

FEDERAL REGISTER



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**GUIDE TO
 RECORD RETENTION
 REQUIREMENTS**

[Updated to January 1, 1962]

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Presidential Documents

Title 3—THE PRESIDENT

Proclamation 3457

REDEFINING THE EXTERNAL BOUNDARIES OF THE TIMPANOGOS CAVE NATIONAL MONUMENT, UTAH

By the President of the United States of America

A Proclamation

WHEREAS, by Proclamation No. 1640 of October 14, 1922 (42 Stat. 2285), there were reserved and set apart, as the Timpanogos Cave National Monument, Utah, certain lands as shown on a diagram forming a part of that proclamation; and

WHEREAS a subsequent survey, accepted by the General Land Office on May 17, 1945, disclosed that that diagram does not accurately depict the boundaries of the monument as those boundaries are marked on the ground; and

WHEREAS it appears that it would be in the public interest to redefine the external boundaries of the monument in conformity with the survey:

NOW, THEREFORE, I, JOHN F. KENNEDY, President of the United States of America, under and by virtue of the authority vested in me by the Act of June 8, 1906 (34 Stat. 225; 16 U.S.C. 431), do proclaim that the lands within the following-described boundaries shall constitute the Timpanogos Cave National Monument:

SALT LAKE BASE AND MERIDIAN, UTAH

Beginning at a point marked by a brass cap located 8.33 chains S. 7°30' W. from the quarter section corner common to sections 27 and 28, township 4 south, range 2 east; thence north approximately 20 chains to a point; thence east approximately 50 chains to a point; thence south approximately 50 chains to a point; thence west approximately 50 chains to a point; thence north approximately 30 chains to a brass cap, the point of beginning, as depicted on the plat for township No. 4 south, range No. 2 east, of the Salt Lake Meridian, Utah, Survey and Dependent Resurvey, accepted May 17, 1945, by Assistant Commissioner, General Land Office, Joel David Wolfsohn.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this twenty-seventh day of March in the year of our Lord nineteen hundred and sixty-two, and [SEAL] of the Independence of the United States of America the one hundred and eighty-sixth.

JOHN F. KENNEDY

By the President:

GEORGE W. BALL,
Acting Secretary of State.

[F.R. Doc. 62-3122; Filed, Mar. 28, 1962; 2:42 p.m.]

Executive Order 11012

PROVIDING FOR THE PERFORMANCE OF CERTAIN FUNCTIONS UNDER SECTIONS 1(a) AND 1(b) OF THE ADMINISTRATIVE EXPENSES ACT OF 1946

By virtue of the authority vested in me by Section 301 of Title 3 of the United States Code, and as President of the United States, it is hereby ordered as follows:

SECTION 1. Subsection (b) of Section 1 of Executive Order No. 10530 of May 10, 1954, as amended by Executive Order No. 10759 of March 17, 1958, is hereby further amended to read as follows:

"(b) The authority vested in the President by sections 1(a) and 1(b) of the act of August 2, 1946, ch. 744, 60 Stat. 806, 807, as amended by the act of February 12, 1958, 72 Stat. 14 (5 U.S.C. 73b-1(a), 73b-1(b)), to prescribe regulations (1) with respect to the allowance and payment from Government funds of the expenses of travel of any civilian officer or employee of the Government transferred from one official station to another for permanent duty, the expenses of transportation of his immediate family (or commutation thereof), and the expenses of transportation, packing, crating, temporary storage, drayage, and unpacking of his household goods and personal effects; (2) with respect to the reimbursement of such officer or employee on a commuted basis in lieu of the payment of actual expenses of transportation, packing, crating, temporary storage, drayage, and unpacking of his household goods and personal effects in the case of such transfers between points in the continental United States, except that this authority shall not include authority with respect to the establishment of the commuted rates on which such reimbursement is made; and (3) with respect to the amount of the allowance, and the payment thereof, to such officer or employee for the transportation of a house trailer or mobile dwelling within the continental United States, within Alaska, or between the continental United States and Alaska, for use as a residence."

SEC. 2. The Administrator of General Services is hereby designated and empowered to exercise, without the approval, ratification, or other action of the President, so much of the authority vested in the President by Section 1(b) of the Act of August 2, 1946, ch. 744, 60 Stat. 807 (5 U.S.C. 73b-1(b)), as pertains to the establishment of the rates to be used in reimbursing civilian officers or employees of the Government on a commuted basis in lieu of the payment of actual expenses of transportation, packing, crating, temporary storage, drayage, and unpacking of their household goods and personal effects in the case of transfers from one official station to another within the continental United States for permanent duty.

SEC. 3. The initial regulations to be issued by the Director of the Bureau of the Budget and by the Administrator of General Services under the authority delegated to each of them by this order shall be effective on the same date and effective as of that date the following-described Executive orders are revoked:

- (a) Executive Order No. 9778 of September 10, 1946.
- (b) Executive Order No. 9805 of November 25, 1946.
- (c) Executive Order No. 9933 of February 27, 1948.
- (d) Executive Order No. 9997 of September 8, 1948.
- (e) Executive Order No. 10069 of July 13, 1949.
- (f) Executive Order No. 10177 of October 27, 1950.
- (g) Executive Order No. 10196 of December 20, 1950.
- (h) Executive Order No. 10274 of July 18, 1951.
- (i) Executive Order No. 10381 of August 6, 1952.
- (j) Executive Order No. 10507 of December 10, 1953.

SEC. 4. Existing regulations prescribed by the Director of the Bureau of the Budget under the authority of Section 1(b) of Executive Order No. 10530, as amended and in effect immediately prior to the issuance of this order, shall remain in effect until they are superseded in pursuance of the provisions of this order.

JOHN F. KENNEDY

THE WHITE HOUSE,
March 27, 1962.

[F.R. Doc. 62-3121; Filed, Mar. 28, 1962; 2:40 p.m.]

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Rules and Regulations

Title 5—ADMINISTRATIVE PERSONNEL

Chapter I—Civil Service Commission PART 6—EXCEPTIONS FROM THE COMPETITIVE SERVICE Department of Defense

Effective upon publication in the FEDERAL REGISTER, subparagraph (2) of paragraph (a) of § 6.304 is amended as set out below.

§ 6.304 Department of Defense.

(a) *Office of the Secretary.* * * *
(2) Two Private Secretaries to the Deputy Secretary of Defense and one Private Secretary to each of the following: The Director of Defense Research and Engineering; the Assistant Secretary of Defense (Manpower); the Assistant Secretary of Defense (International Security Affairs); the Senior Military Aide to the President; the Assistant Secretary of Defense (Public Affairs); the Assistant Secretary of Defense (Installations and Logistics); the Assistant Secretary of Defense (Medical and Health); the General Counsel; and the Assistant to the Secretary of Defense (Atomic Energy).

(R.S. 1753, Sec. 2, 22 Stat. 403, as amended; 5 U.S.C. 631, 633)

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

[F.R. Doc. 62-3080; Filed, Mar. 29, 1962; 8:47 a.m.]

PART 6—EXCEPTIONS FROM THE COMPETITIVE SERVICE

Department of Commerce and Federal Maritime Commission

§ 6.312 [Amendment]

1. Effective upon publication in the FEDERAL REGISTER, the headnote and subparagraphs (1) and (2) of paragraph (k) of § 6.312 are revoked.

2. Effective upon publication in the FEDERAL REGISTER, a new § 6.374, paragraph (a) is added to Part 6 as set out below.

§ 6.374 Federal Maritime Commission.

(a) One Confidential Assistant to each Commissioner.

(R.S. 1753, sec. 2, 22 Stat. 403, as amended; 5 U.S.C. 631, 633)

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

[F.R. Doc. 62-3079; Filed, Mar. 29, 1962; 8:47 a.m.]

Title 7—AGRICULTURE

Chapter IX—Agricultural Marketing Service (Marketing Agreements and Orders), Department of Agriculture

[Grapefruit Reg. 7]

PART 905—ORANGES, GRAPEFRUIT, TANGERINES, AND TANGELOS GROWN IN FLORIDA

Limitation of Shipments

§ 905.319 Grapefruit Regulation 7.

(a) *Findings.* (1) Pursuant to the marketing agreement, as amended, and Order No. 905 as amended (7 CFR Part 905), regulating the handling of oranges, grapefruit, tangerines, and tangelos grown in Florida, effective under the applicable provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601-674), and upon the basis of the recommendations of the committees established under the aforesaid amended marketing agreement and order, and upon other available information, it is hereby found that the limitation of shipments of grapefruit, as hereinafter provided, will tend to effectuate the declared policy of the act.

(2) It is hereby further found that it is impracticable and contrary to the public interest to give preliminary notice, engage in public rule-making procedure, and postpone the effective date of this section until 30 days after publication thereof in the FEDERAL REGISTER (5 U.S.C. 1001-1011) because the time intervening between the date when information upon which this section is based became available and the time when this section must become effective in order to effectuate the declared policy of the act is insufficient; a reasonable time is permitted, under the circumstances, for preparation for such effective time; and good cause exists for making the provisions hereof effective as hereinafter set forth. Shipments of all grapefruit, grown in the production area, are presently subject to regulation by grades and sizes, pursuant to the amended marketing agreement and order; the recommendation and supporting information for regulation during the period specified herein were promptly submitted to the Department after an open meeting of the Growers Administrative Committee on March 27, 1962, such meeting was held to consider recommendations for regulation, after giving due notice of such meeting, and interested persons were afforded an opportunity to submit their views at this meeting; the provisions of this section, including the effective time hereof, are identical with the aforesaid recommendation of the committee, and information concerning such provisions and effective time has been disseminated among handlers of such grapefruit; it is necessary, in order to effectuate the declared policy of the act, to make this

section effective during the period hereinafter set forth so as to provide for the continued regulation of the handling of grapefruit, and compliance with this section will not require any special preparation on the part of the persons subject thereto which cannot be completed by the effective time hereof.

(b) *Order.* (1) Terms used in the amended marketing agreement and order shall, when used herein, have the same meaning as is given to the respective term in said amended marketing agreement and order; and terms relating to grade, diameter, standard pack, and standard box, as used herein, shall have the same meaning as is given to the respective term in the United States Standards for Florida Grapefruit (§§ 51.750-51.783 of this title; 26 F.R. 163).

(2) Grapefruit Regulation 6 (§ 905.318; 27 F.R. 2552) is hereby terminated effective at 12:01 a.m., e.s.t., March 30, 1962.

(3) During the period beginning at 12:01 a.m., e.s.t., March 30, 1962, and ending at 12:01 a.m., e.s.t., April 16, 1962, no handler shall ship between the production area and any point outside thereof in the continental United States, Canada, or Mexico:

(i) Any grapefruit, grown in the production area, which do not grade at least U.S. No. 1: *Provided*, That such grapefruit may have discoloration to the extent permitted under the U.S. No. 2 Russet grade, and may have slightly rough texture caused only by speck type melanose;

(ii) Any seeded grapefruit, grown in the production area, which are smaller than $3\frac{5}{16}$ inches in diameter, except that a tolerance of 10 percent, by count, of seeded grapefruit smaller than such minimum size shall be permitted, which tolerance shall be applied in accordance with the provisions, for the application of tolerances, specified in said United States Standards for Florida Grapefruit; or

(iii) Any white seedless grapefruit, grown in the production area, which are smaller than $3\frac{3}{16}$ inches in diameter, except that a tolerance of 10 percent, by count, of white seedless grapefruit smaller than such minimum size shall be permitted, which tolerance shall be applied in accordance with the provisions for the application of tolerances, specified in said United States Standards for Florida Grapefruit; or

(iv) Any pink seedless grapefruit, grown in the production area, which are smaller than $3\frac{3}{16}$ inches in diameter, except that a tolerance of 10 percent, by count, of pink seedless grapefruit smaller than such minimum size shall be permitted, which tolerance shall be applied in accordance with the provisions for the application of tolerances, specified in said United States Standards for Florida Grapefruit.

(Secs. 1-19, 48 Stat. 31, as amended; 7 U.S.C. 601-674)

Dated: March 28, 1962.

PAUL A. NICHOLSON,
Deputy Director, Fruit and Vegetable
Division, Agricultural
Marketing Service.

[F.R. Doc. 62-3113; Filed, Mar. 29, 1962;
8:49 a.m.]

Title 14—AERONAUTICS AND SPACE

Chapter I—Federal Aviation Agency

[Reg. Docket 107; Amdt. 4b-12; Supp. 43]

PART 4b—AIRPLANE AIRWORTHINESS; TRANSPORT CATEGORIES

Miscellaneous Amendments Resulting From First Airworthiness Review

As a result of the First Federal Aviation Agency Airworthiness Review, the Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961. There are contained herein amendments to Part 4b of the Civil Air Regulations which stem from this First FAA Airworthiness Review.

Interested persons have been afforded an opportunity to express their comments in regard to the proposal. In some cases the proposal has been modified in accordance with such comments. The more significant amendments being adopted by the Agency are discussed herein.

Several revisions to the flight requirements are being made. A change is made to § 4b.160(c)(1) for consistency with the trim condition applicable to the stall speed in present § 4b.112(c)(1). The proposed amendment to § 4b.112, to redefine the stalling speed as the 1g level flight stall speed, is being deferred pending further evaluation of the effect of such a change.

To supplement existing controllability requirements, § 4b.130 is being expanded to provide pilot control force criteria during phases of unsteady flight and during transition from one flight condition to another. The proposal provided, among other things, that both temporary and prolonged forces be considered with the airplane trimmed in the prior steady flight condition. Two significant changes have been made to this proposal. The first change permits compliance to be shown in an untrimmed condition when the airplane cannot be trimmed so as not to encroach upon the requirements of §§ 4b.140 through 4b.144. The second change permits retrim during the investigation of the prolonged forces. In conjunction with these changes, the proposed note has been deleted because it does not illustrate the prescribed forces. In addition, § 4b.131 is being amended to prescribe the maximum longitudinal control force applicable to operation with one hand.

A number of changes are being made to the stability requirements. Because static longitudinal stability may become dependent upon the stick-fixed characteristics as well as the stick-free characteristics when artificial stick forces are used, the stability requirements of § 4b.150 through § 4b.155 are being revised. If the elevator control forces are not the result of the elevator control surface hinge moments, it must be shown that an upward displacement of the elevator trailing edge is necessary to obtain and maintain speeds below the specified trim speed and a downward displacement of the elevator trailing edge is necessary to obtain and maintain speeds above the specified trim speed. Proposed § 4b.151(a), has been changed merely to reflect the new speed nomenclature prescribed by the addition of § 4b.191. Section 4b.151(c), which now requires any speed change to be perceptible to the pilot by a change in stick force, is also being amended. Because of difficulties in ascertaining a "perceptible" change in stick force, the minimum stick force versus speed gradient is being defined as not less than one pound per 6 knots. Present § 4b.155 provides that the airplane be stable over the entire operating speed range under the most adverse trim condition. In many cases this involves very large speed ranges over which it is no longer considered necessary to demonstrate stability without retrimming. While it was originally proposed to permit retrimming at V_A it has been determined that such a provision would be unnecessarily restrictive and the proposal has been changed to permit retrim at a speed midway in the cruising speed range. However, this change necessitates the addition of a provision to insure stability over an adequate speed range in those cases where the operating speed range is relatively small.

In conjunction with these proposed changes, §§ 4b.150-1 and 4b.151-1 are being deleted, together with the discussion of policies relating thereto, as well as §§ 4b.152-1, 4b.153-1, 4b.154-1, and 4b.155-1 because this material does not reflect the changes being made to the corresponding sections of the regulations and the information contained in these sections is already covered elsewhere. In addition §§ 4b.157-1(e)(3), (e)(4), and (f)(2) are being deleted because they are in conflict with the provisions of § 4b.157.

Amendments to the strength requirements include changes to the provisions on flap design speeds, pressure cabins, unsymmetrical loads due to engine failure, ground handling conditions, landing gear fatigue evaluation, and casting factors.

The present requirements on design flap speed V_F in § 4b.210(b)(1) were based on the concept of a single speed at which the pilot could place the flaps in any position from fully retracted to fully extended without reducing or increasing speed and without exceeding limit loads or without approaching a stalling condition. For this reason the requirements specify that V_F shall not be less than the greater of $1.4 V_{S1}$ (flaps re-

tracted) or $1.8 V_{S0}$ (flaps in landing position). However, the development of more efficient flaps has resulted in the establishment of different operating speeds and flap positions for various stages of flight; e.g., initial approach, final approach, landing, and takeoff. The requirements are being amended to permit supplementary values of the flaps extended operating limit speed (§ 4b.714(c)), and to cover en route flap conditions (§ 4b.212(b)). Nevertheless, the single flap design speed concept has been retained in §§ 4b.210(b), 4b.212(a), 4b.221(a), and 4b.714(a).

Recent improvements in high lift flap design have raised the question of whether it is any longer necessary for the design speed for flaps in the landing position to be based on the stalling speed with flaps retracted. In view of the current operating practice of progressively reducing airspeed as flaps are extended during approach and landing, and of retracting flaps as airspeed increases during takeoff or balked landing, it appears more rational to base the design speed for each flap position on the operating and stalling speeds corresponding with the particular flap position. Therefore, § 4b.210(b)(1) is being amended to permit the selection of a flap design speed for each flap position established for the various stages of flight, with minimum values of $1.8 V_{S0}$ for flaps in the landing position, and $1.6 V_{S1}$ for flaps in the takeoff position. Where an automatic flap positioning or load limiting device is employed, it is permissible to use the speeds and flap positions programmed by the device. Related changes are being made to §§ 4b.1(d)(10), 4b.212(a), (b), and (c), 4b.221, and 4b.714 to make these requirements consistent with the method adopted for establishing flap design speeds. In this connection, it was proposed to amend § 4b.323(c) to provide specific speed limits for flap load limiting devices in addition to the existing objective requirement in that section. However, the proposed specific limits are not being adopted because the minimum values required in operation depend upon other characteristics of the particular airplane design, and such characteristics can be evaluated under the provisions of the existing regulation.

The present strength requirements for pressurized cabins state that, where the cabin is separated into compartments by bulkheads or floors, the primary structure shall be designed for the effects of sudden release of pressure in any compartment having external doors or windows. Difficulties have arisen in applying these requirements because primary structure is not defined and the objectives are not stated clearly. Therefore, § 4b.216(c)(4) is being amended to state that, under conditions of sudden pressure release, the integrity of the structure supporting flight and ground loads and other structure the failure of which could interfere with the continued safe flight and landing of the aircraft, shall be maintained. Damage to other portions of the airplane is acceptable, provided reasonable design precautions are taken to minimize the probability of parts becoming detached which might in-

ture occupants while in their seats. Fail-safe design features may be taken into account, provided possible operational and maintenance errors are also considered.

Section 4b.216(d) presently contains a general requirement that the airplane be designed for the unsymmetrical loads resulting from failure of one engine; e.g., yaw loads due to windmilling drag of a turbopropeller engine. On the basis of experience gained in design evaluation, testing, and operation of turbopropeller airplanes, § 4b.216(d) is being amended to state the factors to be considered in determining these loads, including types of engine failure, corresponding airplane speeds, malfunctioning of propeller drag limiting systems, and pilot corrective action.

Section 4b.235 presently contains an inconsistency between the drag loads specified for the main landing gear in the braked roll condition (which may be based on the maximum obtainable brake torque), and the drag load specified for one main gear in the nose wheel yawing condition (which is based solely on a friction coefficient of 0.8). Changes to § 4b.235 are being made which apply the yawing loads resulting from the 0.8 coefficient to the nose gear and supporting structure only. A drag load corresponding with the basic braked roll condition is being applied to one main gear as an overall airplane design condition.

The fatigue evaluation requirements of § 4b.270 at present apply only to structure supporting flight loads. A number of cases of landing gear fatigue cracking or failure have been reported. Although these failures have not resulted in fatal accidents, the possibility of fire after landing gear failure is a potential hazard. Therefore, a new § 4b.271 is being adopted, requiring a fatigue evaluation of the landing gear structure, and, where such evaluation indicates a need, the establishment of inspection or other procedures to prevent catastrophic fatigue failure. Alternatively, it may be shown that catastrophic failure of the landing gear is not probable after fatigue failure or after obvious partial failure of a single structural element.

The present requirements on factors of safety and inspections for structural castings (§ 4b.307(a)) specify a special factor of 2.0 for visual inspection only, and a factor of 1.25 when radiographic inspection and strength tests of 3 sample castings are employed. Section 4b.307(a) is being amended to provide a series of casting factors and corresponding test and inspection requirements which reflect current methods and practices. In addition, a minor revision in the format of § 4b.307(a) as proposed is being made and, in the light of comment received, alternative methods of compliance with the proposed requirements of this section are being added.

A revision to § 4b.334(e) concerning landing gear position indicators and warning devices is being made to insure warning in the event a landing is made with one or more throttles advanced. A note is also being added setting forth an acceptable means of compliance which would replace § 4b.334-2. To in-

sure that essential equipment in wheel wells is not damaged by loose tire treads or a bursting tire, a provision is being added which requires protection of such equipment. As a result of comments made on the proposal, alternatives are being added to the requirement, to permit a finding that a tire cannot burst from overheat or that a loose tire tread cannot cause damage. It is intended that such findings will be based on the use of a wheel which is fitted with a fusible plug and a tubeless tire or that an extended wheel is located so that a tire tread which has separated from the wheel cannot enter the wheel well and that the wheel is braked to a stop before retraction into the wheel well.

Current provisions of § 4b.352 do not require fail-safe windshields and windows on pressurized cabin airplanes; however, existing turbine transport airplanes incorporate this feature, which has prevented complete loss of cabin pressurization in a considerable number of partial windshield failure incidents. Therefore, § 4b.352(d) is being amended to require that windshields and window panels in pressurized cabins have strength to withstand the maximum differential pressure load, aerodynamic pressures, and temperature effects after failure of a single element. This amendment differs from that proposed in that it is less restrictive as to the type of window or windshield required.

Sections 4b.357 and 4b.371(d) require that, when louvers or other ventilating devices are provided between cabin partitions, it shall be possible for the crew to stop the flow of air through such ventilating devices. Because this requirement does not accomplish its apparent objective which is covered elsewhere, §§ 4b.357 and 4b.371(d) are being deleted.

Sections 4b.358(c) (2) and 4b.643 presently require an additional factor of safety of 1.33 on the loads for seat and safety belt attachments, and § 4b.307(c) requires a factor of 1.15 for structural fittings (attachments). Sections 4b.358(c) (2) and 4b.643 are being clarified by inserting a statement that the 1.33 factor may be applied in lieu of the 1.15 factor, not be added to it. This is consistent with the general principle that only the highest factor intended for a similar purpose need be applied. However, if castings are used, the casting factor specified in § 4b.307(a) still applies, since this factor is intended for another purpose.

The upper aisle width specified in § 4b.362(h) has been reduced from 20 to 18 inches, for airplanes having a passenger seating capacity of 10 or less, on the basis of studies indicating that this reduction would not adversely affect safe emergency evacuation. However, a further reduction of this dimension to 16 inches, as suggested by several interested persons, has not been justified. Biometric data derived from a general sampling of the civilian population reveals that a significant percentage of passengers have a standing hip-breadth exceeding 16 inches, whereas the percentage exceeding 18 inches is negligible. A 16-inch upper aisle width, therefore,

introduces the probability that a single passenger may jam the aisle between seats in the excitement and near-panic of an emergency evacuation; and, in any event, movement along the aisle would be retarded by the awkward sideward gait which large-hipped passengers must assume for passage.

It had been proposed that the optional provision of § 4b.385, which permits the control of fire once it has started, would be deleted. Comments made on that proposal have led to the conclusion that such an amendment might be unnecessarily restrictive and would not be compatible with other requirements which do permit the control of fire in cargo compartments and nacelles. Accordingly, presently effective § 4b.385 remains unchanged. Section 4b.412 dealing with pressure crossfeed lines is being deleted because §§ 4b.370 and 4b.385 cover both the fire control and ventilation aspects of § 4b.412.

As a result of comments received, the specific provisions regarding demonstrations or tests are being deleted from §§ 4b.413 and 4b.416 as they were proposed in the draft release. Adequate authority for any ground or flight tests which might be required continues to rest in presently effective §§ 4b.15 and 4b.16. The flight conditions specified in § 4b.416, used in connection with the selection of unusable fuel supply, are unnecessary if compliance with general fuel flow requirements is obtained and are, therefore, being deleted. The provisions of paragraph (b) of § 4b.416, as proposed in the draft release are being transferred to a new paragraph (c) under § 4b.413, as an editorial change, since the provision for fuel feed belongs more appropriately in the fuel flow section than in the unusable fuel supply section. Presently effective § 4b.415 also covers fuel flow rate, relative to transfer systems and bases required flow rates on horsepower output. Since the changes being made to § 4b.413 eliminate the horsepower basis for establishing flow rate, § 4b.415 is being deleted.

Because of the change made to § 4b.416, material contained in other sections is no longer necessary. Therefore, §§ 4b.416-1, 4b.416-2, 4b.418(a), 4b.418-1, and 4b.426-1 are being deleted. Section 4b.420(d) is also being deleted to eliminate a conflict with the definition of unusable fuel supply in § 4b.416.

In addition to the matter of unusable fuel supply, another question has arisen relating to the flow requirements of § 4b.413. Section 4b.413(a) presently requires that the available fuel flow shall be not less than 125 percent of that needed to develop maximum engine horsepower or thrust. The 25 percent margin is not required to insure adequate fuel flow. Furthermore, a margin is unnecessary to offset system deterioration because such deterioration is precluded by proper maintenance, inspection, and overhaul. Section 4b.413 is being amended as proposed in accordance with the foregoing.

Section 4b.436, dealing with fuel system drains, is being revised to delete redundant and contradictory requirements.

Presently effective §§ 4b.450 through 4b.455 deal with the powerplant cooling capability and specify tests to show that powerplant temperature limits can be maintained. With the exception of § 4b.455, these sections apply to reciprocating engines. Sections 4b.450 through 4b.452 are being clarified by making them generally applicable to turbine engine installations as well as reciprocating engine installations and by specifying test conditions in general terms which are based on the applicable airplane performance requirements. This clarification makes §§ 4b.453 and 4b.455 unnecessary. Accordingly, they are being deleted.

Consistent with the proposed changes to the powerplant cooling requirements, §§ 4b.440(e), 4b.440-1, 4b.450-1, 4b.452-1, 4b.453-1, 4b.454-1, 4b.465, and 4b.465-1 are being deleted inasmuch as the matter of oil cooling and carburetor air cooling is covered in the changes being made to §§ 4b.450 through 4b.455.

Section 4b.488 requires a fireproof diaphragm to isolate the engine power section and all portions of the exhaust system from the engine accessory compartment, unless equivalent protection can be shown by other means. Fire extinguishing systems are required in all cases to be provided in the engine power section, in the engine accessory section, and in complete powerplant compartments. Since it is considered that fire extinguishing systems are equivalent to a diaphragm in providing protection, there is no reason for retaining the provisions of § 4b.488. Accordingly, this section is being deleted. Consistent with this deletion, editorial changes are being made in §§ 4b.484 and 4b.487.

Section 4b.604(q) requires a thrust indicator for each turbojet engine. Because such indicators have not been perfected and because the thrust output information which is desired can be otherwise obtained, this section is being amended to require instead an indicator which will permit the pilot to determine if the thrust of any engine has changed as a result of any engine deficiency. A comment on this section as proposed expressed concern that the proposed phrase "relative to the thrust being obtained by the remaining engines" meant a requirement for a differential thrust indicator between any two engines. Such a meaning was not intended. To prevent the possibility of further misconstrual, the phrase is being deleted. Another comment expressed concern that since pressure ratio indication has been accepted as meeting the requirement for a thrust indicator, it would necessarily be disallowed in meeting a requirement for indication that thrust has changed. A pressure ratio indicator will continue to be acceptable in meeting the amended requirement if it has previously been acceptable in meeting the requirement for a thrust indicator. Since pressure ratio indication might not in all cases fully satisfy the provision that the indicated thrust change results from any engine deficiency, an alternative is being added to the requirement. The alternative will permit the indication of any gas stream

pressure which can be related to the thrust output of the engine.

Section 4b.622(b) is being amended by adding two provisions which relate to the proper functioning of the generating system with respect to load equipment. These provisions are a more precise statement of the requirement in currently effective § 4b.627 and permit deletion of that requirement.

To eliminate an unnecessarily restrictive provision requiring that certain electrical protective devices or their controls be accessible for resetting in flight, § 4b.624(d) is being amended. Section 4b.627 is also being amended by deleting the currently effective rule and adding several provisions to insure the validity of electrical system tests under simulated conditions in the laboratory. The wording in the present section is being deleted because: (1) Other sections require such tests as are necessary to show compliance with all airworthiness requirements, including those dealing with the electrical system; and (2) the need for the provision that the electrical system "functions properly and without electrical or thermal distress" has been eliminated by the revision to § 4b.622(b).

Presently effective § 4b.652 deals with the reliability of engine-driven accessories and § 4b.659 specifies that an airplane must be able to continue safe flight in the event of a failure of a high energy rotor. These two sections are being deleted because their substance is covered by the provisions of § 4b.606 which is concerned with the reliability of all equipment, systems, and installations.

Hydraulic system service difficulties have arisen which affect the proposal to add a new § 4b.656, concerning hydraulic system tests. Therefore, the proposed addition of § 4b.656, containing a new test requirement, is not being included at this time. A study of the matter is being made outside the framework of this review.

A change is being made to figure 4b-19 dealing with position light intensities in order to remove an irrational discontinuity.

Operating records show an increasing number of cases of exceeding the airspeed operating limits on transport category airplanes, particularly on turbine-powered airplanes. Also, the present regulations lack definite criteria for the rational determination of speed margins. Among the probable causes of overspeed are the characteristics of turbine-powered airplanes which make it desirable to operate at the limit speed, the somewhat indefinite significance of the present normal operating limit speed, and the increasing preoccupation of pilots with air traffic and other duties which distract them from continuous monitoring of airspeed instruments. Therefore, a series of amendments to the airspeed operating limitations and related requirements are being made. These amendments replace the existing normal operating limit and never exceed speeds (§§ 4b.711 and 4b.712) by a single speed at the previous normal operating limit value. The new single limit is designated as the "maximum operating

limit speed," and is defined in the Airplane Flight Manual (§ 4b.741) as a speed which shall not be deliberately exceeded in any regime of flight, except where a higher speed is authorized for flight test or pilot training operations. The amendments provide a rational method (based on a 7.5 degree dive maneuver), as well as alternative arbitrary factors, for calculating the speed margin between the new limit speed and the demonstrated flight or structural dive speeds. To provide for atmospheric conditions and other operational factors not covered by the 7.5 degree dive criteria, the amendments include a minimum speed margin of 0.05 Mach number beyond the operating limit speed. This is 0.04 M beyond the aural warning speed, and is believed to be consistent with the minimum margin on existing airplanes.

A new § 4b.191, high-speed characteristics, is being adopted to cover in general terms the flight tests for speed increase and recovery characteristics, and to establish a maximum speed V_{rc} for certain stability characteristics. The speed margin between design speeds V_c and V_D in § 4b.210 is being replaced by a cross reference to § 4b.711.

To minimize overspeeding due to pilot preoccupation, § 4b.603 is being amended by adding a new paragraph (k) to require an aural warning device on turbine-powered airplanes and on other airplanes having a speed margin of less than 20 percent between limit and demonstrated speeds. To insure early warning and thus to make a major portion of the speed margin available for pilot reaction and recovery maneuvers, the amendment also requires that the warning occur whenever the speed exceeds the limit speed by more than 6 knots or 0.01 M.

The changes in terminology in the airspeed limitations require corresponding changes, including deletions and additions, in §§ 4b.1(d)(9), (15), and (16); 4b.132(e); 4b.141; 4b.142(c); 4b.155; 4b.156; 4b.157; 4b.157-1; 4b.158; 4b.210(b)(4); 4b.210(b)(5); 4b.484-1(b)(1); 4b.603(a); 4b.612(a)(3); 4b.612-4(a); 4b.711; 4b.712; 4b.740-1; and 4b.741(a).

Miscellaneous changes of an editorial or clarifying nature are being made to §§ 4b.1, 4b.11, 4b.155, 4b.160, 4b.221, 4b.306, 4b.306-1, 4b.329-2, 4b.329-6, 4b.435, 4b.447, 4b.612, 4b.642, 4b.645, 4b.718, and 4b.738. Among the miscellaneous amendments there is one to expressly exclude from the provisions of § 4b.11(b) consideration of provisional type certificates. While it was proposed that this be accomplished by a note, it now appears that it is more appropriate to include such a provision within § 4b.11(b) rather than as a note thereto. Furthermore, the proposed § 4b.612(f)(4) requiring two complete static air pressure operating systems for the required instruments at the first pilot's station has been withdrawn in the light of comment received. It has been determined that one such static air pressure operating system as presently required is all that is necessary as a minimum requirement in the interest of safety.

Interested persons have been afforded an opportunity to participate in the

making of this amendment, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 4b of the Civil Air Regulations (14 CFR Part 4b, as amended) is hereby amended as follows, effective May 3, 1962:

1. By amending § 4b.1 by amending paragraphs (b) (2), (d) (9), (d) (10), (d) (15), and (d) (16) to read as follows:

§ 4b.1 Definitions.

(b) *General design.* * * *
 (2) *Maximum ambient atmospheric temperature.* The maximum ambient atmospheric temperature is the temperature selected by the applicant as the maximum operational limit.

(d) *Speeds.* * * *
 (9) *V_{DF}/M_{DF}:* The demonstrated flight diving speed at which compliance is shown with the applicable flight requirements. (See §§ 4b.190 and 4b.191(a).)
 (10) *V_F:* The design flap speeds for flight loading conditions. (See § 4b.210 (b) (1).)

(15) *V_{FC}/M_{FC}:* The maximum speed for stability characteristics. (See § 4b.191 (b).)
 (16) *V_{MO}/M_{MO}:* The maximum operating limit speed. (See § 4b.711.)

§ 4b.11 [Amendment]

2. By amending § 4b.11(b) by inserting in the first sentence between the words "required" and "except" the phrase "notwithstanding the applicant may have been issued a provisional type certificate".

3. By amending § 4b.130 by adding new paragraphs (c), (d), and (e) to read as follows:

§ 4b.130 Controllability; general.

(c) Compliance with the "strength of pilots" limits in paragraph (b) of this section need not be demonstrated unless the condition is found to be marginal. In the latter case, they shall not exceed the following pilot control force limits, expressed in pounds:

	Pitch	Roll	Yaw
(1) For temporary application.....	75	60	180
(2) For prolonged application.....	10	5	20

Pitch and roll forces shall be measured as applied to the control wheel.

(d) For the purpose of complying with the temporary control force limitations of paragraph (c) of this section, the airplane shall be operated in accordance with approved operating procedure or conventional operating practice including being as nearly trimmed as possible at the prior steady flight condition, except that in the case of takeoff the airplane shall 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 shall be as nearly trimmed as possible.

§ 4b.131 [Amendment]

4. By amending § 4b.131(b) by deleting the first sentence and inserting in lieu thereof the following: "During each of the following controllability demonstrations, a change in the trim control shall not be required. In addition, exertion of more than 50 pounds control force, representative of the maximum temporary force which can readily be applied by one hand, shall not be required."

§ 4b.132 [Amendment]

5. By amending § 4b.132(e) by deleting from the last sentence the symbol "V_{NE}" and inserting in lieu thereof "V_{FC}/M_{FC}."

§ 4b.141 [Amendment]

6. By amending § 4b.141 by deleting the words "V_{NO} or to M_{NO}, whichever is the lesser" and inserting in lieu thereof "V_{MO}/M_{MO}."

§ 4b.142 [Amendment]

7. By amending § 4b.142(c) by deleting the word "V_{NO} or to M_{NO}, whichever is the lesser" and inserting in lieu thereof "V_{MO}/M_{MO}."

8. By amending § 4b.150 to read as follows:

§ 4b.150 General.

The airplane shall be longitudinally, directionally, and laterally stable in accordance with §§ 4b.151 through 4b.158. Suitable stability shall be required in other conditions normally encountered in service if flight tests show such stability to be necessary for safe operation.

§ 4b.150-1 [Deletion]

9. By deleting § 4b.150-1.
 10. By amending § 4b.151 by amending the introductory paragraph and paragraphs (a) and (c) to read as follows:

§ 4b.151 Static longitudinal stability.

In the conditions outlined in §§ 4b.152 through 4b.155, the characteristics of the elevator control forces including friction and the elevator control surface displacement shall comply with paragraphs (a) through (c) of this section.

(a) A pull shall be required to obtain and maintain speeds below the specified trim speed, and a push shall be required to obtain and maintain speeds above the specified trim speed, except that if the elevator control forces are not dependent upon the hinge moments of the elevator control surface it shall also be shown that an 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. These criteria shall apply to any speed which can be obtained, except that such speeds need not be greater than the landing gear or the wing flap operating limit speed or V_{FC}/M_{FC}, whichever is appropriate, or need not be less than the minimum speed in steady unstalled flight.

(c) The stable slope of the stick force versus speed curve shall not be less than

0.5 pounds per 3 knots nor shall it exceed a value beyond which control of the airplane is difficult.

§ 4b.151-1 [Deletion]

11. By deleting § 4b.151-1.
 12. By amending § 4b.152 to read as follows:

§ 4b.152 Stability during landing.

The stick force curve and, if required by § 4b.151(a), the elevator angle curve shall have stable slopes and the stick force shall not exceed 80 pounds at any speed between 1.1 V_{s0} and 1.8 V_{s0} with:

- (a) Wing flaps in the landing position;
- (b) The landing gear extended;
- (c) Maximum landing weight;
- (d) Power, or thrust, off on all engines; and
- (e) The airplane trimmed at 1.4 V_{s0} with power or thrust off.

§ 4b.152-1 [Deletion]

13. By deleting § 4b.152-1.
 14. By amending § 4b.153 to read as follows:

§ 4b.153 Stability during approach.

The stick force curve and, if required by § 4b.151(a), the elevator angle curve shall have stable slopes at all speeds between 1.1 V_{s1} and 1.8 V_{s1} with:

- (a) Wing flaps in the approach position;
- (b) Landing gear retracted;
- (c) Maximum landing weight; and
- (d) The airplane trimmed at 1.4 V_{s1} and with power sufficient to maintain level flight at this speed.

§ 4b.153-1 [Deletion]

15. By deleting § 4b.153-1.
 16. By amending § 4b.154 to read as follows:

§ 4b.154 Stability during climb.

The stick force curve and, if required by § 4b.151(a), the elevator angle curve shall have stable slopes at all speeds between 85 and 115 percent of the speed at which the airplane is trimmed with:

- (a) Wing flaps retracted;
- (b) Landing gear retracted;
- (c) Maximum takeoff weight;
- (d) 75 percent of maximum continuous power for reciprocating engines; maximum power or thrust selected by the applicant as an operating limitation for use during climb (see § 4b.718) for turbine engines; and
- (e) The airplane trimmed at the best rate-of-climb speed except that the speed need not be less than 1.4 V_{s1}.

§ 4b.154-1 [Deletion]

17. By deleting § 4b.154-1.
 18. By amending § 4b.155 to read as follows:

§ 4b.155 Stability during cruising.

(a) *Landing gear retracted; high speed.* The stick force curve and, if required by § 4b.151(a), the elevator angle curve shall have stable slopes at all speeds from V_{FC}/M_{FC} to the speed equal to $V_{FC} - \left(\frac{V_{FC} - 1.4 V_{s1}}{2} \right)$ or to 50 knots less than the trim speed specified in subparagraph (4) of this paragraph, whichever

is the lesser speed except that it need not be less than $1.4 V_{s1}$, and the stick force shall not exceed 50 pounds with:

(1) Wing flaps retracted;

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

(3) 75 percent of maximum continuous power for reciprocating engines; maximum cruising power selected by the applicant as an operating limitation (see § 4b.718) for turbine engines, except that the power need not exceed that required at V_{MO}/M_{MO} ; and

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

(b) *Landing gear retracted; low speed.* The stick force curve and, if required by § 4b.151(a), the elevator angle curve shall have stable slopes at all speeds from a speed equal to

$$V_{FC} - \left(\frac{V_{FC} - 1.4 V_{s1}}{2} \right)$$

to $1.4 V_{s1}$, and the stick force shall not exceed 50 pounds with the wing flaps and weight as specified in paragraph (a) of this section and with:

(1) Power required for level flight at a speed equal to $V_{FC} - \left(\frac{V_{FC} - 1.4 V_{s1}}{2} \right)$; and

(2) The airplane trimmed for level flight with the power required in subparagraph (1) of this paragraph.

NOTE: At altitudes where Mach number is critical, the calibrated airspeed corresponding with M_{FC} may be used to calculate the speed $V_{FC} - \left(\frac{V_{FC} - 1.4 V_{s1}}{2} \right)$.

(c) *Landing gear extended.* The stick force curve and, if required by § 4b.151(a), the elevator angle curve shall have stable slopes at all speeds between $1.4 V_{s1}$ and V_{LE} and the stick force shall not exceed 50 pounds with the wing flaps and the weight as specified in paragraph (a) of this section and with:

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

(2) The airplane trimmed for level flight with the power required in subparagraph (1) of this paragraph.

§ 4b.155-1 [Deletion]

19. By deleting § 4b.155-1.

§ 4b.156 [Amendment]

20. By amending § 4b.156 by inserting between the words "airplane" and "shall" the parenthetical expression "(e.g., V_{FE} , V_{LE} , or V_{FC}/M_{FC})".

§ 4b.157 [Amendment]

21. By amending § 4b.157 by deleting from paragraphs (a) and (b)(1) the words "the operating limit speed" and inserting in lieu thereof the words " V_{FE} , V_{LE} , or V_{FC}/M_{FC} , whichever is appropriate to the airplane configuration".

§ 4b.157-1 [Amendment]

22. By amending § 4b.157-1 by deleting paragraphs (e)(3), (e)(4), and (f)(2).

§ 4b.158 [Amendment]

23. By amending § 4b.158 by inserting between the words "airplane" and

"shall" the parenthetical expression "(e.g., V_{FE} , V_{LE} , or V_{FC}/M_{FC})".

24. By amending § 4b.160(c)(1) by deleting the phrase "With trim controls adjusted for straight flight at a speed of $1.4 V_{s1}$ " and inserting in lieu thereof "With the airplane trimmed for straight flight at the speed prescribed in § 4b.112(c)(1)".

25. By amending § 4b.160(e) to read as follows:

§ 4b.160 Stalling; symmetrical power.

(e) Straight flight stalls shall be entered with wings level. The roll occurring between the stall and the completion of the recovery shall not exceed approximately 20 degrees.

26. By adding a new § 4b.191 to read as follows:

§ 4b.191 High-speed characteristics.

(a) *Speed increase and recovery characteristics.* (1) Operating conditions or characteristics likely to cause inadvertent speed increases, including upsets in pitch and roll, shall be simulated with the airplane trimmed at any likely cruise speed up to V_{MO}/M_{MO} . Allowing for pilot reaction time after effective inherent or artificial speed warning occurs (see § 4b.603(k)), it shall be demonstrated that the airplane can be recovered to a normal attitude and its speed reduced to V_{MO}/M_{MO} without requiring exceptional strength or skill on the part of the pilot, without exceeding V_D/M_D , V_{DF}/M_{DF} , or the structural limitations, and without producing buffeting which would cause structural damage.

NOTE: Examples of operating conditions or characteristics likely to cause speed increases are: 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) At all speeds up to V_{DF}/M_{DF} , there shall be no control reversal. Any reversal of elevator control force or tendency of the airplane to pitch, roll, or yaw, shall be mild and readily controllable using normal piloting technique.

(b) *Maximum speed for stability characteristics, V_{FC}/M_{FC} .* V_{FC}/M_{FC} shall be the maximum speed at which the requirements of §§ 4b.132(e), 4b.155(a), 4b.156, 4b.157(a), 4b.157(b), and 4b.158 are required to be met with flaps and landing gear retracted. It shall not be less than a speed halfway between V_{MO}/M_{MO} and V_{DF}/M_{DF} , except that in the altitude range where Mach number is the limiting factor, M_{FC} need not exceed the Mach number at which effective speed warning occurs.

27. By amending § 4b.210(b)(1) to read as follows:

§ 4b.210 General.

(b) *Design air speeds.* * * *

(1) *Design flap speeds, V_F .* The design flap speed for each flap position established in accordance with § 4b.323

(a) shall 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. V_F shall be not less than:

(i) $1.6 V_{s1}$ with flaps in takeoff position at maximum takeoff weight;

(ii) $1.8 V_{s1}$ with flaps in approach position at maximum landing weight; and

(iii) $1.8 V_{s0}$ with flaps in landing position at maximum landing weight.

Where an automatic flap positioning or load limiting device is employed, it shall be permissible to use the speeds and corresponding flap positions programmed or permitted by the device. (See § 4b.323(c).)

28. By amending § 4b.210(b)(4) by adding at the end thereof the parenthetical reference "(See § 4b.711.)"

29. By amending § 4b.210(b)(5) to read as follows:

(b) *Design air speeds.* * * *

(5) *Design dive speed, V_D .* The design dive speed chosen by the applicant shall be used in determining the maximum operating limit speed for the airplane in accordance with § 4b.711.

30. By amending § 4b.212(a) by deleting the introductory paragraph and inserting in lieu thereof the following: "When flaps are intended for use during takeoff, approach, or landing, the airplane shall be assumed to be subjected to symmetrical maneuvers and gusts within the range determined by the following conditions, at the design flap speeds established for these stages of flight in accordance with § 4b.210(b)(1) and with the flaps in the corresponding positions."

31. By amending § 4b.212(b) by deleting from the introductory paragraph the words " V_{FE} speed established in accordance with § 4b.714(c)" and inserting in lieu thereof "the flap design speed chosen for this condition."

32. By amending § 4b.212 by deleting paragraph (d) and amending paragraph (c) to read as follows:

§ 4b.212 Effect of high lift devices.

(c) The airplane shall 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 the following effects as separate conditions:

(1) Propeller slipstream corresponding with 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).

33. By amending § 4b.216 by amending paragraphs (c)(4) and (d) to read as follows:

§ 4b.216 Supplementary flight conditions.

(c) *Pressurized cabin loads.* * * *

(4) Where a pressurized cabin is separated into two or more compartments by partitions, bulkheads, or floors, the structure supporting the prescribed flight and ground loads and other structure the failure of which could interfere with continued safe flight and landing of the airplane, shall 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 such compartment unless it is shown that the probability of failure or penetration is extremely remote. In determining the probability of failure or penetration and probable size of openings, it shall be acceptable to take into account fail-safe features of the design, provided possible improper operation of closure devices and inadvertent door openings are also taken into account. It shall be acceptable to take into account pressure relief provided by intercompartment venting. It can be assumed that parts of the airplane, other than the structure specified in this paragraph, may be damaged, in which case reasonable design precautions shall be taken to minimize the probability of parts becoming detached which may injure occupants while in their seats.

NOTE: The aforementioned precautions might include, for example, designing internal doors so that they will remain attached to supporting structure even though forced open by differential pressure.

(d) *Unsymmetrical loads due to engine failure.* The airplane shall be designed for the unsymmetrical loads resulting from the failure of the critical engine. Turbopropeller airplanes shall be designed for the conditions prescribed in subparagraphs (1) through (4) of this paragraph in combination with a single malfunction of the propeller drag limiting system (see § 4b.408), taking into account the probable pilot corrective action on the flight controls.

(1) At all speeds between V_{MC} and V_D , the loads resulting from engine power failure due to fuel flow interruption shall be considered as limit loads.

(2) At all 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 shall be considered as ultimate loads.

(3) The time history of the thrust decay and drag build-up occurring as a result of the prescribed engine failures shall 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 shall be conservatively estimated, considering the characteristics of the particular engine-propeller-airplane combination.

NOTE: It may be assumed that pilot corrective action will be initiated at the time maximum yawing velocity is attained, 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 § 4b.220(a)(1), except that lower forces may be assumed where it is shown by analysis or test that such forces will be suffi-

cient to control the yaw and roll resulting from the prescribed engine failure conditions.

34. By amending § 4b.221 to read as follows:

§ 4b.221 Wing flaps.

Wing flaps and their supporting structure and operating mechanism shall be designed for the critical loads resulting from the conditions prescribed in § 4b.212, taking into account the loads occurring during transition from one flap position and airspeed to another.

§ 4b.235 [Amendment]

35. By amending § 4b.235 by deleting from the last sentence of the introductory paragraph the phrase "of paragraph (b) (1) and (2)" and inserting in lieu thereof "paragraphs (b) (1) and (2), and (e) (3)".

36. By amending § 4b.235(e)(2) by adding at the beginning thereof a new sentence to read as follows: "It shall be acceptable to apply the conditions of this subparagraph to the design of only the nose gear, its attaching structure, and the fuselage structure."

37. By amending § 4b.235 by adding a new paragraph (e)(3) to read as follows:

§ 4b.235 Ground handling conditions.

(e) Nose-wheel yawing. * * *

(3) This subparagraph shall apply to the landing gear and airplane structure. The loading conditions shall be those prescribed in subparagraph (2) of this paragraph, except that the forward acting load at the center of gravity need not exceed the maximum drag reaction on one main gear determined in accordance with the introductory paragraph and paragraph (b)(2) of this section.

§ 4b.270 [Amendment]

38. By amending the title of § 4b.270 to read "*Fatigue evaluation of flight structure.*"

39. By adding a new § 4b.271 to read as follows:

§ 4b.271 Fatigue evaluation of landing gear.

The strength, detail design, and fabrication of those portions of the landing gear and its attachment fittings in which fatigue may be critical shall be evaluated in accordance with the provisions of either paragraph (a) or (b) of this section.

(a) The fatigue strength of the structure shall be evaluated and, when indicated by such evaluation, inspection or other procedures shall be established to prevent catastrophic fatigue failure. The evaluation shall include the loading spectrum expected in service and the identification and analysis or repeated load testing of the principal structural elements and detail design points where catastrophic fatigue failure could occur. It shall be acceptable to utilize the service history of airplanes of similar structural design, taking due account of differences in operating conditions and procedures.

(b) It shall be shown by analysis or tests that catastrophic failure is not probable after fatigue failure or obvious

partial failure of a single principal structural element. After such failure the remaining structure shall be capable of withstanding static loads corresponding with 80 percent of the limit loads resulting from the conditions prescribed in § 4b.230. These static loads shall be considered ultimate loads.

40. By amending § 4b.306(c) and the note to read as follows:

§ 4b.306 Material strength properties and design values.

(c) Values contained in MIL-HDBK-5, MIL-HDBK-17 Part I, ANC-17 Part II, ANC-18, MIL-HDBK-23 Part I, and ANC-23 Part II shall be used unless shown to be inapplicable in a particular case.

NOTE: MIL-HDBK-5, "Strength of Metal Aircraft Elements"; MIL-HDBK-17, "Plastics for Flight Vehicles, Part I—Reinforced Plastics"; ANC-17, "Plastics for Aircraft, Part II—Transparent Glazing Materials"; ANC-18, "Design of Wood Aircraft Structures"; MIL-HDBK-23, "Composite Construction for Flight Vehicles, Part I—Fabrication Inspection Durability and Repair"; and ANC-23, "Sandwich Construction for Aircraft, Part II—Material Properties and Design Criteria", are published by the Department of Defense and the Federal Aviation Agency and may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

§ 4b.306-1 [Amendment]

41. By amending § 4b.306-1 by deleting from paragraph (a) the expression "ANC-5" and inserting in lieu thereof "MIL-HDBK-5"; by deleting from paragraph (c) and the footnote words "The ANC-5 Bulletin" wherever they appear and inserting in lieu thereof "MIL-HDBK-5"; and by deleting from the footnote the phrase "to § 3.111 Design Mechanical Properties" and inserting in lieu thereof "to § 3.1.1 Material Properties".

42. By amending § 4b.307(a) to read as follows:

§ 4b.307 Special factors.

(a) *Casting factors.* For structural castings, the factor of safety prescribed in § 4b.200 shall be multiplied by the casting factors specified in subparagraphs (1) and (2) of this paragraph. The prescribed tests and inspections shall be in addition to those necessary to establish foundry quality control. Castings shall be inspected in accordance with approved specifications.

(1) Each casting, the failure of which would preclude continued safe flight and landing of the airplane or which would result in serious injury to occupants, shall have a casting factor of at least 1.25 and shall receive 100 percent inspection by visual, radiographic, and magnetic particle or penetrant inspection methods or approved equivalent non-destructive inspection methods. Where such castings have a casting factor less than 1.50, three sample castings shall be static tested. The test castings shall comply with the strength requirements of § 4b.201 at an ultimate load corresponding with a casting factor of 1.25 and shall comply with the deformation

requirements at a load equal to 1.15 times limit load.

NOTE: Examples of castings to which this subparagraph applies 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; cabin pressure valves.

(2) For structural castings other than those specified in subparagraph (1) of this paragraph, the casting factors and inspections shall be in accordance with the following table except that it shall be acceptable to reduce the percentage of castings inspected by nonvisual methods when an approved quality control procedure is established. For castings procured to a specification which guarantees the mechanical properties of the material in the castings and provides for demonstration of these properties by test of coupons cut from castings on a sampling basis, it shall be acceptable to use a casting factor of 1.0. The inspection requirements for such castings shall be in accordance with those specified in the following table for casting factors of 1.25 to 1.50, and the testing requirements shall be in accordance with subparagraph (1) of this paragraph.

Casting factor	Inspections
2.0 or greater.....	100 percent visual.
Less than 2.0 greater than 1.5.	100 percent visual, and magnetic particle or penetrant or equivalent nondestructive inspection methods.
1.25 to 1.50.....	100 percent visual, magnetic particle or penetrant, and radiographic, or approved equivalent nondestructive inspection methods.

(3) Castings which are pressure tested as parts of a hydraulic or other fluid system shall not be required to comply with the provisions of this section unless such castings support airplane structural loads.

(4) The casting factor need not exceed 1.25 with regard to bearing stresses regardless of the method of inspection employed. A casting factor need not be employed with respect to the bearing surface of a part if the bearing factor used (see paragraph (b) of this section) is greater than the casting factor.

§ 4b.329-2 [Amendment]

43. By amending § 4b.329-2 by deleting from table I the expression "MIL-C-5424" and inserting in lieu thereof "MIL-W-5424" and by deleting from note 3 the words "Air Force-Navy Aeronautical Design Standard AND 10482" and inserting in lieu thereof "Military Standard Drawing MS33591(ASG)".

§ 4b.329-6 [Amendment]

44. By amending § 4b.329-6 by deleting the expression "ANC-5" and inserting in lieu thereof "MIL-HDBK-5".

45. By amending § 4b.334(e) (2) by deleting the word "all" and inserting in lieu thereof "one or more".

46. By amending § 4b.334 by adding a note at the end of paragraph (e) (1); and by adding a new paragraph (g) to read as follows:

§ 4b.334 Retracting mechanism.

(e) Position indicator and warning device. (1) * * *

NOTE: An acceptable method for indicating to the pilot when the landing gear is secured in the extended and in the retracted positions is by means of lights. For example, landplanes may display a green light when the landing gear is down and locked; a red light to indicate an intermediate or unlocked landing gear position; and "all lights out" when the landing gear is up and locked. An acceptable method for sensing when the landing gear is secured in the extreme positions is to locate the sensing devices so that they are operated by the landing gear locking latch.

(g) Protection of equipment in wheel wells. Equipment located in wheel wells, which is essential to safe operation of the airplane, shall be protected from the damaging effects of a bursting tire unless it is shown that a tire cannot burst from overheat, or from the damaging effects of a loose tire tread unless it is shown that a loose tire tread cannot cause damage.

§ 4b.352 [Amendment]

47. By amending § 4b.352(d) by adding at the end thereof, after the parenthetical expression, two new sentences to read as follows: "Strength shall be provided in the windshield and window panels to withstand the maximum cabin pressure differential loads (see § 4b.216(c)(1)) combined with critical aerodynamic pressure and temperature effects, after failure of a single load-carrying element of the windshield or window. It shall be acceptable to assume that after a single failure occurs, which is obvious to the flight crew, the cabin pressure differential will be reduced from the maximum in accordance with appropriate operating limitations enabling continued safe flight of the airplane with a cabin pressure altitude of not more than 15,000 feet. (See 4b.374(b).)"

§ 4b.357 [Deletion]

48. By deleting § 4b.357.

§ 4b.358 [Amendment]

49. By amending § 4b.358(c) (2) by adding at the end thereof the words "in lieu of the fitting factor prescribed in § 4b.307(c)."

50. By amending § 4b.362(h) to read as follows:

§ 4b.362 Emergency evacuation.

(h) Width of main aisle. The main passenger aisle width at any point between seats shall not be less than 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
10 or less.....	Inches 12	Inches 18
11 to 19.....	12	20
20 or more.....	15	20

§ 46.371 [Amendment]

51. By deleting § 4b.371(d).

§ 46.412 [Deletion]

52. By deleting § 4b.412.

53. By amending § 4b.413 to read as follows:

§ 4b.413 Fuel flow.

(a) The fuel system shall provide not less than 100 percent of the fuel flow required by the engines when the airplane is operated under all intended operating conditions and maneuvers.

(b) In determining compliance with the provisions of paragraph (a) of this section, the provisions of subparagraphs (1) through (4) of this paragraph shall apply.

(1) Fuel shall be delivered to the engine at a pressure within the limits specified in the engine type certificate.

(2) The quantity of fuel in the tank being considered shall not exceed the sum of the amount established as the unusable fuel supply for that tank, as determined in accordance with the provisions of § 4b.416, and whatever minimum quantity of fuel it may be necessary to add for the purpose of determining compliance.

(3) Such main pumps shall be used as are necessary for each operating condition and airplane attitude for which compliance is determined, and, in addition, for each main pump so used, the appropriate emergency pump shall be substituted. (See § 4b.430(b).)

(4) If a fuel flowmeter is provided, operation of the meter shall be blocked in determining compliance with this section and the fuel shall flow through the meter or its bypass.

(c) If an engine can be supplied with fuel from more than one tank, it shall be possible to regain the full fuel pressure of that engine in not more than 20 seconds after switching to any 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.

§ 4b.415 [Deletion]

54. By deleting § 4b.415.

55. By amending § 4b.416 to read as follows:

§ 4b.416 Unusable fuel supply.

The unusable fuel supply shall be selected by the applicant and shall be established for each tank as not less than the quantity at which the first evidence of malfunctioning occurs under the most adverse condition from the standpoint of fuel feed during all intended operations and flight maneuvers involving use of that tank.

§§ 4b.416-1, 4b.416-2 [Deletion]

56. By deleting §§ 4b.416-1 and 4b.416-2.

57. By amending § 4b.418 to read as follows:

§ 4b.418 Flow between interconnected tanks.

If it is possible to pump fuel from one tank to another in flight, the design of the fuel tank vents and the fuel transfer

system shall be such that no structural damage to tanks will occur in the event of overfilling.

§ 4b.418-1 [Deletion]

58. By deleting § 4b.418-1.

§ 4b.420 [Amendment]

59. By deleting § 4b.420(d).

§ 4b.426-1 [Deletion]

60. By deleting § 4b.426-1.

61. By amending § 4b.435(d) to read as follows:

§ 4b.435 Fuel strainer or filter.

(d) Provision shall be made to maintain automatically the fuel flow when ice-clogging of the filter occurs, unless means are incorporated in the fuel system to prevent the accumulation of ice particles on the filter.

62. By amending § 4b.436 to read as follows:

§ 4b.436 Fuel system drains.

Drainage of the fuel system shall be accomplished by fuel strainer drains and other drains as provided in § 4b.424. The drains shall discharge clear of all portions of the airplane and shall incorporate means for positive locking of the drain in the closed position, either manually or automatically.

§ 4b.440 [Amendment]

63. By deleting § 4b.440(e).

§ 4b.440-1 [Deletion]

64. By deleting § 4b.440-1.

65. By amending § 4b.447 to read as follows:

§ 4b.447 Oil filters.

If the powerplant installation incorporates an oil filter (strainer), the filter shall be constructed and installed so that oil will continue to flow at the normal rate through the remainder of the system when the flow of oil through the filter element is completely blocked.

66. By amending § 4b.450 to read as follows:

§ 4b.450 General.

The powerplant cooling provisions shall be capable of maintaining the temperatures of powerplant components and engine fluids within the temperature limits established for such components and fluids, under all surface (ground or water) and flight operating conditions. (For cooling systems instruments see §§ 4b.604 and 4b.734.)

§ 4b.450-1 [Deletion]

67. By deleting § 4b.450-1.

68. By amending § 4b.451 to read as follows:

§ 4b.451 Cooling tests.

(a) *General.* Compliance with the provisions of § 4b.450 shall be demonstrated by test under critical surface (ground or water) and flight operating conditions. If the tests are conducted under conditions which deviate from the maximum ambient atmospheric temperature (see paragraph (b) of this section), the recorded powerplant tempera-

tures shall be corrected in accordance with the provisions of paragraphs (c) and (d) of this section. The corrected temperatures determined in this manner shall not exceed the established limits. In the case of reciprocating engines, the fuel used during the cooling tests shall be of the minimum grade approved for the engines involved, and the mixture settings shall be those normally used in the flight stages for which the cooling tests are conducted. The test procedures shall be as outlined in §§ 4b.452 and 4b.454.

(b) *Maximum ambient atmospheric temperature.* A maximum ambient atmospheric temperature corresponding with sea level conditions shall be established by the applicant as a limitation on the operation of the airplane (see § 4b.718). The temperature lapse rate shall be 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 shall be constant at -69.7° F.

(c) *Correction factor.* Temperatures of all powerplant components and engine fluids, except cylinder barrels, for which temperature limits have been established, shall be corrected by adding 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, unless a more rational correction is shown to be applicable.

(d) *Correction factor for cylinder barrel temperatures.* Cylinder barrel temperatures shall be corrected by adding 0.7 of 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, unless a more rational correction is shown to be applicable.

69. By amending § 4b.452 to read as follows:

§ 4b.452 Cooling test procedures.

(a) *General.* Compliance with the provisions of § 4b.450 shall be established for the takeoff, climb, en route, and landing stages of flight which correspond with the applicable performance regulations. The cooling tests shall be conducted with the airplane in the configuration and operating under the conditions which are critical relative to cooling during each stage of flight.

(b) *Temperature stabilization.* For all stages of flight, temperatures shall be stabilized under conditions from which entry is made into the stage of flight for which a test is conducted, except when the entry condition normally is not one during which component and engine fluid temperatures would stabilize. In such case, operation through the full entry condition shall be conducted prior to entry into the stage of flight for which the test is conducted in order to allow temperatures to attain their natural level at the time of entry. In particular, the takeoff cooling test shall be preceded by a period during which the powerplant

component and engine fluid temperatures are stabilized with the engines at ground idle. A temperature shall be considered stabilized when its rate of change is less than 2 degrees F. per minute.

(c) *Duration of test.* Cooling tests for each stage of flight shall be continued until one of the following conditions is fulfilled:

(1) Component and engine fluid temperatures stabilize;

(2) The stage of flight is completed; or

(3) An operating limitation is reached.

NOTE: In the case of reciprocating engines, it may be assumed for cooling test purposes that the takeoff stage of flight is complete when the airplane has attained an altitude of 1,500 feet above the takeoff surface or 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 § 4b.120(c) is shown, whichever point is at a higher altitude.

§ 4b.452-1 [Deletion]

70. By deleting § 4b.452-1.

§§ 4b.453, 4b.453-1 [Deletion]

71. By deleting §§ 4b.453 and 4b.453-1.

§ 4b.454-1 [Deletion]

72. By deleting § 4b.454-1.

§ 4b.455 [Deletion]

73. By deleting § 4b.455.

§§ 4b.465, 4b.465-1 [Deletion]

74. By deleting §§ 4b.465 and 4b.465-1.

§ 4b.484 [Amendment]

75. By amending § 4b.484(a)(1) by deleting from the third sentence the words "complying with the provisions of § 4b.488".

§ 4b.484-1 [Amendment]

76. By deleting from § 4b.484-1(b)(1) the words "Never Exceed" and inserting in lieu thereof "maximum operating limit".

§ 4b.487 [Amendment]

77. By amending § 4b.487(c) by deleting from the first sentence the words "complying with § 4b.488" and inserting in lieu thereof "to isolate the engine power section from the engine accessory section,".

§ 4b.488 [Deletion]

78. By deleting § 4b.488.

79. By amending § 4b.603(a) by deleting the symbol " V_{NE} " and inserting in lieu thereof " V_{MO}/M_{MO} ".

80. By amending § 4b.603 by adding a new paragraph (k) to read as follows:

§ 4b.603 Flight and navigational instruments.

(k) Speed warning device for all turbine-powered airplanes and for all other airplanes for which V_{MO}/M_{MO} is greater than $0.8 V_{DF}/M_{DF}$ or $0.8 V_D/M_D$. The device shall provide effective aural warning to the pilots which is distinctively different from aural warnings used for other purposes, whenever the speed exceeds V_{MO} plus 6 knots or $M_{MO}+0.01$. The upper limit of the production toler-

ance permitted for the warning device shall be at a speed not greater than the prescribed warning speed.

81. By amending § 4b.604(q) to read as follows:

§ 4b.604 Powerplant instruments.

(q) An indicator for each turbojet engine to indicate a change in thrust, resulting from any deficiency in the engine or an indicator to indicate a gas stream pressure which can be related to thrust.

§ 4b.612 [Amendment]

82. By amending § 4b.612(a)(3) by deleting the symbol "V_{NO}" and inserting in lieu thereof "V_{MO}".

§ 4b.612-4 [Amendment]

83. By amending § 4b.612-4(a) by deleting the symbols "V_{NE}" and "M_{NE}" and inserting in lieu thereof "V_{FC}" and "M_{FC}".

84. By amending § 4b.612(f) to read as follows:

§ 4b.612 Flight and navigational instruments.

(f) *Duplicate instrument systems.* If duplicate flight instruments are required by the operating parts of the Civil Air Regulations (see note under § 4b.610), the provisions of subparagraphs (1) through (3) of this paragraph shall apply.

(1) The operating system for flight instruments used by the first pilot, which are required to be duplicated at other flight crew stations, shall be completely independent of the operating system provided for other flight crew stations.

(2) Only the required flight instruments and duplicates of required instruments provided for use of the first pilot shall be connected to the operating system provided for the first pilot.

(3) When other than required instruments and duplicates are connected to other than the first pilot's operating system, provision shall be made to disconnect or isolate in flight such other instruments.

85. By amending § 4b.622(b) to read as follows:

§ 4b.622 Generating system.

(b) The generating system shall be designed so that:

(1) The power sources function properly when independent and when connected in combination;

(2) The failure or malfunctioning of any power source cannot create a hazard or impair the ability of the 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 initiated by switching, fault clearing, or other causes, do not render essential loads inoperative, and do not introduce a smoke or fire hazard.

86. By amending § 4b.624(d) to read as follows:

§ 4b.624 Electrical protection.

(d) If the ability to reset a circuit breaker or to replace a fuse is essential to safety in flight, such circuit breaker or fuse shall be so located and identified that it can be readily reset or replaced in flight.

87. By amending § 4b.627 to read as follows:

§ 4b.627 Electrical system tests.

When laboratory tests of the electrical system are conducted they shall be performed on a mock-up utilizing the same generating equipment complement as in the aircraft. The equipment shall simulate the electrical characteristics of the distribution wiring and connected loads to the extent necessary for valid test results. Laboratory generator drives shall simulate the actual prime movers on the airplane with respect to their reaction to generator loading, including loading due to faults. When the conditions of flight cannot adequately be simulated in the laboratory or by ground tests on the prototype airplane, flight tests shall be conducted.

§ 4b.634 [Amendment]

88. By amending Figure 4b-19 referred to in § 4b.634 by deleting the phrase "At least 2 candles" in the intensity column and inserting in lieu thereof "0.05 I".

§ 4b.642 [Amendment]

89. By amending § 4b.642(a) by deleting the word "danger" and inserting in lieu thereof "probability".

§ 4b.643 [Amendment]

90. By amending § 4b.643 by adding at the end of the third sentence the words "in lieu of the fitting factor prescribed in § 4b.307(c)."

§ 4b.645 [Amendment]

91. By amending § 4b.645 by deleting from the introductory paragraph the phrase "through (d)" and inserting in lieu thereof "through (e)".

§ 4b.652 [Deletion]

92. By deleting § 4b.652.

§ 4b.659 [Deletion]

93. By deleting § 4b.659.

94. By amending § 4b.711 to read as follows:

§ 4b.711 Maximum operating limit speed V_{MO}/M_{MO}.

The maximum operating limit speed is a speed which shall not be deliberately exceeded in any regime of flight (climb, cruise, or descent), except where a higher speed is authorized for flight test or pilot training operations. This operating limitation, denoted by the symbols V_{MO}/M_{MO} (airspeed or Mach number, whichever is critical at a particular altitude), shall be established to be not greater than the design cruising speed V_C and 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} shall be determined in accordance with either paragraph (a) or (b) of this section, but shall not be less than the margin found necessary in flight tests in accordance with § 4b.191. (Also see § 4b.603(k) concerning speed warning means.)

(a) The minimum margin shall be the greater of the values determined in accordance with subparagraphs (1) and (2) of this paragraph.

(1) From an initial condition of stabilized flight at V_{MO}/M_{MO}, the airplane shall be assumed to be upset, flown for 20 seconds along a flight path 7.5 degrees below the initial path and pulled up at a load factor of 1.5 (.5g acceleration increment). It shall be acceptable to calculate the speed increase occurring in this maneuver, provided reliable or conservative aerodynamic data are used. Power, as specified in § 4b.155(a), shall be assumed until the pullup is initiated, at which time power reduction and the use of pilot controlled drag devices may be assumed.

(2) The margin shall be sufficient to provide for atmospheric variations, such as horizontal gusts, penetration of jet stream or cold front, and for instrument errors and airframe production variations. It shall be acceptable to consider these factors on a probability basis, but the margin at altitudes where M_{MO} is limited by compressibility effects shall not be less than 0.05M.

(b) V_{MO}/M_{MO} shall not be greater than 0.8 V_D/M_D or 0.8 V_{DF}/M_{DF}.

§ 4b.712 [Deletion]

95. By deleting § 4b.712.

96. By amending § 4b.714 to read as follows:

§ 4b.714 Flap extended speeds, V_{FE}.

Flap extended speeds, V_{FE}, shall be established not to exceed the design flap speeds, V_F, chosen in accordance with §§ 4b.210(b)(1) and 4b.212 for the corresponding flap positions and engine powers.

97. By amending § 4b.718(c) to read as follows:

§ 4b.718 Powerplant limitations.

(c) *Fuel grade or specification designation.* The minimum fuel grade for reciprocating engines or the fuel designation for turbine engines, required for the operation of the engine within the limitations prescribed in paragraphs (a) and (b) of this section.

98. By amending § 4b.718 by adding a new paragraph (d) to read as follows:

(d) *Maximum ambient atmospheric temperature.* The maximum ambient atmospheric temperature at which compliance with the cooling provisions of §§ 4b.450 through 4b.452 is established.

§ 4b.738 [Amendment]

99. By amending § 4b.738(b)(1) by deleting the words "octane number" and inserting in lieu thereof "grade or designation".

100. By amending § 4b.740-1 by deleting paragraph (b)(4)(ii) and by amending paragraphs (b)(4)(i), (vii), and (viii) to read as follows:

§ 4b.740-1 Preparation of Airplane Flight Manuals for aircraft certificated in the transport category (FAA policies which apply to § 4b.740).

- (b) *Operating limitations.* * * *

(4) *Speed limitations.* * * *

(i) *Maximum operating limit speed, V_{MO}/M_{MO} .* In accordance with § 4b.741 (a) (1), the manual should include a statement that the maximum operating limit speed shall not be deliberately exceeded in any regime of flight (climb, cruise, or descent), except where a higher speed is authorized for flight test or pilot training operations.

(vii) *Compressibility effects.* Where a speed limitation (e.g., M_{MO}) is based on compressibility effects, the manual should include information concerning warning symptoms, probable behavior of the airplane, and recovery procedures.

(viii) *Airspeed and Mach indicator markings and placards.* An explanation of any markings, limit hands, placards, etc., provided in complying with § 4b.732, should be included.

101. By amending § 4b.741(a) by deleting subparagraph (2) and revising subparagraph (1) to read as follows:

§ 4b.741 Operating limitations.

- (a) *Airspeed limitations.* * * *

(1) The maximum operating limit speed V_{MO}/M_{MO} (see § 4b.711), together with a statement that this speed limit shall not be deliberately exceeded in any regime of flight (climb, cruise, or descent), except where a higher speed is authorized for flight test or pilot training operations.

(Secs. 313(a), 601, 603; 72 Stat. 752, 775, 776; 49 U.S.C. 1354(a), 1421, 1423)

Issued in Washington, D.C., on March 27, 1962.

N. E. HALABY,
Administrator.

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[Reg. Docket 107; Reg. No. SR-450]

PART 4b—AIRPLANE AIRWORTHINESS; TRANSPORT CATEGORIES

PART 40—SCHEDULED INTERSTATE AIR CARRIER CERTIFICATION AND OPERATION RULES

PART 41—CERTIFICATION AND OPERATION RULES FOR CERTIFICATED ROUTE AIR CARRIERS ENGAGING IN OVERSEAS AND FOREIGN AIR TRANSPORTATION AND AIR TRANSPORTATION WITHIN HAWAII AND ALASKA

PART 42—IRREGULAR AIR CARRIER AND OFF-ROUTE RULES

PART 43—GENERAL OPERATION RULES

Airspeed Operation Limitation for Transport Category Airplanes

As a result of the First Federal Aviation Agency Airworthiness Review, the

Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice which was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961, also contained a proposed Special Civil Air Regulation which would require, for certain transport category airplanes, revision of the Airplane Flight Manual statement of airspeed operating limitations, and the revision of airspeed indicator markings and installation of an overspeed warning device in turbine-powered airplanes.

Operating records show an increasing number of cases of exceeding the airspeed operating limits on transport category airplanes, particularly on turbine-powered airplanes. Among the probable causes of overspeed are the characteristics of turbine-powered airplanes which make it desirable to operate at the limit speed, the somewhat indefinite significance of the present normal operating limit speed, and the increasing preoccupation of the pilots with air traffic and other duties which distract them from continuous monitoring of airspeed instruments.

For new type airplanes, Part 4b of the Civil Air Regulations is being amended concurrently to replace the existing normal operating limit and never exceed speeds (§§ 4b.711 and 4b.712) by a single speed at the previous normal operating limit value. The new single limit in Part 4b is being designated as the "maximum operating limit speed," and will be defined in the Airplane Flight Manual (§ 4b.741) as a speed which shall not be deliberately exceeded in any regime of flight, except where a higher speed is authorized for flight test or pilot training operations.

To minimize overspeeding due to pilot preoccupation, § 4b.603(k) is being amended to require an aural warning device on turbine-powered airplanes and other airplanes having a speed margin of less than 20 percent between limit and demonstrated speeds. To insure early warning and thus to make a major portion of the speed margin available for pilot reaction and recovery maneuvers, the speed warning shall occur whenever the speed exceeds the limit speed by more than 6 knots or 0.01 Mach number.

The changes being made to Part 4b relating to airspeed operating limitations apply only to new type airplanes for which application for type certificate is filed on or after the effective date of the amended regulations, and would not affect existing airplanes. This Special Civil Air Regulation is being issued to apply retroactively to transport category airplanes certificated under the provisions of Part 4b in effect prior to the effective date of the amendments to Part 4b discussed herein.

For turbine-powered airplanes, this regulation requires an aural speed warning device and revision of Airplane Flight Manuals to replace the previous term "normal operating limit speed" with the new term "maximum operating limit speed" and to state that this speed shall

not be deliberately exceeded in any regime of flight, except where a higher speed is specifically authorized for flight test or pilot training operations, or in approved emergency procedures. The actual value of this limit speed is not changed. The existing never exceed speed may be retained in the manual since, in some cases, emergency procedures may refer to this speed. Airspeed placards and markings are required to be revised as necessary to reflect the maximum operating limit speed.

For reciprocating engine-powered airplanes, this regulation merely requires revision of the statement in the Airplane Flight Manual explaining the significance of the existing speed limitations.

Since this Special Civil Air Regulation is applicable to existing airplanes, approximately 6 months is being allowed after its adoption for the revision of manuals and approximately one year for installation of warning devices in turbine-powered airplanes. The proposed provision requiring air carriers to take action to insure that their pilots are informed of the changes to the airspeed operating limitation prescribed in this regulation has been withdrawn. Such an additional provision is considered to be unnecessary in that it is the responsibility of the air carrier under other provisions of the Civil Air Regulations to inform their pilots of the current operating limitations for their aircraft.

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.

In consideration of the foregoing, the following Special Civil Air Regulation is hereby adopted, to become effective May 3, 1962:

Contrary provisions of the Civil Air Regulations notwithstanding, the following requirements shall be applicable to transport category airplanes certificated under the provisions of Part 4b in effect prior to May 3, 1962:

1. *Turbine-powered airplanes.* (a) On or before September 1, 1962:

(1) The airspeed operating limitations in the Airplane Flight Manual shall be revised by deleting the term "normal operating limit speed" and the corresponding symbols " V_{NO}/M_{NO} ", together with statements explaining the significance of this term, and inserting in lieu thereof the term "maximum operating limit speed", the corresponding symbols " V_{MO}/M_{MO} ", and the following statement explaining the significance of the new term:

"The maximum operating limit speed shall not be deliberately exceeded in any regime of flight (climb, cruise, or descent), except where a higher speed is specifically authorized for flight test or pilot training operations, or in approved emergency procedures."

(2) Airspeed placards and instrument markings shall be consistent with subparagraph (1) of this paragraph. Where color markings are used on airspeed or Mach indicators, the red radial line shall be at V_{MO}/M_{MO} . Where a maximum allowable airspeed indicator is used, the limit hand shall indicate V_{MO}/M_{MO} .

(b) On or before February 1, 1963, each airplane shall be equipped with a speed warning device which shall provide aural warning to the pilots, which is distinctly different from aural warnings used for other purposes, whenever the speed exceeds V_{MO} plus 6 knots or $M_{MO} + 0.01$. The upper limit

of the production tolerances permitted for the warning device shall be at a speed not greater than the prescribed warning speed.

2. *Reciprocating engine-powered airplanes.* On or before September 1, 1962, the airspeed operating limitations in the Airplane Flight Manual shall be revised as necessary to state that the normal operating limit speed, or the maximum structural cruising speed (whichever term is used in the particular manual), shall not be deliberately exceeded in any regime of flight (climb, cruise, or descent), except where a higher speed is specifically authorized for flight test or pilot training operations, or in approved emergency procedures.

(Secs. 313a, 601, 603, 604; 72 Stat. 752, 775, 776, 778; 49 U.S.C. 1354(a), 1421, 1423, 1424)

Issued in Washington, D.C., on March 27, 1962.

N. E. HALABY,
Administrator.

[F.R. Doc. 62-3095; Filed, Mar. 29, 1962; 8:49 a.m.]

[Reg. Docket 107; Amdt. 5-1]

PART 5—GLIDER AIRWORTHINESS

Miscellaneous Amendments Resulting From First Airworthiness Review

As a result of the First Federal Aviation Agency Airworthiness Review, the Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961. There are contained herein amendments to Part 5 of the Civil Air Regulations which stem from this First FAA Airworthiness Review.

The provisions of Part 5 apply only to fixed-wing gliders. Because of recent developments in the design of gliders, §§ 5.10 and 5.13 are being amended to include such references as are necessary to make this part also applicable to rotary-wing gliders. In addition, § 5.11 (b) is being amended to exclude from the provisions of that section consideration of provisional type certificates. It was proposed in Draft Release 61-12 that this be accomplished by a note. However, it now appears that it is more appropriate to include such a provision within § 5.11(b) rather than as a note thereto.

Interested persons have been afforded an opportunity to participate in the making of this amendment, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 5 of the Civil Air Regulations (14 CFR Part 5, as amended) is hereby amended as follows, effective May 3, 1962:

1. By amending § 5.10 by changing the words "Part 3" to read "Part 3 or Part 6", and by inserting between the words "finds" and "appropriate" the words "are applicable to the type design and are".

2. By amending § 5.11(b) by inserting in the first sentence between the words "required" and "except" the phrase "notwithstanding the fact that the applicant may have been issued a provisional type certificate,".

3. By amending § 5.13(b) by deleting the parenthetical expression "(see § 3.737

of this subchapter)" and inserting in lieu thereof "(see § 3.737 or § 6.700 of this chapter, as appropriate)".

(Secs. 313(a), 601, 603; 72 Stat. 752, 775, 776; 49 U.S.C. 1354(a), 1421, 1423)

Issued in Washington, D.C., on March 27, 1962.

N. E. HALABY,
Administrator.

[F.R. Doc. 62-3087; Filed, Mar. 29, 1962; 8:48 a.m.]

[Reg. Docket 107; Amdt. 6-5; Supp. 19]

PART 6—ROTORCRAFT AIRWORTHINESS; NORMAL CATEGORY

Miscellaneous Amendments Resulting From First Airworthiness Review

As a result of the First Federal Aviation Agency Airworthiness Review, the Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961. There are contained herein amendments to Part 6 of the Civil Air Regulations which stem from this First FAA Airworthiness Review.

Interested persons have been afforded an opportunity to express their comments in regard to the proposal and, in some cases, the proposal has been modified in accordance with such comments. The more significant amendments being adopted by the Agency are discussed herein.

Two changes are being made which affect control systems. Section 6.225 now requires manual control systems to comply with the provisions of that section. Because the word "manual" has erroneously been construed to limit the applicability of this section, it is being amended to make certain that it applies to all control systems. The other change stems from the fact that Part 6 does not now cover the design of dual primary flight control systems. To insure that future dual control systems will be designed to withstand more than single pilot effort, a new § 6.226 is being adopted.

Several changes to the structural provisions relating to parts subjected to alternating stresses, casting factors, and hull and float design are being made. The current regulations require fatigue evaluation of the rotor structure but not of the essential fuselage and rotor pylon structure. Service experience has shown a need for fatigue evaluation of these other structural parts. Therefore, § 6.251 is being amended to require an evaluation of fuselage and rotor pylon structure, the failure of which would threaten the structural integrity of the rotorcraft. The present requirements on factors of safety and inspections for structural castings specify a special factor of 2.0 for visual inspection only, and a factor of 1.25 when radiographic inspection and strength tests of 3 sample castings are employed. Section 6.307 is being amended to provide a series of casting factors and corresponding test and inspection requirements which re-

fect current methods and practices. In addition, a minor revision in the format of this section has been made from that which was proposed and the rule now provides for alternative methods of compliance with the requirements therein. It was proposed in Draft Release 61-12 to add a new § 6.343 setting forth minimum design standards for hull and float design of "sea and amphibian type rotorcraft." To avoid having the requirement affect all amphibian rotorcraft, i.e., even those which have an extremely limited capability as an amphibian, the proposal has been confined in applicability only to those rotorcraft which are to be approved for both taking off from and alighting on water. The requirement is being set forth in a new paragraph (c) under § 6.341 rather than as a new § 6.343 because it is concerned with buoyancy. This change necessitates the inclusion of the word "hulls" in § 6.340.

The regulations covering Part 6 fuel systems are not in the same form and do not use terminology similar to that used in other airworthiness parts. To eliminate this inconsistency, new §§ 6.418 and 6.419 are being adopted, and changes are being made to §§ 6.420, 6.421, and 6.424.

Section 6.420 presently requires that, insofar as practicable, the entire fuel supply can be utilized under certain conditions. Such a requirement is unnecessary, even when practicable, because a rotorcraft will continue to be airworthy so long as usable fuel can be used regardless of the quantity of unusable fuel. Therefore, this provision is being deleted in favor of the objective requirement being added in § 6.418, which covers fuel system construction and arrangement to insure a satisfactory fuel flow.

Currently effective § 6.421 defines unusable fuel supply as that quantity at which the first evidence of malfunctioning occurs. This definition is unnecessarily restrictive and is not essential to safety since a rotorcraft is no less airworthy if an unusable fuel supply is selected as a quantity which is in excess of that which would produce a malfunction. Accordingly, the definition of unusable fuel supply is being revised to make it not less than the quantity at which the first evidence of malfunction occurs, the same as in other airworthiness parts.

As a result of comment received on Draft Release 61-12, specific requirements for demonstrations or tests are being deleted from §§ 6.420 and 6.421. Adequate authority for any ground or flight tests which might be required continues to rest in presently effective §§ 6.15 and 6.16. The provisions of paragraph (b) of § 6.421 as proposed are being transferred to a new paragraph (c) under § 6.420 as an editorial change, since the provision for fuel feed belongs more appropriately in the fuel flow section than in the unusable fuel supply section. In addition, the requirements for a low fuel quantity warning indicator presently in § 6.420(a), and a means to indicate when the emergency fuel system is in operation presently in § 6.424, are being transferred to § 6.604 which lists required items of equipment. In addition, the powerplant operating limitation dealing with fuel is being brought up to date by

including reference to turbine engine fuel in § 6.714.

Presently effective Part 6 contains no requirement pertaining to the bypass of engine oil around a filter element when the element becomes clogged. Although installation of a filter is not required, it is necessary to provide for the bypass of a clogged filter, if a filter is installed, to insure continued normal functioning of the rest of the oil system. Accordingly, a new § 6.447 is being adopted to provide for bypass capability, consistent with the same requirement now appearing in all the other airworthiness parts.

Revisions to the regulations concerning electrical systems and equipment are being made involving §§ 6.617 through 6.627. These changes are being made in recognition of the substantial growth in capacity, complexity, and significance to safety of electrical systems on rotorcraft. In particular, new § 6.618 dealing with electric power sources is being added. Revisions are being made to §§ 6.623, 6.626, and 6.627 concerned with master switch arrangement, protective devices, and electric cables, respectively. In conjunction with these changes, §§ 6.623-1, 6.625-1, 6.625-2, and 6.627-1 are being deleted because the material in these sections is being included, or is already contained, in other sections.

Two changes are being made to the lighting requirements. Figure 6-2 now specifies that position light intensity for angles 40° to 90° above or below the horizontal be at least 2 candles. Because this results in an irrational discontinuity when related to the other data in figure 6-2, figure 6-2 is being amended to require an intensity of 0.05 I for these angles.

The current anticollision light requirements in § 6.637(a) permit 0.03 steradians blockage. In view of recent qualitative studies, it has been determined that such a limitation might be unduly restrictive. Therefore, § 6.637(a) is being amended to permit 0.5 steradians of obstruction.

Part 6 currently does not require the tail rotor to be marked. Because there have been a number of accidents attributable to persons walking into tail rotors, § 6.738(f) is being added to require that tail rotors be marked conspicuously.

Miscellaneous changes of an editorial or clarifying nature are being made to §§ 6.11, 6.203, 6.237, 6.251, 6.306, 6.605, 6.642, and 6.738. Among the miscellaneous amendments there is one to expressly exclude from the provisions of § 6.11(b) consideration of provisional type certificates. While it was proposed that this be accomplished by a note, it now appears that it is more appropriate to include such a provision within § 6.11(b) rather than as a note thereto.

Interested persons have been afforded an opportunity to participate in the making of this amendment, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 6 of the Civil Air Regulations (14 CFR Part 6, as amended) is hereby amended as follows, effective May 3, 1962:

§ 6.11 [Amendment]

1. By amending § 6.11(b) by inserting in the first sentence between the words

"required" and "except" the phrase "notwithstanding the applicant may have been issued a provisional type certificate".

§ 6.203 [Amendment]

2. By amending § 6.203(d) by deleting the reference "(see §§ 6.221 and 6.250)" and inserting in lieu thereof "(see §§ 6.221, 6.250, and 6.251)".

§ 6.225 [Amendment]

3. By amending § 6.225 by deleting from the introductory paragraph the word "Manual" and inserting in lieu thereof "All".

4. By adding a new § 6.226 to read as follows:

§ 6.226 Dual primary flight control systems.

If a dual primary flight control system is provided, the system shall be designed for conditions when the pilots operate the controls in opposition and in conjunction. Individual pilot loads equal to 75 percent of those obtained in accordance with § 6.225 shall be applicable.

§ 6.237 [Amendment]

5. By amending § 6.237(a) by amending the definition of W_T to read as follows:

$W = W_T$ for tailwheel units (pounds) equal to whichever of the following is critical:

(1) The static weight on the tailwheel with the rotorcraft resting on all wheels; or

(2) The vertical component of the ground reaction which would occur at the tailwheel assuming the mass of the rotorcraft acting at the center of gravity and exerting a force of 1g downward with the rotorcraft in the maximum nose-up attitude considered in the nose-up landing conditions. (See § 6.246 (b) and (c).)

6. By amending § 6.251 by deleting from the introductory paragraph the phrase "through (d)" and inserting in lieu thereof "through (e)"; and by deleting from paragraph (d) the phrase "in § 6.250 (d) and (f)" and inserting in lieu thereof "in § 6.250 (e) and (f)".

7. By amending § 6.251 by adding a new paragraph (e) to read as follows:

§ 6.251 Fuselage, landing gear, and rotor pylon structure.

(e) Parts of the basic structure which are directly subjected to alternating stresses, the sudden failure of which would threaten the structural integrity of the rotorcraft, shall be designed to withstand the repeated loading conditions likely to occur within the established service life for such parts. The stresses of critical parts shall be determined in flight in all attitudes appropriate to the type of rotorcraft throughout the ranges of limitations prescribed in § 6.204. The service life of such parts shall be established by the applicant on the basis of fatigue tests or other acceptable methods.

8. By amending § 6.306(c) and the note to read as follows:

§ 6.306 Material strength properties and design values.

(c) Values contained in MIL-HDBK-5, MIL-HDBK-17 Part I, ANC-17 Part II, ANC-18, MIL-HDBK-23 Part I, and ANC-23 Part II shall be used unless shown to be inapplicable in a particular case.

NOTE: MIL-HDBK-5, "Strength of Metal Aircraft Elements"; MIL-HDBK-17, "Plastics for Flight Vehicles, Part I—Reinforced Plastics"; ANC-17, "Plastics for Aircraft, Part II—Transparent Glazing Materials"; ANC-18, "Design of Wood Aircraft Structures"; MIL-HDBK-23, "Composite Construction for Flight Vehicles, Part I—Fabrication Inspection Durability and Repair"; and ANC-23, "Sandwich Construction for Aircraft, Part II—Material Properties and Design Criteria", are published by the Department of Defense and the Federal Aviation Agency and may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

9. By amending § 6.307(b) to read as follows:

§ 6.307 Special factors.

(b) *Casting factors.* For structural castings, the factor of safety prescribed in § 6.200 shall be multiplied by the casting factors specified in subparagraph (1) and (2) of this paragraph. The prescribed tests and inspections shall be in addition to those necessary to establish foundry quality control. Castings shall be inspected in accordance with approved specifications.

(1) Each casting, the failure of which would preclude continued safe flight and landing of the rotorcraft or which would result in serious injury to occupants, shall have a casting factor of at least 1.25 and shall receive 100 percent inspection by visual, radiographic, and magnetic particle or penetrant inspection methods or approved equivalent nondestructive inspection methods. Where such castings have a casting factor less than 1.50, 3 sample castings shall be static tested. The test castings shall comply with the strength requirements of § 6.201 at an ultimate load corresponding with a casting factor of 1.25 and shall comply with the deformation requirements at a load equal to 1.15 times limit load.

NOTE: Examples of castings to which this subparagraph applies 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; cabin pressure valves.

(2) For structural castings other than those specified in subparagraph (1) of this paragraph, the casting factors and inspections shall be in accordance with the following table except that it shall be acceptable to reduce the percentage of castings inspected by nonvisual methods when an approved quality control procedure is established. For castings procured to a specification which guarantees the mechanical properties of the material in the castings and provides for demonstration of these properties by test of coupons cut from castings on a sampling basis, it shall be acceptable to use a casting factor of 1.0. The in-

spection requirements for such castings shall be in accordance with those specified in the following table for casting factors of 1.25 to 1.50, and the testing requirements shall be in accordance with subparagraph (1) of this paragraph.

Casting factor	Inspections
2.0 or greater.....	100 percent visual.
Less than 2.0 greater than 1.5.....	100 percent visual, and magnetic particle or penetrant or equivalent nondestructive inspection methods.
1.25 to 1.50.....	100 percent visual, magnetic particle or penetrant, and radiographic, or approved equivalent nondestructive inspection methods.

(3) Castings which are pressure tested as parts of a hydraulic or other fluid system shall not be required to comply with the provisions of this section unless such castings support rotorcraft structural loads.

(4) The casting factor need not exceed 1.25 with regard to bearing stresses regardless of the method of inspection employed. A casting factor need not be employed with respect to the bearing surface of a part if the bearing factor used (see paragraph (c) of this section) is greater than the casting factor.

10. By amending the center heading preceding § 6.340 to read as follows: "Hulls and Floats."

§ 6.340 [Amendment]

11. By amending § 6.340 by inserting the words "hulls and" between the words "of" and "floats".

12. By amending § 6.341 by amending the heading and by adding a new paragraph (c) to read as follows:

§ 6.341 Buoyancy.

(c) If a rotorcraft, constructed with a hull and auxiliary floats, is to be approved for both taking off from and alighting on water, the hull and auxiliary floats shall be divided into watertight compartments so that, with any single compartment flooded, the buoyancy of the hull and auxiliary floats (and wheel tires if used) will provide a sufficient margin of positive stability to minimize capsizing. (See § 6.741(e).)

13. By adding between the center heading "Fuel System" and § 6.420 a new § 6.418 to read as follows:

§ 6.418 General.

(a) The fuel system shall be constructed and arranged in a manner to insure a flow of fuel at a rate and pressure which have been established for proper engine functioning under all likely operating conditions, including all maneuvers for which the rotorcraft is intended. (For fuel system instruments see § 6.604.)

(b) The fuel system shall be arranged so that no one fuel pump can draw fuel from more than one tank at a time unless means are provided to prevent introducing air into the system.

14. By amending § 6.420 by redesignating paragraph (b) as § 6.419, by amending the remainder of the section to read as follows, and by deleting the associated note:

§ 6.420 Fuel flow.

(a) The fuel system shall provide not less than 100 percent of the fuel flow required by the engines when the rotorcraft is operated under all intended operating conditions and maneuvers.

(b) In determining compliance with the provisions of paragraph (a) of this section, the provisions of subparagraphs (1) through (3) of this paragraph shall apply.

(1) Fuel shall be delivered to the engine at a pressure within the limits specified in the engine type certificate.

(2) The quantity of fuel in the tank being considered, shall not exceed the sum of the amount established as the unusable fuel supply for that tank, as determined in accordance with the provisions of § 6.421, and whatever minimum quantity of fuel it may be necessary to add for the purpose of determining compliance.

(3) Such main pumps shall be used as are necessary for each operating condition and rotorcraft attitude for which compliance is determined and, in addition, for each main pump so used, the appropriate emergency pump shall be substituted. (See § 6.424.)

(c) If an engine can be supplied with fuel from more than one tank, the fuel system shall feed promptly when the fuel supply becomes low in one tank and another tank is turned on.

15. By amending § 6.421 to read as follows:

§ 6.421 Unusable fuel supply.

The unusable fuel supply shall be selected by the applicant and shall be established for each tank as not less than the quantity at which the first evidence of malfunctioning occurs under the most adverse condition from the standpoint of fuel feed during all intended operations and flight maneuvers involving use of that tank.

16. By amending § 6.424 to read as follows:

§ 6.424 Fuel pumps.

(a) *Main pumps.* (1) Any fuel pump which is required for proper engine operation or to meet the fuel system requirements of this subpart, except for the provisions of paragraph (b) of this section, shall be considered a main pump.

(2) Provision shall be made to permit the bypass of all positive displacement fuel pumps except fuel injection pumps approved as part of the engine.

NOTE: The phrase "fuel injection pump" means a pump which supplies the proper flow and pressure conditions for fuel injection when such injection is not accomplished in a carburetor. Fuel injection is a special form of carburetion: the charging of air or gas with volatile carbon compounds. It is either an intermittent charging of air by discrete metered quantities of fuel such as occurs in a Diesel cylinder or it is a continuous charging of air by fuel, the fuel flow being proportioned to the airflow through the engine. Examples of continuous injection are injections into the supercharger section of a reciprocating engine or into the combustion chambers of a turbine engine.

(b) *Emergency pumps.* Pumps shall be provided to permit supplying all engines with fuel immediately after the

failure of any one main fuel pump except fuel injection pumps approved as part of the engine. The emergency pump shall be actuated automatically or operated continuously so that sufficient fuel pressure will be maintained to prevent engine stoppage.

17. By adding a new § 6.447 to read as follows:

§ 6.447 Oil filters.

If the powerplant installation incorporates an oil filter (strainer), the filter shall be constructed and installed so that oil will continue to flow at the normal rate through the remainder of the system when the flow of oil through the filter element is completely blocked.

18. By amending § 6.604 by adding new paragraphs (l) and (m) to read as follows:

§ 6.604 Powerplant instruments.

(l) A warning device to indicate low fuel in each tank if an engine can be supplied with fuel from more than one tank. The fuel in any tank shall be considered to be low if a five-minute usable fuel supply remains when the rotorcraft is in the most adverse condition, from the standpoint of fuel feed from that tank, whether or not that condition can be sustained for five minutes.

(m) Means to indicate to the pilot when emergency pumps are in operation.

§ 6.605 [Amendment]

19. By amending § 6.605(d) by deleting the reference "6.620 through 6.622" and inserting in lieu thereof "6.618 through 6.621."

20. By adding, between the center heading "Electrical Systems and Equipment" and § 6.620, new §§ 6.617 and 6.618 to read as follows:

§ 6.617 Installation.

Electrical systems in rotorcraft shall be free from hazards in themselves, in their method of operation, and in their effects on other parts of the rotorcraft. Electrical equipment shall be of a type and design adequate for the use intended. Electrical systems shall be installed in such a manner that they are protected from fuel, oil, water, other detrimental substances, and mechanical damage.

§ 6.618 Electric power sources.

(a) Electric power sources, their transmission cables, and their associated control and protective devices shall have sufficient capacity to furnish the required power at the proper voltage to all load circuits which are essential to the safe operation of the rotorcraft.

(b) Compliance with paragraph (a) of this section shall be shown by means of an electrical load analysis, or by electrical measurements, which take into account all electrical loads applied to the electrical system, in probable combinations and for probable durations.

(c) At least one generator shall be installed if the electrical system supplies power to load circuits which are essential to the safe operation of the rotorcraft.

(d) Electric power sources shall function properly when connected in combination or independently. The failure or malfunction of any electric power source shall not impair the ability of any remaining source to supply load circuits which are essential to the safe operation of the rotorcraft.

(e) Electric power source controls shall be such as to permit independent operation of each source.

21. By amending § 6.620 to read as follows:

§ 6.620 Generator.

Generators shall be capable of delivering their continuous rated power.

§ 6.619 [Redesignation]

22. By redesignating § 6.621 as § 6.619 and by adding a new § 6.621 to read as follows:

§ 6.621 Generator controls.

(a) Generator voltage control equipment shall be capable of dependably regulating the generator output within rated limits.

(b) A generator reverse current cut-out shall be incorporated and designed to disconnect the generator from the battery and other generators when the generator is developing a voltage of such value that current sufficient to cause malfunctioning can flow into the generator.

23. By amending § 6.622 to read as follows:

§ 6.622 Electric power system instruments.

Means shall be provided to indicate to appropriate crewmembers those electric power system quantities which are essential for the safe operation of the system. For direct current systems, an ammeter which can be switched into each generator feeder shall be acceptable. When only one generator is installed, it shall be acceptable to locate the ammeter in the battery feeder.

24. By amending § 6.623 to read as follows:

§ 6.623 Master switch arrangement.

A master switch arrangement shall be provided to permit expeditious disconnection of all electric power sources from all load circuits. The point of disconnection shall be adjacent to the power sources.

§ 6.623-1 [Deletion]

25. By deleting § 6.623-1.

26. By amending § 6.625 to read as follows:

§ 6.625 Fuses or circuit breakers.

Protective devices (fuses or circuit breakers) shall be installed in the circuits to all electrical equipment, except that such items need not be installed in the main circuits of starter motors or in other circuits where no hazard is presented by their omission. Not more than one circuit, which is essential to safety in flight, shall be protected by a single protective device. All resettable type circuit protective devices shall be designed so that a manual operation is

required to restore service after tripping and so that, when an overload or circuit fault exists, they will open the circuit irrespective of the position of the operating control.

NOTE: The aforementioned resettable type circuit protective devices are known commercially as "trip-free"; i.e., the tripping mechanism cannot be overridden by the operating control. Such circuit protective devices can be reset on an overload or circuit fault, but will trip subsequently in accordance with their current-time trip characteristic.

§§ 6.625-1, 6.625-2 [Deletion]

27. By deleting §§ 6.625-1 and 6.625-2 and related footnotes.

28. By amending § 6.626 to read as follows:

§ 6.626 Protective devices installation.

If the ability to reset a circuit breaker or to replace a fuse is essential to safety in flight, such circuit breaker or fuse shall be so located and identified that it can be readily reset or replaced in flight. If fuses are used, one spare of each rating, whichever is the greater, shall be provided.

29. By amending § 6.627 to read as follows:

§ 6.627 Electric cables.

Electric connecting cables shall be of adequate capacity. Cables which would overheat in the event of circuit overload or fault shall be flame-resistant and shall not emit dangerous quantities of toxic fumes.

§ 6.627-1 [Deletion]

30. By deleting § 6.627-1 and related footnotes.

§ 6.634 [Amendment]

31. By amending Figure 6-2 referred to in § 6.634 by deleting the phrase "At least 2 candles" in the intensity column and inserting in lieu thereof "0.05 I".

§ 6.637 [Amendment]

32. By amending § 6.637(a) by deleting the number ".03" and inserting in lieu thereof "0.5".

§ 6.642 [Amendment]

33. By amending § 6.642(a) by deleting the word "danger" and inserting in lieu thereof "probability".

34. By amending § 6.714(c) to read as follows:

§ 6.714 Powerplant limitations.

(c) *Fuel grade or specification designation.* The minimum fuel grade for reciprocating engines or the fuel designation for turbine engines, required for the operation of the engine within the limitations prescribed in paragraphs (a) and (b) of this section.

35. By amending § 6.738(b) (1) by deleting the words "octane number" and inserting in lieu thereof "grade or designation".

36. By amending § 6.738 by adding a new paragraph (f) to read as follows:

§ 6.738 Miscellaneous markings and placards.

(f) *Tail rotor.* The tail rotor shall be marked so that the rotor disc will be conspicuous under all normal ground conditions.

(Secs. 313(a), 601, 603; 72 Stat. 752, 775, 776; 49 U.S.C. 1354(a), 1421, 1423)

Issued in Washington, D.C., on March 27, 1962.

N. E. HALABY,
Administrator.

[F.R. Doc. 62-3088; Filed, Mar. 29, 1962; 8:48 a.m.]

[Reg. Docket 107; Amdt. 7-5]

PART 7—ROTORCRAFT AIRWORTHINESS; TRANSPORT CATEGORIES

Miscellaneous Amendments Resulting From First Airworthiness Review

As a result of the First Federal Aviation Agency Airworthiness Review, the Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961. There are contained herein amendments to Part 7 of the Civil Air Regulations which stem from this First FAA Airworthiness Review.

Interested persons have been afforded an opportunity to express their comments in regard to the proposal and, in some cases, the proposal has been modified in accordance with such comments. The more significant amendments being adopted by the Agency are discussed herein.

Two changes are being made which affect control systems. Section 7.225 now requires manual control systems to comply with the provisions of that section. Because the word "manual" has erroneously been construed to limit the applicability of this section, it is being amended to make certain that it applies to all control systems. The other change is of an editorial nature, making § 7.226 consistent with the change to Part 6 covering the design of dual flight control systems.

The present requirements on factors of safety and inspections for structural castings specify a special factor of 2.0 for visual inspection only, and a factor of 1.25 when 3 sample castings are subjected to radiographic inspection and strength tests. Section 7.307 is being amended to provide a series of casting factors and corresponding test and inspection requirements which reflect current methods and practices. In addition, a minor revision in the format of this section has been made from that which was proposed and the rule now provides for alternative methods of compliance with the requirements therein.

A revision to the note under § 7.332 dealing with shock absorption tests is being made because it does not reflect the ground loading conditions for tail-wheel type landing gear. It was pro-

posed in Draft Release 61-12 to add a new § 7.342 setting forth minimum design standards for hull and float design of "sea and amphibian type rotorcraft." To avoid having the requirement affect all amphibian rotorcraft, i.e., even those which have an extremely limited capability as an amphibian, the proposal has been confined in applicability only to those rotorcraft which are to be approved for both taking off from and alighting on water. The requirement is being set forth in a new paragraph (c) under § 7.340 rather than as a new § 7.342 because it is concerned with buoyancy. This change necessitates the inclusion of the word "hulls" in § 7.340.

The upper aisle width specified in § 7.357(g) has been reduced from 20 to 18 inches, for rotorcraft having a passenger seating capacity of 10 or less, on the basis of studies indicating that this reduction would not adversely affect safe emergency evacuation. However, a further reduction of this dimension to 16 inches, as suggested by several interested persons, has not been justified. Biometric data derived from a general sampling of the civilian population reveals that a significant percentage of passengers have a standing hip-breadth exceeding 16 inches, whereas the percentage exceeding 18 inches is negligible. A 16-inch upper aisle width, therefore, introduces the probability that a single passenger may jam the aisle between seats in the excitement and near-panic of an emergency evacuation; and, in any event, movement along the aisle would be retarded by the awkward sideward gait which large-hipped passengers must assume for passage.

It had been proposed that the optional provision of § 7.385, which permits the control of fire once it has started, would be deleted. Comments made on that proposal have led to the conclusion that such an amendment might be unnecessarily restrictive and would not be compatible with other requirements which do permit the control of fire in cargo compartments and nacelles. Accordingly, presently effective § 7.385 remains unchanged. Section 7.412 dealing with fuel line location is being deleted because §§ 7.358 and 7.385 cover both the ventilation and fire control aspects of § 7.412.

Section 7.405(e) currently requires each gearbox used in the rotor drive system of a category A helicopter to be bench tested for 150 hours. This test is in addition to a 200-hour endurance test required by other provisions of this part. Because the 200-hour endurance test is adequate to show the structural and functional capacity of the gearbox as an element of the whole helicopter, the additional test now required by § 7.405(e) is not necessary. Therefore, the paragraph is being deleted.

Presently effective §§ 7.413 and 7.416 cover the demonstration of adequate fuel flow and the selection of unusable fuel supply. The demonstration is required to be conducted with unusable fuel supply together with the minimum quantity of fuel necessary for conducting the flow test. As a result of comment received on Draft Release 61-12, specific requirements for demonstrations or tests are

being deleted from §§ 7.413 and 7.416. Adequate authority for any ground or flight tests which might be required continues to rest in presently effective §§ 7.15 and 7.16. The unusable fuel supply is defined as that quantity at which the first evidence of malfunction occurs. This definition is unnecessarily restrictive and is not essential to safety since the rotorcraft is no less airworthy if an unusable fuel supply is selected as a quantity which is in excess of that which would produce a malfunction. Accordingly, the definition of unusable fuel supply is being revised to make it not less than the quantity at which the first evidence of malfunction occurs, the same as in other airworthiness parts. The form of § 7.413 is being arranged to make it consistent with that of corresponding § 4b.413 in Part 4b. This change eliminates the provision that the entire fuel supply be capable of being utilized under certain conditions, "insofar as practicable." Such a requirement is unnecessary even when practicable because a rotorcraft will continue to be airworthy so long as usable fuel can be used regardless of the quantity of unusable fuel.

In addition to the matter of unusable fuel supply, another question has arisen relating to the flow requirements of § 7.413. Section 7.413(c) presently requires that the available fuel flow shall be 150 percent of actual fuel consumption for gravity systems, 0.9 pounds per takeoff horsepower per hour for pump systems, or 125 percent of actual takeoff fuel consumption for pump systems. These margins are not required to insure adequate fuel flow. Furthermore, a margin is unnecessary to offset system deterioration because such deterioration is precluded by proper maintenance, inspection, and overhaul. Accordingly, the presently effective provisions of paragraph (c) of § 7.413 are being deleted. The provisions of paragraph (b) of § 7.416, as proposed, are being transferred to a new paragraph (c) under § 7.413, as an editorial change, since the provision for fuel feed belongs more appropriately in the fuel flow section than in the unusable fuel supply section.

The presently effective provisions of §§ 7.414 and 7.430 deal with fuel pumps and fuel flow. In consideration of the changes proposed for § 7.413, these flow provisions become unnecessarily repetitive. Section 7.414 is being deleted, therefore, and all fuel pump requirements are being combined in § 7.430 in a form consistent with other airworthiness parts.

Presently effective § 7.415 also covers fuel flow rate, relative to transfer systems, and bases required flow rates on horsepower output. Since the changes to § 7.413 eliminate the horsepower basis for establishing flow rate, § 7.415 is being deleted.

Presently effective § 7.438 merely repeats the requirement of § 7.604(f) for a low fuel warning device. Therefore, § 7.438 is being deleted and the definition of low fuel is being transferred from the associated note to § 7.604(f).

Section 7.488 requires a fireproof diaphragm to isolate the engine power section and all portions of the exhaust

system from the engine accessory compartment, unless equivalent protection can be shown by other means. Fire extinguishing systems are required to be provided in the engine power section, in the engine accessory section, and in complete powerplant compartments. Since it is considered that fire extinguishing systems are equivalent to a diaphragm in providing protection, there is no reason for retaining the provisions of § 7.488. Accordingly, this section is being deleted. Consistent with this change, the reference to § 7.488 in § 7.487(c) is being deleted and, as proposed, a provision is being added making the requirements of § 7.487(c) applicable to any rotorcraft equipped with a diaphragm to isolate the engine power section from the engine accessory section.

Section 7.604(m) currently requires an oil temperature warning device for all rotor drive gearboxes. Because it is doubtful that such devices would further safety in the case of small, noncritical gearboxes of simple design, § 7.604(m) is being amended to require oil temperature warning devices only for each main rotor drive gearbox including those gearboxes essential to rotor phasing.

Several changes are being made to the electric system requirements. Section 7.622(b) is being amended by adding two provisions which relate to the proper functioning of the generating system with respect to load equipment. Section 7.624(d) is also being amended in order to eliminate an unnecessarily restrictive provision requiring that certain electrical protective devices or their controls be accessible for resetting in flight. In addition, a new § 7.627 is being added which is intended to insure the validity of electrical system tests under simulated conditions in the laboratory.

Two changes are being made to the lighting requirements. Figure 7-2 now specifies that position light intensity for angles 40° to 90° above or below the horizontal be at least 2 candles. Because this results in an irrational discontinuity when related to the other data in figure 7-2, figure 7-2 is being amended to require an intensity of 0.05 I for these angles.

The current anticollision light requirements in § 7.637(a) permit .03 steradians blockage. In view of recent qualitative studies, it has been determined that such a limitation might be unduly restrictive. Therefore, § 7.637(a) is being amended to permit 0.5 steradians of obstruction.

Hydraulic system service difficulties have arisen which affect the proposal to add a new section, § 7.653, concerning hydraulic system tests. Therefore, the proposed addition of the new test requirement is not being included at this time. A study of the matter is being made outside the framework of this review.

Part 7 currently does not require the tail rotor to be marked. Because there have been a number of accidents attributable to persons walking into tail rotors, § 7.738(f) is being added to require that tail rotors be marked conspicuously.

Miscellaneous changes of an editorial or clarifying nature are being made to

§§ 7.11, 7.306, 7.325, 7.436, 7.447, 7.612, 7.634, 7.642, 7.714, and 7.738. Among the miscellaneous amendments there is one to expressly exclude from the provisions of § 7.11(b) consideration of provisional type certificates. While it was proposed that this be accomplished by a note, it now appears that it is more appropriate to include such a provision within § 7.11(b) rather than as a note thereto.

The proposed revisions to § 7.612(a) (3) and (4), have been withdrawn pending completion of a more comprehensive review of rotorcraft airspeed indicating system regulations. Furthermore, the proposed § 7.612(f) (4) requiring two complete static air pressure operating systems for the required instruments at the first pilot's station has been withdrawn in the light of comment received. It has been determined that one such static air pressure operating system as presently required is all that is necessary as a minimum requirement in the interest of safety. In addition, while not proposed, § 7.436 is being amended to delete redundant and contradictory requirements. This is in accordance with Part 4b requirements and the deletion imposes no additional burden on any person.

Interested persons have been afforded an opportunity to participate in the making of this amendment, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 7 of the Civil Air Regulations (14 CFR Part 7, as amended) is hereby amended as follows, effective May 3, 1962:

§ 7.11 [Amendment]

1. By amending § 7.11(b) by adding at the end of the first sentence the words "notwithstanding the applicant may have been issued a provisional type certificate".

§ 7.225 [Amendment]

2. By amending § 7.225(a) by deleting the words "Manually operated" and inserting in lieu thereof "All".

3. By amending § 7.226 to read as follows:

§ 7.226 Dual primary flight control systems.

If a dual primary flight control system is provided, the system shall be designed for conditions when the pilots operate the controls in opposition and in conjunction. Individual pilot loads equal to 75 percent of those obtained in accordance with § 7.225 shall be applicable.

4. By amending § 7.306(c) and the note to read as follows:

§ 7.306 Material strength properties and design values.

(c) Values contained in MIL-HDBK-5, MIL-HDBK-17 Part I, ANC-17 Part II, ANC-18, MIL-HDBK-23 Part I, and ANC-23 Part II shall be used unless shown to be inapplicable in a particular case.

NOTE: MIL-HDBK-5, "Strength of Metal Aircraft Elements"; MIL-HDBK-17, "Plastics

for Flight Vehicles, Part I—Reinforced Plastics"; ANC-17, "Plastics for Aircraft, Part II—Transparent Glazing Materials"; ANC-18, "Design of Wood Aircraft Structures"; MIL-HDBK-23, "Composite Construction for Flight Vehicles, Part I—Fabrication Inspection Durability and Repair"; and ANC-23, "Sandwich Construction for Aircraft, Part II—Material Properties and Design Criteria", are published by the Department of Defense and the Federal Aviation Agency and may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

5. By amending § 7.307(b) to read as follows:

§ 7.307 Special factors.

(b) *Casting factors.* For structural castings, the factor of safety prescribed in § 7.200 shall be multiplied by the casting factors specified in subparagraphs (1) and (2) of this paragraph. The prescribed tests and inspections shall be in addition to those necessary to establish foundry quality control. Castings shall be inspected in accordance with approved specifications.

(1) Each casting, the failure of which would preclude continued safe flight and landing of the rotorcraft or which would result in serious injury to occupants, shall have a casting factor of at least 1.25 and shall receive 100 percent inspection by visual, radiographic, and magnetic particle or penetrant inspection methods or approved equivalent nondestructive inspection methods. Where such castings have a casting factor less than 1.50, 3 sample castings shall be static tested. The test castings shall comply with the strength requirements of § 7.201 at an ultimate load corresponding with a casting factor of 1.25 and shall comply with the deformation requirements at a load equal to 1.15 times limit load.

NOTE: Examples of castings to which this subparagraph applies 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; cabin pressure valves.

(2) For structural castings other than those specified in subparagraph (1) of this paragraph, the casting factors and inspections shall be in accordance with the following table except that it shall be acceptable to reduce the percentage of castings inspected by nonvisual methods when an approved quality control procedure is established. For castings procured to a specification which guarantees the mechanical properties of the material in the castings and provides for demonstration of these properties by test of coupons cut from castings on a sampling basis, it shall be acceptable to use a casting factor of 1.0. The inspection requirements for such castings shall be in accordance with those specified in the following table for casting factors of 1.25 to 1.50, and the testing requirements shall be in accordance with subparagraph (1) of this paragraph.

Casting factor	Inspections
2.0 or greater.....	100 percent visual.
Less than 2.0 greater than 1.5.	100 percent visual, and magnetic particle or penetrant or equivalent nondestructive inspection methods.
1.25 to 1.50.....	100 percent visual, magnetic particle or penetrant, and radiographic, or approved equivalent nondestructive inspection methods.

(3) Castings which are pressure tested as parts of a hydraulic or other fluid system shall not be required to comply with the provisions of this section unless such castings support rotorcraft structural loads.

(4) The casting factor need not exceed 1.25 with regard to bearing stresses regardless of the method of inspection employed. A casting factor need not be employed with respect to the bearing surface of a part if the bearing factor used (see paragraph (c) of this section) is greater than the casting factor.

§ 7.325 [Amendment]

6. By amending § 7.325(a) (4) by deleting the expression "ANC-5" and inserting in lieu thereof "MIL-HDBK-5".

§ 7.332 [Amendment]

7. By amending § 7.332(a) by inserting a new definition in the note between the definitions of "W=W_N" and "h" to read as follows:

W=W_T for tailwheel units (pounds) equal to whichever of the following is critical:

(1) The static weight on the tailwheel with the rotorcraft resting on all wheels, or

(2) The vertical component of the ground reaction which would occur at the tailwheel assuming the mass of the rotorcraft acting at the center of gravity and exerting a force of 1g downward with the rotorcraft in the maximum nose-up attitude considered in the nose-up landing conditions. (See § 7.246 (b) and (c).)

8. By amending the center heading preceding § 7.340 to read as follows: "Hulls and Floats".

9. By amending § 7.340 by amending the heading and by adding a new paragraph (c) to read as follows:

§ 7.340 Buoyancy.

(c) If a rotorcraft, constructed with a hull and auxiliary floats, is to be approved for both taking off from and alighting on water, the hull and auxiliary floats shall be divided into watertight compartments so that, with any single compartment flooded, the buoyancy of the hull and auxiliary floats (and wheel tires if used) will provide a sufficient margin of positive stability to minimize capsizing. (See § 7.741(e).)

10. By amending § 7.357(g) to read as follows:

§ 7.357 Emergency evacuation:

(g) *Width of main aisle.* The main passenger aisle width at any point be-

tween seats shall not be less than 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
10 or less.....	Inches 12	Inches 18
11 to 19.....	12	20
20 or more.....	15	20

§ 7.405 [Amendment]

11. By deleting § 7.405(e).

§ 7.412 [Deletion]

12. By deleting § 7.412.

13. By amending § 7.413 to read as follows:

§ 7.413 Fuel flow.

(a) The fuel system shall provide not less than 100 percent of the fuel flow required by the engines when the rotorcraft is operated under all intended operating conditions and maneuvers.

(b) In determining compliance with the provisions of paragraph (a) of this section, the provisions of subparagraphs (1) through (4) of this paragraph shall apply.

(1) Fuel shall be delivered to the engine at a pressure within the limits specified in the engine type certificate.

(2) The quantity of fuel in the tank being considered shall not exceed the sum of the amount established as the unusable fuel supply for that tank, as determined in accordance with the provisions of § 7.416, and whatever minimum quantity of fuel it may be necessary to add for the purpose of determining compliance.

(3) Such main pumps shall be used as are necessary for each operating condition and airplane attitude for which compliance is determined and, in addition, for each main pump so used, the appropriate emergency pump shall be substituted. (See § 7.430(b).)

(4) If a fuel flowmeter is provided, operation of the meter shall be blocked in determining compliance with this section and the fuel shall flow through the meter or its bypass.

(c) If an engine can be supplied with fuel from more than one tank, the fuel system shall feed promptly when the fuel supply becomes low in one tank and another tank is turned on.

§§ 7.414, 7.415 [Deletion]

14. By deleting §§ 7.414 and 7.415.

15. By amending § 7.416 to read as follows:

§ 7.416 Unusable fuel supply.

The unusable fuel supply shall be selected by the applicant and shall be established for each tank as not less than the quantity at which the first evidence of malfunctioning occurs under the most adverse condition from the standpoint of fuel feed during all intended operations and flight maneuvers involving use of that tank.

16. By amending § 7.430 to read as follows:

§ 7.430 Fuel pumps.

(a) *Main pumps.* (1) Any fuel pump which is required for proper engine operation or to meet the fuel system requirements of this subpart, except for the provisions of paragraph (b) of this section, shall be considered a main pump.

(2) Provision shall be made to permit the bypass of all positive displacement fuel pumps except fuel injection pumps approved as part of the engine.

NOTE: The phrase "fuel injection pump" means a pump which supplies the proper flow and pressure conditions for fuel injection when such injection is not accomplished in a carburetor. Fuel injection is a special form of carburetion: the charging of air or gas with volatile carbon compounds. It is either an intermittent charging of air by discrete metered quantities of fuel such as occurs in a Diesel cylinder or it is a continuous charging of air by fuel, the fuel flow being proportioned to the airflow through the engine. Examples of continuous injection are injections into the supercharger section of a reciprocating engine or into the combustion chambers of a turbine engine.

(b) *Emergency pumps.* Pumps shall be provided to permit supplying all engines with fuel immediately after the failure of any one main fuel pump except fuel injection pumps approved as part of the engine.

17. By amending § 7.436 to read as follows:

§ 7.436 Fuel system drains.

Drainage of the fuel system shall be accomplished by fuel strainer drains and other drains as provided in § 7.424. The drains shall discharge clear of all portions of the rotorcraft and shall incorporate means for positive locking of the drain in the closed position, either manually or automatically.

§ 7.438 [Deletion]

18. By deleting § 7.438 including the associated note.

19. By amending § 7.447 to read as follows:

§ 7.447 Oil filters.

If the powerplant installation incorporates an oil filter (strainer), the filter shall be constructed and installed so that oil will continue to flow at the normal rate through the remainder of the system when the flow of oil through the filter element is completely blocked.

§ 7.437 [Amendment]

20. By amending § 7.487(c) by deleting from the first sentence the words "complying with § 7.488" and inserting in lieu thereof "to isolate the engine power section from the engine accessory section".

§ 7.438 [Deletion]

21. By deleting § 7.488.

22. By amending § 7.604 by amending paragraphs (f) and (m) to read as follows:

§ 7.604 Powerplant instruments.

(f) A warning device to indicate low fuel in each tank if an engine can be supplied with fuel from more than one tank. The fuel in any tank shall be con-

sidered to be low if a five-minute usable fuel supply remains when the rotorcraft is in the most adverse condition, from the standpoint of fuel feed from that tank, whether or not that condition can be sustained for five minutes.

(m) Oil temperature warning device to indicate when the oil temperature exceeds a safe value in each main rotor drive gearbox, including those gearboxes essential to rotor phasing, having an oil system independent of the engine oil system.

23. By amending § 7.612(f) to read as follows:

§ 7.612 Flight and navigational instruments.

(f) *Duplicate instrument systems.* If duplicate flight instruments are required by the operating parts of the Civil Air Regulations (see note under § 7.610), the provisions of subparagraphs (1) through (3) of this paragraph shall apply:

(1) The operating system for flight instruments used by the first pilot, which are required to be duplicated at other flight crew stations, shall be completely independent of the operating system provided for other flight crew stations.

(2) Only the required flight instruments and duplicates of required instruments provided for use of the first pilot shall be connected to the operating system provided for the first pilot.

(3) When other than required instruments and duplicates are connected to other than the first pilot's operating system, provision shall be made to disconnect or isolate in flight such other instruments.

24. By amending § 7.622(b) to read as follows:

§ 7.622 Generating system.

(b) The generating system shall be designed so that:

(1) The power sources function properly when independent and when connected in combination;

(2) The failure or malfunctioning of any power source cannot create a hazard or impair the ability of the 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;

(4) System transients initiated by switching, fault clearing, or other causes, do not render essential loads inoperative, and do not introduce a smoke or fire hazard.

25. By amending § 7.624(d) to read as follows:

§ 7.624 Electrical protection.

(d) If the ability to reset a circuit breaker or to replace a fuse is essential to safety in flight, such circuit breaker or fuse shall be so located and identified that it can be readily reset or replaced in flight.

26. By adding a new § 7.627 to read as follows:

§ 7.627 Electrical system tests.

When laboratory tests of the electrical system are conducted, they shall be performed on a mock-up utilizing the same generating equipment complement as in the rotorcraft. The equipment shall simulate the electrical characteristics of the distribution wiring and connected loads to the extent necessary for valid test results. Laboratory generator drives shall simulate the actual prime movers on the rotorcraft with respect to their reaction to generator loading, including loading due to faults. When the conditions of flight cannot be simulated adequately in the laboratory or by ground tests on the prototype rotorcraft, flight tests shall be conducted.

§ 7.634 [Amendment]

27. By amending § 7.634(a) by deleting the phrase "of paragraphs (b) and (c)" and inserting in lieu thereof "of paragraph (b)".

28. By amending Figure 7-2 by deleting the phrase "At least 2 candles" in the intensity column and inserting in lieu thereof "0.05 I".

§ 7.637 [Amendment]

29. By amending § 7.637(a) by deleting the number ".03" and inserting in lieu thereof "0.5".

§ 7.642 [Amendment]

30. By amending § 7.642(a) by deleting the word "danger" and inserting in lieu thereof "probability".

31. By amending § 7.714(c) to read as follows:

§ 7.714 Powerplant limitations.

(c) *Fuel grade or specification designation.* The minimum fuel grade for reciprocating engines or the fuel designation for turbine engines, required for the operation of the engine within the limitations prescribed in paragraphs (a) and (b) of this section.

32. By amending § 7.738(b)(1) by deleting the words "octane number" and inserting in lieu thereof "grade or designation".

33. By amending § 7.738 by adding a new paragraph (f) to read as follows:

§ 7.738 Miscellaneous markings and placards.

(f) *Tail rotor.* The tail rotor shall be marked so that the rotor disc will be conspicuous under all normal ground conditions.

(Secs. 313(a), 601, 603; 72 Stat. 752, 775, 776; 49 U.S.C. 1354(a), 1421, 1423)

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N. E. HALABY,
Administrator.

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No. 62—Pt. I—4

[Reg. Docket 107; Amdt. 13-4]

**PART 13—AIRCRAFT ENGINE
AIRWORTHINESS**

**Miscellaneous Amendments Resulting
From First Airworthiness Review**

As a result of the First Federal Aviation Agency Airworthiness Review, the Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961. There are contained herein amendments to Part 13 of the Civil Air Regulations which stem from this First FAA Airworthiness Review.

Presently effective § 13.260 requires, among other things, that thrust reversers be subjected to reversal tests and that, after each reversal, the reverser be operated at full reverse thrust for a period of one minute. A period of operation this long is unnecessary for reversers intended for use only as a braking means on the ground since the usual period of reverse thrust in operation has been shown to be between 20 and 30 seconds. Accordingly, the provision is revised by reducing the reverse thrust test time for such reversers from one minute per cycle to 30 seconds per cycle.

Concurrently, the provisions of § 13.260(b), dealing specifically with reversers intended for use in flight, are being amended to retain the requirement for a one-minute reversal operation. In addition, the proposed provision requiring such other tests to be conducted as are found necessary to insure safe and reliable operation of the reverser in flight is not being adopted. This provision unnecessarily repeats the requirement which appears elsewhere and could lead to an incorrect inference that flight tests of an engine might be required as a part of engine type certification.

Interested persons have been afforded an opportunity to participate in the making of this amendment, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 13 of the Civil Air Regulations (14 CFR Part 13, as amended) is hereby amended as follows, effective May 3, 1962:

1. By amending § 13.260(a) by deleting from the last sentence the words "one minute" and inserting in lieu thereof "30 seconds."

2. By amending § 13.260(b) to read as follows:

§ 13.260 Thrust reversers.

(b) If the reverser is intended for use in flight, the provisions of paragraph (a) of this section shall apply, except that, after each reversal, the reverser shall be operated at full reverse thrust for a period of one minute.

(Secs. 313(a), 601, 603; 72 Stat. 752, 775, 776; 49 U.S.C. 1354(a), 1421, 1423)

Issued in Washington, D.C., on March 27, 1962.

N. E. HALABY,
Administrator.

[F.R. Doc. 62-3090; Filed, Mar. 29, 1962; 8:48 a.m.]

[Reg. Docket 107; Amdt. 14-1]

**PART 14—AIRCRAFT PROPELLER
AIRWORTHINESS**

**Miscellaneous Amendments Resulting
From First Airworthiness Review**

As a result of the First Federal Aviation Agency Airworthiness Review, the Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961. There is contained herein an amendment to Part 14 of the Civil Air Regulations which stems from this First FAA Airworthiness Review.

Presently effective § 14.154 covers the functional testing of propellers. Paragraph (d) of this section requires 200 complete cycles of operation from the lowest normal pitch to the maximum reverse pitch. This paragraph further provides that at the end of each cycle the propeller be operated in reverse pitch for a period of one minute at the reverse pitch maximum rotational speed and power. This testing in one minute periods is unnecessary because the propeller is adequately endurance tested in accordance with the provisions of § 14.153. Accordingly, the additional testing is dispensed with by deleting the last sentence of § 14.154(d).

Interested persons have been afforded an opportunity to participate in the making of this amendment, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 14 of the Civil Air Regulations (14 CFR Part 14, as amended) is hereby amended by deleting the last sentence of § 14.154(d), effective May 3, 1962.

(Secs. 313(a), 601, 603; 72 Stat. 752, 775, 776; 49 U.S.C. 1354(a), 1421, 1423)

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N. E. HALABY,
Administrator.

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[Reg. Docket 107; Amdt. 18-3; Supp 13]

**PART 18—MAINTENANCE, REPAIR,
AND ALTERATION OF AIRFRAMES,
POWER PLANTS, PROPELLERS, AND
APPLIANCES**

**Miscellaneous Amendments Resulting
From First Airworthiness Review**

As a result of the First Federal Aviation Agency Airworthiness Review, the

Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961. There are contained herein amendments to Part 18 of the Civil Air Regulations which stem from this First FAA Airworthiness Review.

Section 18.13 is being amended and § 18.13-1 is being deleted in conjunction with changes to Part 43 to provide a means for maintaining the currency of documents which show aircraft operating limitations whenever repairs or alterations are made which affect the limitations.

Interested persons have been afforded an opportunity to participate in the making of this amendment, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 18 of the Civil Air Regulations (14 CFR Part 18, as amended) is hereby amended as follows, effective May 3, 1962:

1. By amending § 18.13 to read as follows:

§ 18.13 Aircraft operating limitations.

When a repair or an alteration results in any change in the aircraft operating limitations or in the data contained in the approved Aircraft Flight Manual, the aircraft shall not be approved for return to service unless such operating limitations or data are appropriately revised and set forth in accordance with the requirements of § 43.10 of Part 43 of this chapter.

§ 18.13-1 [Deletion]

2. By deleting § 18.13-1.

(Secs. 313(a), 601, 605; 72 Stat. 752, 775, 778; 49 U.S.C. 1354(a), 1421, 1425)

Issued in Washington, D.C., on March 27, 1962.

N. E. HALABY,
Administrator.

[F.R. Doc. 62-3092; Filed, Mar. 29, 1962; 8:49 a.m.]

[Reg. Docket 107; Amdt. 43-15; Supp. 16]

PART 43—GENERAL OPERATION RULES

Miscellaneous Amendments Resulting From First Airworthiness Review

As a result of the First Federal Aviation Agency Airworthiness Review, the Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961. There are contained herein amendments to Part 43 of the Civil Air Regulations which stem from this First FAA Airworthiness Review.

Section 43.10 presently requires that no aircraft, except foreign aircraft, shall be operated in the United States unless there is available in the aircraft appropriate operating limitations set forth in a form and manner approved by the Ad-

ministrator or an approved aircraft Flight Manual. Section 43.10-1 requires that the operating limitations consist of either a current approved Airplane or Rotorcraft Flight Manual, Forms ACA 309 or 309A, or placards or listings or combinations of both. As proposed, § 43.10 has been amended to incorporate the substance of present § 43.10-1, and § 43.10-1 has been deleted. In this connection, the reference to Forms ACA 309 and 309A, previously contained in § 43.10-1, has been deleted since such forms are no longer issued. In those cases where they are still being used they constitute listings within the meaning of this regulation.

Section 43.10 has also been amended, as proposed, to expand the provision concerning the operating limitations to be included in the Flight Manual, or on placards, listings or markings. As amended, § 43.10 specifies additional items for which operating limitations must be included when prescribed for a particular aircraft. These items are consistent with the requirements concerning operating limitations contained in the airworthiness parts of the Civil Air Regulations. In this connection, § 43.10 now requires an operating limitation when prescribed for a particular aircraft concerning the weight distribution including the composition of the useful load in those combinations and ranges intended to insure that the weight and center of gravity position will remain within approved limits. This will insure that when a change in the operating limitations concerning the weight and center of gravity of an aircraft is required following a modification or alteration to such aircraft, the pilot or operator will have the necessary information available to avoid an inadvertent overloading of the aircraft.

Interested persons have been afforded an opportunity to participate in the making of this amendment, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 43 of the Civil Air Regulations (14 CFR Part 43, as amended) is hereby amended as follows, effective May 3, 1962:

1. By amending § 43.10(d) to read as follows:

§ 43.10 Aircraft requirements.

(d) No aircraft, except foreign aircraft, shall be operated unless the operating limitations prescribed for the particular aircraft are set forth in a current approved Aircraft Flight Manual, on placards, listings, instrument markings, or in any combination thereof. The flight manual, placards, listings, or markings shall be legible and accessible to the pilot at his station, and shall include limitations on each of the following items, which have been prescribed for a particular aircraft:

- (1) Airspeeds (e.g., normal operating speed, flaps extended speed, etc.);
- (2) Powerplant (e.g., rpm, manifold pressure, gas temperature, etc.);
- (3) Aircraft weight, center of gravity, and weight distribution, including the composition of the useful load in those

combinations and ranges intended to insure that the weight and center of gravity position will remain within approved limits (e.g., combinations and ranges of crew, oil, fuel, passengers, and baggage);

- (4) Minimum flight crew;
- (5) Types of operation;
- (6) Maximum operating altitude;
- (7) Maneuvering flight load factors;
- (8) Rotor speed (for rotorcraft);
- (9) Limiting height-speed envelope (for rotorcraft); and,
- (10) Any other limitations prescribed for a particular aircraft.

§ 43.10-1 [Deletion]

2. By deleting § 43.10-1 and footnotes 1 and 2 related thereto.

(Secs. 313(a), 601, 603; 72 Stat. 752, 775, 776; 49 U.S.C. 1354(a), 1421, 1423)

Issued in Washington, D.C., on March 27, 1962.

N. E. HALABY,
Administrator.

[F.R. Doc. 62-3093; Filed, Mar. 29, 1962; 8:49 a.m.]

[Reg. Docket 107; Amdt. 46-6]

PART 46—SCHEDULED AIR CARRIER HELICOPTER CERTIFICATION AND OPERATION RULES

Miscellaneous Amendments Resulting From First Airworthiness Review

As a result of the First Federal Aviation Agency Airworthiness Review, the Agency published a notice of proposed rule making affecting several parts of the Civil Air Regulations. This notice was published in the FEDERAL REGISTER (26 F.R. 5130) and circulated as Civil Air Regulations Draft Release No. 61-12 dated June 8, 1961.

There is contained herein an amendment to Part 46 of the Civil Air Regulations which is associated with one of the changes to Part 7 of the Civil Air Regulations resulting from this First FAA Airworthiness Review.

The Part 7 change is the amendment of § 7.604(m) to require an oil temperature warning device to indicate when the oil temperature exceeds a safe value in each main rotor drive gearbox, including those gearboxes essential to rotor phasing, having an oil system independent of the engine oil system.

Part 46 now requires an oil temperature indicator for each transmission, as part of the engine instruments and equipment which are required for all operations. In view of the change to § 7.604(m), the requirement in § 46.172(k) for an oil temperature indicator for each transmission is being amended to require either an oil temperature indicator or an oil temperature warning device for each main rotor drive gearbox, including those gearboxes essential to rotor phasing, having an oil system independent of the engine oil system.

Since this amendment relieves a restriction and imposes no additional burden on any person, notice and public procedure hereon are unnecessary.

In consideration of the foregoing, § 46.172(k) of Part 46 of the Civil Air Regulations (14 CFR Part 46, as

amended) is hereby amended to read as follows, effective May 3, 1962:

§ 46.172 Engine instruments and equipment for all operations.

(k) Oil temperature indicator or warning device to indicate when the oil temperature exceeds a safe value in each main rotor drive gearbox, including those gearboxes essential to rotor phasing, having an oil system independent of the engine oil system;

(Secs. 313(a), 601, 604; 72 Stat. 752, 775, 778; 49 U.S.C. 1354(a), 1421, 1424)

Issued in Washington, D.C., on March 27, 1962.

N. E. HALABY,
Administrator.

[F.R. Doc. 62-3094; Filed, Mar. 29, 1962; 8:49 a.m.]

Title 21—FOOD AND DRUGS

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

SUBCHAPTER B—FOOD AND FOOD PRODUCTS

[Docket No. FDC 69]

PART 19—CHEESES; PROCESSED CHEESES; CHEESE FOODS; CHEESE SPREADS, AND RELATED FOODS; DEFINITIONS AND STANDARDS OF IDENTITY

Termination of Stay of Amendments

In the matter of amending the standards of identity for cheddar cheese, washed curd cheese, colby cheese, granular cheese, and swiss cheese to provide for the optional use of hydrogen peroxide and catalase in treating the milk used in making such cheeses:

A notice setting forth proposals filed by the National Cheese Institute, 110 North Franklin Street, Chicago, Illinois, seeking amendment of the standards of identity for each of the above-identified cheeses was published in the FEDERAL REGISTER of June 2, 1959 (24 F.R. 4495). Following consideration of comments filed by interested persons, an order was published in the FEDERAL REGISTER of February 5, 1960 (25 F.R. 1016), adopting the proposals, with modifications. Objections were filed to the order, showing reasonable grounds for a hearing on four issues. The amendments were stayed (25 F.R. 3073; April 9, 1960) and a notice was published scheduling a public hearing on the issues raised by the objections (25 F.R. 6301; July 2, 1960). Following the hearing, proposed findings of fact and conclusions were published, and the parties were afforded time for filing exceptions (26 F.R. 5687; June 24, 1961).

Now, therefore, upon the basis of substantial evidence in the complete record of the hearing, taking into consideration the exceptions filed, and pursuant to the authority vested in the Secretary of Health, Education, and Welfare by the Federal Food, Drug, and Cosmetic Act (secs. 401, 701, 52 Stat. 1046, 1055, as

amended 70 Stat. 919, 72 Stat. 948; 21 U.S.C. 341, 371) and delegated by the Secretary to the Commissioner of Food and Drugs (25 F.R. 8625), the following order is made:

*Findings of fact.*¹ 1. By an order published in the FEDERAL REGISTER of February 5, 1960 (25 F.R. 1016), the standard of identity for cheddar cheese (21 CFR 19.500) was amended to permit, during the cheesemaking process, the treatment of the milk with hydrogen peroxide in an amount not to exceed 0.05 percent, and the use of enough of a suitable catalase preparation to eliminate any residual hydrogen peroxide. The identity standards for three related cheeses (washed curd, colby, and granular) (21 CFR 19.505, 19.510, 19.535) and for swiss cheese (21 CFR 19.540) were amended by inserting in each standard a cross-reference to the peroxide-catalase amendment in the cheddar cheese standard. Objections were filed by Kraft Foods Division of National Dairy Products Corporation, the State of Wisconsin, and the Wisconsin Swiss and Limburger Cheese Producers Association. These objections raised issues whether the addition of hydrogen peroxide and catalase to the milk would:

A. Affect the quality of such cheeses as compared with cheeses manufactured from untreated milk.

B. Permit the production of cheeses of apparently high quality from milk inferior in quality to that ordinarily used.

C. Encourage the insanitary handling of milk and retard progress in milk-sanitation programs.

D. Significantly impair the nutritive quality of such cheeses.

Notices were published announcing the objections and the issues, staying the amendments, and scheduling the hearing (25 F.R. 3073, 6301).

At the hearing, the proponents of the objections, seeking an order rescinding the peroxide-catalase amendments, did not offer evidence on washed curd cheese, colby cheese, or granular cheese. However, it is reasonable to consider the evidence on cheddar cheese as applicable to the three closely related cheeses. (R. 4-6, Ex. 2-7)

2. Milk as received for cheesemaking contains naturally occurring enzymes; it contains some bacteria (milk showing a high bacterial count being usually associated with developed acidity); and it contains small amounts of extraneous material measurable by sediment tests. For the cheesemaker, certain naturally occurring enzymes are desirable, particularly if he is going to hold the cheese for curing. Some of the bacteria, i.e., certain lactic-acid-producing bacteria, are not objectionable but when the total bacterial count is high there are apt to be kinds of bacteria which are undesirable. Cheesemakers regard milk having a low bacterial count as better quality milk.

The cheesemaker is able to exercise some control over the bacteria in the milk he uses. For some kinds of cheese,

¹The citations following each finding of fact refer to the pages of the transcript of testimony and the exhibits received in evidence at the hearing.

particularly cheeses which are not to be held for aging, he can pasteurize the milk. In other cases, the milk can be heat-treated at a temperature slightly below pasteurization. In some areas, swiss cheese is made from heat-treated milk, or even from pasteurized milk, but representatives of the Wisconsin swiss cheese industry hold that only raw milk is proper for making swiss cheese. For cheddar cheese, which is to be held for several months to make "aged" or "sharp" cheddar, many cheesemakers favor the use of raw milk.

An additional control over the bacteria in milk is afforded by the peroxide-catalase treatment. By warming milk to 120° F. the cheesemaker can inactivate the naturally occurring catalase, and then, while maintaining the temperature at about 120° F., by adding up to 0.05 percent of hydrogen peroxide and holding the treated milk for about 30 seconds, the cheesemaker can destroy a substantial proportion of the bacteria. Thereafter, he cools the milk and adds a suitable catalase preparation to decompose the residual hydrogen peroxide to water and oxygen. By testing with potassium iodide solution (a test sufficiently sensitive to detect as little as 1.4 parts per million of hydrogen peroxide), the cheesemaker can determine when the peroxide has been decomposed. The starter culture may then be added to the vat of milk. (R. 64, 88, 93-94, 102, 106, 138-141, 164-165, 186, 205-206, 243-247, 265, 293, 297, 360, 367, 376, 402-403, 406-412, 415-420, 429, 434-438, 442, 457-458, 479-485, 487-488; Ex. 5, 23, 24, 30, 31, 34, 36, 37, 49, 50)

3. On the issue of whether using peroxide-treated milk would affect the quality of cheeses, the objectors representing the State of Wisconsin and the Wisconsin Swiss and Limburger Cheese Producers Association concentrated their testimony on swiss cheese. None of the witnesses had any first-hand experience with making swiss cheese from peroxide-treated milk or with grading swiss cheese so made. A questionnaire was sent to the swiss cheesemakers in the southern area of Wisconsin asking whether they favored the hydrogen peroxide and catalase treatment of milk for swiss cheese. Preceding the questions were statements suggesting that the peroxide-catalase amendments might "open areas where now they cannot produce" and might cause consumers to "become reluctant to purchase swiss cheese if they become aware that chemicals are used in its manufacture." These statements seriously weaken the objectivity of the survey and the probative value of the responses to the questionnaires. (R. 44, 48-52, 63, 65, 70, 71, 82-83, 88, 91, 103, 108, 119-131, 210; Ex. 43, 45)

4. Witnesses presented by Kraft testified that certain cheddar cheese made from peroxide-treated milk had a weak body and developed "slits" when aged. It was inferred but not proved that the "slits" were caused by the peroxide treatment. There was testimony that the peroxide treatment gives cheddar cheese a lighter color; but artificial color is a permitted ingredient in cheddar cheese, and there was no showing that cheesemakers would have any difficulty in pro-

ducing cheddar cheese from peroxide-treated milk to meet the shade of color requirements their customers demand. The articles from the literature on cheesemaking submitted as exhibits did not show that cheeses made from peroxide-treated milk are significantly different in quality from cheeses made from untreated milk. (R. 249, 258-264, 271, 279, 283, 291, 297-300, 304, 308-309; Ex. 24, 25, 26, 27-27a, 28)

5. Industry witnesses testifying in support of the peroxide-catalase amendments described limited commercial production of both swiss cheese and cheddar cheese made from peroxide-treated milk. They had not encountered any problems with "slits" or in producing the desired color. Their evidence indicates that the cheeses produced using peroxide-treated milk were as good as or better than the swiss and cheddar made from raw milk or from pasteurized milk. One firm had tried making swiss from heat-treated milk and found the quality of the cheese quite disappointing. (R. 360-363, 365-367, 371-375, 401-416, 417-418, 420, 429, 439, 459; Ex. 32, 36, 37)

6. Most of the evidence offered on whether peroxide treatment of milk would permit the production of cheese apparently high in quality from milk of inferior quality was opinion evidence. The opinions of most witnesses were that it requires high-quality milk to make high-quality cheese, and that when poor quality milk is used a poor cheese will result. The standards for all the cheeses covered by the peroxide-catalase amendments permit the use of raw milk. For the milk available to cheesemakers in many areas, some type of treatment (pasteurization, heat-treatment, or peroxide-catalase treatment) is usually needed to control bacteria. If the milk is not pasteurized, and the cheese tests phosphatase-positive, it must be held for 60 days for safety purposes. (R. 87, 102, 110, 186-187, 208, 213, 363, 373, 376, 419, 425-426, 465, 467, 471, 486)

7. Limited experiments carried out in the Department of Dairy Technology, Ohio State University, using milk of low and of high bacterial counts to make cheddar cheese were reported. The lots of milk were divided and portions were used raw, others pasteurized, and still others peroxide-catalase treated. The lots of cheddar cheese were graded for quality after aging for 2-3 months and again after 5-7 months. The investigators did not find consistently higher scores attributable to the treatment used. On the other hand, the cheeses produced from the high-quality milk (low bacterial count) were better than the cheeses produced from the inferior quality milk (high bacterial count). Somewhat similar experiments were reported from dairy schools of Ontario and Quebec. In these experiments both high and low bacterial count milks were used to make cheddar from raw milk and from peroxide-catalase treated milk. The cheeses were graded by graders of the Canadian Government. The low bacterial count milk produced cheese of better quality than was produced from milk with high bacterial count. Treating the inferior milk with peroxide did not re-

sult in cheese coming up to the grade of the cheese made from better quality (low count) milk. (R. 231-232, 271, 439-440, 469-474, 475-476; Ex. 24, 36)

8. To support their assertion that the permissive use of hydrogen peroxide and catalase by cheesemakers would encourage insanitary handling of milk and retard progress in milk sanitation programs, the objectors offered two types of opinion evidence: the opinions of witnesses who testified and the opinions expressed in letters and affidavits offered as exhibits. The witnesses, in describing the milk-improvement programs practiced by cheese producers, showed that bacterial counts are not the only or even the most common checks made on milk. Cheese producers check sediments, make curd tests, and have fieldmen who visit milk producers and observe their practices. Regardless of whether the cheesemaker is going to pasteurize the milk, treat the milk with heat insufficient for pasteurization, or treat the milk with hydrogen peroxide and catalase, he will be able to produce better cheese from sanitary milk. The record gives no basis for concluding that permitting cheesemakers to treat milk with peroxide will have any greater tendency to retard progress in milk-sanitation programs than the permission which the standards give for heat-treating or pasteurizing the milk.

The letters from State officials and the affidavits from two professors were subject to the disadvantage that they did not set forth the facts that led the writers to their opinions that the amendments would encourage insanitary handling and retard progress of milk-improvement programs. Also, because of the lack of an opportunity for cross-examination, it was not possible to bring out the basis for the opinions expressed. The exhibit setting out the report of the Meeting of Experts on the Use of Hydrogen Peroxide and Other Preservatives in Milk, as published by the Food and Agricultural Organization of the United Nations, has very little bearing on the amendments under consideration. It is concerned with milk preservation before the milk reaches the consumer or the cheese plant, rather than the use of peroxide-catalase treatment in cheesemaking as authorized by the proposed amendments under consideration. The report gives no support for the claim that the amendments of the cheese standards will result in a lowering of the sanitary quality of the milk used in cheese. (R. 44, 63, 88, 91-94, 105, 108, 110, 134-137, 144-155, 158, 183-184, 197-204, 208, 211, 412, 419, 425, 429, 471, 474, 485-486; Ex. 8-16, 18, 29, 36, 38-42, 46, 48, 49)

9. On the issue of whether the amendments permitting the use of hydrogen peroxide and catalase to treat milk used to make swiss cheese, cheddar cheese, and the three related cheeses under consideration would impair the nutritive qualities of such cheeses, the objectors offered only one witness. This witness had supervised electrophoretic studies which warranted the conclusion that peroxide-catalase treatment of milk used for cheddar cheese did not make any substantial difference in the proteins of

the cheese. This conclusion was a part of the National Cheese Institute's petition for the peroxide-catalase amendments. It was further substantiated in the petition by reports of paper chromatographic studies. At the hearing, the witness who had supervised the electrophoretic studies testified that subsequently, on the basis of reports he had read, he had formed the opinion that peroxide might have an effect on the fraction of the cheese protein called "kappa casein". He did not relate this effect to any nutritionally significant human requirement. When all the evidence in the record concerning the effect on the nutritive value of cheese caused by treating the milk with peroxide and catalase is considered, it must be concluded that the objectors failed to sustain their assertions that the amendments would result in impairment in the nutritive qualities of the cheeses under consideration. (R. 316-317, 322-326, 334, 342-356, 364, 381-386, 387-389, 397, 436-437; Ex. 27-27A, 34, 35-35A, 36)

Conclusions. On the basis of the foregoing findings of fact, and taking into consideration the substantial evidence in the record as a whole, it is concluded that for the purpose of promoting honesty and fair dealing in the interest of consumers, the standards of identity for cheddar cheese, washed curd cheese, colby cheese, granular cheese, and swiss cheese as amended should not be modified by rescinding those amendments that permit milk to be treated with hydrogen peroxide and catalase during the cheesemaking process.

Thirty days from the date of publication of this order in the FEDERAL REGISTER, the stay announced by the order published April 9, 1960 (25 F.R. 3073), shall terminate, and the amendments of the standards of identity for cheddar cheese, washed curd cheese, colby cheese, granular cheese, and swiss cheese which permit the milk used to be treated during the cheesemaking process with hydrogen peroxide and catalase, as set forth in the order published February 5, 1960 (25 F.R. 1016) shall become effective.

(Secs. 401, 701, 52 Stat. 1046, 1055, as amended 70 Stat. 919; 21 U.S.C. 341, 371)

Dated: March 26, 1962.

GEO. P. LARRICK,
Commissioner of Food and Drugs.

[F.R. Doc. 62-3075; Filed, Mar. 29, 1962; 8:46 a.m.]

SUBCHAPTER C—DRUGS

PART 146a—CERTIFICATION OF PENICILLIN AND PENCILLIN-CONTAINING DRUGS

Sampling Requirements

On March 11, 1961, there was published in the FEDERAL REGISTER (26 F.R. 2127) a notice of the proposal of the Commissioner of Food and Drugs to amend the regulations pertaining to the sampling requirements for certain dosage forms of antibiotic drugs. On the basis of data accumulated at that time and subsequently to the proposal, the Commissioner has concluded that an in-

crease in moisture occurs between the time certain dosage forms are certified in bulk containers and the time they are packaged in dispensing-size containers. Accordingly, the sampling requirements for penicillin tablets, capsules, and troches were amended on January 20, 1962 (27 F.R. 619), to require that the certification samples be collected during the time that the drugs are being packaged in market containers. No objections to this order were received.

In order that certification samples of penicillin dental cones, suppositories, bougies, and implantation pellets be truly representative of these drugs as they are packaged for sale and use, the regulations for the certification of these drugs (21 CFR 146a.31, 146a.36, 146a.40, 146a.55, 146a.71, 146a.76, 146a.81) are amended as set forth below, pursuant to the provisions of section 507(b) of the Federal Food, Drug, and Cosmetic Act (sec. 507(b), 59 Stat. 463 as amended; 21 U.S.C. 357(b)), and under the authority delegated to the Commissioner by the Secretary of Health, Education, and Welfare (25 F.R. 8625).

1. Section 146a.31 is amended as follows:

a. Paragraph (d) (1), (2) (i), and (3) (i) are changed to read:

§ 146a.31 Penicillin dental cones (calcium penicillin dental cones, penicillin dental cones calcium salt, crystalline penicillin dental cones).

(d) *Requests for certification; samples.* (1) In addition to complying with the requirements of § 146.2 of this chapter, a person who requests certification of a batch shall submit with his request a statement showing the batch mark, the number of dental cones in such batch, the number of dental cones of the batch packaged into dispensing-size containers during each day's packaging operations, the number of units in each dental cone, the date on which the latest assay of the drug comprising such batch was completed, the date (unless submitted previously) on which the latest assay of the penicillin used in making such batch was completed, the quantity of each ingredient used in making the batch, and a statement that such ingredient conforms to the requirements prescribed therefor, if any, by this section.

(2) * * *

(i) The batch:

(a) If the person who requests certification is the manufacturer of the batch: Average potency and average moisture of cones collected during the time of making the batch, and, unless the cones are packaged into dispensing-size containers immediately after they are compressed, average moisture of cones collected during each day of packaging the batch.

(b) If the person who requests certification is not the manufacturer of the batch: Average potency and average moisture of cones collected during each day the cones are being packaged into dispensing-size containers.

(3) * * *

(i) The batch:

(a) If the person who requests certification is the manufacturer of the batch: One cone for each 5,000 cones in the batch, but in no case less than 30 cones collected by taking single cones throughout the entire time of making the batch that the quantities made during the intervals are approximately equal.

(b) If, after making, such person packages the batch into dispensing-size containers: 20 cones collected at equal intervals during each day the cones are being packaged, except that this sample is not required if the cones are packaged immediately after they are made; or

(c) If the person who requests certification is not the manufacturer of the batch (for the purposes of certification, a batch shall be that number of cones filled by such person into dispensing-size containers during each day's packaging operations): One cone for each 5,000 cones in the batch, but in no case less than 30 cones collected by taking single cones at such intervals throughout each day of packaging the cones that the quantities packaged during the intervals are approximately equal.

b. Paragraph (e) (1) is changed to read:

(e) *Fees.* * * *

(1) \$0.75 for each cone in the samples submitted in accordance with paragraph (d) (3) (i) (a) and (c) of this section; \$3.00 for the sample submitted in accordance with paragraph (d) (3) (i) (b) of this section; \$4.00 for each package submitted in accordance with paragraph (d) (3) (ii) and (iii) of this section.

2. Section 146a.36 is amended as follows:

a. Paragraph (d) (1), (2) (i), and (3) (i) are changed to read as follows:

§ 146a.36 Penicillin vaginal suppositories.

(d) *Requests for certification; samples.* (1) In addition to complying with the requirements of § 146.2 of this chapter, a person who requests certification of a batch shall submit with his request a statement showing the batch mark, the number of suppositories in such batch, the number of suppositories of the batch packaged into dispensing-size containers during each day's packaging operations, the number of units in each suppository, the date on which the latest assay of the drug comprising such batch was completed, the date (unless submitted previously) on which the latest assay of the penicillin used in making such batch was completed, the quantity of each ingredient used in making the batch, and a statement that such ingredient conforms to the requirements prescribed therefor, if any, by this section.

(2) * * *

(i) The batch:

(a) If the person who requests certification is the manufacturer of the batch: Average potency and average moisture of suppositories collected during the time of making the batch, and,

unless the suppositories are packaged into dispensing-size containers immediately after they are molded, average moisture of suppositories collected during each day of packaging the batch.

(b) If the person who requests certification is not the manufacturer of the batch: Average potency and average moisture of suppositories collected during each day the suppositories are being packaged into dispensing-size containers.

(3) * * *

(i) The batch:

(a) If the person who requests certification is the manufacturer of the batch: One suppository for each 5,000 suppositories in the batch, but in no case less than 30 suppositories collected by taking single suppositories throughout the entire time of making the batch that the quantities made during the intervals are approximately equal.

(b) If, after making, such person packages the batch into dispensing-size containers: 20 suppositories collected at equal intervals during each day the suppositories are being packaged, except that this sample is not required if the suppositories are packaged immediately after they are made; or

(c) If the person who requests certification is not the manufacturer of the batch (for the purposes of certification, a batch shall be that number of suppositories filled by such person into dispensing-size containers during each day's packaging operations): One suppository for each 5,000 suppositories in the batch, but in no case less than 30 suppositories collected by taking single suppositories at such intervals throughout each day of packaging the suppositories that the quantities packaged during the intervals are approximately equal.

b. Paragraph (e) (1) is changed to read:

(e) *Fees.* * * *

(1) \$0.75 for each suppository in the samples submitted in accordance with paragraph (d) (3) (i) (a) and (c) of this section; \$3.00 for each sample submitted in accordance with paragraph (d) (3) (i) (b) of this section; \$4.00 for each package submitted in accordance with paragraph (d) (3) (ii) and (iii) of this section.

3. Section 146a.40 is amended as follows:

a. Paragraph (d) (1), (2) (i), and (3) (i) are changed to read:

§ 146a.40 Penicillin bougies (sodium penicillin bougies, calcium penicillin bougies, potassium penicillin bougies, procaine penicillin bougies, penicillin bougies sodium salt, penicillin bougies calcium salt, penicillin bougies potassium salt, penicillin bougies procaine salt).

(d) *Requests for certification; samples.* (1) In addition to complying with the requirements of § 146.2 of this chapter, a person who requests certification of a batch shall submit with his request a statement showing the batch mark, the number of bougies in such batch, the

number of bougies of the batch packaged into dispensing-size containers during each day's packaging operations, the number of units in each bougie, the date on which the latest assay of the drug comprising such batch was completed (unless submitted previously) on which the latest assay of the penicillin used in making such batch was completed, the quantity of each ingredient used in making the batch, and a statement that such ingredient conforms to the requirements prescribed therefor, if any, by this section.

(2) * * *

(i) The batch:

(a) If the person who requests certification is the manufacturer of the batch: Average potency and average moisture of bougies collected during the time of making the batch, and, unless the bougies are packaged into dispensing-size containers immediately after they are made, average moisture of bougies collected during each day of packaging the batch.

(b) If the person who requests certification is not the manufacturer of the batch: Average potency and average moisture of bougies collected during each day the bougies are being packaged into dispensing-size containers.

(3) * * *

(i) The batch:

(a) If the person who requests certification is the manufacturer of the batch: One bougie for each 5,000 bougies in the batch, but in no case less than 30 bougies collected by taking single bougies at such intervals throughout the entire time of making the batch that the quantities made during the intervals are approximately equal.

(b) If, after making, such person packages the batch into dispensing-size containers: 20 bougies collected at equal intervals during each day the bougies are being packaged, except that this sample is not required if the bougies are packaged immediately after they are made; or

(c) If the person who requests certification is not the manufacturer of the batch (for the purposes of certification, a batch shall be that number of bougies filled by such person into dispensing-size containers during each day's packaging operations): One bougie for each 5,000 bougies in the batch, but in no case less than 30 bougies collected by taking single bougies at such intervals throughout each day of packaging the bougies that the quantities packaged during the intervals are approximately equal.

b. Paragraph (e)(1) is changed to read:

(e) Fees. * * *

(1) \$0.75 for each bougie in the samples submitted in accordance with paragraph (d)(3)(i)(a) and (c) of this section; \$3.00 for each sample submitted in accordance with paragraph (d)(3)(i)(b) of this section; \$4.00 for each package submitted in accordance with paragraph (d)(3)(ii) and (iii) of this section.

4. In § 146a.55, paragraph (b)(1) is amended to read as follows:

§ 146a.55 Penicillin-streptomycin bougies; penicillin-dihydrostreptomycin bougies.

* * *

(b) * * *

(1) \$1.00 for each bougie submitted in accordance with the requirements of § 146a.40(d)(3)(i)(a) and (c).

5. In § 146a.71, paragraph (b)(1) is amended to read as follows:

§ 146a.71 Penicillin-streptomycin dental cones; penicillin-dihydrostreptomycin dental cones.

* * *

(b) * * *

(1) \$1.00 for each cone submitted in accordance with the requirements of § 146a.31(d)(3)(i)(a) and (c).

6. Section 146a.76 is amended as follows:

a. Paragraph (d)(1), (2)(i), and (3)(i) are changed to read:

§ 146a.76 Penicillin-streptomycin implantation pellets; penicillin-dihydrostreptomycin implantation pellets.

* * *

(d) Requests for certification; samples. (1) In addition to complying with the requirements of § 146.2 of this chapter, a person who requests certification of a batch shall submit with his request a statement showing the batch mark, the number of pellets in such batch, the number of pellets of the batch packaged into dispensing-size containers during each day's packaging operations, the number of units of penicillin and the number of milligrams of streptomycin or dihydrostreptomycin in each pellet, the date on which the latest assay of the drug comprising such batch was completed, the date (unless submitted previously) on which the latest assay of the penicillin and streptomycin or dihydrostreptomycin, used in making the batch was completed, the quantity of each ingredient used in making the batch, and a statement that such ingredient conforms to the requirements prescribed therefor, if any, by this section.

(2) * * *

(i) The batch:

(a) If the person who requests certification is the manufacturer of the batch: Average potency and average moisture of pellets collected during the time of making the batch, and, unless the pellets are packaged into dispensing-size containers immediately after they are compressed, average moisture of pellets collected during each day of packaging the batch.

(b) If the person who requests certification is not the manufacturer of the batch: Average potency and average moisture of pellets collected during each day the pellets are being packaged into dispensing-size containers.

* * *

(3) * * *

(i) The batch:

(a) If the person who requests certification is the manufacturer of the batch: One pellet for each 5,000 pellets in the batch, but in no case less than

30 pellets collected by taking single pellets throughout the entire time of making the batch that the quantities made during the intervals are approximately equal.

(b) If, after making, such person packages the batch into dispensing-size containers: 20 pellets collected at equal intervals during each day the pellets are being packaged, except that this sample is not required if the pellets are packaged immediately after they are made; or

(c) If the person who requests certification is not the manufacturer of the batch (for the purposes of certification, a batch shall be that number of pellets filled by such person into dispensing-size containers during each day's packaging operations): One pellet for each 5,000 pellets in the batch, but in no case less than 30 pellets collected, by taking single pellets at such intervals throughout each day of packaging the pellets that the quantities packaged during the intervals are approximately equal.

b. Paragraph (e)(1) is changed to read:

(e) Fees. * * *

(1) \$1.00 for each pellet in the samples submitted in accordance with paragraph (d)(3)(i)(a) and (c) of this section; \$3.00 for the sample submitted in accordance with paragraph (d)(3)(i)(b) of this section; \$4.00 for each package submitted in accordance with paragraph (d)(3)(ii), (iii), and (iv) of this section.

7. In § 146a.81, paragraph (b)(1) is amended to read as follows:

§ 146a.81 Penicillin-streptomycin vaginal suppositories; penicillin-dihydrostreptomycin vaginal suppositories.

* * *

(b) * * *

(1) \$1.00 for each suppository submitted in accordance with the requirements of § 146a.36(d)(3)(i)(a) and (c).

Any person who will be adversely affected by the foregoing order may at any time prior to the thirtieth day from the date of its publication in the FEDERAL REGISTER file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 5440, 330 Independence Avenue SW., Washington 25, D.C., written objections thereto. Objections shall show wherein the person filing will be adversely affected by the order and specify with particularity the provisions of the order deemed objectionable and the grounds for the objections. If a hearing is requested, the objections must state the issue for the hearing, and such objections must be supported by grounds legally sufficient to justify the relief sought. Objections may be accompanied by a memorandum or brief in support thereof. All documents shall be filed in quintuplicate.

Effective date. This order shall become effective 30 days from the date of its publication in the FEDERAL REGISTER, except as to any provisions that may be stayed by the filing of proper objections. Notice of the filing of objections or lack thereof will be announced by publication in the FEDERAL REGISTER.

(Sec. 507, 701, 59 Stat. 463 as amended, 52 Stat. 1055 as amended; 21 U.S.C. 357, 371)

Dated: March 23, 1962.

GEO. P. LARRICK,
Commissioner of Food and Drugs.

[F.R. Doc. 62-3077; Filed, Mar. 29, 1962;
8:47 a.m.]

SUBCHAPTER D—HAZARDOUS SUBSTANCES

PART 191—HAZARDOUS SUBSTANCES; DEFINITIONS AND PROCEDURAL AND INTERPRETATIVE REGULATIONS

Absorbent Polishing and Cleaning Materials; Exemption From Labeling Requirements

There have been submitted to the Commissioner of Food and Drugs a number of petitions requesting that containers of polishing and cleaning products which consist of absorbent material impregnated with petroleum distillates be exempted from certain labeling requirements of the Federal Hazardous Substances Labeling Act. These special labeling requirements are necessary for products containing 10 percent or more of petroleum distillates such as kerosene, mineral seal oil, naphtha, gasoline, benzene, mineral spirits, paint thinner, and Stoddard solvents. The reason for this requirement is the special hazard of aspiration into the lungs of the petroleum distillate, causing chemical pneumonitis, pneumonia, and pulmonary edema. The petitioners allege that particulate solid, semisolid, or fibrous absorbent materials impregnated with 10 percent or more of petroleum distillates, in which the distillate is fully absorbed by the carrier, do not present an aspiration hazard, and that the special labeling requirements are therefore not necessary.

The Commissioner concludes from the information supplied by the petitioners and gathered on his own initiative that if the petroleum distillate in such products is totally absorbed and free liquid cannot reasonably be pressed therefrom, the aspiration hazards are no longer present. He therefore finds that for such products the special labeling requirements imposed by § 191.7(b)(3) of the regulations are not necessary for the protection of the public health and safety. Therefore, pursuant to the provisions of the act (sec. 3(c), 74 Stat. 374; 15 U.S.C. 1262) and under the authority vested in the Secretary of Health, Education, and Welfare, delegated to the Commissioner (25 F.R. 8625), § 191.63 (21 CFR 191.63) is amended by adding thereto a new paragraph (k), reading as follows:

§ 191.63 Exemptions for small packages, minor hazards, and special circumstances.

(k) Packages containing polishing or cleaning products which consist of a carrier of solid particulate or fibrous composition and which contain petroleum distillates in the concentration described in § 191.7(a)(4) are exempt from the labeling requirements of § 191.7(b)

(3), provided the petroleum distillate is fully absorbed by the solid, semisolid, or fibrous carrier and cannot be expressed therefrom with any reasonably foreseeable conditions of manipulation.

Notice and public procedure and delayed effective date are not necessary prerequisites to the promulgation of this order, and I so find, since the Federal Hazardous Substances Labeling Act contemplates such modification of labeling requirements under certain conditions.

Effective date. This order shall become effective on the date of its publication in the FEDERAL REGISTER.

(Sec. 3(c), 74 Stat. 374; 15 U.S.C. 1262)

Dated: March 26, 1962.

GEO. P. LARRICK,
Commissioner of Food and Drugs.

[F.R. Doc. 62-3076; Filed, Mar. 29, 1962;
8:47 a.m.]

Title 32A—NATIONAL DEFENSE, APPENDIX

Chapter XVIII—National Shipping Authority, Maritime Administration, Department of Commerce

[NSA Order No. 6 (INS-1, 7th Rev., Amdt. 4)]

INS-1—MARINE PROTECTION AND INDEMNITY INSURANCE INSTRUCTIONS UNDER GENERAL AGENCY AND BERTH AGENCY AGREEMENTS

Miscellaneous Amendments

Effective as of March 31, 1962, midnight, e.s.t., INS-1 is hereby amended as follows:

1. Amend section 1 *What this order does*, by changing the attachment date stated therein to read March 31, 1962, midnight, e.s.t.

2. Amend section 2 *Insurer*, by changing the insurer therein to read The Continental Insurance Company (Marine Office of America), 123 William Street, New York 38, N.Y., and by changing the attachment and expiration dates stated therein to read March 31, 1962, midnight, e.s.t., and March 31, 1963, midnight, e.s.t., respectively.

3. Amend section 4 *Vessels insured and terms of insurance*, by changing the attachment date stated therein to read March 31, 1962, midnight, e.s.t., by changing the expiration date stated therein to read March 31, 1963, midnight, e.s.t., and by changing the annual rate stated therein to read \$5.84 per gross registered ton.

4. Amend paragraph (e) of section 5 *Assumption of risk by Owner and attachment and cancellation dates of commercial insurance*, by changing the attachment date stated therein to read March 31, 1962, midnight, e.s.t.

5. Amend paragraph (a) of section 7 *Insurance premiums*, by changing the expiration date stated therein to read March 31, 1963, midnight, e.s.t.

6. Amend paragraph (c) of section 9 *Settlement of claims*, by changing the

attachment date stated therein to read March 31, 1962, midnight, e.s.t.

7. Amend paragraph (b) of section 11 *Report of claims*, by changing the reporting date stated therein to read December 31, 1962.

In accordance with the provisions of section 4 of the Administrative Procedure Act (5 U.S.C. 1003), it is found to be impracticable and not in the public interest to delay the effective date thereof; therefore, the foregoing amendments shall be effective as aforesaid.

Approved: March 26, 1962.

J. W. GULICK,
Deputy Maritime Administrator.

[F.R. Doc. 62-3082; Filed, Mar. 29, 1962;
8:47 a.m.]

Title 39—POSTAL SERVICE

Chapter I—Post Office Department

PART 201—PROCEDURES OF THE POST OFFICE DEPARTMENT

Subpart K—Equal Employment Opportunity; Policy and Procedure

The procedure of the Post Office Department in Subpart K of Part 201, as published in 27 F.R. 585-586, issued in conformity with Executive Order 10925 of March 9, 1961, is revised, and rearranged under different heading to more clearly state the existing policy and procedure. As so revised, Subpart K reads as follows:

Sec.

- 201.90 Introduction.
- 201.91 Filing complaints.
- 201.92 Right to counsel.
- 201.93 Settlements.
- 201.94 Report of disposition of complaint.

AUTHORITY: §§ 201.90 to 201.94 issued under R.S. 161, as amended; 5 U.S.C. 22, 39 U.S.C. 309, 501, E.O. 10590, 3 CFR 1954-1958 Comp. E.O. 10925, 3 CFR, 1961 Supp.

§ 201.90 Introduction.

(a) *Authority and scope.* (1) Executive Order 10925 of March 6, 1961, established the President's Committee on Equal Employment Opportunity and reaffirmed Government policy for exclusion and prohibition of discrimination against any employee or applicant for employment in the Federal Government because of race, creed, color, or national origin. The Executive order points out that discrimination because of race, creed, color, or national origin is contrary to the constitutional principles and policies of the United States and that it is the policy of the executive branch of the Government to encourage by positive measures equal opportunity for all qualified persons within the Government.

(2) This subpart is issued in conformity with and under the authority of Executive Order 10925, and shall govern the administration of employment policies in the Post Office Department. The regulations in this subpart shall apply also to cases pending under Executive Order 10590, as amended, and regulations promulgated thereunder.

(b) *Designation of employment policy officer.* The Assistant Postmaster General, Bureau of Personnel, is the Employment Policy Officer for the Post Office Department. He shall:

(1) Advise the Postmaster General regarding the preparation of regulations, reports, and other matters dealing with the exclusion and prohibition of discrimination under Executive Order 10925.

(2) Process complaints of alleged discrimination in personnel matters within the Post Office Department headquarters and field installations and make recommendations to appropriate administrative officials for such corrective measures as he may deem necessary.

(3) Appraise the personnel operations of the Post Office Department headquarters and field installations at regular

intervals to assure their continuing conformity to the policy expressed in Executive Order 10925 of excluding and prohibiting discrimination.

(4) Institute prompt investigation of each complaint, and shall be responsible for developing a complete case record, including an adequate transcript or agreed summary of any hearings, sufficient to dispose of all relevant issues. Whenever necessary or appropriate for a full development of the case, the investigation shall include an appraisal of employment practices in the organizational segment or unit in which the alleged discrimination occurred.

(c) *Designation of deputy employment policy officers.* The following officials are Deputy Employment Policy Officers for the indicated units:

Unit	Deputy employment policy officer
All field installations.....	Special Assistant to Regional Director for Employee Relations, where authorized. Otherwise, Regional Director.
Inspection Service field organizations..	Chief Postal Inspector.
Headquarters organizations.....	Bureau or Office Head.

§ 201.91 Filing complaints.

(a) *Right to file.* The right to file complaints without restraint, interference, coercion, or reprisal is recognized.

(b) *Who may file.* Any aggrieved postal employee or qualified applicant for postal employment who believes he has been discriminated against because of race, creed, color, or national origin may file a complaint. The complaint may be submitted by an authorized representative of the aggrieved individual, such authorization to be in writing.

(c) *Where to file.* Complaints may be filed with the Deputy Employment Policy Officer, with the Employment Policy Officer, or with the President's Committee.

(d) *When to file.* Complaints shall be filed within 90 days from the date of the alleged discrimination unless time is extended by the Department or the Executive Vice Chairman of the President's Committee for good cause shown.

(e) *What to file.* Each complainant should file Form 1776, Equal Employment Opportunity Complaint, in duplicate. Failure to submit this form will not preclude the right of the employee to file a complaint under the regulations in this subpart. However, all complaints must be in writing and signed.

(f) *Copy of complaint.* The Deputy Employment Policy Officer shall send promptly a copy of each complaint he receives to the Employment Policy Officer for transmittal to the Executive Vice Chairman of the Committee.

§ 201.92 Right to counsel.

Parties to proceedings under the regulations in this subpart shall have the right to be accompanied, represented, and advised by counsel or by other qualified representatives.

§ 201.93 Settlements.

(a) *Negotiation and informal settlement.* On cases filed with him, or referred to him, the Deputy Employment Policy Officer shall take necessary steps to get the facts and to develop a complete record of the case. This will in-

clude an interview with the complainant and with the persons against whom the complaint is made. When necessary, the Deputy Employment Policy Officer may request the Employment Policy Officer to have an investigation conducted by the Postal Inspection Service. After he has the facts, the Deputy Employment Policy Officer should attempt to resolve the matter by informal means.

(b) *Hearing and conclusions.* (1) In any case that cannot be disposed of by informal means, the complainant shall be given an oral hearing before the Deputy Employment Policy Officer, or his designee, at a convenient time and place, provided he requests the hearing within 10 days from receipt of the Deputy Employment Policy Officer's proposed resolution of the complaint. (In no case shall the hearing officer be the investigating officer.)

(2) At the hearing, the installation shall produce any witnesses under its jurisdiction upon a showing satisfactory to the hearing officer of reasonable necessity therefor. Parties to the hearing shall have the right of confrontation and cross-examination as may be necessary to a development of the facts. Any request for the attendance of necessary witnesses shall be made in writing by the complainant at least 10 days prior to the date of the hearing.

(3) The complainant shall have the right to receive a concise and accurate summary of the facts regarding his complaint, including those on which the Deputy Employment Policy Officer relied in making his proposed resolution, together with a statement of the reasons for the Deputy Employment Policy Officer's resolution in denying the claim. The Deputy Employment Policy Officer may, in lieu of a summary statement, make available to the complainant the entire investigative report of the agency. When the complainant or his agent is provided with a summary statement, the Executive Vice Chairman of the Committee or his representative shall have the right, on request, to examine the en-

tire record in the case, including all data gathered pursuant to investigation of the complaint.

(4) Where practicable, a transcript of the testimony shall be made. If a verbatim transcript is not practicable, a full summary of the testimony shall be made by the hearing officer. If the complainant does not agree with the summary, he may note and sign his exceptions, which will become a part of the summary. The complainant shall be furnished a copy of the summary or transcript.

(5) The hearing officer shall make his proposed findings and recommended conclusions on the basis of the record before him and submit his findings and conclusions to the Deputy Employment Policy Officer. The Deputy Employment Policy Officer, after consultation with the Regional Director, where appropriate, shall render his decision to the complainant based on the total record. The letter of decision shall contain a concise and accurate summary of the facts relied on in reaching the decision and, when claim is denied, a statement of the reasons for denying the claim.

(c) *Delay on part of complainant.* When the complainant fails to appear without good cause shown or fails within 60 days to furnish requested information or to otherwise process his complaint, the case may be closed.

(d) *Appeals by complainant.* (1) *To employment policy officer.* If the decision of the Deputy Employment Policy Officer is not satisfactory to the complainant, he may appeal the decision to the Employment Policy Officer within 10 days of the date of the decision by the Deputy Employment Policy Officer, unless the Employment Policy Officer waives this time limitation for good cause. The Employment Policy Officer will make the final decision for the Department and notify the complainant and the Deputy Employment Policy Officer. The letter of decision shall contain a concise and accurate summary of the facts relied on in reaching the decision and, when claim is denied, a statement of the reasons for denying the claim.

(2) *To President's Committee for review.* If the decision of the Employment Policy Officer is not satisfactory to the complainant, he may request the Employment Policy Officer to send the case to the Executive Vice Chairman of the President's Committee for review. The request must be made by the complainant within 30 days of the date of final action by the Employment Policy Officer, unless the Executive Vice Chairman waives this time limitation for good cause.

(e) *Referral to President's Committee for advisory opinion.* The Employment Policy Officer, if he so desires, may refer a case to the Executive Vice Chairman of the President's Committee for study and recommendation after the Employment Policy Officer has formulated his findings and recommendations and prior to any decision by the Employment Policy Officer. When referral has been made, final decision by the Employment Policy Officer may be made only after receipt of the recommendations of the Executive Vice Chairman.

(f) *Time limitation for processing complaints.* Within 30 days from receipt of a complaint by the Deputy Employment Policy Officer or Employment Policy Officer, or within such additional time as may be allowed by the Executive Vice Chairman for good cause shown, the complaint shall be processed and report submitted to the Executive Vice Chairman as required by § 201.94(a). When the complainant requests a hearing, the complaint shall be processed within 60 days. When necessary, the Employment Policy Officer will request the Executive Vice Chairman to allow additional time.

§ 201.94 Report of disposition of complaint.

(a) *By employment policy officer.* The Employment Policy Officer shall submit to the Executive Vice Chairman of The President's Committee a report of the final disposition of each written complaint filed under the Executive order. The report shall contain the following:

(1) A copy of the complete case record, if requested by the Executive Vice Chairman.

(2) A summary of the complete case record, which shall include—

(i) The name and address of the complainant.

(ii) The date on which the complaint was filed with or referred to the Department and, where the complaint was filed with the Department, the name and title of the officer with whom filed.

(iii) A summary of the complaint indicating the specific type or types of discrimination alleged.

(iv) A summary of the results of any appraisal of employment practices and the significant facts disclosed by the investigation and any hearing.

(v) A statement describing disposition of the complaint. If the complaint was withdrawn, the reason for withdrawal should be included.

(vi) The date of the disposition of the complaint.

(b) *By deputy employment policy officer.* Deputy Employment Policy Officers shall submit disposition reports to the Employment Policy Officer, in duplicate, in the format outlined in paragraph (a) of this section.

LOUIS J. DOYLE,
General Counsel.

[F.R. Doc. 62-3072; Filed, Mar. 29, 1962;
8:46 a.m.]

Proposed Rule Making

DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

[7 CFR Part 965]

TOMATOES GROWN IN LOWER RIO GRANDE VALLEY IN TEXAS

Notice of Proposed Rule Making With Respect to Limitation of Shipments

Notice is hereby given that the Secretary of Agriculture is considering the limitation of shipments, as hereinafter set forth, which was recommended by the Texas Valley Tomato Committee, established pursuant to Marketing Order No. 965 (7 CFR Part 965; formerly Order No. 121, 7 CFR Part 1021) regulating the handling of tomatoes grown in the counties of Cameron, Hidalgo, Starr, and Willacy in Texas (Lower Rio Grande Valley). This program is effective under the applicable provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601-674).

Consideration will be given to any data, views, or arguments pertaining thereto, which are filed with the Director, Fruit and Vegetable Division, Agricultural Marketing Service, United States Department of Agriculture, Washington 25, D.C., not later than five days following publication of this notice in the FEDERAL REGISTER. The proposals are as follows:

§ 965.304 Limitation of shipments.

Except as otherwise provided in this section, during the period April 16, 1962, through July 15, 1962, the following regulations shall be effective with respect to all varieties of tomatoes handled, as defined in § 965.7 of Order No. 965, and no person shall handle such tomatoes or cause such tomatoes to be handled unless they are inspected and certified as required by paragraph (b) of this section, and meet the requirements of paragraph (a) of this section.

(a) *Requirements*—(1) *Minimum grade*. U.S. No. 2, or better, grade.

(2) *Minimum size*. $2\frac{1}{32}$ inches in diameter or larger. Not more than ten percent, by count, of tomatoes in any lot of size 7 x 7 ($2\frac{1}{32}$ inches minimum diameter to $2\frac{3}{32}$ inches maximum diameter) may be smaller than the specified minimum diameter.

(3) *Sizing arrangements*. (i) Any lot with more than 5 percent "green" tomatoes shall be packed in one of the following ranges of diameter applicable thereto:

Size arrangements:	Diameter (inches)
7 x 7-----	$2\frac{1}{32}$ to $2\frac{3}{32}$, inclusive.
6 x 7-----	Over $2\frac{1}{32}$ to $2\frac{1}{16}$, inclusive.
6 x 6-----	Over $2\frac{1}{32}$.

(ii) All tomatoes subject to sizing arrangements shall be packed separately

for each size range, except that size 6 x 6 and larger sizes may be commingled.

(iii) To allow for variations incident to proper sizing and handling not more than a total of ten percent, by count, in any lot, may be smaller than the minimum diameter or larger than the specified maximum diameter. "Breakers" or tomatoes of a greater degree of maturity shall not be subject to size arrangements.

(b) *Inspection*. (1) All tomatoes handled pursuant to this part, other than those specifically excepted therefrom pursuant to paragraph (c) of this section, or exempted pursuant to paragraphs (d), (e), and (f) of this section, shall be inspected and certified pursuant to the provisions of § 965.60; and (2) no handler shall transport or cause the transportation of any shipment of tomatoes by motor vehicle unless each such shipment is accompanied by a copy of the inspection certificate applicable thereto.

(c) *Excepted varieties*. Elongated types of tomatoes, commonly referred to as pear shaped or paste tomatoes and including but not limited to San Marzano, Red Top, and Roma varieties; and cerasiform type tomatoes commonly referred to as cherry tomatoes, are not subject to the requirements of this section.

(d) *Repacked tomatoes*. A handler who is a repacker within the production area may register with the committee, as a repacker, in accordance with applicable rules and regulations, and thereafter may handle repacked tomatoes without reinspection thereon after repacking, if such tomatoes were previously inspected prior to repacking and met the grade and size requirements of this section.

(e) *Minimum quantity*. For purposes of regulation under this part, each person subject thereto may handle, pursuant to § 965.53, up to, but not to exceed 120 pounds of tomatoes per day without regard to the requirements of this part, but this exception shall not apply to any portion of a shipment of over 120 pounds of tomatoes.

(f) *Special purpose shipments*. The limitations set forth in this section shall not be applicable to shipments of tomatoes for the following purposes: (1) Relief or charity; (2) processing; and (3) for experimental purposes.

(g) *Safeguards*. Each handler making shipments of tomatoes pursuant to paragraph (f) of this section for relief or charity, for processing, or for experimental purposes, shall apply for and obtain an approved Certificate of Privilege from the committee applicable to shipments for such purposes.

(h) *Definitions*—(1) *Grade, size, and color*. The terms "U.S. No. 2," "green," and "breakers" mean the U.S. No. 2 grade, and "green" and "breakers" maturity, as set forth in the United States Standards for Fresh Tomatoes (§§ 51.1855-51.1877 of this title; 22 F.R. 4528 as

amended, 26 F.R. 8559), including the tolerance set forth therein; and the application of tolerance for size shall be as set forth in § 51.1861 of such standards.

(2) *Other terms*. All other terms used in this section shall have the same meaning as when used in Marketing Order No. 965.

(Secs. 1-19, 48 Stat. 31, as amended; 7 U.S.C. 601-674)

Dated: March 27, 1962.

PAUL A. NICHOLSON,
Deputy Director,
Fruit and Vegetable Division.

[F.R. Doc. 62-3068; Filed, Mar. 29, 1962; 8:45 a.m.]

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Food and Drug Administration

[21 CFR Part 120]

INORGANIC BROMIDES

Notice of Proposal to Establish Tolerances Resulting From Fumigation With Methyl Bromide

The United States Department of Agriculture has requested that action be taken to permit the use of methyl bromide as a fumigant on avocados in the quarantine program to prevent entry from Hawaii into the Continental United States of serious pests, particularly the oriental fruit fly (*Dacus dorsalis*). In this program, it is proposed to use methyl bromide as a fumigant on avocados in Hawaii and at mainland ports, under supervision of representatives of the U.S. Department of Agriculture. That Department states that residues of inorganic bromide resulting from the treatment in the quarantine program do not exceed 75 parts per million. These residues on avocados will not constitute a hazard to man.

By virtue of the authority vested in the Secretary of Health, Education, and Welfare by the Federal Food, Drug, and Cosmetic Act (sec. 408(e), 68 Stat. 514; 21 U.S.C. 346a(e)) and delegated to the Commissioner of Food and Drugs by the Secretary (25 F.R. 8625), it is proposed by the Commissioner, on his own initiative, that the regulations for tolerances for pesticide chemicals in or on raw agricultural commodities (21 CFR 120.123; 26 F.R. 12249) be amended by inserting immediately following the item "75 parts per million in or on potatoes, sweetpotatoes" a new item reading as follows:

§ 120.123 Tolerances for residues of inorganic bromides resulting from fumigation with methyl bromide.

75 parts per million in or on avocados from use in accordance with the Plant Quarantine Program of the U.S. Department of Agriculture.

Any person who has registered or who has submitted an application for the registration of an economic poison under the Federal Insecticide, Fungicide, and Rodenticide Act containing methyl bromide may request, within 30 days from the publication of this proposal in the FEDERAL REGISTER, that the proposal be referred to an advisory committee in accordance with section 408(e) of the Federal Food, Drug, and Cosmetic Act.

Any interested person may, within thirty days from the date of publication of this notice in the FEDERAL REGISTER, file with the Hearing Clerk, Department of Health, Education, and Welfare, Room 5440, 330 Independence Avenue SW., Washington 25, D.C., written comments on the proposal. Comments may be accompanied by a memorandum or brief in support thereof.

All documents shall be filed in quintuplicate.

Dated: March 26, 1962.

GEO. P. LARRICK,
Commissioner of Food and Drugs.

[F.R. Doc. 62-3074; Filed, Mar. 29, 1962;
8:46 a.m.]

Notices

DEPARTMENT OF THE TREASURY

Office of the Secretary

[AA 643.3-m]

1/4" DRILL CHUCKS FROM ENGLAND

Fair Value Determination

MARCH 27, 1962.

A complaint was received that 1/4" geared key drill chucks from England were being sold in the United States at less than fair value within the meaning of the Antidumping Act of 1921.

I hereby determine that 1/4" geared key drill chucks from England are not being, nor likely to be, sold at less than fair value within the meaning of section 201(a) of the Antidumping Act, 1921, as amended (19 U.S.C. 160(a)).

Statement of reasons. The quantity of drill chucks sold in the home market for home consumption was adequate to form a basis for fair value comparison. Since all transactions were outright purchases, no relationship, financial or otherwise, existing between the seller and buyer, a fair value comparison was made between purchase price and home market price.

Purchase price was calculated on the basis of the c.i.f., delivered, duty paid, price. From this price ocean freight, insurance, f.o.b. charges, clearance and service charges, overland freight, and United States customs duty were deducted.

Computation of home market price was made on the basis of the delivered customer's works price, with allowance for inland freight, in the quantity range comparable to the quantities sold for export to the United States.

Purchase price was found to be not lower than the home market price.

This determination and the statement of reasons therefore are published pursuant to section 201(c) of the Antidumping Act, 1921, as amended (19 U.S.C. 160(c)).

[SEAL] JAMES POMEROY HENDRICK,
Acting Assistant Secretary.

[F.R. Doc. 62-3081; Filed, Mar. 29, 1962;
8:47 a.m.]

ATOMIC ENERGY COMMISSION

[Docket No. 50-17]

INDUSTRIAL REACTOR LABORATORIES, INC., AND TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK

Notice of Issuance of Facility License Amendment

Please take notice that the Atomic Energy Commission has issued Amendment No. 9 set forth below to License No. R-46 authorizing Industrial Reactor Laboratories, Inc. and The Trustees of Co-

lumbia University in the City of New York to perform certain low power tests on a prototype silver-indium-cadmium control rod. The tests authorized by Amendment No. 9 will be performed in the Industrial Reactor Laboratories, Inc. facility located in Plainsboro Township, Middlesex County, New Jersey, in accordance with procedures described in application for license amendment dated January 15, 1962. The Commission has found that conduct of the tests in accordance with the terms and conditions of the license as amended will not be inimical to the public health and safety.

The Commission has further found that prior public notice of proposed issuance of this amendment is not necessary in the public interest since the conduct of the proposed tests would not present any substantial change in the hazards to the health and safety of the public from those previously considered and evaluated in connection with the previously approved operation of the facility.

In accordance with the Commission's rules of practice (10 CFR Part 2), the Commission will direct the holding of a formal hearing on the matter of issuance of the license amendment upon receipt of a request therefor from the licensee or an intervener within 30 days after the issuance of the license amendment. Petitions for leave to intervene shall be filed by mailing a copy to the Office of the Secretary, Atomic Energy Commission, Washington 25, D.C., or by delivery of a copy in person to the Office of the Secretary, Germantown, Maryland, or the AEC's Public Document Room, 1717 H Street NW., Washington, D.C.

For further details see (a) the application for license amendment by Industrial Reactor Laboratories, Inc. and The Trustees of Columbia University in the City of New York, and (b) a hazards analysis of the proposed tests prepared by the Division of Licensing and Regulation, all on file at the Commission's Public Document Room, 1717 H Street NW., Washington, D.C. A copy of item (b) above may be obtained at the Commission's Public Document Room, or upon request addressed to the Atomic Energy Commission, Washington 25, D.C., Attention: Director, Division of Licensing and Regulation.

Dated at Germantown, Md., this 26th day of March 1962.

For the Atomic Energy Commission.

ROBERT H. BRYAN,
Chief, Research and Power Reactor Safety Branch, Division of Licensing and Regulation.

[License No. R-46, Amtd. No. 9]

License No. R-46, as previously amended, is further amended as follows: In addition to the activities previously authorized by the Commission at the Industrial Reactor Laboratories, Inc. reactor facility under License

No. R-46, as amended, Industrial Reactor Laboratories, Inc. and The Trustees of Columbia University in the City of New York are hereby authorized to perform low power tests on a prototype silver-indium-cadmium control rod in accordance with the procedures and subject to the limitations described in the application for amendment dated January 15, 1962 and subject to the conditions contained in License No. R-46, as amended.

Date of issuance: March 26, 1962.

This amendment is effective as of the date of issuance:

For the Atomic Energy Commission.

ROBERT H. BRYAN,
Chief, Research and Power Reactor Safety Branch, Division of Licensing and Regulation.

[F.R. Doc. 62-3060; Filed, Mar. 29, 1962;
8:45 a.m.]

[Docket No. 27-2]

CROSSROADS MARINE DISPOSAL CORP.

Notice of Proposed Amendment of Byproduct, Source and Special Nuclear Material License

Please take notice that Crossroads Marine Disposal Corporation, 201 Victory Road, Dorchester, Massachusetts, holder of License No. 20-685-2 which authorizes the receipt, packaging and disposal of waste byproduct, source and special nuclear material, has applied for an amendment which would:

1. Authorize the receipt, packaging and storage of radioactive waste material at a new site located at 201 Victory Road, Dorchester, Massachusetts.
2. Renew the license for a period of two (2) years.

The AEC has reviewed the applications for amendment and proposes to grant the amendment subject to appropriate limitations, unless within fifteen (15) days after filing of this notice with the Federal Register Division, a petition to intervene and a request for a formal hearing are filed with the Commission in the manner prescribed in Title 10, Code of Federal Regulations, Chapter I, Part 2—Rules of Practice, or unless the Commission upon further consideration, directs the holding of such a hearing on its own motion.

The application for license amendment and a Memorandum prepared by the Division of Licensing and Regulation which summarizes the considerations evaluated prior to the issuance of this notice of proposed licensing action are available for inspection at the Commission's Public Document Room, 1717 H Street NW., Washington 25, D.C. Copies of the Memorandum¹ referenced above may also be obtained by request addressed to the Commission's Public Doc-

¹ Filed as part of the original document.

ument Room, 1717 H Street NW., Washington 25, D.C., or to the Atomic Energy Commission, Washington 25, D.C., Attention: Director, Division of Licensing and Regulation.

The text of the proposed amendment is set forth below.

Dated at Germantown, Md., March 26, 1962.

For the Atomic Energy Commission.

R. LOWENSTEIN,
Director, Licensing and Regulation.

[License No. 20-685-2, Amdt. No. 5]

In accordance with application dated June 29, 1961, and amendments thereto, dated December 19, 1961, January 8, 1962 and January 27, 1962 (hereinafter referred to as "the application"), License No. 20-685-2 is hereby amended in its entirety to read as follows:

Pursuant to the Atomic Energy Act of 1954, as amended, 10 CFR Part 30, "Licensing of Byproduct Material", 10 CFR Part 40, "Licensing of Source Material", and 10 CFR Part 70, "Special Nuclear Material", and in reliance upon the statements and representations contained in the application, Crossroads Marine Disposal Corporation, 201 Victory Road, Dorchester, Massachusetts, is hereby authorized to receive, package and dispose of solid byproduct, source and special nuclear material waste at sea or by transfer to the AEC-designated sites at the National Reactor Testing Station, Idaho Falls, Idaho and Oak Ridge National Laboratory, Oak Ridge, Tennessee for land burial.

This license shall be deemed to contain the conditions specified in section 183 of the Atomic Energy Act of 1954, as amended, and is subject to the provisions of 10 CFR Part 20, "Standards for Protection Against Radiation", all other applicable rules, regulations, orders of the Atomic Energy Commission now or hereafter in effect, and to the following conditions:

1. The licensee shall not possess more than 1,000 curies of byproduct material; 16,000 pounds of source material; and 100 grams of special nuclear material at any one time.

2. Packages prepared for disposal by land burial shall be received, handled and shipped to the disposal site by, or in the physical presence of, George C. Perry or James J. Nuss. Packages for sea disposal shall be prepared and disposed of by, or in the physical presence of, George C. Perry or James J. Nuss.

3. The licensee shall receive, package, possess and dispose of the byproduct, source and special nuclear material in accordance with the procedures described in the application, except as provided otherwise in this license.

4. A copy of "Personnel Monitoring Instructions" and "Instructions For Collection and Transportation of Radioactive Waste Material" as described in the application shall be supplied to each employee of the licensee involved in the receipt, packaging and disposal of byproduct, source and special nuclear material.

5. The licensee shall receive only waste materials which have been prepackaged by the licensee's customers in compliance with applicable Interstate Commerce Commission regulations or with Condition 6 of this license. Prepackaged waste containers shall not be opened by the licensee except for insertion of pressure relief valves in packages prepared for sea disposal as described in the application. The licensee shall provide each customer a copy of "Instructions to Shipper of Radioactive Waste Material" as described in the application.

6. The transportation of AEC-licensed material to and from the location designated in Condition 7 shall be subject to the appli-

cable regulations of the Interstate Commerce Commission, United States Coast Guard and other agencies of the United States having appropriate jurisdiction, and where such regulations are not applicable shall be in accordance with the following requirements except as specifically provided by the Atomic Energy Commission:

A. *Outside shipping containers.* (1) The containers shall meet the specifications for sea disposal containers as described in the application or by any one of the following specifications described in Appendix A attached hereto:

a. 15A, 15B, 12B, 6A, 6B, 6C, 17C, 17H, 19A or 19B for the containment of radioactivity in amounts not in excess of 2.7 curies; except polonium, 2 curies; or

b. Specification 55 for containment of solid cobalt 60, cesium-137, iridium 192, or gold 198 in amounts not in excess of 300 curies.

(2) There shall be no radioactive contamination on any exterior surface of the container in excess of 500 d/m/100 sq. cm. alpha and 0.1 mrep/hr beta-gamma radiation.

(3) The smallest dimension of the container shall not be less than 4 inches.

(4) The radiation level of any accessible surface of the container shall not exceed 200 mrem/hr.

(5) At one meter from any point on the radioactive source the radiation level shall not exceed 10 mrem/hr.

(6) Containers which contain radioactive material emitting only alpha and/or beta radiation shall contain sufficient shielding to prevent the escape of primary corpuscular radiation to the exterior surface and to reduce the secondary radiation at the surface of the container to at least 10 mrem/24 hours at any time during transportation.

B. *Inside containers.* (1) Solid and gaseous radioactive materials shall be packed in suitable inside containers designed to prevent rupture and leakage under conditions incident to transportation.

(2) Liquid radioactive materials must be packed in sealed glass, earthenware, or other suitable containers. The container must be surrounded on all sides by an absorbent material sufficient to absorb the entire liquid contents and be of such nature that its efficiency will not be impaired by chemical reactions with the contents. Where shielding is required the absorbent material must be placed within the shield. If the inside container meets the Specification 2R in Appendix A the absorbent material is not required.

(3) Materials containing radioisotopes of plutonium, americium, polonium, or curium, or the isotope strontium 90, in quantities in excess of 100 microcuries, must be packed in containers which meet Specification 2R in Appendix A.

C. *Shielding.* Inside containers must be completely surrounded with sufficient shielding to meet the requirements of subparagraphs A(4), A(5) and A(6) of this condition. The shield must be so designed that it will not open or break under normal conditions incident to transportation.

D. *Labeling.* Each outside container label required under § 20.203(f) of 10 CFR Part 20 shall bear the following information:

(1) Total activity in millicuries, or in the case of source and special nuclear material, total weight;

(2) Principal radioisotope;

(3) Radiation level at the surface of the container and at one meter from the source; and

(4) The name and address of the licensee.

E. Each vehicle in which licensed material is transported shall be marked or placarded on each side and the rear with the lettering at least 3 inches high as follows: "Dangerous—Radioactive Material".

F. *Accidents.* In the event of an accident involving any vehicle transporting licensed material, immediate steps shall be taken to prevent radiation exposure of persons and to control contamination.

G. *Exemptions.* Specific approval must be obtained from the Atomic Energy Commission for modification of, or exemption from, the requirements of the license condition. Requests for such approval should be directed to the Chief, Isotopes Branch, Division of Licensing and Regulation, Atomic Energy Commission, and should contain sufficient information to support such a request.

7. The licensee shall store byproduct, source and special nuclear material only at 201 Victory Road, Dorchester, Massachusetts as described in the application.

8. The licensee shall dispose of byproduct, source and special nuclear material waste by:

A. Burial at a minimum depth of 1,000 fathoms in the Atlantic Ocean:

(1) Within an area bounded by points designated as 41°38' N., 41°28' N., 65°28' W., and 65°45' W.

(2) Within 5 miles of a point designated as 38°30' N., 72°06' W.

(3) Other locations in the Atlantic Ocean when approved by the Commission.

B. Transfer of solid waste to AEC-designated sites for land burial at the National Reactor Testing Station, Idaho Falls, Idaho and Oak Ridge National Laboratory, Oak Ridge, Tenn.

9. The licensee shall notify the Chief, Isotopes Branch, Division of Licensing and Regulation, Atomic Energy Commission, Washington 25, D.C. and the Director, Region I, Division of Compliance, Atomic Energy Commission, 376 Hudson Street, New York 14, N.Y., at least 20 days prior to each sea disposal or series of sea disposals by letter deposited in the United States mail properly stamped and addressed of the proposed date and location for disposal. Information regarding the total number of containers, the total activity of byproduct material in millicuries, the total amount of source material in pounds and the total amount of special nuclear material in grams contained in each sea disposal shipment shall be supplied the Director, Region I, Division of Compliance one working day prior to the loading of the vessel for each sea disposal trip. Information regarding the quantities of byproduct, source and special nuclear material disposed of, the actual date of disposal and the disposal location in latitude and longitude shall be supplied to the Chief, Isotopes Branch, Division of Licensing and Regulation within 30 days after the date of disposal.

10. Notwithstanding the recordkeeping requirements of 10 CFR Parts 20, 30, 40 and 70, the licensee shall maintain:

A. Records of the following items of information regarding each container of waste received from customers:

(1) Name and address of customer.

(2) Principal radioisotope.

(3) Total amount of byproduct material in millicuries, total amount of source material in pounds, and total amount of special nuclear material in grams.

(4) Radiation level at the surface of the container and at 1 meter.

(5) Level of removable radioactive contamination on the container surface.

(6) Date received.

B. Records of the following items of information regarding each container of waste packaged for sea disposal.

(1) Total amount of byproduct material in millicuries, the amount of source material in pounds and the amount of special nuclear material in grams.

(2) Radiation level at the surface of the container and at 1 meter.

(3) Level of removable radioactive contamination on the container surface.

(4) Most hazardous radioisotope.

(5) Date of packaging.

(6) Weight and volume of final container, if prepared for disposal at sea.

(7) Disposal location and date of disposal.

11. Packaged radioactive waste containing special nuclear material shall be transported only aboard vessels of American registry.

12. Containers received and packaged by the licensee shall not contain more than 20 grams of special nuclear material.

13. Waste byproduct, source and special nuclear material shall be disposed of within 21 months from the date on which the licensee first takes possession of such material.

14. The licensee shall not receive any byproduct, source or special nuclear material until the facility for storing such material has been completed in accordance with the application. Upon completion of the facility the licensee shall notify the Chief, Isotopes Branch, Division of Licensing and Regulation, of the fact of such completion.

15. The licensee shall notify the Chief, Isotopes Branch, Division of Licensing and Regulation, Atomic Energy Commission within fifteen (15) days of the first receipt of byproduct, source or special nuclear material in the storage facility.

This amendment is effective as of the date of issuance and shall expire two (2) years from the last day of the month in which this amendment is issued.

Date of issuance:

For the Atomic Energy Commission.

[F.R. Doc. 62-3061; Filed, Mar. 29, 1962; 8:45 a.m.]

CIVIL AERONAUTICS BOARD

[Docket No. 13489, Order No. E-18153]

ALLEGHENY AIRLINES, INC., AND NAPIER ENGINES, INC.

Certain Aircraft and Related Equipment; Order Granting Tentative Approval of Purchase

Adopted by the Civil Aeronautics Board at its office in Washington, D.C., on the 27th day of March 1962.

By application filed March 22, 1962, Napier Engines Incorporated (Napier) and Allegheny Airlines, Inc. (Allegheny) jointly request the Board to approve without hearing pursuant to the provisions of section 408(b) of the Federal Aviation Act of 1958, as amended (the Act) the purchase by Napier from Allegheny of five Eland powered Convair 540 aircraft and related spare engines, parts and ground equipment at a cost of \$5,406,881. The purchase price is payable in five equal installments of \$1,081,376.20 upon delivery of each aircraft, consisting of \$400,561.60 in cash with the balance of \$680,814.60 to be applied toward discharge of Allegheny's promissory notes held by Napier. It is planned that all aircraft will be delivered to Napier by July 1, 1962. Napier, a Delaware corporation,¹ has imported and sold Eland engines in North America and provides support for Allegheny's Eland engine maintenance, and is thus a person engaged in a phase of aeronautics within the meaning of section 408 of the Act.

In support of the application, the parties state that the engine manufacturer

¹ Napier is a wholly owned subsidiary of Napier Aero Engines Limited, a British manufacturer of aircraft engines including the Eland.

has found it necessary to discontinue commercial sales. Accordingly, Napier wishes to be relieved of its costly support obligation to Allegheny. To accomplish this, Napier has agreed to purchase Allegheny's five Eland powered Convair 540's and related equipment. The purchase price is alleged to be approximately equal to the depreciated value of the aircraft and related engines, parts and ground equipment on Allegheny's books as of December 31, 1961. The applicants point out that any other course would indefinitely leave Allegheny as the only domestic carrier operating such equipment and that disposition thereof on reasonable financial terms is beneficial to Allegheny. Allegheny also asserts that the withdrawal of the five aircraft will not adversely affect its certificate obligations in that it has contracted for the purchase of five substitute piston engine Convair aircraft, two of which have already been acquired. Such acquisition has been accomplished pursuant to interim short-term financing which requires Allegheny to meet a commitment of \$500,000 on March 28, 1962. Allegheny has arranged for a bank loan to meet this commitment, the collateral for which will be the monies to be paid Allegheny by Napier. Allegheny further asserts that the bank will not advance the commitment funds until the purchase agreement is tentatively approved by the Board. In addition, Allegheny claims that the equipment substitution program is also dependent upon the prompt receipt of payments from Napier so that a portion of them may be applied to the purchase of the substitute aircraft.

The Board, upon consideration of the application, finds that the five Convair 540 aircraft and related equipment to be purchased by Napier constitute a substantial portion of the properties of Allegheny within the meaning of section 408 of the Act. However, the Board has concluded tentatively that the purchase of aircraft by Napier from Allegheny does not affect the control of an air carrier directly engaged in the operation of aircraft in air transportation, does not result in creating a monopoly, and does not tend to restrain competition. Furthermore, the Board notes that no person disclosing a substantial interest is currently requesting a hearing. The Board sees no present indication that the purchase price and other terms of the transaction are not adequate and there appears to be no reason for concern as to Allegheny's continued ability to meet its certificate obligations. However, we will condition our approval to provide that no determination has been made as to the reasonableness of the transaction for rate-making purposes.

In view of the foregoing, the Board tentatively finds that the acquisition of five Convair 540 aircraft and related spare engines and parts by Napier from Allegheny should be approved and intends to approve it under section 408 without a hearing, pursuant to the provisions of section 408(b). In accordance therewith, this order constituting notice of such intention will be published in the FEDERAL REGISTER and interested per-

sons will be afforded an opportunity to comment on the Board's tentative decision.

Therefore, it is ordered:

1. That this order be published in the FEDERAL REGISTER;
2. That the Attorney General be furnished a copy of this order within one day of its publication;
3. That interested persons are afforded a period of ten days within which to file comments or request a hearing with respect to the Board's proposed action herein; and
4. That the action herein shall not be deemed a determination for rate-making purposes of the reasonableness of the transaction.

By the Civil Aeronautics Board.

[SEAL] HAROLD R. SANDERSON,
Secretary.

[F.R. Doc. 62-3083; Filed, Mar. 29, 1962; 8:48 a.m.]

[Docket No. 8305]

ALLEGHENY SEGMENT 3 RENEWAL PROCEEDING

Notice of Oral Argument

Notice is hereby given, pursuant to the provisions of the Federal Aviation Act of 1958, as amended, that oral argument in the above-entitled proceeding is assigned to be heard on April 10, 1962, at 10 a.m., e.s.t., in Room 1027, Universal Building, Connecticut and Florida Avenues NW., Washington, D.C., before the Board.

Dated at Washington, D.C., March 26, 1962.

[SEAL] FRANCIS W. BROWN,
Chief Examiner.

[F.R. Doc. 62-3084; Filed, Mar. 29, 1962; 8:48 a.m.]

FEDERAL AVIATION AGENCY

[OE Docket No. 62-WE-4]

CONSTRUCTION EQUIPMENT

Proposed Erection; Determination of Hazard to Air Navigation

The Federal Aviation Agency has circularized the following proposal to interested persons for aeronautical comment and has conducted a study to determine its effect upon the safe and efficient utilization of airspace: The County of San Bernardino, California, proposes to erect a pile driver and high crane at latitude 34°04'00" north, longitude 117°16'22" west. The overall height of the equipment would be 75 feet above ground level (1085 feet above mean sea level).

Objections were made in response to the circularization and at a Los Angeles Informal Airspace Meeting by the operators of the Tri-City Airport, San Bernardino, California and the California Aeronautics Commission on the basis that the proposed construction equipment would constitute a hazard to aircraft using the principal runway at the Tri-City Airport.

The pile driver and high crane would be used in the construction of a bridge on Waterman Avenue at a point approximately 20 feet off the west end of the East/West runway. The area of construction would be within the East/West runway approach area surface as defined in § 626.13(b)(2)(ii) of Part 626 of the regulations of the Administrator, and the proposed equipment would exceed the hazards to air navigation criteria of Part 626 by the entire height of the equipment. The construction would require the use of the pile driver for a period of approximately 30 days. The high crane would be required intermittently during the entire six months construction period.

There are an estimated 10,800 aircraft operations per year at the Tri-City Airport of which approximately 95 percent are on the East/West runway due to prevailing winds. This runway is 3140 feet in length (2480 feet corrected per TSO-N6B). By applying an approach slope ratio of 40:1 to clear a 75-foot obstruction at the west end of the runway, it was found that none of the runway would be usable for landings to the east. By applying an approach slope ratio of 20:1 to clear a 75 foot obstruction at the west end of the runway it was found that a landing area of only 1685 feet in length (approximately 1440 feet corrected) would be usable for landings to the east. Aircraft taking off to the west or landing to the east on this runway pass over the area where the proposed equipment would be used while in a climbing or descending attitude when a pilot's attention is directed toward extremely critical phases of flight.

The Agency study disclosed that the proposed equipment would have a substantial adverse effect upon aircraft operations at the Tri-City Airport.

No other aeronautical operations, procedures or minimum flight altitudes would be affected by the proposed equipment.

Therefore, pursuant to the authority delegated to me by the Administrator (14 CFR 626.33; 26 F.R. 5292), it is concluded that the erection of the proposed construction equipment at the location and mean sea level elevation specified herein would have a substantial adverse effect upon aeronautical operations, and it is hereby determined that this equipment would be a hazard to air navigation.

This determination is effective as of the date of issuance and will become final 30 days thereafter unless an appeal is filed under § 626.34 (26 F.R. 5292). If the appeal is denied the determination will then become final as of the date of the denial or 30 days after the issuance of the determination whichever is later.

Issued in Washington, D.C., on March 20, 1962.

R. H. FLETCHER,
Acting Chief,
Obstruction Evaluation Branch.

[F.R. Doc. 62-3062; Filed, Mar. 29, 1962;
8:45 a.m.]

FEDERAL RESERVE SYSTEM

COMMERCIAL ASSOCIATES, INC.

Notice of Receipt of Application for Approval of Acquisition of Shares of Banks

Notice is hereby given that the Board of Governors of the Federal Reserve System has received an application by Commercial Associates, Inc., Pensacola, Florida, pursuant to section 3(a)(1) of the Bank Holding Company Act of 1956 (12 U.S.C. 1842), for the Board's prior approval of action to become a bank holding company through acquisition by that corporation of 20,622 (51.56 percent) of the voting shares of The Commercial National Bank of Pensacola, Pensacola, Florida, and 5,700 shares (50.67 percent) of the voting shares of Bank of Gulf Breeze, Gulf Breeze, Florida.

In determining whether to approve this application, the Board is required by said Act to take into consideration the following factors: (1) The financial history and condition of the company and the banks concerned; (2) their prospects; (3) the character of their management; (4) the convenience, needs, and welfare of the communities and the area concerned; and (5) whether or not the effect of such acquisition would be to expand the size or extent of the bank holding company system involved beyond limits consistent with adequate and sound banking, the public interest, and the preservation of competition in the field of banking.

Not later than 30 days after the publication of this notice in the FEDERAL REGISTER, comments and views regarding the proposed acquisition may be filed with the Board. Communications should be addressed to the Secretary, Board of Governors of the Federal Reserve System, Washington 25, D.C.

Dated at Washington, D.C., this 23d day of March 1962.

By order of the Board of Governors.

[SEAL]

MERRITT SHERMAN,
Secretary.

[F.R. Doc. 62-3063; Filed, Mar. 29, 1962;
8:45 a.m.]

GENERAL SERVICES ADMINISTRATION

[Delegation of Authority No. 410]

HEADS OF EXECUTIVE AGENCIES

Authority to Use Title III of the Federal Property and Administrative Services Act of 1949

1. Pursuant to authority vested in me by the Federal Property and Administrative Services Act of 1949 (63 Stat. 377), as amended (herein called the Act), authority is hereby delegated to

all executive agencies, except those specified in 10 U.S.C. 2303(a), to utilize the provisions of Title III of the Act when procuring property and services.

2. This authority shall be exercised in accordance with applicable limitations and requirements of the Act, particularly sections 304 and 307, and policies, procedures, limitations, controls and reporting requirements prescribed by this Administration.

3. The authority herein delegated may be redelegated by the head of the executive agency concerned to any officer or employee of such agency, except as precluded by section 307 of the Act.

4. Such review shall be made of procurement operations and procedures under this delegation as is necessary to assure that procurement practices are conducted in an economical and efficient manner and in accordance with this delegation.

5. This delegation supersedes and revokes Delegation of Authority No. 273, dated September 25, 1956 (21 F.R. 7420), and Supplement No. 1 thereto, dated June 5, 1959 (24 F.R. 4865), and Delegation of Authority No. 363, dated March 10, 1959 (24 F.R. 1921, 2096). However, such revocation shall not impair the validity of any actions heretofore taken under the provisions of such delegations.

6. This delegation shall be effective as of the date hereof.

BERNARD L. BOUTIN,
Administrator.

MARCH 26, 1962.

[F.R. Doc. 62-3073; Filed, Mar. 29, 1962;
8:46 a.m.]

SECURITIES AND EXCHANGE COMMISSION

[File No. 1-3848]

APEX MINERALS CORP.

Order Summarily Suspending Trading

MARCH 26, 1962.

The common stock, \$1 par value, of Apex Minerals Corporation, being listed and registered on the San Francisco Mining Exchange, a national securities exchange; and

The Commission being of the opinion that the public interest requires the summary suspension of trading in such security on such Exchange and that such action is necessary and appropriate for the protection of investors; and

The Commission being of the opinion further that such suspension is necessary in order to prevent fraudulent, deceptive or manipulative acts or practices, with the result that it will be unlawful under section 15(c)(2) of the Securities Exchange Act of 1934 and the Commission's Rule 15c2-2 thereunder for any broker or dealer to make use of the mails or of any means or instrumentality of interstate commerce to ef-

fect any transaction in, or to induce or attempt to induce the purchase or sale of such security, otherwise than on a national securities exchange;

It is ordered, Pursuant to section 19 (a) (4) of the Securities Exchange Act of 1934 that trading in said security on the San Francisco Mining Exchange be summarily suspended in order to prevent fraudulent, deceptive or manipulative acts or practices, this order to be effective for a period of ten (10) days, March 27, 1962, to April 5, 1962, both dates inclusive.

By the Commission.

[SEAL] ORVAL L. DuBOIS,
Secretary.

[F.R. Doc. 62-3064; Filed, Mar. 29, 1962;
8:45 a.m.]

[File No. 24A-1592]

CURRENCY MACHINES CORP.

Order Temporarily Suspending Exemption, Statement of Reasons Therefor, and Notice of Opportunity for Hearing

MARCH 26, 1962.

I. Currency Machines Corporation (issuer), 1050 N.E. 85th St., Miami, Fla., filed with the Commission on February 26, 1962, a notification on Form 1-A, an offering circular and other exhibits relating to a proposed public offering of 100,000 shares of 10 cents par value common stock at \$1.00 per share for an aggregate amount of \$100,000, for the purpose of obtaining an exemption from the registration requirements of the Securities Act of 1933, as amended, pursuant to the provisions of section 3(b) of said Act and Regulation A promulgated thereunder.

II. The Commission has reasonable cause to believe that:

A. The terms and conditions of Regulation A have not been compiled with in that the jurisdiction for the filing is not established as required by Rule 255 (c) and financial statements required by paragraph 11(a) of Schedule I are not included in the offering circular.

B. The offering circular contains untrue statements of material facts and omits to state material facts necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, particularly with respect to:

1. The proper business address of the issuer;
2. The space leased by issuer and the amount of rental paid;
3. The failure to disclose the extent to which the issuer is dependent upon proceeds from the sale of securities proposed to be offered for funds with which to carry out its contemplated business activities;
4. The failure to disclose the extent to which funds received from public investors are to be used to pay officers' salaries; and
5. The failure to disclose that the issuer owns no property, machinery or equipment of any kind.

III. *It is ordered*, Pursuant to Rule 261(a) of the general rules and regulations under the Securities Act of 1933, as amended, that the exemption under Regulation A be, and it hereby is, temporarily suspended.

Notice is hereby given that any person having any interest in the matter may file with the Secretary of the Commission a written request for hearing within thirty days after the entry of this order; that within twenty days after receipt of such request the Commission will, or at any time upon its own motion may, set the matter down for hearing at a place to be designated by the Commission for the purpose of determining whether this order of suspension should be vacated or made permanent, without prejudice, however, to the consideration and presentation of additional matters at the hearing; that if no hearing is requested and none is ordered by the Commission, this order shall become permanent on the thirtieth day after its entry and shall remain in effect unless or until it is modified or vacated by the Commission; and that notice of the time and place for any hearing will be promptly given by the Commission.

By the Commission.

[SEAL] ORVAL L. DuBOIS,
Secretary.

[F.R. Doc. 62-3065; Filed, Mar. 29, 1962;
8:45 a.m.]

INTERSTATE COMMERCE COMMISSION

FOURTH SECTION APPLICATIONS FOR RELIEF

MARCH 27, 1962.

Protests to the granting of an application must be prepared in accordance with Rule 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 No. 37625: *Brick or tile raw materials between points in southern territory*. Filed by O. W. South, Jr., Agent (No. A4167), for interested rail carriers. Rates on crude earth, suitable only for use in the manufacture of brick or tile, as described in the application, in carloads, between points in southern territory, also Ohio and Mississippi River crossings, Virginia cities and Washington, D.C.

Grounds for relief: Truck competition, and short-line distance formula.

Tariff: Supplement 38 to Southern Freight Association tariff I.C.C. S-144.

FSA No. 37626: *Alcohols from Bishop and Corpus Christi, Tex., to Chicago, Ill.* Filed by Southwestern Freight Bureau, Agent (No. B-8171), for interested rail carriers. Rates on acetone, butyl acetate, butyl alcohol, etc., in tank-car loads, from Bishop and Corpus Christi, Tex., to Chicago, Ill. (Applicable only for deliveries on railroad tracks serving the General American Tank Storage Ter-

minals at Argo, Ill., or the Lake River Terminals at Crawford, Ill., or De Mert and Dougherty, Inc., at Corwith, Ill.)
Grounds for relief: Market competition.

Tariff: Supplement 229 to Southwestern Freight Bureau tariff I.C.C. 4064.

FSA No. 37627: *Fresh meats and packing house products from San Angelo, Tex.* Filed by Southwestern Freight Bureau, Agent (No. B-8170), for interested rail carriers. Rates on fresh meats and packing house products, as described in the application, in carloads, from San Angelo, Tex., to points in southwestern, western trunk-line and Illinois territories, also Mississippi River crossings Memphis and south thereof.

Grounds for relief: Market competition.

Tariff: Supplement 161 to Southwestern Freight Bureau tariff I.C.C. 4036.

FSA No. 37628: *Lime from Davenport and Linwood, Iowa to the South*. Filed by Illinois Freight Association, Agent (No. 163), for interested rail carriers. Rates on lime, common, hydrated, quick or slaked, in carloads, from Davenport and Linwood, Iowa, to points in southern territory.

Grounds for relief: Market competition.

Tariff: Supplements 14 and 216 to Illinois Freight Association tariff I.C.C. 970 and 776, respectively.

By the Commission.

[SEAL] HAROLD D. McCoy,
Secretary.

[F.R. Doc. 62-3069; Filed, Mar. 29, 1962;
8:46 a.m.]

[Notice 616]

MOTOR CARRIER TRANSFER PROCEEDINGS

MARCH 27, 1962.

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 64811. By order of March 22, 1962, the Transfer Board approved the transfer to All Freight, Inc., South Kearny, N.J., of Certificate No. MC 61502, issued December 7, 1956, to Wm. McCoullough Transportation Co., Inc., South Kearny, N.J., authorizing the transportation of: General commodities excluding household goods, commodities in bulk, and other specified commodities, between New York, N.Y., and points in Nassau and Westchester Counties, N.Y., Newark, N.J., and points in New Jersey within 25 miles of Newark; be-

tween New York, N.Y., points in Nassau and Westchester Counties, N.Y., Newark, N.J., and points within 25 miles of Newark, on the one hand, and, on the other, points in Connecticut, points as specified in New York, and Camden and Trenton, N.J.; between Newark, N.J., and points in New Jersey within 25 miles of Newark, on the one hand, and, on the other, points in Massachusetts, and Rhode Island, and those in Pennsylvania as specified; and between Stratford, Conn., on the one hand, and, on the other, Red Bank, N.J. A. David Millner, 1060 Broad Street, Newark 2, N.J., Attorney for applicants.

No. MC-FC 64831. By order of March 22, 1962, the Transfer Board approved the transfer to Frederick C. Landon, Galeton, Pa., of Certificate No. MC 90699 Sub 1, issued July 9, 1953, to Lloyd L. Dugan, Galeton, Pa., authorizing the transportation of: Fertilizer and fertilizer ingredients, over irregular routes, from Batavia and Big Flats, N.Y., to Galeton, Pa., and animal and poultry feeds, over irregular routes, from Buffalo, N.Y., to Galeton, Pa.

No. MC-FC 64845. By order of March 22, 1962, the Transfer Board approved the transfer to Arnold B. Garrett, doing business as Warren Motor Service, Woodbury, N.J., of Certificate No. MC 29908 issued June 14, 1941, to Earle L. Walker, doing business as Walker's Express, Woodstown, N.J., authorizing the transportation of: General commodities, excluding household goods, commodities in bulk, and other specified commodities, between Woodstown, N.J., and Philadelphia, Pa. Robert E. Boakes, Broad and Cooper Streets, Woodbury, N.J., Attorney for Transferee.

[SEAL] HAROLD D. MCCOY,
Secretary.

[F.R. Doc. 62-3070; Filed, Mar. 29, 1962; 8:46 a.m.]

DEPARTMENT OF LABOR

Wage and Hour Division

CERTIFICATES AUTHORIZING EMPLOYMENT OF LEARNERS AT SPECIAL MINIMUM RATES

Notice is hereby given that pursuant to section 14 of the Fair Labor Standards Act of 1938 (52 Stat. 1060, as amended, 29 U.S.C. 201 et seq.), the regulations on employment of learners (29 CFR Part 522), and Administrative Order No. 524 (24 F.R. 9274), the firms listed in this notice have been issued special certificates authorizing the employment of learners at hourly wage rates lower than the minimum wage rates otherwise applicable under section 6 of the Act. The effective and expiration dates, occupations, wage rates, number or proportion of learners, learning periods, and the principal product manufactured by the employer for certificates issued under general learner regulations (§§ 522.1 to 522.11) are as indicated below. Conditions provided in certificates issued under special industry regulations are as established in these regulations.

No. 62—Pt. I—6

Apparel Industry Learner Regulations (29 CFR 522.1 to 522.11, as amended, and 29 CFR 522.20 to 522.25, as amended).

The following learner certificates were issued authorizing the employment of 10 percent of the total number of factory production workers for normal labor turnover purposes. The effective and expiration dates are indicated.

Anthracite Overall Manufacturing Co., 430-438 Penn Avenue, Scranton, Pa.; effective 3-10-62 to 3-9-63. Learners may not be employed in the production of separate skirts at special minimum wage rates (men's work and dress pants and jackets, and ladies' slacks, shorts, and pedal pushers).

Bee and Gee Pants Manufacturing Co., Inc., 416-418 Main Street, Dickson City, Pa.; effective 3-14-62 to 3-13-63 (men's and boys' trousers).

Bern Haven, Inc., Mt. Wolf, Pa.; effective 3-5-62 to 3-4-63 (children's cotton dresses). Bishopville Manufacturing Co., Gregg Street, Bishopville, S.C.; effective 3-18-62 to 3-17-63 (women's cotton dresses).

Carolina Sportswear Co., Warrenton, N.C.; effective 3-6-62 to 3-5-63 (men's and boys' knitted sport shirts).

Chetopa Manufacturing Co., Inc., Chetopa, Kans.; effective 3-7-62 to 3-6-63 (men's work clothing—pants and waistband overalls).

Cluett, Peabody and Co., Inc., Bremen, Ga.; effective 3-13-62 to 3-12-63 (men's shirts).

Edgewood Casual's Inc., East Second Avenue, Lexington, N.C.; effective 3-11-62 to 3-10-63 (men's sport shirts and ladies' blouses).

Elizabethtown Manufacturing Co., Elizabethtown, N.C.; effective 3-6-62 to 3-5-63 (women's cotton dresses).

Executive Service Co., Pickens, S.C.; effective 3-8-62 to 3-7-63 (men's dress shirts).

Fayette Manufacturing Co., N.Y.A. Court, Fayette, Ala.; effective 3-6-62 to 3-5-63 (children's and infants' blouses, shorts, and crawlers).

Four Sisters Manufacturing Co., Inc., 121 East Second Street, Flora, Ill.; effective 3-14-62 to 3-13-63 (women's brassieres, garterbelts and girdles).

Gopher Manufacturing Co., Buffalo, Minn.; effective 3-5-62 to 3-4-63 (children's outer garments).

Herrin Apparel Co., Inc., 720 East Monroe Street, Herrin, Ill.; effective 3-8-62 to 3-7-63 (women's and misses' dresses).

Imperial Shirt Corp., True Loom Division, Lafayette, Tenn.; effective 3-6-62 to 3-5-63 (men's sport shirts).

Indiana Sportswear Co., Indiana, Pa.; effective 3-6-62 to 3-5-63 (men's and boys' outerwear jackets and raincoats).

Jaco Pants, Inc., 501 East Washington Street, Ashburn, Ga.; effective 3-5-62 to 3-4-63 (men's pants).

F. Jacobson and Sons, Inc., Tipton and O'Brien Streets, Seymour, Ind.; effective 3-2-62 to 3-1-63 (men's dress shirts).

Jonny-Jax, Inc., Holsopple, Pa.; effective 3-9-62 to 3-8-63 (children's and men's jackets).

Kentucky Pants Co., 117 North Race Street and Glasgow-Bowling Green Road, Glasgow, Ky.; effective 3-7-62 to 3-6-63 (work and casual pants).

Lawrence Manufacturing Co., Lawrenceville, Va.; effective 3-6-62 to 3-5-63 (misses' and women's cotton blouses).

The H. D. Lee Co., Inc., 117 West 20th Street, Kansas City, Mo.; effective 3-7-62 to 3-6-63 (overalls, work pants and jackets).

Samuel Meltzer d/b/a, The Liberty Co., Alexander Avenue, Bradford, Tenn.; effective 3-7-62 to 3-6-63 (men's and boys' pajamas and robes).

Morganstern Pants Co., 404 Willis Street, Fredericksburg, Va.; effective 3-8-62 to 3-7-63 (men's trousers).

Oberman Manufacturing Co., Harrison, Ark.; effective 3-10-62 to 3-9-63 (men's and boys' pants).

Ottenheimer Bros. Manufacturing Co., Inc., Second and Victory Streets, Little Rock, Ark.; 3-14-62 to 3-13-63 (women's dresses).

Ottenheimer Bros. Manufacturing Co., 5801 Scott Hamilton Drive, Little Rock, Ark.; effective 3-14-62 to 3-13-63 (blouses and jackets).

Rainfair, Inc., Wynne, Ark.; effective 3-15-62 to 3-14-63 (men's dress trousers and walking shorts).

Reidbord Bros. Co., Lumber Street, Buckhannon, W. Va.; effective 3-7-62 to 3-6-63 (men's dress trousers and work trousers).

Selro Cambridge Manufacturing Co., Crisfield, Md.; effective 3-7-62 to 3-6-63 (ladies' sportswear—pedal pushers, coordinates and Jamaicas).

Somerville Manufacturing Co., Inc., Somerville, Tenn.; effective 3-10-62 to 3-9-63 (men's cotton and synthetic slacks).

Bernard Walsh and Son, Inc., 600 Park Drive, Statesville, N.C.; effective 3-5-62 to 3-4-63 (men's and boys' knitted sport shirts).

The following learner certificates were issued for normal labor turnover purposes. The effective and expiration dates and the number of learners authorized are indicated.

Dapper-Do Co., 5359 Dixie Highway, Bridgeport, Mich.; effective 3-6-62 to 3-5-63; 10 learners (infants' gowns, blankets, pajamas and dresses).

Falls City Manufacturing Co., 27th and North Chase, Falls City, Neb.; effective 3-7-62 to 3-6-63; 10 learners (boys' jackets and pants).

Glenn Berry Manufacturers, Inc., Oswego, Kans.; effective 3-1-62 to 2-28-63; 10 learners (boys' dungarees).

Hill Co., Inc., Fort Smith, Ark.; effective 3-10-62 to 3-9-63; 10 learners (men's and boys' shirts and boys' pants).

Holiday Togs, Inc., Dayton, Tenn.; effective 3-22-62 to 3-21-63; 5 learners (children's outer play shorts).

Eileen Hope, Inc., 1424 Herr Street, Harrisburg, Pa.; effective 3-7-62 to 3-6-63; 10 learners (women's dresses).

Lake Butler Apparel Co., Lake Butler, Fla.; effective 3-12-62 to 3-11-63; 10 learners (men's and boys' semi-dress slacks and shorts).

Lloyd's Lingerie, Inc., Murphy Street, Madison, N.C.; effective 3-9-62 to 3-8-63; 10 learners (ladies' and children's knit panties).

McLoughlin Manufacturing Corp., Peru, Ind.; effective 3-8-62 to 3-7-63; 10 learners (ladies' and children's blouses).

Peerless Sportswear Manufacturing Co., 324 South Main Street, Wilkes-Barre, Pa.; effective 3-6-62 to 3-5-63; 10 learners (girls' slacks and shorts).

The Roswell Manufacturing Co., Alpharetta Plant, Alpharetta, Ga.; effective 3-7-62 to 3-6-63; 10 learners (men's work pants).

Scottsdale Fashions, Inc., 230 West Fifth Street, Tempe, Ariz.; effective 3-6-62 to 3-5-63; 10 learners (blouses and dresses).

Selro Manufacturing Co., Federalsburg, Md.; effective 3-20-62 to 3-19-63; 10 learners (ladies' blouses).

Shroyer Dress Co., Milton Branch, Rear 28 Prospect Ave., Milton, Pa.; effective 3-12-62 to 3-11-63; 10 learners (women's and misses' dresses).

Shroyer Dress Co., 315 North Water Street, Selinsgrove, Pa.; effective 3-12-62 to 3-11-63; 10 learners (women's and misses' dresses).

Spruce Pine Manufacturing Co., 145 Oak Avenue, Spruce Pine, N.C.; effective 3-7-62 to 3-6-63; 10 learners (boys' and men's shirts).

The following learner certificates were issued for plant expansion purposes.

The effective and expiration dates and the number of learners authorized are indicated.

Bowcar Manufacturing Co., Bowman, S.C.; effective 3-6-62 to 9-5-62; 25 learners (children's outer sportswear—overalls, slacks and jackets).

Clinton Shirt Corp., Moss Drive, Clinton, Ky.; effective 3-5-62 to 9-4-62; 100 learners (boys' and men's knit sport shirts).

Fayette Manufacturing Co., N.Y.A. Court, Fayette, Ala.; effective 3-6-62 to 9-5-62; 50 learners (children's and infants' blouses, shorts, and crawlers).

Grifton Clothing Co., Grifton, N.C.; effective 3-12-62 to 9-11-62; 20 learners (boys', men's and girls' parkas).

Eileen Hope, Inc., 1424 Herr Street, Harrisburg, Pa.; effective 3-7-62 to 9-6-62; 10 learners (women's dresses).

Imperial Shirt Corp., True Loom Division, Lafayette, Tenn.; effective 3-6-62 to 9-5-62; 75 learners (men's sport shirts).

Lake Butler Apparel Co., Lake Butler, Fla.; effective 3-12-62 to 9-11-62; 10 learners (men's and boys' semi-dress slacks and shorts).

O'Bryan Bros. Inc., Richland Center, Wis.; effective 3-2-62 to 9-1-62; 60 learners (women's pants and children's pants and slips).

Richlands Manufacturing Corp., Richlands, Va.; effective 3-5-62 to 9-4-62; 50 learners (ladies' pajamas and nightgowns).

Sport Sales, Inc., 135 South Main, Fredericktown, Mo.; effective 3-5-62 to 9-4-62; 20 learners (women's slacks, pedal pushers, Bermuda shorts, etc.).

Spruce Pine Manufacturing Co., 145 Oak Avenue, Spruce Pine, N.C.; effective 3-13-62 to 9-12-62; 25 learners (boys' and men's shirts).

Cigar Industry Learner Regulations (29 CFR 522.1 to 522.11, as amended, and 29 CFR 522.80 to 522.85, as amended).

La Primadora Cigar Corp., East Avenue at Turner Street, Clearwater, Fla.; effective 3-11-62 to 3-10-63; 10 percent of the total number of factory production workers for normal labor turnover purposes.

Glove Industry Learner Regulations (29 CFR 522.1 to 522.11, as amended, and 29 CFR 522.60 to 522.65, as amended).

Brookville Glove Manufacturing Co., Inc., 5-15 Western Avenue, Brookville, Pa.; ef-

fective 3-10-62 to 3-9-63; 10 learners for normal labor turnover purposes (cotton work gloves).

Galena Glove and Mitten Co., 430 Garfield Avenue, Dubuque, Iowa; effective 3-15-62 to 3-14-63; 10 learners for normal labor turnover purposes (work gloves, cotton flannel).

Good Luck Glove Co., Metropolis, Ill.; effective 3-10-62 to 3-9-63; 10 percent of the total number of machine stitchers for normal labor turnover purposes (work gloves—leather).

Hosiery Industry Learner Regulations (29 CFR 522.1 to 522.11, as amended, and 29 CFR 522.40 to 522.43, as amended).

Ballston Knitting Company, Inc., Ballston Spa, N.Y.; effective 3-8-62 to 3-7-63; 5 percent of the total number of factory production workers for normal labor turnover purposes (seamless woolen hosiery).

Ballston Knitting Co., Inc., Stillwater, N.Y.; effective 3-7-62 to 3-6-63; 5 percent of the total number of factory production workers for normal labor turnover purposes (seamless woolen hosiery).

Greensboro Hosiery Mills, Inc., Greensboro, N.C.; effective 3-3-62 to 9-2-62; 20 learners for plant expansion purposes (seamless).

Harris-Marshall Hosiery Mills, Inc., Galax, Va.; effective 3-5-62 to 3-4-63; 5 percent of the total number of factory production workers for normal labor turnover purposes (seamless).

McLaurin Corp., Asheboro, N.C.; effective 3-13-62 to 3-12-63; 5 percent of the total number of factory production workers for normal labor turnover purposes (ladies' seamless hosiery).

Troy Craft, Inc., 430 Canton Street, Troy, Pa.; effective 3-8-62 to 3-7-63; 5 learners for normal labor turnover purposes (seamless).

Vogue Hosiery Mills, Inc., 145 Williamsboro Street, Oxford, N.C.; effective 3-5-62 to 3-4-63; 1 learner for normal labor turnover purposes (seamless).

Knitted Wear Industry Learner Regulations (29 CFR 522.1 to 522.11, as amended, and 29 CFR 522.30 to 522.35, as amended).

Hazlehurst Manufacturing Co., Inc., Gill Street, Hazlehurst, Ga.; effective 3-2-62 to 9-1-62; 50 learners for plant expansion purposes (women's underwear—slips, nightgowns and panties).

Monroe Crafters, Inc., Sutherland Avenue, Monroe, N.C.; effective 3-17-62 to 3-16-63; 5 percent of the total number of factory production workers for normal labor turnover purposes (men's and boys' knitted underwear).

Regulations Applicable to the Employment of Learners (29 CFR 522.1 to 522.11, as amended).

France Neckwear Manufacturing Corporation, 1217 S. 13th St., Wilmington, N.C.; effective 3-12-62 to 9-11-62; 5 percent of the total number of factory production workers for normal labor turnover purposes, in the occupations of sewing machine operator, hand sewer, presser, and finishing operations involving hand sewing, each for a learning period of 320 hours at the rates of at least \$1 an hour for the first 160 hours and \$1.05 an hour for the remaining 160 hours. No learner may be employed in more than two learner occupations at special minimum wage rates under the terms of this certificate (men's and boys' neckwear).

Each learner certificate has been issued upon the representations of the employer which, among other things, were that employment of learners at special minimum rates is necessary in order to prevent curtailment of opportunities for employment, and that experienced workers for the learner occupations are not available. The certificates may be annulled or withdrawn, as indicated therein, in the manner provided in Part 528 of Title 29 of the Code of Federal Regulations. Any person aggrieved by the issuance of any of these certificates may seek a review or reconsideration thereof within fifteen days after publication of this notice in the FEDERAL REGISTER pursuant to the provisions of 29 CFR 522.9.

Signed at Washington, D.C., this 26th day of March 1962.

ROBERT G. GRONEWALD,
Authorized Representative
of the Administrator.

[F.R. Doc. 62-3066; Filed, Mar. 29, 1962; 8:45 a.m.]

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