the protections of the Act are not designed, and, in addition, Development Fund will be supervised by the State Department of Banking and is required to make annual reports of its condition to the Governor, Legislature, and Secretary of Banking.

Notice is further given that any interested person may, not later than January 6, 1965, at 5:30 p.m. submit to the Commission in writing a request for a hearing on the matter accompanied by a statement as to the nature of his interest, the reason for such request and the issues of fact or law proposed to be controverted, or he may request that he be notified if the Commission should order a hearing thereon. Any such communication should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C., 20549. A copy of such request shall be served personally or by mail (air mail if the person being served is located more than 500 miles from the point of mailing) upon Development Fund. Proof of such service (by affidavit or in case of an attorney-at-law by certificate) shall be filed contemporaneously with the request. At any time after said date, as provided by Rule 0–5 of the rules and regulations promulgated under the Act, an order disposing of the application herein may be issued by the Commission upon the basis of the information stated in said application, unless an order for hearing upon said application shall be issued upon request or upon the Commission's own motion.

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F.R. Doc. 64–13226; Filed, Dec. 23, 1964; 8:46 a.m.]

[File No. 812–1735]

NUCLEONICS, CHEMISTRY & ELECTRONICS SHARES, INC., AND RESEARCH INVESTING CORP.

Notice of Filing of Application for Order Exempting Proposed Transactions Between Affiliated Persons

DECEMBER 21, 1964.

Notice is hereby given that Nucleonics, Chemistry & Electronics Shares, Inc. ("Nucleonics") and Research Investing Corp. ("Research"), 163 Engle Street, Englewood, N.J., both registered diversified management open-end investment companies, have filed a joint application pursuant to section 17(b) of the Investment Company Act of 1940 ("Act") for an order exempting from the provisions of section 17(a) of the Act the proposed merger of Nucleonics into Research. All interested persons are referred to the application on file with the Commission for a complete statement of the applicants' representations therein, which are summarized below.

The proposed merger for accounting purposes will be treated as a "pooling of interests". Accordingly, the assets, liabilities and equity accounts of the merging companies will be carried forward on the books of Research at the amounts theretofore carried on the books of the constituent companies, except that the excess of par value of capital stock issued over that previously outstanding will be charged to paid-in surplus.

The application states that where a shareholder holds certificates for his shares of Nucleonics stock, upon surrender of such Nucleonics share certificates, stock certificates of Research will be issued to him for the largest whole number of Research shares to which he thus shall become entitled, plus a check for the value of any fractional Research share. Where the stockholder's shares are held for him in a contractual or voluntary plan or dividend reinvestment account, shares of Research will be credited to such plan or account for the entire number of whole and fractional Research shares to which he thus shall become entitled. The exchange will be made on the basis of the adjusted per share net asset values of Nucleonics and Research and without any sales load. The purpose is to adjust as between the shareholders of each Fund for an increased or decreased possible tax liability by reason of the value of their holdings in the merged Fund having a higher or lower ratio of unrealized appreciation or depreciation or realized capital gains or losses, as well as to adjust for losses or gains, if any, which may be realized if securities in the portfolio of Nucleonics are sold as not being consid-

ered suitable to achieve the policies of Research. The adjustments to the net asset value of the two Funds will be 6½ percent of each Fund's unrealized appreciation or depreciation and 10 percent of each Fund's realized gains or losses.

In the opinion of counsel for both Funds no taxable gain or loss under the United States Internal Revenue Code will result to either of the Funds by reason of the merger or to the stockholders of Nucleonics upon the exchange of their stock for stock of Research, except that the amount of any check received in lieu of fractional shares will be taxed as a dividend. The cost basis of the Research shares for Federal tax purposes will be the same as the cost basis for Nucleonics' shares previously held by each shareholder, adjusted for any fractional share cash distribution. The cost basis of the Nucleonics portfolio assets acquired by Research will remain the same as when such assets were held by Nucleonics.

The agreement of merger has been approved by the Board of Directors of both companies subject to certain conditions, including approval of two-thirds (⅔'s) or more of the outstanding shares of stock of each Fund. The valuation date will be the first full business day on which the New York Stock Exchange is open following the day upon which the merger has been approved by the shareholders of both Funds.

Research and Nucleonics have Templeton, Damroth Security Managers, Inc. as their investment adviser and principal underwriter; Templeton, Dobbrow & Vance, Inc. as their supplementary investment adviser; Renyx Field & Co., Inc. as their principal distributor to handle retail sales; and certain common officers and directors who are also directors and/or officers of the above-named companies as well as of Templeton, Damroth Corp., the parent company of some of such companies. The application represents that no person owns beneficially, directly or indirectly, 25 percent of the voting securities of either Nucleonics or Research; consequently, it is applicants' view that the two Funds are presumed not to be under common control. However, in view of the above-mentioned relationships, applicants have filed the present application, pursuant to section 17(b) of the Act, requesting an exemption from the provisions of section 17(a).

Notice is further given that any interested person may, not later than December 30, 1964, at 5:30 p.m., submit to the Commission in writing a request for a hearing on the matter accompanied by a statement as to the nature of his interest, the reason for such request and the issues of fact or law proposed to be controverted, or he may request that he be notified if the Commission shall order a hearing thereon. Any such communication should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C., 20549. A copy of such request shall be served personally or by mail (air mail if the person being served is located more than 500 miles from the point of mailing) upon applicant at the address stated above. Proof of such service (by affidavit or in case of an attorney-at-law by certificate) shall be filed contemporaneously with the request. At any time after said date, as provided by Rule 0–5 of the rules and regulations promulgated under the Act, an order disposing of the application herein may be issued by the Commission upon the basis of the information stated in said application, unless an order for hearing upon said application shall be issued upon request or upon the Commission's own motion.

For the Commission (pursuant to delegated authority).

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F.R. Doc. 64–13238; Filed, Dec. 23, 1964; 8:46 a.m.]

INTERSTATE COMMERCE COMMISSION

ORGANIZATION

Divisions of the Commission

DECEMBER 11, 1964.

The Interstate Commerce Commission has amended its Organization Minutes, being assignment of work, business and functions pursuant to section 17 of the Interstate Commerce Act, as amended, issue of March 7, 1961, revised to May 1, 1961 (26 F.R. 4773, 5167, 8434, 10991 and 12789; 27 F.R. 1234, 1747, 2500, 3830 and 9997; 28 F.R. 198, 896 and 8185; and 29 F.R. 3027, 4935, 11401, 12503, 14517 and 16846) as follows:

Under the heading Divisions of the Commission, the last sentence of Item 2.4 has been amended to read as follows:

The Commission reserves to itself the determination (1) as to the disposition of any Commission proceeding subsequent to an adverse decision of a court, and (2) as to the filing and general content of a memorandum or brief filed on behalf of the Commission as amicus curiae in any court.

[SEAL] HAROLD D. MCCOY, *Secretary.*

[F.R. Doc. 64–13164; Filed, Dec. 23, 1964; 8:45 a.m.]

[Notice 26]

APPLICATIONS FOR MOTOR CARRIER "GRANDFATHER" CERTIFICATE OF REGISTRATION

DECEMBER 18, 1964.

The following applications are filed under section 206(a)(7) of the Interstate Commerce Act, as amended October 15, 1962. These applications are governed by Special Rule 1.244, of the Commission's rules of practice published in the FEDERAL REGISTER, issue of December 8, 1962, page 12188, which provides, among other things, that protests to the granting of an application may be filed with the Commission within 30 days after the date of notice of filing of the application is published in the FEDERAL REGISTER. Failure seasonably to file a protest will be construed as a waiver of opposition and participation in the proceeding. Protests shall set forth specifically the grounds upon which they are made and contain a concise statement of the interest of the protestant in the proceeding. Protests containing general allegations may be rejected. A protest filed under these special rules shall be served upon applicant's representative (or applicant, if no practitioner representing him is named). The original and six copies of the protests shall be filed with the Commission.

The Special Rules do not provide for publication of the operating authority, but the applications are available at the Commission's office in Washington, D.C., and the field offices.

Applications not included in this publication will be published at a later date.

CALIFORNIA

No. MC 99818 (Sub-No. 1) (REPUBLICATION), filed January 18, 1963, published in FEDERAL REGISTER issue of June 12, 1963, and republished this issue. Applicant: ARTHUR R. BENNETT, doing business as B–LINE EXPRESS, 5105 East Eighth Street, Oakland, Calif., and COAST DRAYAGE, 615 Cedar Street, Berkeley, Calif., joint applicants, California certificates granted by Decisions Nos. 59294 and 59504. Applicant's attorney: Scott Elder, 200 Bush Street, San Francisco 4, Calif.

NOTE: The purpose of this republication is to show Coast Drayage as joint applicant in so far as California certificates granted by Decisions Nos. 59294 and 59504 are concerned.

MASSACHUSETTS

No. MC 120748 (Sub-No. 1) (REPUBLICATION), filed February 6, 1963, published in FEDERAL REGISTER issue of October 2, 1963, and republished this issue. Applicant: SANTUCCI TRUCKING CO., INC., 118 Main Street, Milford, Mass., and JOHN J. MINUTOLI, doing business as JAY JAY FORWARDING SERVICE, 167 Milk Street, Boston, Mass., joint applicants.

NOTE: The purpose of this republication is to show John J. Minutoli, doing business as Jay Jay Forwarding Service, as joint applicant.

OHIO

No. MC 96995 (Sub-No. 1) (REPUBLICATION), filed February 1, 1963, published in FEDERAL REGISTER issue of June 12, 1963, and republished this issue. Applicant: MIKE MERCURE, Route No. 1, New Waterford, Ohio, and MIKE MERCURE TRUCKING, INC., Route No. 1, New Waterford, Ohio, joint applicants. Applicant's attorney: James M. Burtch, 44 East Broad Street, Columbus 15, Ohio.

NOTE: The purpose of this republication is to show Mike Mercure Trucking, Inc. as joint applicant.

No. MC 120064 (Sub-No. 1) (REPUBLICATION), filed February 6, 1963, published in FEDERAL REGISTER issue of June 12, 1963, and republished this issue. Applicant: WHITE MOVING & STORAGE CO., 630 South Second Street, Greenfield, Ohio, and HILLSBORO TRANSPORTATION CO., 131½ West Walnut Street, Hillsboro, Ohio, joint applicants, Ohio Certificate Nos. 3010 and 8146. Applicant's representative: Earl J. Thomas, Thomas Building, Post Office

Drawer 70, 5844–5866 North High Street, Worthington, Ohio.

NOTE: The purpose of this republication is to show Hillsboro Transportation Co., as joint applicant in so far as Ohio Certificate Nos. 3010 and 8146 are concerned.

By the Commission.

[SEAL] HAROLD D. McCOY, *Secretary.*

[F.R. Doc. 64-13165; Filed, Dec. 23, 1964; 8:45 a.m.]

[Notice 333]

MOTOR CARRIER ALTERNATE ROUTE DEVIATION NOTICES

DECEMBER 18, 1964.

The following letter-notices of proposals to operate over deviation routes for operating convenience only have been filed with the Interstate Commerce Commission, under the Commission's Deviation Rules Revised, 1957 (49 CFR 211.1 (c)(8)) and notice thereof to all interested persons is hereby given as provided in such rules (49 CFR 211.1(d)(4)).

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 211.1(e)) 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 Deviation Rules Revised, 1957, will be numbered consecutively for convenience in identification and protests, if any, should refer to such letter-notices by number.

MOTOR CARRIERS OF PROPERTY

No. MC 20824 (Deviation No. 4), COMMERCIAL MOTOR FREIGHT, INC., OF INDIANA, 111 East McCarty Street, Indianapolis, Ind., 46255, filed December 9, 1964. Carrier proposes to operate as a *common carrier*, by motor vehicle, of *general commodities*, with certain exceptions, over deviation routes as follows: (1) From Columbus, Ohio, over Interstate Highway 71 to junction Interstate Highway 275, thence over Interstate Highway 275 to junction Interstate Highway 75, thence over Interstate Highway 75 to Cincinnati, Ohio, and (2) from Dayton, Ohio, over Interstate Highway 75, to Cincinnati, and return over the same routes, for operating convenience only. The notice indicates that the carrier is presently authorized to transport the same commodities over pertinent service routes as follows: (1) From Columbus, over U.S. Highway 40 to Springfield, Ohio, thence over Highway 4 to Dayton, thence over unnumbered highway (formerly U.S. Highway 25), south of Franklin, Ohio, to junction Ohio Highway 73, thence over Ohio Highway 73 to Middletown, Ohio, thence over Ohio Highway 4 to junction Ohio Highway 63, thence over Ohio Highway 63 to Monroe, Ohio, thence over U.S. Highway 25 to Cincinnati, (2) from Dayton, over U.S. Highway 35 to Eaton, Ohio, thence over U.S. Highway 127 to Cincinnati, (3) from Eaton, over Ohio Highway 122 to Middletown, thence over Ohio Highway 4 to junction Ohio Highway 63, thence over Ohio Highway 63 to Monroe, thence over U.S. Highway 25 to Cincinnati, (4) from Hamilton, Ohio, over Ohio Highway 4 to Cincinnati, and (5) from Eaton, over Ohio Highway 122 to Middletown, thence over Ohio Highway 25 to Cincinnati, and return over the same routes.

No. MC 26739 (Deviation No. 3), CROUCH BROS., INC., Transport Building, St. Joseph, Mo., 64501, filed December 7, 1964. Carrier proposes to operate as a *common carrier*, by motor vehicle, of *general commodities*, with certain exceptions, over a deviation route as follows: From junction U.S. Highways 36 and 54, 4 miles west of Pittsfield, Ill., over U.S. Highway 54 to junction Interstate Highway 70, thence over Interstate Highway 70 to Kansas City, Mo., and return over the same route, for operating convenience only. The notice indicates that the carrier is presently authorized to transport the same commodities over pertinent service routes as follows: (1) From Chicago, Ill., over U.S. Highway 66 to Springfield, Ill., thence over U.S. Highway 36 to Monroe City, Mo., thence over U.S. Highway 24 to Kansas City, and (2) from Chicago, over U.S. Highway 66 to Springfield, thence over U.S. Highway 36 to Cameron, Mo., thence over U.S. Highway 69 to Kansas City, and return over the same routes.

No. MC 29130 (Deviation No. 8), THE ROCK ISLAND MOTOR TRANSIT COMPANY, 2744 SE. Market Street, Post Office Box 1355, Des Moines, Iowa, filed December 7, 1964. Carrier proposes to operate as a *common carrier*, by motor vehicle, of *general commodities*, with certain exceptions over a deviation route as follows: From Davenport, Iowa, over U.S. Highway 61 to Muscatine, Iowa, and return over the same route, for operating convenience only. The notice indicates that the carrier is presently authorized to transport the same commodities over a pertinent service route as follows: From Davenport over U.S. Highway 61 (now Iowa Highway 22) to Muscatine, and return over the same route.

No. MC 29988 (Deviation No. 16), DENVER CHICAGO TRUCKING COMPANY, INC., 45th and Jackson Streets, Denver, Colo. Carrier's attorney: Edw. G. Bazelon, 39 South La Salle Street, Chicago 3, Ill., filed December 8, 1964. Carrier proposes to operate as a *common carrier*, by motor vehicle, of *general commodities*, with certain exceptions, over a deviation route as follows: From Denver, Colo., over Interstate Highway 70 via Kansas City and St. Louis, Mo., to junction Interstate Highway 70S at or near Washington, Pa., thence over Interstate Highway 70S to junction Pennsylvania Turnpike, thence over Pennsylvania Turnpike to junction New Jersey Turnpike at or near the Pennsylvania-New Jersey State line, thence over the New Jersey Turnpike to junction New York Highway 3 at the Lincoln Tunnel Interchange No. 16, approximately 3 miles from New York City, N.Y., and return over the same route, for operating convenience only. The notice indicates that the carrier is presently authorized to transport the same commodities over pertinent service routes as follows: (1) From Denver over U.S. Highway 85 to Greeley, Colo., thence over U.S. Highway 34 to junction U.S. Highway 6, thence over U.S. Highway 6 to Sterling, Colo. (also from Denver over U.S. Highway 6 to Sterling), thence over U.S. Highway 138 to junction U.S. Highway 30, thence over U.S. Highway 30 to junction Alternate U.S. Highway 30, thence over Alternate U.S. Highway 30 to Chicago, Ill., (2) from Denver over U.S. Highway 40 to Limon, Colo., thence over U.S. Highway 24 to Halford, Kans., thence over U.S. Highway 83 to Oakley, Kans., thence over U.S. Highway 40 to Topeka, Kans., thence over U.S. Highway 24 to Kansas City (also from Topeka over U.S. Highway 40 to Kansas City), thence over U.S. Highway 40 to St. Louis, and (3) from Chicago over U.S. Highway 20 to junction U.S. Highway 62, approximately 4 miles north of Hamburg, N.Y., thence over U.S. Highway 62 to Buffalo, N.Y., thence over New York Highway 130 to junction U.S. Highway 20, thence over U.S. Highway 20 via Avon, Auburn, and Lafayette, N.Y., to Albany, N.Y. (also from Buffalo over New York Highway 5 to Albany), and thence over U.S. Highway 9 (also over U.S. Highway 9W), to New York, and return over the same routes.

No. MC 43654 (Deviation No. 10), DIXIE OHIO EXPRESS, INC., Post Office Box 750, Akron, Ohio, 44309, filed December 10, 1964. Carrier proposes to operate as a *common carrier*, by motor vehicle, of *general commodities*, with certain exceptions, over a deviation route as follows: From Columbus, Ohio, over Interstate Highway 71 to junction Interstate Highway 275, thence over Interstate Highway 275 to junction Interstate Highway 75, thence over Interstate Highway 75 via Cincinnati, Ohio, to Lexington, Ky., and return over the same route, for operating convenience only. The notice indicates that the carrier is presently authorized to transport the same commodities over a pertinent service route as follows: From Columbus, over U.S. Highway 62 to junction U.S. Highway 68, thence over U.S. Highway 68 to Lexington, and return over the same route.

No. MC 43654 (Deviation No. 11), DIXIE OHIO EXPRESS, INC., Post Office Box 750, Akron, Ohio, 44309, filed December 10, 1964. Carrier proposes to operate as a *common carrier*, by motor vehicle, of *general commodities*, with certain exceptions, over a deviation route as follows: Between Akron, Ohio, and junction Interstate Highway 80S and Ohio Highway 46, over Interstate Highway 80S, for operating convenience only. The notice indicates that the carrier is presently authorized to transport the same commodities over pertinent service routes as follows: (1) From Akron over Ohio Highway 18 to junction Ohio Highway 45, thence over Ohio Highway 45 to junction Interstate Highway 80S, and (2) from Akron, over Ohio Highway 18 to junction Ohio Highway 46, thence over Ohio Highway 46 to junction Interstate Highway 80S, and return over the same routes.

MOTOR CARRIER OF PASSENGERS

No. MC 1515 (Deviation No. 210) (Cancels Deviation No. 192), GREYHOUND LINES, INC. (Southern Division), 219 East Short Street, Lexington, Ky., 40507, filed December 7, 1964. Carrier proposes to operate as a *common carrier*, by motor vehicle, of *passengers and their baggage*, over deviation routes as follows: (1) From Chattanooga, Tenn., over Interstate Highway 75 to junction Georgia Highway 53, thence over Georgia Highway 53 to junction U.S. Highway 41, 3 miles south of Calhoun, Ga., with access roads as follows: (a) From junction Interstate Highway 75 and Georgia Highway 2 over Georgia Highway 2 to Ringgold, Ga., thence over Georgia Highway 151 to junction Interstate Highway 75, (b) from junction Interstate Highway 75 and U.S. Highway 41 over U.S. Highway 41 to Dalton, Ga., and (c) from junction Interstate Highway 75 and U.S. Highway 41, over U.S. Highway 41 to Calhoun, thence over Georgia Highway 156 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 their baggage over a pertinent service route as follows: From Chattanooga over U.S. Highway 41 via Macon, Ga., to Lake City, Fla., thence over U.S. Highway 90 to Jacksonville, Fla., and return over the same route.

No. MC 1515 (Deviation No. 211) GREYHOUND LINES, INC. (Western Division), Greyhound Building, Market and Fremont Streets, San Francisco 5, Calif., filed December 4, 1964. Carrier's attorney: W. T. Meinhold (same address as carrier). Carrier proposes to operate as a *common carrier*, by motor vehicle, of *passengers and their baggage*, over deviation routes as follows: (1) From junction unnumbered highway and U.S. Highway 99 (North Merced Junction), over U.S. Highway 99 to junction unnumbered highway (South Merced Junction), (2) from Fresno over U.S. Highway 99 to junction unnumbered highway (South Kingsburg Junction), serving the points of Malaga, Fowler, Selma and Kingsburg via available access highways to U.S. Highway 99, (3) from junction unnumbered highway and U.S. Highway 99 (North Bakersfield Junction), over U.S. Highway 99 to junction unnumbered highway (South Bakersfield Junction), serving the points of Bakersfield and Greenfield Corners via available access highways to U.S. Highway 99, and (4) from junction Business Route U.S. Highway 99 and Interstate Highway 5 (San Fernando Junction), over Interstate Highway 5 to Los Angeles, serving the points of San Fernando, Burbank and Glendale via available access highways to Interstate Highway 5, and return over the same routes, for operating convenience only. The notice indicates that the carrier is presently authorized to transport passengers and their baggage over a pertinent service route as follows: From San Francisco over San Francisco-Oakland Bay Bridge to Oakland, thence over unnumbered highway via San Leandro and Hayward to junction U.S. Highway 50 northeast of Hayward (Hayward Junction), thence over U.S. Highway 50 to junction California Highway 120 (San Joaquin Bridge), thence over California Highway 120 to junction unnumbered highway (Manteca), thence over unnumbered highway to junction U.S. Highway 99 south of Manteca (South Manteca), thence over U.S. Highway 99 to Los Angeles, and return over the same route.

By the Commission.

[SEAL] HAROLD D. McCOY, *Secretary.*

[F.R. Doc. 64-13165; Filed, Dec. 23, 1964; 8:45 a.m.]

NOTICE OF FILING OF MOTOR CARRIER INTRASTATE APPLICATIONS

DECEMBER 18, 1964.

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, and 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.

State Docket No. 46498, filed April 13, 1964. Applicant: POLSLEY TRANSPORTATION SERVICE, Post Office Box, 39, Covelo, Calif. Applicant's attorney: Edward M. Berol, 100 Bush Street, San Francisco, Calif. Certificate of public convenience and necessity sought to operate a freight service as follows: Transportation of *general commodities* ((a) except used household goods and personal effects not packed in accordance with the crated property requirements as set forth in paragraphs (a)(1) and (a)(2), Item 20 of Minimum Rate Tariff No. 4-B; (b) liquids, compressed gases, commodities in semi-plastic form nor commodities in suspension; liquids in bulk in tank trucks, tank trailers, or tank and semi trailers or a combination of such highway vehicles; (c) commodities when transported in motor vehicles equipped for mechanical mixing in transit; (d) articles of extraordinary value; and (e) automobiles, trucks or buses, new or used, finished or unfinished, namely; passenger automobiles (including jeeps); ambulances; hearses; taxis; freight automobiles; automobile chassis; truck trailers; trucks and trailers combined; buses or bus chassis), between Willits, on the one hand, and, on the other hand, Dos Rios and Covelo and intermediate points between Dos Rios and Covelo along the county road between said points, service to be restricted to the movement of traffic interlined with the Northwestern Pacific Railroad, Pacific Motor-Trucking Company and Pacific Motor Transport and interchanged with said carriers at Willits, Calif.

NOTE: Applicant states the proposed route of service will be from Willits to Longvale via U.S. Highway 101, thence over county roads from Longvale to Covelo and Dos Rios, returning from Covelo via the same route.

HEARING: Date, time and place assigned for hearing this application, not specified.

Requests for procedural information, including the time for filing protests concerning this application should be addressed to the California Public Utilities Commission, State Building, Civic Center, San Francisco 2, Calif., and should not be directed to the Interstate Commerce Commission.

By the Commission.

[SEAL] HAROLD D. McCOY, *Secretary.*

[F.R. Doc. 64-13168; Filed, Dec. 23, 1964; 8:45 a.m.]

[S.O. 947; Taylor's Car Distribution Order 7-A]

CENTRAL RAILROAD COMPANY OF NEW JERSEY AND ERIE-LACKAWANNA RAILROAD CO.

Vacation of Order

Upon further consideration of Taylor's Car Distribution Order No. 7 (The Central Railroad Company of New Jersey; Erie-Lackawanna Railroad Co.) and good cause appearing therefor:

It is ordered, That: Taylor's Car Distribution Order No. 7 be, and it is hereby vacated.

It is further ordered, That this amendment shall become effective at 12:01 a.m., December 18, 1964, and that this order shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and per diem agreement under the terms of that agreement, and by filing it with the Director, Office of the Federal Register.

Issued at Washington, D.C., December 17, 1964.

INTERSTATE COMMERCE COMMISSION,

[SEAL] CHARLES W. TAYLOR, *Agent.*

[F.R. Doc. 64-13172; Filed, Dec. 23, 1964; 8:45 a.m.]

[S.O. 947; Second Rev. Taylor's Car Distribution Order 9-A]

BALTIMORE AND OHIO RAIL ROAD CO. AND CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD CO.

Shortage of Freight Cars

Pursuant to section 1 (15) and (17) of the Interstate Commerce Act and authority vested in me by paragraph (5) (b) of Interstate Commerce Commission Service Order No. 947 (28 F.R. 12127, 29 F.R. 6014 and 9670).

I find that there exists a shortage of freight cars in certain areas because of inequitable distribution and, because

of such emergency, notice and public procedure on this order would be impracticable and contrary to the public interest, and this order shall be made effective upon less than 30 days' notice.

Therefore, it is ordered, That:

(a) The Baltimore and Ohio Rail Road Co. shall deliver to the Chicago, Rock Island and Pacific Railroad Co. a daily average of 25 plain serviceable boxcars inside length less than 44'8".

(b) Cars received by the Chicago, Rock Island and Pacific Railroad Co. under this order will be delivered to the Union Pacific Railroad.

It is further ordered, That The Baltimore and Ohio Rail Road Co. shall prepare empty car cards, tickets or movement slips for all cars delivered to the Chicago, Rock Island and Pacific Railroad Co. Such cards, tickets or slips to accompany cars and be delivered with cars to the Union Pacific Railroad.

(c) *Effective date.* This order shall become effective at 12:01 a.m., December 18, 1964.

(d) *Expiration date.* This order shall expire at 11:59 p.m., December 22, 1964, unless otherwise ordered.

It is further ordered, That this order shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and per diem agreement under the terms of that agreement and by filing it with the Director, Office of the Federal Register.

Issued at Washington, D.C., December 17, 1964.

INTERSTATE COMMERCE COMMISSION,
[SEAL] CHARLES W. TAYLOR,
Agent.

[F.R. Doc. 64-13173; Filed, Dec. 23, 1964; 8:45 a.m.]

[S.O. 947; Rev. Taylor's Car Distribution Order 14]

PENNSYLVANIA RAILROAD CO. AND ILLINOIS CENTRAL RAILROAD CO.

Vacation of Order

Pursuant to section 1 (15) and (17) of the Interstate Commerce Act and authority vested in me by paragraph (5) (b) of Interstate Commerce Commission Service Order No. 947 (28 F.R. 12127, 29 F.R. 6014 and 9670).

I find that there exists a shortage of freight cars in certain areas because of inequitable distribution and, because of such emergency, notice and public procedure on this order would be impracticable and contrary to the public interest, and this order shall be made effective upon less than 30 days' notice.

Therefore, it its ordered, That:

(a) The Pennsylvania Railroad Co. shall deliver to the Illinois Central Railroad Co. a daily average of 25 plain serviceable boxcars inside length less than 44'8".

(b) Cars received by the Illinois Central Railroad Co. under this order will be delivered to the Union Pacific Railroad.

It is further ordered, That The Pennsylvania Railroad Co. shall prepare empty car cards, tickets or movement slips for all cars delivered to the Illinois Central Railroad Co. Such cards, tickets or slips to accompany cars and be delivered with cars to the Union Pacific Railroad.

(c) *Effective date.* This order shall become effective at 12:01 a.m., December 18, 1964.

(d) *Expiration date.* This order shall expire at 11:59 p.m., December 22, 1964, unless otherwise ordered.

It is further ordered, That this order shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and per diem agreement under the terms of that agreement and by filing it with the Director, Office of the Federal Register.

Issued at Washington, D.C., December 17, 1964.

INTERSTATE COMMERCE COMMISSION,
[SEAL] CHARLES W. TAYLOR,
Agent.

[F.R. Doc. 64-13174; Filed, Dec. 23, 1964; 8:45 a.m.]

[S.O. 947; Rev. Taylor's Car Distribution Order 22]

ERIE-LACKAWANNA RAILROAD CO.

Vacation of Order

Pursuant to section 1 (15) and (17) of the Interstate Commerce Act and authority vested in me by paragraph (5) (b) of Interstate Commerce Commission Service Order No. 947 (28 F.R. 12127, 29 F.R. 6014, and 20 F.R. 9670).

I find that there exists a shortage of freight cars in certain areas because of inequitable distribution and, because of such emergency, notice and public procedure on this order would be impracticable and contrary to the public interest, and this order shall be made effective upon less than 30 days' notice.

Therefore, it is ordered, That:

(a) The Erie-Lackawanna Railroad Co. shall deliver to the Chicago Burlington and Quincy Railroad Co. a daily average of 25 plain serviceable boxcars inside length less than 44'8".

It is further ordered, That the Erie-Lackawanna Railroad Co. shall prepare empty car cards, tickets or movement slips for all cars delivered to the Chicago, Burlington and Quincy Railroad.

(c) *Effective date.* This order shall become effective at 12:01 a.m., December 18, 1964.

(d) *Expiration date.* This order shall expire at 11:59 p.m., December 22, 1964, unless otherwise ordered.

It is further ordered, That this order shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and per diem agreement under the terms of that agreement and by filing it with the Director, Office of the Federal Register.

Issued at Washington, D.C., December 17, 1964.

INTERSTATE COMMERCE COMMISSION,
[SEAL] CHARLES W. TAYLOR,
Agent.

[F.R. Doc. 64-13175; Filed, Dec. 23, 1964; 8:45 a.m.]

[S.O. 947; Rev. Taylor's Car Distribution Order 23]

ERIE-LACKAWANNA RAILROAD CO.

Vacation of Order

Pursuant to section 1 (15) and (17) of the Interstate Commerce Act and authority vested in me by paragraph (5) (b) of Interstate Commerce Commission Service Order No. 947 (28 F.R. 12127, 29 F.R. 6014, and 29 F.R. 9670).

I find that there exists a shortage of freight cars in certain areas because of inequitable distribution and, because of such emergency, notice and public procedure on this order would be impracticable and contrary to the public interest, and this order shall be made effective upon less than 30 days' notice.

Therefore, it is ordered, That:

(a) The Erie-Lackawanna Railroad Co. shall deliver to the Chicago, Burlington & Quincy Railroad Co. a daily average of 25 plain serviceable boxcars inside length less than 44'8".

It is further ordered, That the Erie-Lackawanna Railroad Co. shall prepare empty car cards, tickets or movement slips for all cars delivered to the Chicago, Burlington & Quincy Railroad Co.

(c) *Effective date.* This order shall become effective at 12:01 a.m., December 18, 1964.

(d) *Expiration date.* This order shall expire at 11:59 p.m., December 22, 1964 unless otherwise ordered.

It is further ordered, That this order shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and per diem agreement under the terms of that agreement and by filing it with the Director, Office of the Federal Register.

Issued at Washington, D.C., December 17, 1964.

INTERSTATE COMMERCE COMMISSION,
[SEAL] CHARLES W. TAYLOR,
Agent.

[F.R. Doc. 64-13176; Filed, Dec. 23, 1964; 8:45 a.m.]

[S.O. 947; Rev. Taylor's Car Distribution Order 9-A, Amdt. 2]

BALTIMORE AND OHIO RAIL ROAD CO. AND CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD CO.

Vacation of Order

Upon further consideration of Revised Taylor's Car Distribution Order

No. 9–A (The Baltimore and Ohio Rail Road Co.; Chicago, Rock Island and Pacific Railroad Co.) and good cause appearing therefor:

It is ordered, That: Revised Taylor's Car Distribution Order No. 9–A be, and it is hereby vacated.

It is further ordered, That this amendment shall become effective at 12:01 a.m., December 18, 1964, and that this order shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and per diem agreement under the terms of that agreement, and by filing it with the Director, Office of the Federal Register.

Issued at Washington, D.C., December 17, 1964.

INTERSTATE COMMERCE COMMISSION,
[SEAL] CHARLES W. TAYLOR,
Agent.

[F.R. Doc. 64–13177; Filed, Dec. 23, 1964; 8:45 a.m.]

FOURTH SECTION APPLICATIONS FOR RELIEF

DECEMBER 21, 1964.

Protests to the granting of an application must be prepared in accordance with Rule 1.40 of the general rules of practice (49 CFR 1.40) and filed within 15 days from the date of publication of this notice in the FEDERAL REGISTER.

LONG-AND-SHORT HAUL

FSA 39474: *Iron or steel articles to Nashville, Tenn.* Filed by O. W. South, Jr., agent (No. A4611), for interested rail carriers. Rates on iron or steel articles, in carloads, from Gulf, south Atlantic and Virginia ports to Nashville, Tenn.

Grounds for relief: Port equalization and rate relationship.

Tariff: Supplement 22 to Southern Freight Association, Agent, tariff I.C.C. S–398.

FSA 39475: *Liquid caustic soda to La Grange, Ga.* Filed by O. W. South, Jr., agent (No. A4610), for interested rail carriers. Rates on liquid caustic soda, in tank carloads, from Charleston, W. Va., group points to La Grange, Ga.

Grounds for relief: Market competition.

Tariff: Supplement 151 to Traffic Executive Association-Eastern Railroads, Agent, tariff I.C.C. C–102.

FSA 39476: *Liquid caustic soda to Jeffersonville, Ind.* Filed by O. W. South, Jr., agent (No. A4613), for interested rail carriers. Rates on liquid caustic soda, in tank carloads, from Calvert, Ky., to Jeffersonville, Ind.

Grounds for relief: Market competition.

Tariff: Supplement 4 to Southern Freight Association, Agent, tariff I.C.C. S–484.

FSA 39477: *Acetaldehyde from Norco, La.* Filed by O. W. South, Jr., agent (No. A4614), for interested rail carriers. Rates on Acetaldehyde, in tank carloads, from Norco, La., to Heyden, N.J., and Tottenville, N.Y.

Grounds for relief: Market competition.

Tariff: Supplement 50 to Southern Freight Association, Agent, tariff I.C.C. S–384.

FSA 39478: *T.O.F.C. rates from and to points in New Mexico.* Filed by Southwestern Freight Bureau, agent (No. B–8657), for interested rail carriers. Rates on property moving on class and commodity rates, loaded in trailers and transported on railroad flat cars, between Amarillo, El Paso and Lubbock, Tex., on the one hand, and points in New Mexico, on the other.

Grounds for relief: Short-line distance formula and grouping.

Tariff: Supplement 187 to Southwestern Freight Bureau, Agent, tariff I.C.C. 4353.

By the Commission.

HAROLD D. MCCOY,
[SEAL] *Secretary.*

[F.R. Doc. 64–13234; Filed, Dec. 23, 1964; 8:46 a.m.]

[Notice 1099]

MOTOR CARRIER TRANSFER PROCEEDINGS

DECEMBER 21, 1964.

Synopses of orders entered pursuant to section 212(b) of the Interstate Commerce Act, and rules and regulations prescribed thereunder (49 CFR Part 179), appear below:

As provided in the Commission's special rules of practice any interested person may file a petition seeking reconsideration of the following numbered proceedings within 20 days from the date of publication of this notice. Pursuant to section 17(8) of the Interstate Commerce Act, the filing of such a petition will postpone the effective date of the order in that proceeding pending its disposition. The matters relied upon by petitioners must be specified in their petitions with particularity.

No. MC–FC 35388. By order of December 16, 1964, the Transfer Board approved the lease for one year to Kansas City Western Express, Inc., Kansas City, Mo., of a portion of the operating rights in Certificate in No. MC 8803, and the entire operating rights in Certificate in No. MC 8803 Sub 2, issued November 25, 1942 and November 10, 1942, respectively, to The Topeka Transfer & Storage Company, a corporation, Topeka, Kans., authorizing the transportation of: General commodities, with the usual exceptions including household goods and commodities in bulk, between Topeka, Kans., and Kansas City, Mo.: From Topeka over U.S. Highway 24 to Kansas City and return over the same route. Service is authorized to and from the intermediate and off-route points of Perry, Lawrence, Tonganoxie, and Kansas City, Kans., with service to and from points in the Kansas City, Mo., Kansas City, Kans., commercial zone; Lessors retained operating rights have been restricted against service from or to Perry, Lawrence, Tonganoxie, and Kansas City, Kans., or points in the Kansas City, Mo., Kansas City, Kans., commercial zone; Wentworth E. Griffin, 1221 Baltimore, Kansas City, 5, Mo., attorney for applicants.

No. MC–FC 67298. By order of December 16, 1964, the Transfer Board approved the transfer to Russell B. Hullfish, Inc., Plainsboro, N.J., of Permits Nos. MC 45784 and MC 45784 Sub 1, issued July 5, 1941 and August 11, 1949, respectively, to Russell B. Hullfish, Plainsboro, N.J., authorizing the transportation of dried manure fertilizer, in bags, in seasonal operations commencing September 1 and ending May 31, each year, over irregular routes, from Plainsboro, N.J., to points in Connecticut, New York, and Pennsylvania, within 150 miles of Plainsboro; and milk, cream, and milk products, and empty containers, over irregular routes, between Plainsboro, N.J., on the one hand, and, on the other, New York, N.Y., and points in Westchester County, N.Y., and those in Fairfield County, Conn. James C. Bennett, 6–8 Charlton Street, Princeton, N.J., representative for applicants.

No. MC–FC 67407. By order of December 16, 1964, the Transfer Board approved the transfer to Kay-Len Trans., Inc., Paterson, N.J., of the operating rights in Certificate No. MC 105822 Sub 1, issued October 26, 1948, to Charles N. Ged and Joseph C. Homcy, a partnership, doing business as G & H Motor Transportation Co., Paterson, N.J., authorizing the transportation, over irregular routes, of general commodities, excluding household goods, commodities in bulk, and other specified commodities, between points in Essex, Union, Morris, Passaic, Bergen, Monmouth, and Middlesex Counties, N.J., on the one hand, and, on the other, New York, N.Y., and tile and tile products, between points in Hudson and Essex Counties, N.J. George A. Olsen, 69 Tonnele Avenue, Jersey City, N.J., 07306, representative for applicants.

No. MC–FC 67417. By order of December 16, 1964, the Transfer Board approved the transfer to Earl M. Young, Inc., Lincoln, Nebr., of the Permits in Nos. MC 118431 and MC 118431 Sub 2, issued August 31, 1960 and August 15, 1962, respectively, to Earl M. Young, Lincoln, Nebr., authorizing the transportation of: Bananas, from New Orleans, La., to points in Nebraska, and from Gulfport, Miss., to points in Nebraska. Charles F. Noren, NSEA Building, 14th and J, Lincoln, Nebr., attorney for applicants.

No. MC–FC 67436. By order of December 16, 1964, the Transfer Board approved the transfer to Holland Clifton McHenry, doing business as Mac's Delivery, 219 Broadway, Sheridan, Wyo., of the operating rights in Certificate No. MC 27033, issued September 2, 1955, to Jack Sparks, doing business as Otter Freight, Post Office Box 274, Sheridan, Wyo., authorizing the transportation, over regular and irregular routes, of general commodities, except livestock, and the transportation of: Farm machinery, and parts, building materials, fencing materials, stock feed and stock salt, subject to certain restrictions, be-

tween specified points in Montana and Wyoming.

No. MC–FC 67439. By order of December 16, 1964, the Transfer Board approved the transfer to Connie's Incorporated, La Grande, Oreg., of the operating rights in Certificate No. MC 108296, issued June 28, 1961, to Olaf C. Braseth and Geraldine E. Braseth, doing business as La Grande Transfer & Warehouse Co., La Grande, Oreg., authorizing the transportation, over irregular routes, of: Household goods, as defined by the Commission in radial movements, between named counties in Oregon, and points in Idaho and Washington. Earl V. White, 2130 Southwest Fifth Avenue, Portland, Oreg., attorney for applicants.

[SEAL] HAROLD D. McCOY,
Secretary.

[F.R. Doc. 64–13235; Filed, Dec. 23, 1964; 8:46 a.m.]

[Notice 1099–A]

MOTOR CARRIER TRANSFER PROCEEDINGS

DECEMBER 21, 1964.

Application filed for temporary authority under section 210(a)(b) in connection with transfer application under section 212(b) and Transfer Rules, 49 CFR Part 179:

No. MC–FC 66811. Second application filed December 18, 1964, for NORTHEAST FREIGHT LINES, INC., 509 East 34th Street, Paterson, N.J., to temporarily lease the operating rights of ALFRED SEIFERT, SR., doing business as SEIFERT TRUCKING CO., 14 Wenzel Street, East Paterson, N.J., under Section 210a(b). The Transfer to NORTHEAST FREIGHT LINES, INC., of the operating rights of ALFRED SEIFERT, SR., doing business as SEIFERT TRUCKING CO., is pending after hearing.

[SEAL] HAROLD D. McCOY,
Secretary.

[F.R. Doc. 64–13236; Filed, Dec. 23, 1964; 8:46 a.m.]

CUMULATIVE CODIFICATION GUIDE—DECEMBER

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