THE NATIONAL ARCHIVES
LITTERA SCRIPTA MANET
FEDERAL REGISTER
OF THE UNITED STATES 1934

VOLUME 14 NUMBER 119

Washington, Wednesday, June 22, 1949

TITLE 5—ADMINISTRATIVE PERSONNEL

Chapter I—Civil Service Commission

PART 6—EXCEPTIONS FROM THE COMPETITIVE SERVICE

DEPARTMENT OF THE NAVY

Under authority of § 6.1 (a) of Executive Order 9830, and at the request of the Department of the Navy, the Commission has determined that the positions of professors, instructors and teachers in the Naval War College should be excepted from the competitive service. Effective upon publication in the FEDERAL REGISTER, § 6.106 (c) (1) is amended to read as follows:

§ 6.106 *Department of the Navy.*

* * *

(c) *United States Naval Academy*—(1) *NC/PD.* Professors, instructors, and teachers in the United States Naval Academy, the United States Naval Postgraduate School, and the Naval War College.

(R. S. 1753, sec. 2, 22 Stat. 403; 5 U. S. C. 631, 633. E. O. 9830, Feb. 24, 1947, 12 F. R 1259; 3 CFR, 1947 Supp. E. O 9973, June 28, 1948, 13 F. R. 3600, 3 CFR, 1948 Supp)

UNITED STATES CIVIL SERVICE COMMISSION,
[SEAL] H. B. MITCHELL,
President.

[F. R. Doc. 49-4977; Filed, June 21, 1949; 8:47 a. m.]

TITLE 14—CIVIL AVIATION

Chapter I—Civil Aeronautics Board

[Supplement 5]

PART 4b—AIRPLANE AIRWORTHINESS TRANSPORT CATEGORIES

AIRSPEED INDICATOR (PITOT STATIC); AND ALTIMETER, PRESSURE ACTUATED, SENSITIVE TYPE

Acting pursuant to the authority stated hereinafter, the following rules are adopted. They supersede Technical Standard Orders TSO–C2 and TSO–C10, which were published as supplements to § 4b.51 on December 15, 1948, in 13 F. R. 7729–7733, and were redesignated as § 4b.51–1 and § 4b.51–8 in 14 CFR. They have been coordinated with authorized representatives of the aviation industry. They are made effective without delay in order to promote safety of the flying public. Compliance with the notice, procedures, and effective date provisions of section 4 of the Administrative Procedure Act would be impracticable and contrary to the public interest, and therefore is not required.

§ 4b.51–1 *Technical Standard Order TSO–C2a: "Airspeed Indicator (Pitot Static)" (CAA rules which apply to § 4b.51).*—(a) *Introduction.* Under section 601 of the Civil Aeronautics Act of 1938, as amended, and §§ 3.06, 3.51, 4a.07, 4a.513, 4b.05, 4b.51, 6.05, and 6.51 of this chapter, the Administrator of Civil Aeronautics is authorized to adopt standards for airspeed indicators intended for use in civil aircraft. In adopting these standards, consideration has been given to existing Government and industry standards for airspeed indicators.

(b) *Directive*—(1) *Provision.* The performance requirements for airspeed indicators, as set forth in sections 6 and 7 of SAE Specification AS–391A, Airspeed Indicator (pitot static) revised February 1, 1949,[1] stated below, are hereby established as minimum safety performance standards for airspeed indicators intended for use in civil aircraft:

1. *Purpose.* To specify minimum requirements for Pitot Static Pressure Type of Airspeed Indicators for use in aircraft, the operation of which may subject the instruments to the environmental conditions specified in Section 3.3.

2. *Scope.* This specification covers six types of instruments as follows:

Type I: 30–250 miles per hour range.
Type II: 40–300 miles per hour range.
Type III: 50–400 miles per hour range.
Type IV: 50–450 miles per hour range.
Type V: 50–700 miles per hour range.
Type VI: 50–425 knots range.

3. *General requirements.*

3.1 *Materials and workmanship.*

3.1.1 *Materials.* Materials shall be of a quality which experience and/or tests have demonstrated to be suitable and dependable for use in aircraft instruments.

[1] Copies may be obtained from the Society of Automotive Engineers, 29 West 39th St., New York, New York.

(Continued on next page)

CONTENTS

FEDERAL REGISTER

Published daily, except Sundays, Mondays, and days following official Federal holidays, by the Division of the Federal Register, the National Archives, pursuant to the authority contained in the Federal Register Act, approved July 26, 1935 (49 Stat. 500, as amended; 44 U. S. C., ch. 8B), under regulations prescribed by the Administrative Committee, approved by the President. Distribution is made only by the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

The regulatory material appearing herein is keyed to the Code of Federal Regulations, which is published, under 50 titles, pursuant to section 11 of the Federal Register Act, as amended June 19, 1937.

The FEDERAL REGISTER will be furnished by mail to subscribers, free of postage, for $1.50 per month or $15.00 per year, payable in advance. The charge for individual copies (minimum 15¢) varies in proportion to the size of the issue. Remit check or money order, made payable to the Superintendent of Documents, directly to the Government Printing Office, Washington 25, D. C.

There are no restrictions on the republication of material appearing in the FEDERAL REGISTER.

CONTENTS—Continued

CONTENTS—Continued

CODIFICATION GUIDE

A numerical list of the parts of the Code of Federal Regulations affected by documents published in this issue. Proposed rules, as opposed to final actions, are identified as such.

CODIFICATION GUIDE—Con.

3.1.2 *Workmanship.* Workmanship shall be consistent with high grade aircraft instrument manufacturing practice.

3.2 *Identification.* The following information shall be legibly and permanently marked on the instrument or attached thereto:

(a) Name of instrument (airspeed indicator).
(b) SAE Specification, AS 391A.
(c) Manufacturer's part number.
(d) Manufacturer's serial number or date of manufacture.
(e) Manufacturer's name or trademark.
(f) Range.

3.3 *Environmental conditions.* The following are established design requirements only. All tests shall be conducted as specified in sections 5, 6, and 7.

3.3.1 *Temperature.* When installed in accordance with the instrument manufacturer's instructions, the instrument shall function over the range of ambient temperatures from −30° C. to 50° C. and shall not be adversely affected by exposure to temperatures of −65° C. and 70° C.

3.3.2 *Humidity.* The instrument shall function and shall not be adversely affected when exposed to any relative humidity in the range from 0 to 95 percent at a temperature of approximately 32° C.

3.3.3 *Altitude.* The instrument shall function and shall not be adversely affected when subjected to a pressure and temperature range equivalent to −1,000 feet to 40,000 feet standard altitude, except as limited by the application of 3.3.1.

3.3.4 *Vibration.* When installed in accordance with the instrument manufacturer's instructions, the instrument shall function and shall not be adversely affected when subjected to vibrations of not more than 0.010 inch at a frequency from 500 to 3,000 cycles per minute [1] or of not more than 1.3 g. When specified by the purchaser for use in rotary wing aircraft, the frequency range shall be 150–3,000 cycles per minute.

3.4 *Magnetic effect.* The magnetic effect of the indicator shall not adversely affect the operation of other instruments installed in the same aircraft.

[1] It is understood that the unit shall withstand vibrations at higher frequencies, but the acceleration values need not exceed those shown above.

4. *Detail requirements.*

4.1 *Pressure equivalents.* These instruments shall be calibrated to indicate airspeed in accordance with the following pressure equivalents (tables I and II)

TABLE I—DIFFERENTIAL PRESSURES FOR AIRSPEEDS IN M. P. H.

[Water and mercury at 15° C.]

Airspeed m. p. h.	Differential pressure		
	Inches of water	Inches of mercury	Pounds per square inch
20	0.197	0.0145	0.0071
40	.788	.0581	.0284
50	1.231	.0907	.0444
60	1.774	.1307	.0640
70	2.416	.1780	.0872
80	3.158	.2327	.1140
90	4.000	.2948	.1441
100	4.942	.3642	.1784
120	7.130	.5254	.2573
140	9.726	.7167	.3510
160	12.736	.9385	.4577
180	16.167	1.191	.5835
200	20.025	1.476	.7227
210	22.117	1.630	.7982
240	29.054	2.141	1.049
250	31.592	2.328	1.140
270	37.014	2.728	1.336
300	46.033	3.392	1.661
330	56.15	4.138	2.026
360	67.42	4.968	2.433
400	84.32	6.214	3.043
450	108.66	8.007	3.922
500	136.87	10.086	4.940
550	169.31	12.476	6.110
600	206.40	15.210	7.449
650	248.62	18.321	8.973
700	296.50	21.849	10.701

TABLE II—DIFFERENTIAL PRESSURES FOR AIRSPEEDS IN KNOTS

[Water and mercury at 15° C.]

Airspeed knots	Differential pressure		
	Inches of water	Inches of mercury	Pounds per square inch
50	1.634	0.1204	0.0590
60	2.354	.1735	.0850
70	3.207	.2363	.1157
80	4.192	.3089	.1513
90	5.310	.3913	.1916
100	6.563	.4836	.2368
120	9.475	.6982	.3420
140	12.94	.9535	.4670
160	16.95	1.249	.6117
180	21.54	1.587	.7774
200	26.71	1.968	.9640
210	29.51	2.175	1.065
240	38.84	2.862	1.402
250	42.27	3.115	1.526
270	49.59	3.654	1.790
300	61.82	4.556	2.231
330	75.61	5.572	2.729
360	91.03	6.708	3.285
400	114.33	8.425	4.126
420	127.21	9.374	4.591

4.2 *Indicating method.* These airspeed instruments shall indicate by a means of a pointer moving over a fixed dial. Sensitive types shall have, in addition, an under dial visible through an aperture in the fixed dial for indicating hundreds of miles per hour. Clockwise pointer motion shall indicate increasing airspeed.

4.3 *Visibility.* The pointer and all dial markings shall be visible from any point within the frustum of a cone whose side makes an angle of not less than 30° with the perpendicular to the dial, and whose small diameter is the aperture of the instrument case. The distance between the dial and the cover glass shall be a practical minimum and shall not exceed 0.187 of an inch.

4.4 *Dial markings.*

4.4.1 *Finish.* Unless otherwise specified luminescent (self activating) material shall be applied to all major graduations, numerals and pointer.

4.4.2 *Graduations.* Minor graduations shall be used at intervals not to exceed 5 miles per hour, up to the 300 miles per hour mark. Major graduations shall be used to indicate every 10 miles per hour up to 300 miles per hour.

4.4.3 *Numerals.* Sufficient numerals shall be marked to positively and quickly identify all graduations. Numerals shall distinctly indicate the graduations to which each applies.

4.4.4 *Instrument name.* The word "Airspeed" shall be marked and may be the same finish as the numerals. The inscription "m. p. h." or "knots" shall appear on the dial.

4.5 *Limitation of pointer movements.* The pointer movement shall be limited by stops in the mechanism in such a way that the pointer will not be permitted to rotate more than 10 degrees beyond the last graduation on the dial. Stops may also be incorporated in the instrument mechanism to limit counterclockwise motion of the pointer.

4.6 *Back of case markings.* The back of the case, adjacent to the connections shall be marked as follows:

P—Pitot pressure connection.

S—Static pressure connection.

5. *Test conditions.*

5.1 *Atmospheric conditions.* Unless otherwise specified, all tests required by this specification shall be conducted at an atmospheric pressure of approximately 29.92 inches of mercury, and at an ambient temperature of approximately 22° C. When tests are made with the atmospheric pressure or the temperature substantially different from these values allowances shall be made for the variations from the specified conditions.

5.2 *Vibration (to minimize friction).* Unless otherwise specified, all tests for performance may be made with the instrument subjected to a vibration of 0.002 to 0.005 inch amplitude at a frequency of 1,500 to 2,000 cycles per minute. The term amplitude as used herein indicates the total displacement from positive maximum to negative maximum.

5.3 *Preconditioning.* No pressure shall be applied to the diaphragm or any actuating element of the instrument, nor shall the diaphragm or other actuating element be flexed or exercised for a period of 24 hours prior to the start of the tests of section 6.

5.4 *Vibration equipment.* Vibration equipment shall be used which will vibrate at any desired frequency between 500 and 3,000 cycles per minute and shall subject the instrument to vibration such that a point on the instrument case will describe, in a plane inclined 45° to the horizontal plane, a circle, the diameter of which is equal to the amplitude specified herein.

6. *Individual performance requirements.* All instruments shall be subjected to whatever tests the manufacturer deems necessary to demonstrate specific compliance with this specification including the following requirements where applicable.

6.1 *Scale error.* The instrument shall be tested for scale errors at the points of the scale indicated in table III. The tests shall be made by subjecting the instrument to the pressure specified to produce these readings, first with pressure increasing, then with pressure decreasing. With pressure increasing, the pressure shall be brought up to, but shall not exceed the pressure specified to give the desired reading. With pressure decreasing, the pressure shall be brought down to, but shall not fall below the pressure specified to give the desired reading. The errors at the test points shall not exceed the tolerances specified in table III.

6.2 *Friction.* The instrument shall be tested for friction at the test points indicated by an asterisk (*) in table III. The pressure shall be brought up to the desired reading and then held constant while two readings are taken; the first reading being taken before the instrument is vibrated, and the second one after the instrument is vibrated. The difference between any two readings shall not exceed the tolerance in table IV.

6.3 *Position.* A pressure equivalent to one quarter, one half and three quarters scale deflection shall be applied. The change in reading at each deflection produced by rotating the instrument from the vertical to the horizontal position, or 90 degrees to the right or left, while the instrument is vibrated shall not exceed the tolerance specified in table III.

6.4 *Leak.* With both the pitot pressure and static pressure connections simultaneously evacuated to 15 inches of mercury, the leakage shall not cause more than 0.4 inch of mercury pressure drop during a 10-second period. With the static pressure connection open, and pressure equivalent to full scale pointer deflection applied to the pitot pressure connection, the leakage shall not cause more than 1 m. p. h. decrease in indication during a one minute period.

7. *Qualification tests.* As many instruments as deemed necessary to demonstrate that all instruments will comply with the requirements of this section shall be tested in accordance with the manufacturer's recommendations:

7.1 *Low temperature.* The instrument shall be subjected to a temperature of −30° C. for a period of 3 hours. With the temperature held at −30° C. the instrument shall be tested for scale errors as described in paragraph 6.1. The errors at the test points shall not exceed the tolerances of table III by more than the amount specified in table IV.

7.2 *High temperature.* The instrument shall be subjected to a temperature of 50° C. for a period of 3 hours. With the temperature held at 50° C., the instrument shall be tested for scale errors as described in paragraph 6.1. The errors at the test points shall not exceed the tolerances of table III by more than the amount specified in table IV.

7.3 *Extreme temperature exposure.* The instrument shall, after alternate exposures to ambient temperatures of −65° C. and 70° C. for periods of 24 hours each and a delay of 3 hours at room temperature following completion of the exposure, meet the requirements of section 6.1. There shall be no evidence of damage as a result of exposure to the extreme temperatures specified herein.

7.4 *Vibration.* With a pressure applied, sufficient to give half scale deflection, the instrument shall be vibrated at 500 cycles per minute and describe a circle of 0.003–0.005 inch diameter. The frequency shall be slowly increased to 3,000 cycles per minute and then slowly decreased to 500 cycles per minute, to determine whether the natural frequency of the instrument is in this range. The drift of the pointer shall not exceed the tolerances of table IV and the instrument pointer shall not oscillate more than the tolerance specified in table IV. After three hours exposure to vibration amplitude as specified in section 3.4.4 and at natural frequency, if between 500 and 3,000 cycles per minute, otherwise at 2,000 cycles per minute, the instrument shall meet the requirements of section 6. No damage shall be evident after this test.

7.5 *Seasoning.* The instrument shall be subjected to one hundred applications of a differential pressure sufficient to produce approximately full scale deflection. Not less than one hour following this test the instrument shall be tested for scale errors as described in paragraph 6.1, except that the scale error test shall not exceed the tolerance specified in table III by more than the amount specified in table IV.

7.6 *Drift.* The instrument shall be subjected to a differential pressure sufficient to produce approximately ¾ scale deflection. After being subjected to a pressure for a period of one hour, the instrument shall be tested as described in paragraph 6.1 except scale errors shall be determined for increas-

ing pressure only. The reading of the instrument shall not have increased by more than the amount specified in table IV.

7.7 *Low temperature exposure.* The instrument shall be subjected to a temperature of −65° C. for a period of 24 hours. With the temperature held at −65° C. the instrument shall function. In addition, after the temperature is raised to −30° C. and held for a period of 3 hours, the instrument shall meet the requirements of paragraph 7.1.

7.8 *Magnetic effect.* The magnetic effect of the instrument shall be determined in terms of the deflection of a free magnet, approximately 1½ inches long, in a magnetic field with a horizontal intensity of 0.18, plus or minus 0.01 gauss, when the indicator is held in various positions on an east-west line with its nearest part 5 inches from the center of the magnet. (An aircraft compass with the compensating magnets removed therefrom may be used as a free magnet for this test.) The maximum deflection of the magnet shall not exceed 1° for any pointer deflection.

7.9 *Humidity test.* The instrument shall be subjected to the extreme conditions specified in paragraph 3.4.2 for a period of 10 hours, after which it shall meet the requirements of section 6.

TABLE III—TOLERANCES

Test point	250 m.p.h.	300 m.p.h.	400–450 m.p.h.	700 m.p.h. 7 revs.	425 knots
40	2.5	2.5			
50	*2.5	*2.5	3	4.0	
60	2.0	2.0	*3	2.0	*2
70	2.0				
80	2.0	2.0	3	*2.0	
90	*2.0				
100	2.0	*2.0	*3	2.0	*2
120	2.0		3	2.0	
140	2.5	2.5	3		
150					3
160	*2.5	2.5	5	*2.5	
180	3.0	3.0	5		
200					*4
210	3.0	*4.0	*5	4	
240	3.0	4.0	5		
250	*3.0			*4	5
270		4.0	5		
300		*4.0	5	4	5
330			5		
350					5
360			5	4	
400			5	*4	5
425					5
450				4	
500				5	
550				6	
600				6	
650				*6	

*Reference: Section 6.2.

TABLE IV—TOLERANCES

Test	Reference paragraph	Miles per hour				
		250	300	400–450	700 (7 rev.)	425 knots
Friction	6.2	3.0	3.5	3.5	3.5	4.0
Position	6.3	2.0	2.5	2.5	2.5	3.0
Vibration:						
P'tr. oscillation	7.3	2.0	2.0	2.0	1.5	3.0
P'tr. change		2.0	2.0	2.0	2.5	3.0
Temperature	7.1, 7.2	3.5	3.5	5.0	3.5	4.0
Drift	7.5	1.5	1.5	1.5	2.5	2.0
Seasoning	7.4	2.0	2.0	2.0	2.5	3.0

(2) *Application.* (i) Airspeed indicators complying with the specifications appearing in this section are hereby approved for all aircraft. Airspeed indicators already approved by the Administrator may continue to be installed in aircraft.

(*a*) For which an application for original type certificate is made prior to the effective date of this section,

(*b*) The prototype of which is flown within 1 year after the effective date of this section, and

(*c*) The prototype of which is not flown within 1 year after the effective date of this section if due to causes beyond the applicant's control.

(ii) If an alteration involving a change in type or model of airspeed indicator is made within 9 months after the effective date of this section, previously approved types of airspeed indicators may be installed. However, in any such change made after the 9-month period, new types of airspeed indicators installed in aircraft used in instrument flight shall meet the specifications contained herein.

(c) *Specific instructions*—(1) *Marking.* In addition to the identification information required in the referenced specification, each airspeed indicator shall be permanently marked with the Technical Standard Order designation, CAA–TSO–C2a, to identify the airspeed indicator as meeting the requirements of this section in accordance with the manufacturers' statement of conformance outlined below. This identification will be accepted by the Civil Aeronautics Administration as evidence that the established minimum safety requirements for airspeed indicators have been met.

(2) *Data requirements.* None.

(3) *Effective date.* After March 1, 1949, specifications contained in this section will constitute the basis for Civil Aeronautics Administration approval of airspeed indicators for use in certificated aircraft used in instrument flight.

(4) *Deviations.* Requests for deviation from, or waiver of, the requirements of this section, which affect the basic airworthiness of the component, should be submitted for approval by the Chief, Aircraft Service, Office of Aviation Safety, Civil Aeronautics Administration. These requests should be addressed to the nearest Regional Office of the Civil Aeronautics Administration, Attention: Superintendent, Aircraft Branch.

(5) *Conformance.* (i) The manufacturer shall furnish to the Civil Aeronautics Administration, Aircraft Service, Attention: A–298, Washington 25, D. C., a written statement of conformance signed by a responsible official of his company, setting forth that the airspeed indicators to be produced by him meet the minimum safety requirements established in this section. Immediately thereafter, distribution of the airspeed indicators conforming with the terms of this section may be started and continued.

(ii) The prescribed identification on the airspeed indicator does not relieve the aircraft manufacturer or owner of responsibility for the proper application of the airspeed indicator in his aircraft, nor waive any of the requirements concerning type certification of the aircraft in accordance with existing Civil Air Regulations.

(iii) If complaints of nonconformance with the requirements of this section are brought to the attention of the Civil Aeronautics Administration, and investigation indicates that such complaints are justified, the Administrator will take appropriate action to restrict the use of the product involved.

(iv) Copies of this Technical Standard Order and other Technical Standard Orders may be obtained from the Civil Aeronautics Administration, Aviation Information Staff, Washington 25, D. C.

§ 4b.51–8 *Technical Standard Order TSO–C10a: "Altimeter, Pressure Actuated, Sensitive Type" (CAA rules which apply to § 4b.51)*—(a) *Introduction.* Under section 601 of the Civil Aeronautics Act of 1938, as amended, and §§ 3.06, 3.51, 4a.07, 4a.513, 4a.532, 4b.05, 4b.51, 6.05, and 6.51 of this chapter, the Administrator of Civil Aeronautics is authorized to adopt standards for sensitive altimeters intended for use in civil aircraft. In adopting these standards, consideration has been given to existing Government and industry standards for sensitive altimeters.

(b) *Directive*—(1) *Provision.* The performance requirements for sensitive altimeters, as set forth in sections 6 and 7 of SAE Specification AS–392A, Altimeters, Pressure Actuated, Sensitive Type revised February 1, 1949,[1] stated below, are hereby established as minimum safety performance standards for sensitive altimeters intended for use in civil aircraft:

1. *Purpose.* To specify minimum requirements for Pressure Actuated Sensitive Altimeters for use in aircraft, the operation of which may subject the instrument to the environmental conditions specified in Section 3.3.

2. *Scope.* This Aeronautical Standard covers two basic types of instruments as follows:

Type I: Range 35,000 feet. Barometric pressure. Scale range at least 28.1–30.99 inches of mercury (946–1,049 millibars). May include markers working in conjunction with the barometric pressure scale to indicate pressure-altitude.

Type II: Range 50,000 feet. Barometric pressure. Scale range at least 28.1–30.99 inches of mercury (946–1,049 millibars). May include markers working in conjunction with the barometric pressure scale to indicate pressure-altitude.

3. *General requirements:*

3.1 *Materials and workmanship.*

3.1.1 *Materials.* Materials shall be of a quality which experience and/or tests have demonstrated to be suitable and dependable for use in aircraft instruments.

3.1.2 *Workmanship.* Workmanship shall be consistent with high-grade aircraft instrument manufacturing practice.

3.2 *Identification.* The following information shall be legibly and permanently marked on the units or attached thereto:

a. Name of instrument (altimeter).

b. SAE Specification AS 392A.

c. Manufacturer's part No.

d. Manufacturer's Serial No. or date of manufacture.

e. Manufacturer's name and/or trade mark.

3.3 *Environmental conditions.* The following conditions have been established as design requirements only. Tests shall be conducted as specified in sections 5, 6, 7.

3.3.1 *Temperature.* When installed in accordance with the instrument manufacturer's instructions, the instrument shall function over the range of ambient temperature of −30° C. to 50° C. and shall not be adversely affected by exposure to temperatures of −65° C. to 50° C.

3.3.2 *Humidity.* The units shall function and shall not be adversely affected when exposed to any relative humidity in the range from 0 to 95 percent at a temperature of approximately 32° C.

3.3.3 *Vibration.* When installed in accordance with the manufacturer's instructions, the units shall function and shall not

[1] Copies may be obtained from the Society of Automotive Engineers, 29 West 39th St., New York, N. Y.

be adversely affected when subjected to the following vibration.

Frequency: 500–3,000 cycles per minute.
Amplitude: 0.010 inch.
Maximum acceleration: 0.8 g.

NOTE: It is understood that the unit shall withstand vibration at higher frequencies but the acceleration value need not exceed that shown above.

When specified by the purchaser for use in rotary wing aircraft, the frequency range shall be 150–3,000 cycles per minute.

3.3.4 *Overpressure.* The units shall not be adversely affected by exposure to a pressure of 50 inches of mercury absolute.

3.4 *Magnetic effect.* The magnetic effect of the indicator shall not adversely affect the operation of the instruments installed in the same aircraft.

4. *Detail requirements.*

4.1 *Indicating method.* The following method of indication shall be employed. For indicating an ascent in altitude the sensitive pointer shall move in a clockwise direction completing one revolution (360°) for each 1,000 feet of altitude change. A means shall be provided for showing the multiples of 1,000 feet.

4.2 *Dial markings.*

4.2.1 *Increments.* Markings shall be provided at intervals not exceeding 20 feet of altitude with major increment markings at 100-foot intervals.

4.2.2 *Zero setting system.* A zero setting system shall be provided which will permit the altimeter to be set to show field elevation at any existing ground level barometric pressure. The zero setting system shall show the barometric pressure in inches of mercury or millibars at sea level throughout the range of at least 28.1 to 30.99 inches (946 to 1,049 millibars). A safety feature shall be provided which will prevent incorrect reading of the pressure scale when the zero setting mechanism exceeds its barometric pressure limits.

4.2.3 *Finish.* Unless otherwise specified, luminescent material (self-activating) shall be applied to the pointer(s), major graduations and numerals.

4.2.4 *Name.* The word "altitude" shall be marked on the dial and may be in the same finish as the numerals.

4.3 *Visibility.* Pointers and dial markings shall be visible from any point within the frustrum of a cone, the side of which makes an angle of 30° with the perpendicular to the dial and the small diameter of which is the aperture of the instrument case. The distance between the dial and the cover glass shall be a practical minimum and shall not exceed 0.25 of an inch.

5. *Test conditions.*

5.1 *Atmospheric conditions.* Unless otherwise specified, all tests required by this specification shall be conducted at an atmospheric pressure of approximately 29.92 inches of mercury and at a temperature of approximately 22° C. When tests are made with the atmospheric pressure or the temperature substantially different from the values, allowance shall be made for the variation from the specified condition.

5.2 *Vibration (to minimize friction).* Unless otherwise specified, all tests for performance may be made with the instrument subjected to a vibration of 0.002 to 0.005 inch amplitude at a frequency of 1,500 to 2,000 cycles per minute. The term amplitude, as used herein, indicates the total displacement from positive maximum to negative maximum.

5.3 *Vibration equipment.* Vibration equipment shall be used which will vibrate at any desired frequency between 500 and 3,000 cycles per minute and shall subject the instrument to vibration such that a point on the instrument case will describe, in a plane inclined 45° to the horizontal, a circle, the diameter of which is equal to the amplitude specified herein.

5.4 *Standard pressures.* The standard pressures used in calibrating the altimeters shall be as specified in tables III and IIIa.

6. *Individual performance requirements.* All instruments shall be subjected to whatever tests the manufacturer deems necessary to demonstrate specific compliance with this specification including the following requirements where applicable.

6.1 *Calibration.* For a period of not less than 12 hours prior to this test the altimeter shall not have been operated at other than the pressures specified in section 5.1. The barometric pressure scale shall be set at 29.92 inches of mercury and the scale error recorded. Without changing the setting, the altimeter shall be subjected successively to the pressures specified in table I. The reduction in pressure shall be made at a rate of approximately 3,000 feet per minute. The altimeter shall remain at the pressure corresponding to each test point for at least 1 minute but not more than 10 minutes before a reading is taken. The error at all test points shall not exceed the tolerances specified in table I. The movement of the pointers shall be free from backlash and irregular motion when the the pressure is changed uniformly.

6.2 *Case leak.* A pressure equivalent to 18,000 feet within the case shall not result in leakage exceeding the tolerance shown in table II during a period of 10 seconds.

6.3 *Position error.* The change in pointer indication with change in instrument position shall not exceed the tolerance specified in table II.

6.4 *Barometric scale error.* With the ambient pressure constant at 29.92 inches of mercury, various settings of the barometric pressure scale within its range shall cause the pointer to indicate the equivalent altitude as shown in table III within a tolerance of 25 feet.

7. *Qualification tests.* As many instruments as deemed necessary to demonstrate that all instruments will comply with the requirements of this section shall be tested in accordance with the manufacturers' recommendations.

7.1 *Low temperature.* The instrument shall be exposed to a temperature of −30° C. for 3 hours and while at this temperature shall meet the requirements of section 6.1 within the tolerances specified in table I.

7.2 *Extreme temperature exposure.* The instrument shall, after alternate exposures to ambient temperatures of −65° C. and 50° C. for periods of 24 hours each and a delay of 3 hours at room temperature following completion of the exposure, meet the requirements of section 6.1. There shall be no evidence of damage as a result of exposure to the extreme temperatures specified herein.

7.3 *Hysteresis.* Not more than 15 minutes after the altimeter has been first subjected to the pressure corresponding to the upper limit of the scale in section 6.1 the pressure shall be increased at a rate corresponding to a decrease in altitude of approximately 3,000 feet per minute until the pressure corresponding to 25,000 feet is reached. Within 10 seconds the instrument shall indicate within 100 feet of the test reading. The altimeter shall remain at this pressure for at least 5 minutes but not more than 15 minutes before the test reading is taken. After the reading has been taken, the pressure shall be further increased at the above rate until the pressure corresponding to 20,000 feet is reached. The altimeter shall remain at this pressure for at least 1 minute but not more than 10 minutes before the test reading is taken. After the reading has been taken, the pressure shall be further increased at the above rate until atmospheric pressure is reached. The reading of the altimeter at either of the two test points shall not differ from the reading of the altimeter for the corresponding altitude in the scale error test by more than the tolerance specified in table II,

7.4 *After effect.* Not more than 5 minutes after the completion of the hysteresis test, the pointers shall have returned to their original reading, corrected for any change in atmospheric pressure within the tolerance specified in table II.

7.5 *Vibration.* The instrument shall be vibrated at 500 cycles per minute so that a point on the case will describe a circle of 0.003–0.005 inch diameter. The frequency shall be slowly increased to 3,000 cycles per minute and then slowly decreased to 500 cycles per minute, to determine whether the natural frequency of the instrument is in this range. The drift of the pointer shall not exceed 50 feet and it shall not oscillate more than 20 feet. After three hours exposure to the vibration amplitude specified in section 3.3.3 and at the natural frequency (if between 500 and 3,000 cycles per minute) or at 2,000 cycles per minute the instrument shall meet the requirements of section 6. No damage shall be evident after this test.

7.6 *Magnetic effects.* The magnetic effect of the altimeter shall be determined in terms of the deflection of a free magnet approximately 1½ inches long in a magnetic field with a horizontal intensity of 0.18±0.01 gauss, when the indicator is held in various positions on an east-west line with its nearest part 5 inches from the center of the magnet. (An aircraft compass with the compensating magnets removed therefrom may be used as the free magnet for this test.) The maximum deflection of the magnet shall not exceed 1° for any pointer deflection.

7.7 *Humidity.* The instrument shall function and not be adversely affected when exposed to the extreme condition specified in paragraph 3.3.2 for a period of 10 hours.

7.8 *Overpressure.* After being subjected momentarily to an absolute pressure of 50 inches of mercury the pointers shall return to their original reading, corrected for any change in atmospheric pressure, within 30 feet. Complete recovery shall have been effected in not more than 30 minutes after the pressure application.

TABLE I—ALTIMETER SCALE ERRORS

Standard altitude	Equivalent pressure mercury		Tolerance, feet plus or minus	
	MM	IN	Room temperature sec. 6.1	Low temperature sec. 7.1
0	760.0	29.92	20	75
500	746.4	29.39	20	----
1,000	732.9	28.86	20	----
1,500	719.7	28.33	25	----
2,000	706.6	27.82	30	----
3,000	681.1	26.81	30	----
4,000	656.3	25.84	35	----
6,000	609.0	23.98	40	130
8,000	564.4	22.22	60	----
10,000	522.6	20.58	80	----
12,000	483.3	19.03	120	230
14,000	446.4	17.57	140	----
16,000	411.8	16.21	160	----
18,000	379.4	14.94	180	340
20,000	349.1	13.75	200	----
22,000	320.8	12.63	340	----
25,000	281.9	11.10	375	500
30,000	225.6	8.88	450	----
35,000	178.7	7.04	525	700
40,000	140.7	5.54	600	----
45,000	110.8	4.36	675	----
50,000	87.3	3.44	750	1,000

TABLE II

Tests	Reference section	Tolerance, feet plus or minus	
		Type I 35,000	Type II 50,000
Case leak	6.2	100	100
Position error test	6.3	20	20
Hysteresis	7.3	----	----
First test point 25,000		70	150
Second test point 20,000		70	150
After effect test	7.4	50	60

TABLE III-a—ALTITUDE-PRESSURE TABLE—FEET-INCHES

[Altitude in feet, pressure in inches of mercury (° C.)]

P inches	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	P inches	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.8	80, 522	80, 262	80, 005	79, 751	79, 501	79, 253	79, 008	78, 766	78, 526	78, 289	11.6	23, 983	23, 963	23, 944	23, 924	23, 904	23, 884	23, 864	23, 844	23, 824	23, 805
0.9	78, 056	77, 825	77, 596	77, 369	77, 145	76, 924	76, 705	76, 488	76, 273	76, 060	11.7	785	765	745	726	706	686	666	647	627	607
1.0	75, 850	75, 641	75, 435	75, 231	75, 029	74, 828	74, 629	74, 433	74, 238	74, 045	11.8	588	568	549	529	509	490	470	451	431	412
1.1	73, 854	73, 665	73, 477	73, 291	73, 107	72, 924	72, 743	72, 563	72, 384	72, 207	11.9	392	373	353	334	314	295	275	256	237	217
1.2	72, 032	71, 858	71, 686	71, 515	71, 346	71, 178	71, 011	70, 845	70, 681	70, 518	12.0	198	23, 178	23, 159	23, 140	23, 121	23, 101	23, 082	23, 063	23, 043	23, 024
1.3	70, 357	70, 196	70, 037	69, 879	69, 722	69, 566	69, 411	69, 258	69, 106	68, 955	12.1	23, 005	22, 986	22, 966	22, 947	22, 928	22, 909	22, 890	22, 870	22, 851	22, 832
1.4	68, 805	68, 656	68, 508	68, 361	68, 215	68, 070	67, 926	67, 784	67, 642	67, 501	12.2	22, 813	794	775	756	737	718	698	679	660	641
1.5	67, 361	67, 221	67, 082	66, 945	66, 809	66, 674	66, 539	66, 405	66, 272	66, 140	12.3	622	603	584	565	547	528	509	490	471	452
1.6	66, 009	65, 879	65, 749	65, 620	65, 492	65, 365	65, 239	65, 113	64, 988	64, 864	12.4	433	414	395	377	358	339	320	301	282	264
1.7	64, 740	64, 617	64, 495	64, 374	64, 253	64, 133	64, 014	63, 895	63, 777	63, 660	12.5	245	226	207	189	22, 170	22, 151	22, 133	22, 114	22, 095	22, 077
1.8	63, 543	63, 427	63, 311	63, 196	63, 082	62, 969	62, 856	62, 744	62, 632	62, 521	12.6	22, 058	22, 040	22, 021	22, 002	21, 984	21, 965	21, 947	21, 928	21, 910	21, 891
1.9	62, 411	62, 301	62, 191	62, 082	61, 974	61, 867	61, 760	61, 654	61, 548	61, 442	12.7	21, 872	21, 854	21, 836	21, 817	799	780	762	743	725	706
2.0	61, 337	61, 232	61, 128	61, 025	60, 922	60, 820	60, 618	60, 617	60, 516	60, 416	12.8	688	670	651	633	615	596	578	560	542	523
2.1	60, 315	60, 215	60, 116	60, 018	59, 920	59, 823	59, 726	59, 629	59, 533	59, 437	12.9	505	487	469	450	432	414	396	377	359	341
2.2	59, 341	59, 246	59, 152	59, 058	58, 964	58, 871	58, 778	58, 686	58, 594	58, 502	13.0	323	305	287	268	250	232	214	196	21, 178	21, 160
2.3	58, 411	58, 320	58, 229	58, 139	58, 049	57, 960	57, 871	57, 782	57, 694	57, 606	13.1	21, 142	21, 124	21, 106	21, 088	21, 070	21, 052	21, 034	21, 016	20, 998	20, 980
2.4	57, 519	57, 432	57, 345	57, 259	57, 173	57, 088	57, 003	56, 918	56, 833	56, 749	13.2	20, 962	20, 944	20, 926	20, 908	20, 890	20, 873	20, 855	20, 837	819	801
2.5	56, 665	56, 581	56, 498	56, 415	56, 332	56, 250	56, 168	56, 086	56, 005	55, 924	13.3	783	765	748	730	712	694	677	659	641	623
2.6	55, 844	55, 763	55, 683	55, 603	55, 524	55, 445	55, 366	55, 287	55, 209	55, 131	13.4	605	588	570	552	535	517	499	482	464	446
2.7	55, 053	54, 975	54, 898	54, 821	54, 745	54, 669	54, 593	54, 517	54, 442	54, 367	13.5	429	411	394	376	358	341	323	306	288	271
2.8	54, 292	54, 217	54, 143	54, 069	53, 995	53, 921	53, 848	53, 775	53, 702	53, 629	13.6	253	236	218	201	183	20, 166	20, 149	20, 131	20, 114	20, 096
2.9	53, 557	53, 485	53, 413	53, 341	53, 270	53, 199	53, 127	53, 057	52, 987	52, 917	13.7	20, 079	20, 061	20, 044	20, 027	20, 009	19, 992	19, 975	19, 957	19, 940	19, 922
3.0	52, 847	52, 777	52, 707	52, 638	52, 570	52, 501	52, 432	52, 364	52, 296	52, 228	13.8	19, 905	19, 888	19, 871	19, 853	19, 836	819	802	784	767	750
3.1	52, 161	52, 093	52, 026	51, 959	51, 892	51, 826	51, 759	51, 693	51, 627	51, 561	13.9	733	715	698	681	664	647	630	613	595	578
3.2	51, 496	51, 430	51, 365	51, 300	51, 235	51, 171	51, 107	51, 043	50, 979	50, 916	14.0	561	544	527	510	493	476	459	442	425	408
3.3	50, 852	50, 789	50, 726	50, 663	50, 600	50, 537	50, 475	50, 413	50, 351	50, 290	14.1	391	374	357	340	323	306	289	272	255	238
3.4	50, 228	50, 167	50, 104	50, 044	49, 982	49, 922	49, 862	49, 801	49, 741	49, 680	14.2	221	204	187	170	19, 154	19, 137	19, 120	19, 103	19, 086	19, 069
3.5	49, 620	49, 561	49, 501	49, 442	49, 382	49, 323	49, 264	49, 206	49, 147	49, 089	14.3	19, 052	19, 036	19, 019	19, 002	18, 985	18, 969	18, 952	18, 935	18, 918	18, 902
3.6	49, 030	48, 972	48, 915	48, 857	48, 799	48, 741	48, 684	48, 627	48, 570	48, 513	14.4	18, 885	18, 868	18, 852	18, 835	818	802	785	768	752	735
3.7	48, 456	48, 400	48, 344	48, 288	48, 232	48, 175	48, 120	48, 065	48, 009	47, 954	14.5	718	702	685	668	652	635	619	602	586	569
3.8	47, 898	47, 843	47, 789	47, 734	47, 679	47, 624	47, 570	47, 516	47, 462	47, 408	14.6	553	536	520	503	487	470	454	437	421	404
3.9	47, 354	47, 301	47, 248	47, 194	47, 141	47, 088	47, 035	46, 982	46, 930	46, 877	14.7	388	371	355	339	322	306	289	273	257	240
4.0	46, 824	46, 772	46, 720	46, 668	46, 616	46, 564	46, 513	46, 461	46, 410	46, 358	14.8	224	208	191	175	18, 159	18, 142	18, 126	18, 110	18, 093	18, 077
4.1	46, 307	46, 256	46, 206	46, 155	46, 104	46, 053	46, 003	45, 953	45, 903	45, 853	14.9	18, 061	18, 045	18, 028	18, 012	17, 996	17, 980	17, 963	17, 947	17, 931	17, 915
4.2	45, 803	45, 753	45, 704	45, 654	45, 605	45, 555	45, 506	45, 458	45, 408	45, 359	15.0	17, 899	17, 882	17, 866	17, 850	834	818	802	786	770	754
4.3	45, 310	45, 262	45, 213	45, 165	45, 117	45, 068	45, 020	44, 973	44, 925	44, 877	15.1	737	721	705	689	673	657	641	625	609	593
4.4	44, 829	44, 782	44, 734	44, 687	44, 640	44, 592	44, 546	499	44, 452	44, 405	15.2	577	561	545	529	513	497	481	465	449	433
4.5	44, 358	44, 312	44, 266	44, 220	44, 173	44, 127	44, 081	44, 036	43, 990	43, 944	15.3	417	402	386	370	354	338	322	306	290	275
4.6	43, 898	43, 853	43, 808	43, 762	43, 717	43, 672	43, 627	43, 582	537	492	15.4	259	243	227	211	196	180	164	17, 148	17, 132	17, 117
4.7	448	43, 403	43, 359	43, 315	43, 270	43, 226	43, 182	43, 138	43, 094	43, 050	15.5	17, 101	17, 085	17, 069	17, 054	17, 038	17, 022	17, 007	16, 991	16, 975	16, 959
4.8	43, 007	42, 963	42, 920	42, 876	42, 833	42, 790	42, 747	42, 704	42, 661	42, 618	15.6	16, 944	16, 928	16, 912	16, 897	16, 881	16, 866	16, 850	834	819	803
4.9	42, 575	532	490	447	42, 404	42, 362	42, 320	42, 278	42, 236	42, 193	15.7	787	772	756	741	725	710	694	679	663	648
5.0	42, 151	42, 110	42, 068	42, 026	41, 985	41, 943	41, 902	41, 861	41, 819	41, 778	15.8	632	617	601	586	570	555	539	524	508	493
5.1	41, 737	41, 696	41, 655	41, 614	573	532	492	451	411	370	15.9	477	462	447	431	416	400	385	370	354	339
5.2	41, 330	41, 290	41, 250	41, 210	41, 170	41, 130	41, 090	41, 050	41, 011	40, 971	16.0	324	308	293	278	262	247	232	216	201	186
5.3	40, 931	40, 892	40, 853	40, 813	40, 774	40, 735	40, 696	40, 657	40, 618	579	16.1	171	155	16, 140	16, 125	16, 110	16, 094	16, 079	16, 064	16, 049	16, 034
5.4	540	502	463	425	386	40, 347	40, 309	40, 271	40, 233	40, 195	16.2	16, 018	16, 003	15, 988	15, 973	15, 958	15, 943	15, 927	15, 912	15, 897	15, 882
5.5	40, 156	40, 118	40, 080	40, 043	40, 005	39, 967	39, 929	39, 892	39, 854	39, 816	16.3	15, 867	15, 852	837	822	806	791	776	761	746	731
5.6	39, 779	39, 742	39, 704	39, 667	39, 630	593	556	519	482	445	16.4	716	701	686	671	656	641	626	611	596	581
5.7	408	372	39, 335	39, 298	39, 262	39, 225	39, 189	39, 153	39, 117	39, 080	16.5	566	551	536	521	506	491	476	461	446	431
5.8	39, 044	39, 008	38, 972	38, 936	38, 900	38, 864	38, 829	38, 793	38, 757	38, 722	16.6	416	402	387	372	357	342	327	312	298	283
5.9	38, 686	38, 651	615	580	545	509	474	439	404	369	16.7	268	253	238	224	209	194	179	164	150	15, 135
6.0	38, 334	38, 300	38, 265	38, 230	38, 196	38, 161	38, 126	38, 092	38, 057	38, 023	16.8	15, 120	15, 105	15, 091	15, 076	15, 061	15, 047	15, 032	15, 017	15, 002	14, 988
6.1	37, 989	37, 954	37, 920	37, 886	37, 852	37, 818	37, 784	37, 750	37, 716	37, 682	16.9	14, 973	14, 958	14, 944	14, 929	14, 914	14, 900	14, 885	14, 870	14, 856	841
6.2	648	615	581	547	514	480	447	413	380	346	17.0	826	812	797	783	768	753	739	724	710	695
6.3	37, 313	37, 280	37, 247	37, 214	37, 181	37, 147	37, 115	37, 082	37, 049	37, 016	17.1	681	666	652	637	622	608	594	579	564	550
6.4	36, 983	36, 951	36, 918	36, 886	36, 853	36, 820	36, 788	36, 756	36, 723	36, 691	17.2	536	521	507	492	478	463	449	434	420	406
6.5	659	627	595	563	531	498	467	435	403	371	17.3	391	377	362	348	334	319	305	291	276	262
6.6	339	36, 308	36, 276	36, 245	36, 213	36, 181	36, 150	36, 119	36, 087	36, 056	17.4	247	233	219	204	190	176	162	147	14, 133	14, 119
6.7	36, 024	35, 993	35, 962	35, 931	35, 900	35, 869	35, 838	35, 807	35, 776	35, 745	17.5	14, 104	14, 090	14, 076	14, 062	14, 047	14, 033	14, 019	14, 005	13, 990	13, 976
6.8	35, 714	683	653	622	591	560	530	499	469	438	17.6	13, 962	13, 948	13, 934	13, 919	13, 905	13, 891	13, 877	13, 863	849	834
6.9	408	378	347	317	35, 287	35, 257	35, 227	35, 197	35, 167	35, 136	17.7	820	806	792	778	764	750	736	722	707	693
7.0	35, 106	35, 077	35, 047	35, 017	34, 987	34, 957	34, 927	34, 898	34, 868	34, 838	17.8	679	665	651	637	623	609	595	581	567	553
7.1	34, 809	34, 779	34, 749	34, 720	690	661	631	602	573	543	17.9	539	525	511	497	483	469	455	441	427	413
7.2	514	485	455	426	397	368	339	310	34, 281	34, 251	18.0	399	385	371	357	343	329	315	301	287	274
7.3	34, 222	34, 194	34, 165	34, 136	34, 107	34, 078	34, 049	34, 020	33, 992	33, 963	18.1	260	246	232	218	204	190	176	163	149	13, 135
7.4	33, 934	33, 906	33, 877	33, 848	33, 820	33, 791	33, 763	33, 734	706	678	18.2	13, 121	13, 107	13, 094	13, 080	13, 066	13, 052	13, 038	13, 025	13, 011	12, 997
7.5	649	621	593	564	536	508	480	452	424	395	18.3	12, 983	12, 970	12, 956	12, 942	12, 928	12, 915	12, 901	12, 887	12, 873	860
7.6	367	339	311	283	33, 255	33, 227	33, 200	33, 172	33, 144	33, 116	18.4	846	832	819	805	791	778	764	750	736	723
7.7	33, 088	33, 061	33, 033	33, 005	32, 978	32, 950	32, 922	32, 895	32, 867	32, 840	18.5	709	695	682	668	655	641	627	614	600	587
7.8	32, 812	32, 785	32, 758	32, 730	703	676	648	621	594	567	18.6	573	559	546	532	519	505	492	478	464	451
7.9	539	512	485	458	431	404	377	350	323	296	18.7	437	424	410	397	383	370	356	343	329	316
8.0	269	32, 242	32, 215	32, 188	32, 161	32, 135	32, 108	32, 081	32, 054	32, 028	18.8	302	289	275	262	249	235	222	208	195	181
8.1	32, 001	31, 975	31, 948	31, 921	31, 895	31, 868	31, 842	31, 815	31, 789	31, 763	18.9	168	155	141	12, 128	12, 114	12, 101	12, 088	12, 074	12, 061	12, 048
8.2	31, 736	710	684	657	631	605	578	552	526	500	19.0	12, 034	12, 021	12, 008	11, 994	11, 981	11, 968	11, 954	11, 941	11, 928	11, 914
8.3	474	448	422	396	370	344	318	292	266	31, 240	19.1	11, 901	11, 888	11, 874	861	848	835	821	808	795	781
8.4	31, 214	31, 188	31, 163	31, 137	31, 111	31, 085	31, 060	31, 034	31, 008	30, 983	19.2	768	755	742	729	715	702	689	676	663	649
8.5	30, 957	30, 931	30, 906	30, 880	30, 855	30, 829	30, 804	30, 778	30, 753	728	19.3	636	623	610	597	584	570	557	544	531	518
8.6	702	677	652	626	601	576	550	525	500	475	19.4	505	491	478	465	452	439	426	413	400	387
8.7	449	424	399	374	349	324	299	274	249	30, 224	19.5	374	360	347	334	321	308	295	282	269	256
8.8	30, 199	30, 174	30, 149	30, 125	30, 100	30, 075	30, 050	30, 025	30, 001	29, 976	19.6	243	230	217	204	191	178	165	152	139	11, 126
8.9	29, 951	29, 927	29, 902	29, 877	29, 853	29, 828	29, 804	29, 779	29, 755	730	19.7	11, 113	11, 100	11, 087	11, 074	11, 061	11, 048	11, 035	11, 023	11, 010	10, 997
9.0	706	681	657	633	608	584	560	535	511	487	19.8	10, 984	10, 971	10, 958	10, 945	10, 932	10, 919	10, 906	10, 894	10, 881	868
9.1	462	438	414	390	366	342	317	293	269	245	19.9	855	842	829	816	804	791	778	765	752	739
9.2	29, 221	29, 197	29, 173	29, 149	29, 125	29, 101	29, 077	29, 053	29, 029	29, 005	20.0	726	714	701	688	675	662	650	637	624	611
9.3	28, 982	28, 958	28, 934	28, 910	28, 887	28, 863	28, 839	28, 816	28, 792	28, 768	20.1	599	586	573	560	548	535	522	509	497	484
9.4	745	721	698	674	650	627	603	580	556	533	20.2	471	459	446	433	421	408	395	383	370	357
9.5	510	486	463	439	416	393	369	346	323	300	20.3	344	332	319	307	294	281	269	256	243	231
9.6	276	253	230	28, 207	28, 184	28, 161	28, 138	28, 115	28, 092	28, 069	20.4	218	206	193	180	168	155	143	130	10, 117	10, 105
9.7	28, 046	28, 023	28, 000	27, 977	27, 954	27, 931	27, 908	27, 885	27, 862	27, 839	20.5	10, 092	10, 080	10, 067	10, 055	10, 042	10, 030	10, 017	10, 005	9, 992	9, 980
9.8	27, 816	27, 794	27, 771	748	725	702	680	657	634	612	20.6	9, 967	9, 955	9, 942	9, 930	9, 917	9, 905	9, 892	9, 880	9, 867	9, 855
9.9	589	566	544	521	499	476	453	431	408	386	20.7	9, 842	9, 830	9, 817	9, 805	9, 793	9, 780	9, 768	9, 755	9, 743	9, 730
10.0	363	341	318	396	274	251	229	27, 206	27, 184	27, 162	20.8	9, 718	9, 706	9, 693	9, 681	9, 668	9, 656	9, 644	9, 631	9, 619	9, 607
10.1	27, 140	117	095	073	050	028	006	26, 984	26, 962	26, 940	20.9	9, 594	9, 582	9, 570	9, 557	9, 545	9, 532	9, 520	9, 508	9, 495	9, 483
10.2	26, 917	895	873	851	829	807	785	763	741	719	21.0	9, 471	9, 458	9, 446	9, 434	9, 422	9, 409	9, 397	9, 385	9, 372	9, 360
10.3	697	676	654	632	610	588	566	544	523	501	21.1	9, 348	9, 336	9, 323	9, 311	9, 299	9, 287	9, 274	9, 262	9, 250	9, 238
10.4	479	457	436	27, 414	27, 392	27, 371	27, 349	327	306	284	21.2	9, 225	9, 213	9, 201	9, 189	9, 176	9, 164	9, 152	9, 140	9, 128	9, 116
10.5	262	27, 241	27, 219	26, 198	26, 176	26, 155	26, 133	26, 112	26, 090	26, 069	21.3	9, 103	9, 091	9, 079	9, 067	9, 055	9, 043	9, 030	9, 018	9, 006	8, 994
10.6	26, 048	26, 026	26, 005	25, 984	25, 962	25, 941	25, 919	25, 898	25, 877	25, 856	21.4	8, 982	8, 970	8, 958	8, 946	8, 933	8, 921	8, 909	8, 897	8, 885	8, 873
10.7	25, 834	25, 813	25, 792	771	749	728	707	686	665	644	21.5	8, 861	8, 849	8, 837	8, 825	8, 813	8, 801	8, 789	8, 776	8, 764	8, 752
10.8	622	601	580	559	538	517	496	475	454	433	21.6	8, 740	8, 728	8, 716	8, 704	8, 692	8, 680	8, 668	8, 656	8, 644	8, 632
10.9	412	391	370	350	329	308	287	266	245	224	21.7	8, 620	8, 608	8, 596	8, 584	8, 572	8, 560	8, 548	8, 536	8, 524	8, 512
11.0	25, 204	25, 183	25, 162	25, 141	25, 121	25, 100	25, 079	25, 059	25, 038	25, 017	21.8	8, 500	8, 489	8, 477	8, 465	8, 453	8, 441	8, 429	8, 417	8, 405	8, 393
11.1	24, 996	24, 976	24, 955	24, 935	24, 914	24, 894	24, 873	24, 852	24, 832	24, 811	21.9	8, 381	8, 369	8, 357	8, 346	8, 334	8, 322	8, 310	8, 298	8, 286	8, 274
11.2	791	770	750	730	709	689	668	648	628	607	22.0	8, 262	8, 250	8, 239	8, 227	8, 215	8, 203	8, 191	8, 179	8, 168	8, 156
11.3	587	567	546	526	506	486	465	445	425	405	22.1	8, 144	8, 132	8, 120	8, 109	8, 097	8, 085	8, 073	8, 061	8, 050	8, 038
11.4	384	364	344	324	304	284	263	243	223	203	22.2	8, 026	8, 014	8, 003	7, 991	7, 979	7, 967	7, 956	7, 944	7, 932	7, 920
11.5	24, 183	24, 163	24, 143	24, 123	24, 103	24, 083	24, 063	24, 043	24, 023	24, 003	22.3	7, 909	7, 897	7, 885	7, 873	7, 862	7, 850	7, 838	7, 827	7, 815	7, 803

TABLE III-a—ALTITUDE-PRESSURE TABLE—FEET-INCHES—Continued

[Altitude in feet, pressure in inches of mercury (° C.)]

P inches	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
22.4	7,791	7,780	7,768	7,756	7,745	7,733	7,721	7,710	7,698	7,686
22.5	7,675	7,663	7,652	7,640	7,628	7,617	7,605	7,593	7,582	7,570
22.6	7,559	7,547	7,535	7,524	7,512	7,501	7,489	7,478	7,466	7,454
22.7	7,443	7,431	7,420	7,408	7,397	7,385	7,374	7,362	7,350	7,339
22.8	7,327	7,316	7,304	7,293	7,281	7,270	7,258	7,247	7,235	7,224
22.9	7,212	7,201	7,189	7,178	7,167	7,155	7,144	7,132	7,121	7,109
23.0	7,098	7,086	7,075	7,064	7,052	7,041	7,029	7,018	7,006	6,995
23.1	6,984	6,972	6,961	6,949	6,938	6,927	6,915	6,904	6,893	6,881
23.2	6,870	6,858	6,847	6,836	6,824	6,813	6,802	6,790	6,779	6,768
23.3	6,756	6,745	6,734	6,722	6,711	6,700	6,688	6,677	6,666	6,655
23.4	6,643	6,632	6,621	6,610	6,598	6,587	6,576	6,564	6,553	6,542
23.5	6,531	6,519	6,508	6,497	6,486	6,475	6,463	6,452	6,441	6,430
23.6	6,418	6,407	6,396	6,385	6,374	6,363	6,351	6,340	6,329	6,318
23.7	6,307	6,296	6,284	6,273	6,262	6,251	6,240	6,229	6,218	6,206
23.8	6,195	6,184	6,173	6,162	6,151	6,140	6,129	6,118	6,106	6,095
23.9	6,084	6,073	6,062	6,051	6,040	6,029	6,018	6,007	5,996	5,985
24.0	5,974	5,962	5,951	5,940	5,929	5,918	5,907	5,896	5,885	5,874
24.1	5,863	5,852	5,841	5,830	5,819	5,808	5,797	5,786	5,775	5,764
24.2	5,753	5,742	5,731	5,720	5,709	5,698	5,687	5,676	5,666	5,655
24.3	5,644	5,633	5,622	5,611	5,600	5,589	5,578	5,567	5,555	5,545
24.4	5,534	5,524	5,513	5,502	5,491	5,480	5,469	5,458	5,447	5,436
24.5	5,425	5,415	5,404	5,393	5,382	5,371	5,360	5,350	5,339	5,328
24.6	5,317	5,306	5,295	5,285	5,274	5,263	5,252	5,241	5,230	5,220
24.7	5,209	5,198	5,187	5,176	5,166	5,155	5,144	5,133	5,133	5,112
24.8	5,101	5,090	5,080	5,069	5,058	5,047	5,037	5,026	5,015	5,004
24.9	4,994	4,983	4,972	4,961	4,951	4,940	4,929	4,919	4,908	4,897
25.0	4,886	4,876	4,865	4,854	4,844	4,833	4,822	4,812	4,801	4,790
25.1	4,780	4,769	4,758	4,748	4,737	4,726	4,716	4,705	4,695	4,684
25.2	4,673	4,663	4,652	4,642	4,631	4,620	4,610	4,599	4,588	4,578
25.3	4,567	4,557	4,546	4,536	4,525	4,514	4,504	4,493	4,483	4,472
25.4	4,462	4,451	4,440	4,430	4,419	4,409	4,398	4,388	4,377	4,367
25.5	4,356	4,346	4,335	4,325	4,314	4,304	4,293	4,283	4,272	4,262
25.6	4,251	4,241	4,230	4,210	4,209	4,199	4,188	4,178	4,167	4,157
25.7	4,146	4,136	4,125	4,115	4,105	4,094	4,084	4,073	4,063	4,052
25.8	4,042	4,032	4,021	4,011	4,000	3,990	3,980	3,969	3,959	3,948
25.9	3,938	3,928	3,917	3,907	3,896	3,886	3,876	3,865	3,855	3,845
26.0	3,834	3,824	3,814	3,803	3,793	3,782	3,772	3,762	3,751	3,741
26.1	3,731	3,720	3,710	3,700	3,689	3,679	3,669	3,659	3,648	3,638
26.2	3,628	3,617	3,607	3,597	3,586	3,576	3,566	3,556	3,545	3,535
26.3	3,525	3,515	3,504	3,494	3,484	3,474	3,463	3,453	3,443	3,433
26.4	3,422	3,412	3,402	3,392	3,382	3,371	3,361	3,351	3,341	3,331
26.5	3,320	3,310	3,300	3,290	3,279	3,269	3,259	3,249	3,239	3,229
26.6	3,218	3,208	3,198	3,188	3,178	3,168	3,157	3,147	3,137	3,127
26.7	3,117	3,107	3,097	3,086	3,076	3,066	3,056	3,046	3,036	3,026
26.8	3,016	3,005	2,995	2,985	2,975	2,965	2,955	2,945	2,935	2,925
26.9	2,915	2,905	2,895	2,884	2,874	2,864	2,854	2,844	2,834	2,824
27.0	2,814	2,804	2,794	2,784	2,774	2,764	2,754	2,744	2,734	2,724
27.1	2,714	2,704	2,694	2,684	2,674	2,664	2,654	2,644	2,634	2,624
27.2	2,614	2,604	2,594	2,584	2,574	2,564	2,554	2,544	2,534	2,524
27.3	2,514	2,504	2,494	2,484	2,474	2,464	2,454	2,444	2,434	2,425
27.4	2,415	2,405	2,395	2,385	2,375	2,365	2,355	2,345	2,335	2,325
27.5	2,315	2,306	2,296	2,286	2,276	2,266	2,256	2,246	2,236	2,226
27.6	2,217	2,207	2,197	2,187	2,177	2,167	2,158	2,148	2,138	2,128
27.7	2,118	2,108	2,098	2,089	2,079	2,069	2,059	2,049	2,040	2,030
27.8	2,020	2,010	2,000	1,990	1,981	1,971	1,961	1,951	1,942	1,932
27.9	1,922	1,912	1,912	1,893	1,883	1,873	1,863	1,854	1,844	1,834
28.0	1,824	1,814	1,805	1,795	1,785	1,776	1,766	1,756	1,746	1,737
28.1	1,727	1,717	1,707	1,698	1,688	1,678	1,668	1,659	1,649	1,639
28.2	1,630	1,620	1,610	1,601	1,591	1,581	1,572	1,562	1,552	1,542
28.3	1,533	1,523	1,513	1,504	1,494	1,484	1,475	1,465	1,456	1,446
28.4	1,436	1,427	1,417	1,407	1,398	1,388	1,378	1,369	1,359	1,350
28.5	1,340	1,330	1,321	1,311	1,302	1,292	1,282	1,273	1,263	1,254
28.6	1,244	1,234	1,225	1,215	1,206	1,196	1,186	1,177	1,167	1,158
28.7	1,148	1,139	1,129	1,120	1,110	1,100	1,091	1,081	1,072	1,062
28.8	1,053	1,043	1,034	1,024	1,015	1,005	995	986	976	967
28.9	957	948	938	929	919	910	900	891	881	872
29.0	863	853	844	834	825	815	806	796	787	777
29.1	768	758	749	739	730	721	711	702	692	683
29.2	673	664	655	645	636	626	617	607	598	589
29.3	579	570	560	551	542	532	523	514	504	495
29.4	485	476	467	457	448	439	429	420	410	401
29.5	392	382	373	364	354	345	335	326	317	307
29.6	298	289	280	270	261	252	242	233	224	215
29.7	205	196	187	177	168	159	149	140	131	122
29.8	112	103	94	85	75	66	57	47	38	29
29.9	20	10	1	−8	−17	−26	−36	−45	−54	−63
30.0	−73	−82	−91	−100	−110	−119	−128	−137	−146	−156
30.1	−165	−174	−183	−192	−202	−211	−220	−229	−238	−248
30.2	−257	−266	−275	−284	−293	−303	−312	−321	−330	−339
30.3	−348	−358	−367	−376	−385	−394	−403	−412	−421	−431
30.4	−440	−449	−458	−467	−476	−485	−494	−504	−513	−522
30.5	−531	−540	−549	−558	−567	−576	−585	−594	−604	−613
30.6	−622	−631	−640	−649	−658	−667	−676	−685	−694	−703
30.7	−712	−721	−730	−740	−749	−758	−767	−776	−785	−794
30.8	−803	−812	−821	−830	−839	−848	−857	−866	−875	−884
30.9	−893	−902	−911	−920	−929	−938	−947	−956	−965	−974
31.0	−983	−992	−1,001	−1,010	−1,019	−1,028	−1,037	−1,046	−1,055	−1,064

TABLE III-b—ALTITUDE-PRESSURE TABLE—FEET-MILLIBARS

[Altitude in feet, pressure in millibars]

Pressure Millibars	0	1	2	3	4	5	6	7	8	9
10	101,389	99,393	97,573	95,896	94,346	92,899	91,548	90,279	89,082	87,950
20	86,876	85,854	84,880	83,950	83,059	82,204	81,383	80,592	79,832	79,099
30	78,386	77,700	77,035	76,392	75,766	75,159	74,569	73,996	73,437	72,894
40	72,363	71,846	71,341	70,850	70,367	69,897	69,437	68,986	68,545	68,114
50	67,691	67,277	66,870	66,470	66,079	65,695	65,318	64,947	64,583	64,226
60	63,873	63,527	63,187	62,852	62,522	62,198	61,878	61,563	61,253	60,947
70	60,646	60,348	60,056	59,768	59,483	59,202	58,924	58,651	58,381	58,114
80	57,850	57,590	57,333	57,079	56,828	56,580	56,335	56,093	55,854	55,617
90	55,383	55,152	54,924	54,697	54,474	54,252	54,032	53,815	53,601	53,388
100	53,178	52,969	52,763	52,559	52,357	52,157	51,958	51,761	51,566	51,374
110	51,182	50,993	50,805	50,619	50,433	50,251	50,071	49,891	49,713	49,536
120	49,360	49,187	49,014	48,844	48,674	48,506	48,339	48,173	48,009	47,846
130	47,685	47,525	47,365	47,207	47,050	46,895	46,740	46,587	46,434	46,283
140	46,133	45,984	45,836	45,690	45,543	45,399	45,255	45,111	44,970	44,829
150	44,689	44,550	44,411	44,274	44,138	44,002	43,867	43,734	43,601	43,469
160	43,337	43,207	43,077	42,948	42,820	42,693	42,566	42,440	42,315	42,191
170	42,067	41,944	41,822	41,701	41,580	41,460	41,341	41,222	41,104	40,987
180	40,870	40,754	40,639	40,525	40,411	40,297	40,184	40,072	39,961	398.50
190	39,739	39,629	39,520	39,411	39,303	39,195	39,088	38,981	38,875	38,769
200	38,664	38,560	38,456	38,353	38,250	38,148	38,046	37,945	37,844	37,744
210	37,644	37,544	37,445	37,347	37,249	37,151	37,054	36,957	36,861	36,765
220	36,669	36,575	36,480	36,386	36,292	36,199	36,106	36,014	35,922	35,830
230	35,739	35,648	35,557	35,467	35,377	35,288	35,199	35,110	35,022	34,934
240	34,846	34,759	34,672	34,585	34,498	34,412	34,326	34,240	34,154	34,069
250	33,984	33,900	33,815	33,731	33,647	33,564	33,481	33,398	33,315	33,232
260	33,150	33,068	32,986	32,905	32,823	32,743	32,662	32,581	32,501	32,421
270	32,341	32,262	32,182	32,103	32,024	31,946	31,867	31,789	31,711	31,634
280	31,556	31,479	31,402	31,325	31,249	31,172	31,096	31,021	30,945	30,869
290	30,794	30,719	30,644	30,570	30,495	30,421	30,347	30,273	30,199	30,126
300	30,052	29,979	29,907	29,834	29,762	29,690	29,618	29,546	29,474	29,403
310	29,331	29,260	29,189	29,118	29,048	28,977	28,907	28,837	28,767	28,697
320	28,628	28,559	28,489	28,420	28,351	28,283	28,214	28,146	28,078	28,011
330	27,943	27,875	27,807	27,740	27,673	27,606	27,539	27,473	27,406	27,340
340	27,273	27,207	27,141	27,076	27,010	26,945	26,879	26,814	26,749	26,685
350	26,620	26,555	26,491	26,427	26,363	26,299	26,235	26,172	26,108	26,045
360	25,982	25,919	25,856	25,793	25,730	25,668	25,606	25,544	25,482	25,420
370	25,358	25,296	25,234	25,173	25,112	25,051	24,990	24,929	24,868	24,807
380	24,747	24,687	24,627	24,567	24,507	24,447	24,387	24,328	24,268	24,209
390	24,150	24,091	24,032	23,973	23,914	23,855	23,797	23,739	23,680	23,622
400	23,564	23,506	23,449	23,391	23,333	23,276	23,218	23,161	23,104	23,047
410	22,990	22,934	22,877	22,821	22,764	22,708	22,652	22,596	22,540	22,484
420	22,428	22,372	22,316	22,261	22,206	22,151	22,095	22,040	21,986	21,931
430	21,876	21,821	21,767	21,713	21,658	21,604	21,550	21,496	21,442	21,388
440	21,335	21,281	21,228	21,174	21,121	21,068	21,015	20,962	20,909	20,856
450	20,804	20,751	20,698	20,645	20,593	20,541	20,489	20,437	20,385	20,333
460	20,281	20,229	20,178	20,126	20,075	20,024	19,973	19,921	19,870	19,819
470	19,769	19,718	19,667	19,616	19,566	19,515	19,465	19,414	19,364	19,314
480	19,264	19,214	19,165	19,115	19,065	19,015	18,966	18,917	18,867	18,818
490	18,769	18,720	18,670	18,621	18,573	18,524	18,475	18,426	18,378	18,330
500	18,281	18,233	18,185	18,136	18,088	18,040	17,993	17,945	17,897	17,849
510	17,802	17,754	17,706	17,659	17,612	17,564	17,517	17,470	17,423	17,376
520	17,329	17,282	17,235	17,189	17,142	17,096	17,049	17,003	16,956	16,910
530	16,864	16,818	16,772	16,726	16,680	16,634	16,589	16,543	16,497	16,452
540	16,406	16,361	16,316	16,270	16,225	16,180	16,135	16,090	16,045	16,000
550	15,955	15,911	15,866	15,821	15,777	15,732	15,688	15,644	15,599	15,555
560	15,511	15,467	15,428	15,379	15,335	15,291	15,247	15,203	15,160	15,116
570	15,073	15,029	14,986	14,943	14,899	14,856	14,813	14,770	14,726	14,683
580	14,641	14,598	14,555	14,510	14,470	14,427	14,384	14,342	14,300	14,257
590	14,214	14,172	14,130	14,088	14,046	14,004	13,962	13,920	13,878	13,836
600	13,795	13,753	13,711	13,670	13,628	13,587	13,545	13,504	13,463	13,422
610	13,380	13,339	13,298	13,257	13,216	13,175	13,134	13,093	13,052	13,012
620	12,972	12,931	12,890	12,850	12,809	12,769	12,728	12,688	12,648	12,608
630	12,568	12,528	12,488	12,448	12,408	12,368	12,328	12,288	12,248	12,209
640	12,169	12,130	12,090	12,051	12,011	11,972	11,932	11,893	11,854	11,815
650	11,776	11,737	11,698	11,659	11,620	11,581	11,542	11,503	11,464	11,426
660	11,387	11,349	11,310	11,271	11,233	11,195	11,156	11,118	11,079	11,041
670	11,003	10,965	10,927	10,889	10,851	10,813	10,775	10,737	10,699	10,661
680	10,624	10,586	10,548	10,510	10,473	10,435	10,398	10,360	10,323	10,286
690	10,249	10,211	10,174	10,137	10,100	10,063	10,026	9,989	9,952	9,915
700	9,878	9,841	9,805	9,768	9,732	9,695	9,659	9,622	9,585	9,548
710	9,512	9,476	9,440	9,403	9,367	9,331	9,295	9,258	9,222	9,186
720	9,150	9,114	9,079	9,043	9,007	8,970	8,934	8,899	8,864	8,828
730	8,792	8,757	8,721	8,685	8,650	8,615	8,579	8,544	8,509	8,473
740	8,438	8,403	8,368	8,333	8,298	8,262	8,227	8,192	8,158	8,123
750	8,088	8,053	8,018	7,983	7,949	7,914	7,880	7,845	7,810	7,776
760	7,742	7,707	7,672	7,638	7,604	7,570	7,535	7,501	7,467	7,433
770	7,398	7,364	7,330	7,296	7,262	7,229	7,195	7,161	7,127	7,094
780	7,060	7,026	6,992	6,958	6,925	6,891	6,857	6,823	6,791	6,757
790	6,724	6,690	6,657	6,624	6,590	6,557	6,524	5,491	6,458	6,425
800	6,392	6,359	6,326	6,293	6,260	6,227	6,194	6,161	6,128	6,096
810	6,068	6,030	5,998	5,965	5,932	5,900	5,867	5,835	5,802	5,769
820	5,737	5,705	5,672	5,640	5,608	5,576	5,543	5,511	5,472	5,447
830	5,415	5,383	5,351	5,319	5,287	5,255	5,223	5,191	5,159	5,127
840	5,096	5,064	5,032	5,000	4,969	4,937	4,905	4,874	4,842	4,811
850	4,779	4,748	4,716	4,685	4,654	4,622	4,591	4,560	4,528	4,497
860	4,466	4,435	4,404	4,373	4,342	4,311	4,280	4,249	4,218	4,187
870	4,156	4,125	4,094	4,063	4,032	4,002	3,971	3,940	3,910	3,879
880	3,848	3,818	3,787	3,757	3,726	3,696	3,665	3,635	3,604	3,574
890	3,544	3,513	3,483	3,453	3,423	3,393	3,362	3,332	3,302	3,272
900	3,242	3,212	3,182	3,152	3,122	3,092	3,062	3,032	3,002	2,973
910	2,943	2,913	2,883	2,854	2,824	2,794	2,765	2,735	2,705	2,676
920	2,646	2,617	2,587	2,558	2,529	2,499	2,470	2,441	2,411	2,382
930	2,352	2,323	2,294	2,265	2,236	2,206	2,177	2,148	2,119	2,090
940	2,061	2,032	2,003	1,974	1,945	1,916	1,887	1,859	1,830	1,801
950	1,772	1,743	1,715	1,686	1,657	1,629	1,600	1,572	1,543	1,514
960	1,486	1,458	1,429	1,400	1,372	1,344	1,315	1,287	1,259	1,230
970	1,202	1,174	1,145	1,117	1,089	1,061	1,033	1,005	976	948
980	920	892	865	836	808	780	752	724	697	669
990	641	613	585	558	530	502	474	447	419	391
1,000	364	336	309	281	254	226	190	171	144	117
1,010	89	62	34	7	−20	−48	−75	−102	−129	−156
1,020	−183	−210	−238	−265	−292	−319	−346	−373	−400	−427
1,030	−454	−481	−508	−535	−562	−589	−615	−642	−669	−696
1,040	−722	−749	−776	−803	−830	−856	−883	−909	−936	−963
1,050	−989	−1,016	−1,042	−1,069	−1,095	−1,121	−1,148	−1,174	−1,200	−1,226
1,060	−1,253	−1,278	−1,304	−1,331	−1,357	−1,384	−1,410	−1,437	−1,463	−1,490
1,070	−1,516									

TABLE IV—ALTITUDE-PRESSURE-TEMPERATURE TABLE

Altitude, feet	Pressure		Temperature, ° C.	Mean temperature, ° C.	Altitude, feet	Pressure		Temperature, ° C.	Mean temperature, ° C.
	in. Hg	mm Hg				in. Hg	mm Hg		
−1,000	31.02	787.9	17.0	16.0	32,500	7.91	201.0	−49.4	−18.6
−500	30.47	773.8	16.0	15.5	33,000	7.73	196.4	−50.4	−19.1
0	29.921	760.0	15.0	15.0	33,500	7.55	191.8	−51.4	−19.6
500	29.38	746.4	14.0	14.5	34,000	7.38	187.4	−52.4	−20.2
1,000	28.86	732.9	13.0	14.0	34,500	7.20	183.0	−53.4	−20.7
1,500	28.33	719.7	12.0	13.0	35,000	7.04	178.7	−54.3	−21.3
2,000	27.82	706.6	11.0	13.5	35,332	6.93	175.9	−55.0	−21.6
2,500	27.31	693.8	10.0	12.0	35,500	6.87	174.5	−55.0	−21.8
3,000	26.81	681.1	9.1	12.5	36,000	6.71	170.4	−55.0	−22.3
3,500	26.32	668.6	8.1	11.0	36,500	6.55	166.4	−55.0	−22.8
4,000	25.84	656.3	7.1	11.5	37,000	6.39	162.4	−55.0	−23.3
4,500	25.36	644.2	6.1	10.0	37,500	6.24	158.6	−55.0	−23.8
5,000	24.89	632.3	5.1	10.5	38,000	6.10	154.9	−55.0	−24.3
5,500	24.43	620.6	4.1	9.5	38,500	5.95	151.2	−55.0	−24.8
6,000	23.98	609.0	3.1	9.0	39,000	5.81	147.6	−55.0	−25.2
6,500	23.53	597.6	2.1	8.5	39,500	5.68	144.1	−55.0	−25.6
7,000	23.09	586.4	1.1	8.0	40,000	5.54	140.7	−55.0	−26.0
7,500	22.65	575.3	0.1	7.5	40,500	5.41	137.4	−55.0	−26.4
8,000	22.22	564.4	−0.8	7.0	41,000	5.28	134.2	−55.0	−26.8
8,500	21.80	553.7	−1.8	6.5	41,500	5.16	131.0	−55.0	−27.2
9,000	21.38	543.2	−2.8	6.0	42,000	5.04	127.9	−56.0	−27.6
9,500	20.98	532.8	−3.8	5.5	42,500	4.92	124.9	−55.0	−28.0
10,000	20.58	522.6	−4.8	5.0	43,000	4.80	122.0	−55.0	−28.3
10,500	20.18	512.5	−5.8	4.5	43,500	4.69	119.1	−55.0	−28.6
11,000	19.79	502.6	−6.8	4.0	44,000	4.58	116.3	−55.0	−29.0
11,500	19.40	492.8	−7.8	3.5	44,500	4.47	113.5	−55.9	−29.3
12,000	19.03	483.3	−8.8	2.9	45,000	4.36	110.8	−55.0	−29.6
12,500	18.65	473.8	−9.8	2.4	45,500	4.26	108.2	−55.0	−29.9
13,000	18.29	464.5	−10.8	1.9	46,000	4.16	105.7	−55.0	−30.2
13,500	17.93	455.4	−11.7	1.4	46,500	4.06	103.2	−55.0	−30.5
14,000	17.57	446.4	−12.7	0.9	47,000	3.97	100.7	−55.0	−30.8
14,500	17.22	437.5	−13.7	0.4	47,500	3.873	98.38	−55.0	−31.1
15,000	16.88	428.8	−14.7	−0.1	48,000	3.781	96.05	−55.0	−31.4
15,500	16.54	420.2	−15.7	−0.6	48,500	3.693	93.79	−55.0	−31.7
16,000	16.21	411.8	−16.7	−1.2	49,000	3.605	91.57	−55.0	−31.9
16,500	15.89	403.5	−17.7	−1.7	49,500	3.520	89.41	−55.0	−32.2
17,000	15.56	395.3	−18.7	−2.2	50,000	3.436	87.30	−55.0	−32.4
17,500	15.25	387.3	−19.7	−2.7	51,000	3.276	83.22	−55	----------
18,000	14.94	379.4	−20.7	−3.2	52,000	3.124	79.34	−55	----------
18,500	14.63	371.7	−21.7	−3.7	53,000	2.978	75.64	−55	----------
19,000	14.33	364.0	−22.6	−4.3	54,000	2.839	72.12	−55	----------
19,500	14.04	356.5	−23.6	−4.8	55,000	2.707	68.76	−55	----------
20,000	13.75	349.1	−24.6	−5.3	56,000	2.581	65.55	−55	----------
20,500	13.46	341.9	−25.6	−5.6	57,000	2.460	62.49	−55	----------
21,000	13.18	334.7	−26.6	−6.3	58,000	2.346	59.58	−55	----------
21,500	12.90	327.7	−27.6	−6.9	59,000	2.236	56.80	−55	----------
22,000	12.63	320.8	−28.6	−7.4	60,000	2.132	54.15	−55	----------
22,500	12.36	314.1	−29.6	−7.9	61,000	2.033	51.63	−55	----------
23,000	12.10	307.4	−30.6	−8.4	62,000	1.938	49.22	−55	----------
23,500	11.84	300.9	−31.6	−9.0	63,000	1.847	46.92	−55	----------
24,000	11.59	294.4	−32.5	−9.5	64,000	1.761	44.73	−55	----------
24,500	11.34	288.1	−33.5	−10.0	65,000	1.679	42.65	−55	----------
25,000	11.10	281.9	−34.5	−10.5	66,000	1.601	40.66	−55	----------
25,500	10.86	275.8	−35.5	−11.1	67,000	1.526	38.76	−55	----------
26,000	10.62	269.8	−36.5	−11.6	68,000	1.455	36.95	−55	----------
26,500	10.39	263.9	−37.5	−12.1	69,000	1.387	35.23	−55	----------
27,000	10.16	258.1	−38.5	−12.7	70,000	1.322	33.59	−55	----------
27,500	9.94	252.5	−39.5	−13.2	71,000	1.261	32.02	−55	----------
28,000	9.72	246.9	−40.5	−13.7	72,000	1.202	30.53	−55	----------
28,500	9.50	241.4	−41.5	−14.3	73,000	1.146	29.10	−55	----------
29,000	9.29	236.0	−42.5	−14.8	74,000	1.093	27.75	−55	----------
29,500	9.08	230.7	−43.4	−15.3	75,000	1.041	26.45	−55	----------
30,000	8.88	225.6	−44.4	−15.9	76,000	0.993	25.22	−55	----------
30,500	8.68	220.5	−45.4	−16.4	77,000	0.946	24.04	−55	----------
31,000	8.48	215.5	−46.4	−16.9	78,000	0.902	22.92	−55	----------
31,500	8.29	210.6	−47.4	−17.5	79,000	0.860	21.85	−55	----------
32,000	8.10	205.8	−48.4	−18.0	80,000	0.820	20.83	−55	----------

(2) *Application.* (i) Sensitive altimeters complying with the specifications appearing in this section are hereby approved for all aircraft. Sensitive altimeters already approved by the Administrator may continue to be installed in aircraft

(*a*) For which an application for original type certificate is made prior to the effective date of this section,

(*b*) The prototype of which is flown within one year after the effective date of this section, and

(*c*) The prototype of which is not flown within one year after the effective date of this section if due to causes beyond the applicant's control.

(ii) If an alteration involving a change in type or model of sensitive altimeters is made within nine months after the effective date of this section, previously approved types of sensitive altimeters may be installed. However, in any such change made after the nine-month period, new types of sensitive altimeters installed in aircraft used in instrument flight shall meet the specifications contained herein.

(c) *Specific instructions*—(1) *Marking.* In addition to the identification information required in the referenced specification, each sensitive altimeter shall be permanently marked with the Technical Standard Order designation, CAA–TSO, C10a, to identify the altimeter as meeting the requirements of this section in accordance with the manufacturers' statement of conformance outlined below. This identification will be accepted by the Civil Aeronautics Administration as evidence that the established minimum safety requirements for sensitive altimeters have been met.

(2) *Data requirements.* None.

(3) *Effective date.* After March 1, 1949, specifications contained in this section will constitute the basis for Civil Aeronautics Administration approval of sensitive altimeters for use in certificated aircraft used in instrument flight.

(4) *Deviations.* Requests for deviation from, or waiver of, the requirements of this section; which affect the basic airworthiness of the component, should be submitted for approval by the Chief, Aircraft Service, Office of Aviation Safety, Civil Aeronautics Administration. These requests should be addressed to the nearest Regional Office of the Civil Aeronautics Administration, Attention: Superintendent, Aircraft Branch.

(5) *Conformance.* (i) The manufacturer shall furnish to the Civil Aeronautics Administration, Aircraft Service, Attention: A–298, Washington 25, D. C., a written statement of conformance signed by a responsible official of his company, setting forth that the sensitive altimeter to be produced by him meets the minimum safety requirements established in this section. Immediately thereafter, distribution of the sensitive altimeter conforming with the terms of this section may be started and continued.

(ii) The prescribed identification on the sensitive altimeter does not relieve the aircraft manufacturer or owner of

responsibility for the proper application of the sensitive altimeter in his aircraft, nor waive any of the requirements concerning type certification of the aircraft in accordance with existing Civil Air Regulations.

(iii) If complaints of nonconformance with the requirements of this section are brought to the attention of the Civil Aeronautics Administration, and investigation indicates that such complaints are justified, the Administrator will take appropriate action to restrict the use of the product involved.

(iv) Copies of this Technical Standard Order and other Technical Standard Orders may be obtained from the Civil Aeronautics Administration, Aviation Information Staff, Washington 25, D. C.

These rules shall become effective upon publication in the FEDERAL REGISTER.

(Secs. 205 (a), 601, 52 Stat. 984, 1007; Pub. Law 872, 80th Cong.; 49 U. S. C. 425, 551; Reorg. Plans III and IV of 1940, 3 CFR, Cum. Supp., 5 F. R. 2107, 2421)

[SEAL] F. B. LEE,
Acting Administrator of Civil Aeronautics.

[F. R. Doc. 49-4786; Filed, June 21, 1949; 9:00 a. m.]

[Civil Air Regs., Amdt. 43-7]

PART 43—GENERAL OPERATION RULES

EXTENSION OF CHAIR-TYPE PARACHUTE PACKING PERIOD

Adopted by the Civil Aeronautics Board at its office in Washington, D. C., on the 16th day of June 1949.

Part 43 currently requires that any parachute carried on an aircraft for emergency use shall be of an approved type which has been packed within the past 60 days. In view of the fact that the chair-type (canopy in back) parachute is installed in such a manner that it is completely recessed in the back of the seat and is thus protected from the wear to which other types of parachutes are subjected, it is believed that safety will not be adversely affected by extending the mandatory period for packing of such parachutes from 60 to 120 days.

This amendment provides that no pilot shall carry in an aircraft a parachute which is available for emergency use unless it is of an approved type, and (a) if it is of the chair type (canopy in back), it has been packed by a qualified parachute rigger within the preceding 120 days, or (b) if it is of a type other than a chair type (canopy in back), it has been so packed within the preceding 60 days.

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 the Civil Aeronautics Board hereby amends Part 43 of the Civil Air Regulations (14 CFR, Part 43, as amended) effective July 21, 1949:

By amending § 43.410 to read as follows:

§ 43.410 *Parachutes.* No pilot shall carry on an aircraft a parachute which is available for emergency use unless:

(a) It is an approved chair-type (canopy in back) parachute which has been packed by a qualified parachute rigger within the preceding 120 days; or

(b) It is an approved-type, other than a chair-type (canopy in back) parachute which has been packed by a qualified parachute rigger within the preceding 60 days. (Secs. 205 (a), 601, 52 Stat. 984, 1007; U. S. C. 425 (a), 551)

By the Civil Aeronautics Board.

[SEAL] M. C. MULLIGAN,
Secretary.

[F. R. Doc. 49-4992; Filed, June 21, 1949; 8:52 a. m.]

TITLE 15—COMMERCE AND FOREIGN TRADE

Chapter II — National Bureau of Standards, Department of Commerce

Subchapter A—Test Fee Schedules

PART 205—CHEMISTRY

PART 215—OPTICS

MISCELLANEOUS AMENDMENTS

In accordance with the provisions of sections 4 (a) and (c) of the Administrative Procedure Act, it has been found that notice and hearing on these schedules of fees are unnecessary for the reason that such procedure, because of the nature of these rules, serve no useful purpose.

Section 205.301 *Instruments for measurements of sugar* are hereby added, and will read as follows:

§ 205.301 *Instruments for measurements of sugar.* • • •

Item	Description	Fee
205.301a	Saccharimeter; calibration and certification	$22.00
205.301b	Polariscopes and saccharimeters; adjustment and standardization	52.00
205.301c	Quartz control plate; rotation; calibration and certification	18.00

Section 215.507 *Colorimetry* is hereby amended by the addition of items 215.507 l and m, to read as follows:

§ 215.507 *Colorimetry.* • • •

Item	Description	Fee
	Determination of the Munsell book notation of an opaque specimen by visual interpolation along the scales of the 40-hue-chart edition of the Munsell Book of Color, specimen and scales illuminated by light from the north sky centering approximately along the perpendicular to the surfaces:	
215.507l	Determination of one specimen	$15.00
215.507m	Determination of each additional specimen	2.00

Section 215.509 *Opacimetry* is hereby amended by the addition of an item to be designated as 215.509 c, to read as follows:

§ 215.509 *Opacimetry.* • • •

Item	Description	Fee
215.509c	Set of four opal-glass standards for Bausch and Lomb type photoelectric opacimeter, opacities approximately equal to 0.65, 0.75, 0.85 and 0.95	$50.00

Consistent with the above insertion, present items c, d, and e will be redesignated as d, e, and f, respectively.

(Sec. 312, 47 Stat. 410, 15 U. S. C. 276)

[SEAL] E. U. CONDON,
Director, National Bureau of Standards.

Approved:

CHARLES SAWYER,
Secretary of Commerce.

[F. R. Doc. 49-4984; Filed, June 21, 1949; 8:49 a. m.]

TITLE 21—FOOD AND DRUGS

Chapter I—Food and Drug Administration, Federal Security Agency

PART 135—COLOR CERTIFICATION

HANDLING OF FEES

By virtue of the authority vested in the Federal Security Administrator by the provisions of section 706 of the Federal Food, Drug, and Cosmetic Act (52 Stat. 1040, 1058; 21 U. S. C. 376), the regulations for the certification of coal-tar colors (4 F. R. 1934), as amended (5 F. R. 1140; 11 F. R. 6970), are further amended as indicated below:

1. In § 135.15 *Fees*, paragraph (c) is amended to read as follows:

(c) All deposits and fees required by these regulations shall be paid by money order, bank draft, or certified check, drawn to the order of the Treasurer of the United States, collectible at par at Washington, D. C. All such deposits and fees shall be forwarded to the Food and Drug Administration, Federal Security Agency, Washington 25, D. C., whereupon after making appropriate records thereof they will be transmitted to the Chief Disbursing Officer, Division of Disbursement, Treasury Department, for deposit to the special account "Certification and Inspection Services, Food and Drug Administration."

2. Paragraph (d) of § 135.15 is deleted.

These amendments shall become effective upon the date of publication of this order in the FEDERAL REGISTER.

Notice and public procedure are not necessary prerequisites to the promulgation of this order, since the amendments involve merely changes in administrative accounting procedure.

(Sec. 706, 52 Stat. 1058, 21 U. S. C. 376)

Dated: June 16, 1949.

[SEAL] OSCAR R. EWING,
Administrator.

[F. R. Doc. 49-4981; Filed, June 21, 1949; 8:48 a. m.]

PART 144—CERTIFICATION OF BATCHES OF DRUGS COMPOSED WHOLLY OR PARTLY OF INSULIN

HANDLING OF FEES

By virtue of the authority vested in the Federal Security Administrator by the provisions of section 506 of the Federal Food, Drug, and Cosmetic Act (52 Stat. 1040, 1055, as amended by 55 Stat. 851; 21 U. S. C. 356), the regulations for certification of batches of drugs composed wholly or partly of insulin (12 F. R. 2226) are amended as indicated below.

1. In § 144.10 *Fees*, paragraph (e) is amended to read as follows:

(e) All advance deposits required by the regulations in this part shall be paid by money order, bank draft, or certified check drawn to the order of the Treasurer of the United States, collectible at par at Washington, D. C. All deposits shall be forwarded to the Food and Drug Administration, Federal Security Agency, Washington 25, D. C., whereupon after making appropriate records thereof they will be transmitted to the Chief Disbursing Officer, Division of Disbursement, Treasury Department, for deposit to the special account "Certification and Inspection Services, Food and Drug Administration."

2. Paragraph (f) of § 144.10 is deleted.

These amendments shall become effective upon the date of publication in the FEDERAL REGISTER.

Notice and public procedure are not necessary prerequisites to the promulgation of this order, since the amendments involve merely changes in administrative accounting procedure.

(Sec. 506, 55 Stat. 851; 21 U. S. C. 356)

Dated: June 16, 1949.

[SEAL] OSCAR R. EWING,
Administrator.

[F. R. Doc. 49-4982; Filed, June 21, 1949; 8:48 a. m.]

TITLE 26—INTERNAL REVENUE

Chapter I—Bureau of Internal Revenue, Department of the Treasury

Subchapter C—Miscellaneous Excise Taxes

[T. D. 5705]

PART 185—WAREHOUSING OF DISTILLED SPIRITS

MISCELLANEOUS AMENDMENTS

1. On March 3, 1949, notice of proposed rule making, regarding the withdrawal of samples of distilled spirits by proprietors of internal revenue bonded warehouses, was published in the FEDERAL REGISTER (14 F. R. 959).

2. After consideration of all such relevant matter as was presented by interested persons, § 185.237 of Regulations 10 (26 CFR, Part 185) approved May 20, 1940, relating to the warehousing of distilled spirits, is revoked, and §§ 185.217, 185.234, 185.238, 185.239, 185.240, 185.241, 185.243, 185.244, 185.247, and 185.248 of such regulations are amended to read as follows:

§ 185.217 *Remission of tax.* If the entire contents of a container are lost by theft, accident, or otherwise than by leakage or evaporation, and a claim for remission of the tax is allowed, the district supervisor will take credit for the allowance upon receipt of notice from the Commissioner of the allowance. If the tax is remitted on a portion of the contents of a container still in bond, the district supervisor will instruct the storekeeper-gauger to affix to the container a label showing the number of proof gallons on which the tax has been remitted, the date of allowance, and bearing the signature and title of the storekeeper-gauger. The storekeeper-gauger will, upon labeling the container, note such data on the Form 1520, 1619, or 1620, covering the deposit of the spirits in the warehouse. In the event any such container is transferred in bond to another warehouse, the data relating to remission of the tax will be transcribed by the storekeeper-gauger to Form 1619 or 1620, covering the transfer. (Secs. 3170, 3176, and 3953 (a), I. R. C.)

§ 185.234 *Number and size.* Samples of brandy or fruit spirits for laboratory analysis (including organoleptic examination) must be taken from packages designated as sample packages or from storage tanks. Except upon authority of the district supervisor or the Commissioner, not more than one sample may be removed from any sample package or from the same lot of brandy or fruit spirits in a storage tank in a period of six months. The number of packages that may be designated as sample packages shall be limited, as to each kind of brandy or fruit spirits and each type of cooperage (as designated by the mandatory marks and brands on the packages), to not more than one in each twenty-five packages of any such lot of brandy or fruit spirits of the same entry gauge on storage in the warehouse: *Provided*, That where less than twenty-five packages of any such lot of brandy or fruit spirits are on storage, one package in the lot may be designated as a sample package. Samples for organoleptic examination only may not exceed one-half pint. Samples for laboratory analysis may not exceed one pint. Such samples may be withdrawn upon approval by the storekeeper-gauger in charge at the warehouse of a written application filed in accordance with the provisions of § 185.240. In any instance where a one-pint sample is found to be an insufficient quantity for laboratory analysis, the district supervisor, upon receipt of a statement showing the necessity for an additional quantity, may authorize the withdrawal of an additional sample, not to exceed one pint, from any designated sample package or storage tank. The withdrawal in excess of these limitations of tax-free samples of brandy or fruit spirits shall not be permitted, unless it is shown that such samples are insufficient for the purpose intended, and the Commissioner authorizes the withdrawal of additional samples. (Secs. 3037, 3176, I. R. C.)

§ 185.238 *Limitation on number, size, and use of samples of distilled spirits other than brandy or fruit spirits.* Samples of distilled spirits other than brandy or fruit spirits may be taken only for organoleptic examination or analytical purposes from packages designated as sample packages and from storage tanks. Except upon authority of the district supervisor or the Commissioner, not more than one sample may be removed from any sample package or from the same lot of spirits in a storage tank in a period of six months. The number of packages that may be designated as sample packages shall be limited, as to each kind of spirits and each type of cooperage (as designated by the mandatory marks and brands on the packages), to not more than one in each twenty-five packages of any lot of spirits of the same day's production on storage in the warehouse: *Provided*, That where less than twenty-five packages of any such lot of spirits are on storage, one package in the lot may be designated as a sample package. Samples for organoleptic examination may not exceed one-half pint from any package or storage tank. Samples for laboratory analysis may not exceed one pint from any package or storage tank. Such samples may be withdrawn upon approval by the storekeeper-gauger in charge at the warehouse of a written application filed in accordance with the provisions of § 185.240. In any instance where a one-pint sample is found to be an insufficient quantity for laboratory analysis, the district supervisor, upon receipt of a statement showing the necessity for an additional quantity, may authorize the withdrawal of an additional sample, not to exceed one pint, from any designated sample package or storage tank. The withdrawal of samples in excess of these limitations shall not be authorized unless it is shown that such samples are insufficient for the purpose intended, and the Commissioner authorizes the withdrawal of additional samples. (Sec. 3176, I. R. C.)

§ 185.239 *Disposition of samples.* Samples of distilled spirits other than brandy or fruit spirits must be used solely for chemical analysis or organoleptic examination. They may not be furnished to salesmen and dealers for advertising or soliciting purposes. Where spirits are sold subject to approval as to quality, a sample taken pursuant to the provisions of §§ 185.238, 185.240, and 185.241, may be furnished the purchaser. Remnants or residues of samples remaining after analysis or examination and which are not desired for retention as laboratory specimens or for further analysis or examination, should be returned to vessels in the distilling system containing similar spirits where the warehouse is on or contiguous to the distillery premises, unless the condition of the remnants or residues is such as to render them unsuitable for such disposition. If such remnants or residues of samples are not returned to the distilling system, they should be destroyed. (Sec. 3176, I. R. C.)

§ 185.240 *Application* — (a) *Samples for organoleptic examination or laboratory analysis, and tax-paid samples of brandy for other purposes.* When the warehouseman desires to procure sam-

ples for organoleptic examination, samples not in excess of one pint for laboratory analysis, or tax-paid samples of brandy or fruit spirits for other purposes, he shall make application in triplicate to the storekeeper-gauger in charge at the warehouse. The application shall be given a serial number, beginning with "1" for the first application and running consecutively thereafter. The application shall show (1) the kind of spirits, (2) the name of the distiller, (3) the registered number of the distillery and the State in which located, (4) the serial numbers of the packages or storage tanks from which the samples are to be removed, (5) the dates of entry for deposit, (6) the type of cooperage, (7) if the samples are to be removed from sample packages, the dates the packages were received in the warehouse, (8) whether, in the case of brandy or fruit spirits, the samples are desired for organoleptic examination or laboratory analysis tax-free, or for other purposes subject to payment of tax, (9) whether, in the case of spirits other than brandy or fruit spirits, the samples are required for organoleptic examination or for laboratory analysis, (10) the reasons why the samples are desired, and (11) the size of each sample to be taken.

(b) *Additional samples for laboratory analysis.* Where the warehouseman has found a pint sample to have been an insufficient quantity for analysis, and desires an additional one-pint sample, he shall make application in triplicate, through the storekeeper-gauger in charge at the warehouse, to the district supervisor. The application shall be given a serial number within the series prescribed in paragraph (a) of this section. The application shall show the information called for in paragraphs (a) (1) through (11) of this section.

(c) *Other samples.* Where the warehouseman desires samples in excess of the number or quantities which may be authorized by the storekeeper-gauger or the district supervisor, he shall make application, in quadruplicate, through the storekeeper-gauger in charge at the warehouse, to the Commissioner. The application shall be given a serial number within the series prescribed in paragraph (a) of this section and shall show the information called for in paragraph (a) (1) through (11) of this section. (Secs. 3037, 3176, I. R. C.)

§ 185.241 *Approval of application*—(a) *By the storekeeper-gauger in charge at the warehouse.* Upon receipt of an application for the withdrawal of samples in quantities not to exceed one-half pint for organoleptic examination or in quantities not to exceed one pint for laboratory analysis, or for the withdrawal of tax-paid samples of brandy or fruit spirits from any package or storage tank, the storekeeper-gauger shall determine from his records whether, in the case of packages, the designated packages are eligible for sampling or, in the case of spirits in storage tanks, the lot of spirits contained in a tank is eligible for sampling. If he shall find the number and quantities of samples to be taken do not exceed the number and quantities permitted under §§ 185.234, 185.236, or 185.238, as the case may be, he may authorize the withdrawal of the samples. In the case of samples for laboratory analysis, the storekeeper-gauger should assure himself of the propriety of the request. If he finds upon examination of his records that the number or quantities desired are in excess of the number or quantities permitted, he shall write upon each copy of the application a statement disclosing the reasons why the samples may not be removed. The storekeeper-gauger, upon approval or disapproval of the application, shall return one copy to the warehouseman, forward one copy to the district supervisor, and retain the original copy in his office.

(b) *By the district supervisor.* Upon receipt of an application for an additional sample for laboratory analysis, the storekeeper-gauger shall determine from his records whether an additional sample may be authorized under the limitations of §§ 185.234 or 185.238, as the case may be. If he finds the additional sample may not be authorized under the limitations, he shall write upon each copy of the application, over his signature, a statement showing the reasons why the sample may not be withdrawn. In such case, he shall return one copy to the proprietor, forward one copy to the district supervisor, and retain the original in his office. If he finds the additional sample may be authorized, he shall note such fact upon the application, over his signature, and shall forward the application to the district supervisor with his recommendation. The district supervisor shall determine from the facts presented whether the additional sample is necessary for the proposed type of laboratory analysis and shall thereupon approve or disapprove the application. He shall retain a copy in his office and return the original and one copy to the storekeeper-gauger at the warehouse, who shall file the original and return the copy to the applicant.

(c) *By the Commissioner.* Upon receipt of an application to the Commissioner for authorization to withdraw samples, the storekeeper-gauger shall note upon each copy of the application the number and quantities of samples which have been removed from each package and from each lot represented. The storekeeper-gauger shall thereupon forward all copies of the application to the district supervisor, who shall transmit all copies to the Commissioner with his recommendation. Upon approval or disapproval of the application, three copies shall be returned to the district supervisor, who shall retain a copy and return the original and one copy to the storekeeper-gauger at the warehouse. The storekeeper-gauger shall file the original and return the remaining copy to the applicant. (Secs. 3037, 3176, I. R. C.)

§ 185.243 *Label.* At the time of the withdrawal of a sample the proprietor shall prepare a label and a copy thereof. The label and copy shall be prepared on paper having approximate dimensions of 3" x 5". The proprietor shall show on the label and on the copy, in the order listed and upon separate lines, the following information:

(a) The word "Sample;"

(b) The serial number of the approved application covering the withdrawal of the spirits;

(c) The kind of spirits;

(d) The serial number of the container from which removed;

(e) The name of the distiller followed by the registered number of the distillery and the name of the state in which located;

(f) The purpose for which the sample is intended; and, if for laboratory analysis, the name and address of the laboratory or person making the analysis (unless the analysis is to be made by the warehouseman at the warehouse premises, or premises contiguous thereto);

(g) The size of the sample and, in regard to fruit spirits and brandy, the quantity in proof gallons extended to the 4th decimal place (the proof gallon content need not be shown on samples of other spirits);

(h) The name of the warehouseman, followed by the registered number of the warehouse and the name of the state in which located.

Upon completion, the label and the copy shall be presented to the storekeeper-gauger, who shall verify the accuracy of the data thereon, date and sign both copies, and supervise the affixing of the label to the sample container. Where the sample is taken from a container of fruit spirits or brandy, the storekeeper-gauger shall write upon the copy of the label a statement showing whether the sample was procured tax-free or subject to payment of tax. The copy of the label shall be filed by the storekeeper-gauger in accordance with the provisions of § 185.244. (Secs. 3037, 3176, I. R. C.)

§ 185.244 *Office record.* The proprietor shall furnish sufficient file cases for the filing and retention of sample records. The copies of the labels shall be kept by the storekeeper-gauger as a record of samples removed and shall be filed numerically by package or tank serial number under the name and number of the producing distiller. The record shall be maintained as an active file for each sample package and for each storage tank from which samples are withdrawn, during the period such packages or spirits contained in such storage tanks are on storage in the warehouse. At the time of preparing Form 1520 or Form 1619 covering the removal of a sample package, or upon the emptying of a storage tank from which samples had been taken, the copies of labels covering samples removed from such package or storage tank shall be removed from the active file to an inactive file for storage. (Secs. 3037, 3176, I. R. C.)

§ 185.247 *Credit upon withdrawal of brandy or fruit spirits.* Upon the withdrawal from bond of a package of brandy or fruit spirits from which samples have been removed, the storekeeper-gauger shall interline in appropriate places on the withdrawal application, Forms 179, 206, 257, 655, or 1518, or permit, Form 1508, and in the loss allowed column of the report of withdrawal gauge, Form 1520, the total quantity

(fractions of less than one-tenth gallon being disregarded) of the taxable samples and, separately, the total quantity (fractions of less than one-tenth gallon being disregarded) of tax-free samples removed from the package followed by the words "samples taxpaid" and "samples tax-free," respectively. The total quantity of all samples taken from the package shall be deducted with the allowable loss in calculating (a) the taxable gallons if the package is withdrawn upon payment of tax, or (b) the taxable loss, if any, if the package is withdrawn without payment of tax. Should the package be transferred in bond to another warehouse the storekeeper-gauger shall make like entries on Form 1619 in order that similar adjustments may be made when the package is withdrawn from the receiving warehouse. Upon the removal of a package from bond, the quantity withdrawn as samples shall also be entered by the storekeeper-gauger on Form 1513 as withdrawn taxpaid or tax-free, as the case may be. Credit shall be given similarly upon the emptying of a storage tank from which samples of brandy or fruit spirits were taken. (Secs. 3037, 3176, I. R. C.)

§ 185.248 *Report of taxable samples.* Each day taxable samples of brandy or fruit spirits are withdrawn the storekeeper-gauger shall enter on Form 1615, in quadruplicate, a record of the taxable samples removed. All the information called for by the form shall be furnished. At the end of each month the storekeeper-gauger shall complete the report, retain one copy of the form and deliver the remaining three copies to the warehouseman, who shall forward the three copies to the collector with remittance for the tax due. The collector shall execute his certificate of taxpayment on each copy of the form, retain one copy, and return the remaining two copies to the warehouseman, who will retain one copy and deliver the other copy to the storekeeper-gauger. The storekeeper-gauger shall note the taxpayment on his retained copy and forward the other copy to the district supervisor. (Secs. 3037, 3176, I. R. C.)

3. The amendment of § 185.217 is for the purpose of requiring the storekeeper-gauger to note the records covering the transfer of packages in bond to show, for credit purposes, the quantity of distilled spirits allowed pursuant to a claim for remission of tax where a loss has been sustained. The remaining amendments are designed to establish appropriate limitations and requirements for the withdrawal by proprietors of samples of distilled spirits stored in internal revenue bonded warehouses in packages and tanks for laboratory analysis (including organoleptic examination), and for other purposes in the case of brandy and fruit spirits as provided by law.

4. This Treasury decision shall be effective on the 31st day following the date of its publication in the FEDERAL REGISTER.

(53 Stat. 353, 373, 375, 483; 26 U. S. C. 3037, 3170, 3176 and 3953 (a))

[SEAL] GEO. J. SCHOENEMAN,
Commissioner of Internal Revenue.

Approved: June 16, 1949.

THOMAS J. LYNCH,
Acting Secretary of the Treasury.

[F. R. Doc. 49-4988; Filed, June 21, 1949; 8:58 a. m.]

TITLE 42—PUBLIC HEALTH

Chapter I—Public Health Service, Federal Security Agency

PART 51—GRANTS TO STATES FOR PUBLIC HEALTH SERVICES

Sec.
51.1 Definitions.
51.2 Allotments; extent of health problems.
51.3 Basis of allotments.
51.4 Allotments; estimates; time of making; duration.
51.5 Plans; mode of submittal.
51.6 Plans; contents.
51.7 Plans; time of submittal and approval.
51.8 Payments to States; to cooperating agencies.
51.9 Required expenditure of State and local funds; funds of cooperating agencies.
51.10 Expenditure of Federal funds.
51.11 Use of Federal funds for training.
51.12 Personnel administration on a merit basis.
51.13 Fiscal accounting and control.
51.14 Reports; State health authority; cooperating agencies.
51.15 Audit.

AUTHORITY: §§ 51.1 to 51.15, issued under secs. 2, 215, 314, 58 Stat. 682, 690, 693, as amended by 60 Stat. 421, 424 and 62 Stat. 464, 468; 42 U. S. C. 201, 216, 246.

§ 51.1 *Definitions.* As used in this part:

(a) "Act" means the Public Health Service Act approved July 1, 1944, 58 Stat. 682, as amended.

(b) "Cooperating agency", which term is used only in relation to the heart disease control program, means a county, health district, other political subdivision of the State or other public or nonprofit agency, institution, or other organization in the State, to which payments for a heart disease control program are recommended by the State health authority.

(c) "Exception" means the amount of Federal funds expended contrary to this part or the plan.

(d) "Federal funds" means funds appropriated by Congress for carrying out the purposes of section 314 of the act.

(e) "Financial need" as applied to any State means the relative per capita income as shown by data supplied by the Bureau of Foreign and Domestic Commerce for the most recent five-year period, available on January 1, preceding the fiscal year for which Federal funds are appropriated.

(f) "General health purposes" means the establishment and maintenance of public health services, other than community mental health services, within the meaning of subsection (c) of section 314 of the act.

(g) "Official forms" means forms and instructions supplied by the Public Health Service to the State health authority and to a cooperating agency for use in the submittal of plans or information required with respect to the operation of such plans.

(h) "Political subdivision" includes counties, health districts, municipalities, and other subdivisions of the State established for governmental purposes.

(i) "Population" as applied to any State or political subdivision, means the most recent official estimates of the Bureau of the Census available on January 1, preceding the fiscal year for which Federal funds are appropriated.

(j) "Public Health Service" means the Public Health Service in the Federal Security Agency.

(k) "State" includes any State, the District of Columbia, Hawaii, Alaska, Puerto Rico, or the Virgin Islands.

(l) "Plan" refers to the information and proposals submitted by the State health authority pursuant to the regulations in this part for activities of the State and political subdivisions thereof for (1) the prevention, treatment and control of venereal disease, (2) the prevention, treatment and control of tuberculosis, (3) establishing and maintaining public health services, (4) the prevention, treatment and control of mental illness, including emotional, psychiatric and neurological disorders, or (5) establishing and maintaining organized community programs of heart disease control.

(m) "Plan" refers also to the information and proposals for establishing and maintaining organized community programs for heart disease control submitted in lieu of a State plan by a cooperating agency pursuant to these regulations.

(n) Insofar as the regulations in this part relate to the State mental health program, "State health authority" means, in the case of any State in which there is a single State agency other than the State health authority charged with responsibility for administering such program, the State mental health authority.

§ 51.2 *Allotments; extent of health problems.* For the purpose of making allotments to the several States:

(a) *Venereal disease.* The extent of the venereal disease problem shall be determined by the Surgeon General taking into consideration such factors as:

(1) The varying composite and racial prevalence rates for syphilis;

(2) The extent to which treatment facilities have been provided as evidenced by the population under treatment for syphilis;

(3) The total number of syphilis patients brought to treatment in the primary or secondary stages during the previous year;

(4) The varying costs of providing equal services as determined by the inverse function of the syphilitic density, and the direct function of the size of the population of each State;

(5) The need for training centers and demonstrations in selected areas;

(6) The need for facilities for the prevention and control of venereal diseases in localities where there is an unusual concentration of population.

(b) *Tuberculosis.* The extent of the tuberculosis problem shall be determined by the Surgeon General taking into consideration such factors as:

(1) The morbidity of the disease;

(2) The mortality attributed to the disease;

(3) The relative need among the States of facilities for diagnosis and treatment of tuberculous persons.

(c) *Special health problems.* The extent of special health problems shall be the relative population density of the several States, in inverse order.

(d) *Mental health.* The extent of the mental health problem shall be determined by the Surgeon General, taking into consideration such factors as:

(1) The prevalence of emotional and psychiatric disorders affecting mental health;

(2) Special conditions which create unequal burdens in the administration of mental health services among the States as indicated by the relative population of large urban and dispersed-population areas.

§ 51.3 *Basis of allotments.* Of the total sum determined to be available for each fiscal year for allotment to the several States for the purposes of subsections (a), (b), (c), and (e) of section 314 of the act, allotments to the several States shall be made as follows:

(a) *Venereal disease.* Of the amount available for allotment for venereal disease control programs:

From 20 percent to 40 percent, on the basis of population, weighted by financial need.
From 60 percent to 80 percent, on the basis of the extent of the venereal disease problem.

(b) *Tuberculosis.* Of the amount available for allotment for tuberculosis control programs:

From 20 percent to 40 percent, on the basis of population, weighted by financial need.
From 60 percent to 80 percent, on the basis of the extent of the tuberculosis problem.

(c) *General health purposes.* Of the amount available for allotment for general health purposes other than for mental health:

From 90 percent to 95 percent, on the basis of population, weighted by financial need.
From 5 percent to 10 percent, on the basis of the extent of special health problems.

(d) *Mental health.* Of the amount available for allotment for mental health programs:

From 20 percent to 40 percent, on the basis of population weighted by financial need.
From 60 percent to 80 percent, on the basis of the extent of the mental health problem.

(e) *Heart disease.* Of the amount available for allotment for heart disease control programs:

(1) A portion on the basis of a uniform per capita allotment not to exceed 10 cents per capita for the first 100,000 population or part thereof of each State;

(2) The remaining amount on the basis of the remaining population of each State weighted by financial need.

§ 51.4 *Allotments; estimates; time of making; duration.* (a) For each fiscal year, the Surgeon General shall, with the approval of the Administrator, determine the amount of the appropriation for each program which shall be available for allotment among the several States.

(b) Prior to the beginning of each fiscal year the Surgeon General shall prepare and make available to the States an estimated schedule of the amounts which it is expected will be allotted to each State during the fiscal year from estimated appropriations.

(c) Allotments for each program for the first six months shall be made prior to the beginning of the fiscal year or as soon thereafter as practicable, and shall equal not less than 60 percent nor more than 70 percent of the total sum determined to be available for allotment during that fiscal year. At the end of the second quarter, the amounts of allotments for the first six-month period which have not been certified for payment to the respective States pursuant to § 51.8 shall become available for allotment among the States in the same manner as moneys which had not previously been allotted.

(d) Allotments for each program for the remaining six months shall be made prior to the beginning of the third quarter or as soon thereafter as practicable, and shall equal the total sum remaining unpaid and unallotted from the amount available for allotment during the fiscal year.

(e) The Secretary of the Treasury and the respective State health authorities shall be notified of the amounts of allotments and of the period for which they are made.

§ 51.5 *Plans; mode of submittal.* (a) Each State making application for grants under section 314 of the act shall submit plans through its State health authority for each fiscal year for carrying out the purposes of such section. A State making application for Federal funds for more than one of the purposes authorized by section 314 of the act may consolidate its plan: *Provided,* That the information specifically required for a State plan is distinguished with respect to each purpose.

(b) Plans of cooperating agencies for heart disease control programs, in lieu of State plans, shall be submitted through the State health authority.

(c) Plans shall be prepared in accordance with official forms supplied by the Public Health Service and may be amended with the approval of the Surgeon General or his designee.

§ 51.6 *Plans; contents.* A plan with respect to any program shall include:

(a) A description of the current organization for and health services included in the program and the proposals for extending, improving, and otherwise modifying such organization and services;

(b) Provision for health services in substantial accordance with nationally accepted standards;

(c) A budget by project totals for carrying out the services described under paragraph (a) of this section;

(d) A statement that the plan if approved will be carried out as described and in accordance with the regulations prescribed under section 314 of the act.

§ 51.7 *Plans; time of submittal and approval.* (a) For a continuing program an annual plan shall be submitted at least 45 days prior to the beginning of the Federal fiscal year to which the plan relates.

(b) A plan or amendment thereto shall not be approved for any period antedating receipt of such plan by the Public Health Service: *Provided,* That exceptions to this rule may be made by the Surgeon General when necessary to meet emergencies.

(c) The budget for health services shall not be approved unless each item thereof relates to activities described in the plan.

(d) A plan for a heart disease control program submitted by a cooperating agency as provided in § 51.5 shall not be approved unless recommended by the State health authority.

§ 51.8 *Payments to States; to cooperating agencies.* (a) Payments from allotments to a State shall be certified to the Secretary of the Treasury only after a plan has been approved. Payments from allotments to a State shall not exceed the allotment to such State or the total estimated expenditure necessary for carrying out the plan whichever is less.

(b) Payments from a State allotment for venereal disease control shall be reduced by the amount such State requests the Public Health Service to utilize in furnishing equipment, services, and supplies for special venereal disease activities.

(c) All payments shall be made to the State, except, with respect to the heart disease control program, amounts from the State's allotment may be certified for payment to a cooperating agency upon recommendation by the State health authority when (1) the State health authority has not prior to August 1 of the fiscal year for which allotment is made, presented and had approved a plan, or (2) the State is not authorized by law to make payments to a cooperating agency. Funds for heart disease control paid to a cooperating agency and remaining unobligated at the termination of the plan for any fiscal year shall be returned to the Treasury of the United States, unless plans for continued cooperation with such agency are submitted and approved for the succeeding fiscal year.

(d) Subject to the foregoing limitations, payments shall be made as follows:

(1) Payment for the first quarter shall be based upon an application for funds showing the estimated requirement for such quarter.

(2) Except for payment to a cooperating agency, payment for the second quarter shall be the amount of the difference between the unpaid balance of the allotment of the respective State for the first six months and the unencumbered cash balance of the respective fund in the State treasury at the beginning of the first quarter, adjusted for exceptions. With respect to payment to a cooperating agency from the State's allotment, payment in the second quarter shall be based on the requirements for such quarter adjusted for exceptions and for the

estimated unobligated balances at the beginning of the quarter as shown in an application for funds.

(3) Payment for subsequent quarters from the allotments for the final six-month period shall be made once in each quarter and shall be based upon an application for funds showing the estimated requirement for such quarter and the estimated unencumbered balance of the respective fund in the State treasury (or with respect to the heart disease control program, in the treasury of the cooperating agency) at the beginning of the quarter for which payment is to be made. All such payments shall be in the amount of the difference between the estimated requirement and the estimated unencumbered cash balance adjusted for exceptions.

(4) Payments from allotments shall not be certified unless an application for payment and all reports and documents prescribed by the regulations in this part to be due have been received.

(5) Supplemental payment in any quarter may be certified upon submission of application accompanied by satisfactory justification.

§ 51.9 *Required expenditure of State and local funds; funds of cooperating agencies.* (a) Moneys paid to any State or to a cooperating agency pursuant to section 314 of the act shall be paid upon the condition that there be expended in the State during the fiscal year for which payment is made and for purposes specified in the plan with respect to which payment is made, public funds of the State and its political subdivision (or, in the case of payments to a cooperating agency having an approved heart disease control plan, funds of the cooperating agency) in amounts which shall be exclusive of any funds derived from loan or grant from the United States and which shall be determined as follows:

(1) With respect to payments for a venereal disease control program, an amount equal to 50 percent of the amount of Federal funds to be expended pursuant to the State plan.

(2) With respect to payments for a tuberculosis control program, an amount equal to the amount of Federal funds to be expended pursuant to the State plan.

(3) With respect to payments for a general health program other than the mental health program, an amount equal to 50 percent of the amount of Federal funds to be expended pursuant to the State plan.

(4) With respect to payments for a mental health program, an amount equal to 50 percent of the amount of Federal funds to be expended pursuant to the State plan.

(5) With respect to payments for a heart disease program, an amount equal to 50 percent of the amount of Federal funds to be expended pursuant to the State plan or, in the absence of a State plan, to the plan of the cooperating agency or agencies.

(b) The expenditures required for any one of the above programs shall be additional to the expenditures required for other programs.

(c) Federal funds paid to a State or cooperating agency shall not be used to conserve State and local funds or the funds of a cooperative agency.

§ 51.10 *Expenditure of Federal funds.* (a) Federal funds paid to a State or to a cooperating agency shall be expended solely for the purposes specified in plans approved by the Surgeon General or his designee, and in accordance with the regulations in this part.

(b) Except as otherwise authorized by the Surgeon General, the provisions of State or local law which are applicable to the expenditure of moneys appropriated by the State or local subdivision shall apply respectively to Federal moneys paid to the State or to a political subdivision of the State as a cooperating agency.

(c) All encumbrances of Federal funds shall be liquidated within the period required by State law for the liquidation of encumbrances of State appropriated funds unless otherwise authorized by the Surgeon General, and, in any event within two years after the end of the fiscal year in which the encumbrance was incurred. The amount of encumbrances not so liquidated will be treated for the purpose of determining payments under the regulations in this part as constituting a part of the unencumbered cash balance at the end of the second succeeding fiscal year.

§ 51.11 *Use of Federal funds for training.* Use of Federal funds for training personnel for State and local health work shall be authorized by the State health authority or by a cooperating agency in accordance with "Minimum Standards for Sponsored Training of the Public Health Service." Records of authorized training shall be maintained by the State health authority or cooperating agency and shall be audited for compliance with these standards.

§ 51.12 *Personnel administration on a merit basis.* A system of personnel administration on a merit basis shall be established and maintained for personnel employed in programs, the budgets of which provide for the expenditure of Federal funds or of State or local funds for matching purposes included in the plan of the State health authority. Standards for evaluating compliance with this requirement shall be contained in merit-system standards of the Public Health Service in effect at the time of the expenditure.

§ 51.13 *Fiscal accounting and control.* (a) The principal State Accounting Officer shall maintain either (1) a separate and distinct fund account for each Public Health Service grant, or (2) a separate and distinct fund account for each State agency in which all Public Health Service grants may be commingled with other Federal grants (but no other funds) available to such agency.

(b) The State and local public health agencies and cooperating agencies receiving Federal funds under the regulations in this part shall establish and maintain efficient methods for conducting fiscal affairs (including financial and property controls). Each State agency and cooperating agency shall maintain a separate and distinct fund account for each Public Health Service grant.

§ 51.14 *Reports; State health authority; cooperating agencies.* The Surgeon General may require the submission of information pertinent to the operation of the plans and to the purpose of the grants, including the following:

(a) A certification from the State health authority on an official form as to the amount of State and local funds available for carrying out the State plan shall be due in duplicate within 90 days after the beginning of the fiscal year.

(b) A statement in duplicate shall be due on May 15 of each year from the State health authority showing on an official form the estimates of need by fund and functional activity for the year beginning the second succeeding July 1.

(c) Quarterly reports on official forms showing (1) total receipts, expenditures, unliquidated encumbrances, and balances of Federal funds, and (2) for the first three quarters, total quarterly expenditures from Federal grants and other sources for each activity shown in the budget for health services (§ 51.6 (c)) shall be due in duplicate 45 days after the close of the quarter from each State health authority and each cooperating agency having an approved plan.

(d) An annual report on an official form showing total expenditures for the fiscal year from Federal grants and other sources for each activity shown in the budget for health services shall be due in duplicate within 90 days after the close of the fiscal year from each State health authority and each cooperating agency having an approved plan.

(e) A report on an official form showing personnel, facilities and services for each local health organization included in the current State plan shall be due in duplicate on September 15 of each year.

(f) The following reports on official forms shall be submitted by the State health authority with respect to venereal disease activities within 45 days after the close of the period to which they pertain:

(1) A quarterly report on laboratory activities, drug distribution and fees to private physicians.

(2) A quarterly activity report for each cooperative health unit or a summary of such activities by the State health authority.

(3) A quarterly morbidity report with separate report by each city of 200,000 population or over.

(g) The following reports on official forms shall be submitted by the State health authority with respect to tuberculosis control activities within 45 days after the close of the period to which they pertain:

(1) A semiannual report on mass chest surveys, and tuberculosis morbidity, and mortality, with separate report for cities of 500,000 population or over.

(2) An annual report on clinic and nursing services.

§ 51.15 *Audit.* Audit of the activities and programs described in the plan may be made after prior consultation with the State health authority or the cooperating agency. Records, documents, and information available to the State health authority or cooperating agency perti-

nent to the audit shall be accessible for purposes of audit.

Effective date; prior regulations superseded. The regulations in this part, which shall become effective upon the date of their publication in the FEDERAL REGISTER, shall apply for the fiscal year beginning July 1, 1949 and thereafter, and with respect to the fiscal year 1950 and thereafter, shall supersede the regulations heretofore contained in this part.

Dated: June 2, 1949.

[SEAL] LEONARD A. SCHEELE,
Surgeon General.

Approved: June 16, 1949.

J. DONALD KINGSLEY,
Acting Federal Security Administrator.

[F. R. Doc. 49-4983; Filed, June 21, 1949; 8:48 a. m.]

Chapter IV—Freedmen's Hospital, Federal Security Agency

PART 401—ADMISSION AND OUT-PATIENT TREATMENT

MISCELLANEOUS AMENDMENTS

Notice of proposed rule making and public rule making proceedings have been omitted in the issuance of the following amendments to this part. Notice and rule making proceedings have been found to be unnecessary because the amendments are issued for the purpose of establishing an additional category of individuals eligible for admission to Freedmen's Hospital and for the purpose of relieving patients, under certain circumstances, from the requirement of making payment for hospital services in advance.

1. Section 401.2 is amended by adding the following paragraph thereto:

(h) Other persons for whose hospitalization payment is undertaken by a financially responsible organization.

2. Section 401.12 is amended by adding the following sentences thereto: "However, the requirements of this section concerning payment in advance shall not apply to those cases in which payment for the patient's hospitalization and care is undertaken by a financially responsible organization. In such cases, full settlement shall be made as soon as practicable."

Effective date. The foregoing amendments shall become effective upon publication.

(18 Stat. 223, 32 D. C. Code 317; 45 Stat. 992, 32 D. C. Code 318; 44 Stat. 208, 32 D. C. Code 319; 53 Stat. 561, 5 U. S. C. 133. Reorg. Plan No. IV, 3 CFR, Cum. Supp., Ch. IV)

Dated: June 10, 1949.

[SEAL] LEONARD A. SCHEELE,
Surgeon General.

Approved: June 16, 1949.

J. DONALD KINGSLEY,
Acting Federal Security Administrator.

[F. R. Doc. 49-4980; Filed, June 21, 1949; 8:48 a. m.]

TITLE 46—SHIPPING

Chapter I—Coast Guard, Department of the Treasury

[CGFR 49-22]

LIFEBOATS ON FERRYBOATS

The requirement that ferryboats of 50 and not over 300 gross tons shall be equipped with lifeboats having a capacity of not less than 120 cubic feet was promulgated in 1905. At that time not many ferryboats were less than 150 gross tons. In recent years many ferryboats have been designed to be between 50 and 150 gross tons and to require either two 60 cubic feet lifeboats or one 120 cubic feet lifeboat has been found impracticable on such ferryboats due to limitations of stowage space and facilities for handling lifeboats by the smaller crews available. One lifeboat of not less than 60 cubic feet capacity is deemed sufficient for rescue purposes on ferryboats within this tonnage. The amendments to the regulations, as contained in this document, change only the lifeboat requirements for ferryboats of 50 and not over 150 gross tons by reducing the minimum capacity of lifeboats from 120 cubic feet to 60 cubic feet. The requirements for lifeboats on ferryboats of over 150 gross tons remain the same as before. Since these amendments are relaxations of the present regulations, the notice and public rule making procedure required by the Administrative Procedure Act (60 Stat. 237, 5 U. S. C. 1001 et seq.) are hereby found to be impracticable and the effective date requirement of the Administrative Procedure Act does not apply.

By virtue of the authority vested in me as Commandant, United States Coast Guard, by R. S. 4405 and 4426, as amended, 46 U. S. C. 375, 404, and section 101 of Reorganization Plan No. 3 of 1946, 11 F. R. 7875, 60 Stat. 1097, 46 U. S. C. 1, the following amendments to the regulations are prescribed which shall become effective on the date of publication of this document in the FEDERAL REGISTER:

Subchapter H—Great Lakes: General Rules and Regulations

PART 80—FERRYBOATS

Section 80.3 is amended to read as follows:

§ 80.3 *Lifesaving equipment.* (a) All ferryboats of 50 gross tons or over shall be equipped with such lifeboats, life rafts, outside ladders, and other means of escape, in case of disaster, as, in the opinion of the inspectors, shall meet the requirements of each particular case. In no case shall the cubic feet of lifeboat capacity be less than that provided in the table following:

Ferryboats	*Cubic feet*
50 and not over 150 gross tons	60
Over 150 and not over 300 gross tons	120
Over 300 and not over 600 gross tons	240
Over 600 gross tons	360

(b) On ferryboats of more than 300 gross tons one-half of the lifeboat capacity required by paragraph (a) of this section may be substituted by its equivalent in approved life rafts.

(c) Ferryboats of less than 50 gross tons shall be equipped with lifeboats or life rafts as in the opinion of the inspectors may be necessary in case of disaster to secure the safety of all persons on board. (R. S. 4405, 4426, as amended, 46 U. S. C. 375, 404.)

Subchapter I—Bays, Sounds, and Lakes Other Than the Great Lakes: General Rules and Regulations

PART 98—FERRYBOATS

Section 98.3 is amended to read as follows:

§ 98.3 *Lifesaving equipment.* (See § 80.3 of this chapter, as amended, which is identical with this section.)

Subchapter J—Rivers: General Rules and Regulations

PART 117—FERRYBOATS

Section 117.3 is amended to read as follows:

§ 117.3 *Lifesaving equipment.* (See § 80.3 of this chapter, as amended, which is identical with this section.)

Dated: June 16, 1949.

[SEAL] J. F. FARLEY,
Admiral, U. S. Coast Guard, Commandant.

[F. R. Doc. 49-4985; Filed, June 21, 1949; 8:58 a. m.]

PROPOSED RULE MAKING

DEPARTMENT OF THE TREASURY

Bureau of Internal Revenue

[26 CFR, Part 183]

PRODUCTION OF DISTILLED SPIRITS

WITHDRAWAL OF SAMPLES FOR LABORATORY ANALYSIS

A notice is hereby given, pursuant to the Administrative Procedure Act, approved June 11, 1946, that the regulations set forth in tentative form below are proposed to be prescribed by the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury. Prior to the final adoption of such regulations, consideration will be given to any data, views, or arguments pertaining thereto, which are submitted in writing, in duplicate, to the Commissioner of Internal Revenue, Washington 25, D. C., within the period of 30 days from the date of this notice in the FEDERAL REGISTER. The proposed regulations are to be issued under the authority of sections 2878, 2883 and 3176, Internal Revenue Code (26 U. S. C., secs. 2878, 2883 and 3176).

[SEAL] GEO. J. SCHOENEMAN,
Commissioner of Internal Revenue.

1. Sections 183.3 (a), 183.264, 183.265, 183.266, 183.267, 183.269, 183.270, 183.271, 183.275, 183.277 and 183.293 of Regulations 4 (26 CFR, Part 183), approved February 28, 1940, relating to the production of distilled spirits, are amended, and §§ 183.3 (n-1) and 183.270a are added to such regulations.

2. These amendments are designed to establish appropriate limitations and requirements for the withdrawal by registered distillers of samples of distilled spirits for laboratory analysis, including organoleptic examination.

§ 183.3 *Definitions.* • • •

(a) "Approved containers" shall mean casks, barrels, or similar wooden packages, or drums, or similar metal packages, having a capacity of not less than 10 wine gallons each, or railroad tank cars: *Provided*, That, for the withdrawal of samples for laboratory analysis, "approved containers" shall mean any container of less than 10 wine gallons capacity.

• • • • •

(n-1) "Laboratory analysis" shall mean the determination of the composition of distilled spirits by chemical, physical, or organoleptic examination.

• • • • •

§ 183.264 *Unfinished spirits.* Upon approval by the storekeeper-gauger in charge at the distillery of an application submitted in accordance with the provisions of § 183.266, the distiller may remove for laboratory analysis samples of distilled spirits in the course of distillation and prior to their deposit in the cistern room, as follows:

(a) Samples, not exceeding three in number and three pints in the aggregate, of the product of each still in a distilling unit in each 24-hour period;

(b) Where a discontinuous or batch still, such as a gin still, is operated, samples, not exceeding three in number and three pints in the aggregate, of the product of each batch distilled;

(c) Where the distiller desires to obtain spot-samples from various plates of a still in the course of distilling a day's production, one sample, not exceeding one pint, from each of the various plates;

(d) Where the distiller desires samples in number or quantities in excess of those provided for in paragraphs (a), (b), and (c) of this section he may remove such samples: *Provided*, That if in containers of less than one proof gallon, such removal shall be subject to payment of tax in accordance with the provisions of § 183.270a (b), and, if in containers of one proof gallon or more, such removal shall be made pursuant to taxpayment in accordance with the provisions of §§ 183.293 to 183.296. The size and number of samples taken must be restricted to the minimum necessary for the purposes for which intended. (Sec. 3176, I. R. C.)

§ 183.265 *Finished spirits.* The distiller may take from the cistern room of the distillery samples of distilled spirits for laboratory analysis. Such samples shall not exceed one quart, in the aggregate, in each 24-hour period from any tank in the cistern room: *Provided*, That, when a tank is filled and emptied and filled again in the same 24-hour period, samples, not to exceed one quart in the aggregate, may be taken from each filling of the tank. Such samples may be withdrawn upon approval by the storekeeper-gauger in charge at the distillery of an application filed in accordance with the provisions of § 183.266. The taking of samples from the cistern room at more frequent intervals or in greater quantities shall not be authorized: *Provided*, That, where the distiller desires samples in number or quantities in excess of these limitations, he may remove samples in containers of less than one proof gallon subject to payment of tax in accordance with the provisions of § 183.270a (b), and in containers of one proof gallon or more upon taxpayment in accordance with the provisions of §§ 183.293 to 183.296. (Sec. 3176, I. R. C.)

§ 183.266 *Application.* When the distiller desires to remove samples of unfinished spirits or finished spirits for laboratory analysis under the provisions of §§ 183.264 and 183.265, respectively, he shall make application, in triplicate, to the storekeeper-gauger in charge at the distillery. The application shall be given a serial number beginning with "1" for the first application and running consecutively thereafter. The application should specify the reasons why the samples are desired, the number and size of the samples to be taken, and the place or places of removal. Where it is desired to remove samples regularly for the purpose specified, except spot-samples from the plates of a still or samples subject to taxpayment, the application may be made for that purpose. Where spot-samples from the plates of a still or samples subject to taxpayment are desired, application shall be submitted each day such samples are to be procured. No sample may be taken until the application is approved. (Sec. 3176, I. R. C.)

§ 183.267 *Approval of application.* The storekeeper-gauger must satisfy himself as to the need for the number of samples desired and the legitimacy of the purpose for which they are to be used before approving the application. The storekeeper-gauger, upon arrival or disapproval of the application, shall return one copy to the warehouseman, forward one copy to the district supervisor, and retain the original copy in his office. (Sec. 3176, I. R. C.)

§ 183.269 *Label.* At the time of the withdrawal of a sample the proprietor shall prepare a label and a copy thereof. The label and copy shall be prepared on paper having approximate dimensions of 3" x 5". The proprietor shall show on the label and on the copy, in the order listed and upon separate lines, the following information:

(a) The word "Sample";

(b) The serial number of the approved application covering the withdrawal of the sample;

(c) The kind of spirits;

(d) The place from which the sample was removed;

(e) The name of the distiller followed by the registered number of the distillery and the name of the State in which located;

(f) The size of the samples and, in regard to samples in containers of less than one proof gallon taken subject to payment of tax, the quantity in proof gallons extended to the fourth decimal place (the proof gallon content of other samples need not be shown on the label).

(g) If the sample is to be analyzed at other than the immediate or contiguous premises of the proprietor, the name and address of the laboratory or purchaser to which the sample is to be sent.

Upon completion, the label and the copy shall be presented to the storekeeper-gauger, who shall verify the accuracy of the data thereon, date and sign both copies, and supervise the affixing of the label to the sample container. Where the label is to be placed upon a container of a sample taken subject to payment of tax pursuant to the provisions of § 183.270a (b) the storekeeper-gauger shall write upon the label and the copy the words "subject to taxpayment." The copy of the label shall be filed by the storekeeper-gauger in accordance with the provisions of § 183.270. The distiller shall not be required to affix red strip stamps to containers of taxable samples of spirits. Containers of samples of spirits in quantities of one proof gallon or more taken subject to payment of tax, shall be marked, branded, and stamped, in accordance with the provisions of §§ 183.285 to 183.296. *Provided*, That, where it is impracticable to so mark and brand a sample container, the mandatory marks and brands may be shown on an additional label affixed to the container. (Sec. 3176, I. R. C.)

§ 183.270 *Office record.* The proprietor shall furnish sufficient 3 x 5 file cases for the filing and retention of sample records. The copies of labels shall be kept by the storekeeper-gauger as a record of samples removed and shall be filed numerically by application number and chronologically by date. If the distiller operates an internal revenue bonded warehouse on or contiguous to the distillery premises, the record of samples removed from the distillery shall be maintained separately from the record of samples removed from the warehouse. (Sec. 3176, I. R. C.)

§ 183.270a *Report of taxable samples—*

(a) *General.* Taxable samples shall be reported by the distiller on Form 1598 in accordance with the instructions on the form.

(b) *Containers of less than one gallon.* Each day samples in containers of less than one proof gallon are withdrawn subject to payment of tax the storekeeper-gauger shall enter on Form 1615, "Taxable Samples of Distilled Spirits," in quadruplicate, a record of the taxable samples removed. All the information called for by the form shall be furnished. At the end of each month the storekeeper-gauger shall complete the report, retain one copy of the form and deliver the remaining three copies to the distiller, who shall forward the three copies to the collector with remittance for the tax due. The collector shall execute his certificate of taxpayment on each copy of the form, retain one copy, and return the remaining two copies to the distiller, who

shall retain one copy and deliver the other copy to the storekeeper-gauger. The storekeeper-gauger shall note the taxpayment on his retained copy and forward the other copy to the district supervisor. (Sec. 3176, I. R. C.)

§ 183.271 *Disposition of samples.* The samples must be used solely for laboratory analysis. They may not be furnished to salesmen and dealers for advertising or soliciting purposes. Where spirits are sold subject to approval as to quality, a sample taken pursuant to the provisions of §§ 183.265, 183.266 and 183.267 may be furnished the purchaser. Remnants or residues of samples taken from the distillery or cistern room not subject to taxpayment remaining after analysis or examination and which are not desired to be retained as laboratory specimens or for further analysis or examination should be returned to vessels in the distilling system, unless the condition of the remnants or residues is such as to render them unsuitable for such disposition. If such remnants or residues of samples are unsuitable for return to the distilling system, they should be destroyed. (Sec. 3176, I. R. C.)

§ 183.275 *For spirits under section 2883, I. R. C.* Distilled spirits produced at a proof in excess of 159 degrees and reduced in the receiving cisterns to not more than 159 and not less than 100 degrees of proof may be drawn from such cisterns into casks, barrels, or similar wooden packages, or into drums, or similar metal packages, having a capacity of not less than 10 wine gallons each, or into railroad tank cars, and taxpaid or transferred to any internal revenue bonded warehouse for storage therein: *Provided*, That spirits of any proof to be removed for laboratory analysis may be drawn into containers or packages having a capacity of less than 10 wine gallons each. The spirits may be drawn into railroad tank cars only in case the premises of the distiller and the consignee are equipped with suitable railroad siding facilities. Such railroad siding facilities must, in the case of transfers in bond, extend into the receiving warehouse. (Secs. 2883, 3176, I. R. C.)

§ 183.277 *For spirits under section 2878, I. R. C.* Except as otherwise provided herein, distilled spirits which before reduction in the receiving cisterns are of a composite proof of not more than 159 degrees shall be drawn into casks, barrels, or similar wooden packages, or into drums, or similar metal packages, having a capacity of not less than ten wine gallons each. Such distilled spirits, for the purpose of exportation only, may be drawn into wooden packages, each containing two or more metallic cans having a capacity of not less than five wine gallons each. The construction of such wooden packages for exportation, and the filling, marking, and branding thereof, must conform to the specifications set forth in the regulations governing the warehousing of distilled spirits (26 CFR, Part 185). Such distilled spirits, either before or after reduction, for the purpose of laboratory analysis, may be drawn into containers or packages having a capacity of less than ten wine gallons each. (Secs. 2878, 3176, I. R. C.)

§ 183.293 *Application, Form 179.* Whenever the distiller desires to tax-pay and remove in packages direct from the cistern room distilled spirits produced at a proof in excess of 159 degrees and reduced to not more than 159 and not less than 100 degrees of proof or when, pursuant to approved application, he desires to tax-pay and remove samples of spirits for laboratory analysis in containers of one proof gallon or more, he shall execute application therefor on Form 179, in quadruplicate, and deliver all copies to the storekeeper-gauger. (Secs. 2883, 3176, I. R. C.)

3. This Treasury decision shall be effective on the 31st day following the date of its publication in the FEDERAL REGISTER.

(26 U. S. C., secs. 2878, 2883, 3176)

[F. R. Doc. 49-4987; Filed, June 21, 1949; 8:51 a. m.]

FEDERAL TRADE COMMISSION

[16 CFR, Ch. I]

[File No. 21-413]

FLOOR WAX PRODUCTS INDUSTRY

NOTICE OF HEARING AND OF OPPORTUNITY TO PRESENT VIEWS, SUGGESTIONS, OR OBJECTIONS

At a regular session of the Federal Trade Commission held at its office in the city of Washington, D. C., on the 17th day of June 1949.

Opportunity is hereby extended by the Federal Trade Commission to any and all persons, firms, corporations, organizations, or other parties affected by or having an interest in the proposed trade practice rules for the Floor Wax Products Industry to present to the Commission their views concerning said rules, including such pertinent information, suggestions, or objections as they may desire to submit, and to be heard in the premises. For this purpose they may obtain copies of the proposed rules upon request to the Commission. Such views, information, suggestions, or objections may be submitted by letter, memorandum, brief, or other communication, to be filed with the Commission not later than July 11, 1949. Opportunity to be heard orally will be afforded at the hearing beginning at 10 a. m., July 11, 1949, in Room 332, Federal Trade Commission Building, Pennsylvania Avenue at Sixth Street NW., Washington, D. C., to any such persons, firms, corporations, organizations, or other parties who desire to appear and be heard. After due consideration of all matters presented in writing or orally, the Commission will proceed to final action on the proposed rules.

By the Commission.

[SEAL] D. C. DANIEL, *Secretary.*

[F. R. Doc. 49-4978; Filed, June 21, 1949; 8:48 a. m.]

NOTICES

DEPARTMENT OF THE TREASURY

Bureau of Customs

[T. D. 52242]

CERTAIN PACIFIC ISLANDS

"NO CONSUL" LIST

JUNE 15, 1949.

In accordance with the recommendations from the Department of State, the following Pacific Islands are hereby added to the "No consul" list (1947) T. D. 51797, as amended:

British Solomon Islands.
Fiji Islands.
Gilbert and Ellice Islands.
Pitcairn Island.
Western Samoa.
Auckland Islands.
Chatham Islands.
Cook Islands.
Kermadec Islands.
Austral Islands.
Gambier Islands.
Marquesas Islands.
Society Islands (including Iles-sous-le-Vent).
Tuamotu Archipelago.

The following places listed in the "No consul" list (T. D. 51797) are deleted, as these places are included in the islands mentioned above:

Apia, Western Samoa.
Butaritari, Gilbert Islands.
Raratonga, Cook Islands.
Tarawa, Gilbert Islands.

Funafuti, Ellice Islands, and Nukufetau, Ellice Islands, are also deleted from the "No consul" list.

Consular invoices covering merchandise from the above-named islands will be accepted if certified under the provisions of section 482 (f), Tariff Act of 1930.

[SEAL] W. R. JOHNSON, *Deputy Commissioner.*

[F. R. Doc. 49-4986; Filed, June 21, 1949; 8:58 a. m.]

Fiscal Service, Bureau of the Public Debt

[1949 Dept. Circ. 847]

1¼ PERCENT TREASURY CERTIFICATES OF INDEBTEDNESS OF SERIES F–1950

OFFERING OF CERTIFICATES

JUNE 20, 1949.

I. *Offering of certificates.* 1. The Secretary of the Treasury, pursuant to the authority of the Second Liberty Bond Act, as amended, invites subscriptions, at par, from the people of the United States, for certificates of indebtedness of the United States, designated 1¼ percent Treasury Certificates of Indebtedness of Series F–1950, in exchange for Treasury Certificates of Indebtedness of Series F–1949, maturing July 1, 1949.

II. *Description of certificates.* 1. The certificates will be dated July 1, 1949, and will bear interest from that date at the rate of 1¼ percent per annum, payable with the principal at maturity on July 1, 1950. They will not be subject to call for redemption prior to maturity.

2. The income derived from the certificates shall be subject to all taxes now or hereafter imposed under the Internal Revenue Code, or laws amendatory or supplementary thereto. The certificates shall be subject to estate, inheritance, gift or other excise taxes, whether Federal or State, but shall be exempt from all taxation now or hereafter imposed on the principal or interest thereof by any State, or any of the possessions of the United States, or by any local taxing authority.

3. The certificates will be acceptable to secure deposits of public moneys. They will not be acceptable in payment of taxes.

4. Bearer certificates will be issued in denominations of $1,000, $5,000, $10,000, $100,000 and $1,000,000. The certificates will not be issued in registered form.

5. The certificates will be subject to the general regulations of the Treasury Department, now or hereafter prescribed, governing United States certificates.

III. *Subscription and allotment.* 1. Subscriptions will be received at the Federal Reserve Banks and Branches and at the Treasury Department, Washington. Banking institutions generally may submit subscriptions for account of customers, but only the Federal Reserve Banks and the Treasury Department are authorized to act as official agencies.

2. The Secretary of the Treasury reserves the right to reject any subscription, in whole or in part, to allot less than the amount of certificates applied for, and to close the books as to any or all subscriptions at any time without notice; and any action he may take in these respects shall be final. Subject to these reservations, all subscriptions will be allotted in full. Allotment notices will be sent out promptly upon allotment.

IV. *Payment.* 1. Payment at par for certificates allotted hereunder must be made on or before July 1, 1949, or on later allotment, and may be made only in Treasury Certificates of Indebtedness of Series F–1949, maturing July 1, 1949, which will be accepted at par, and should accompany the subscription. The full year's interest on the certificates surrendered will be paid to the subscriber following acceptance of the certificates.

V. *General provisions.* 1. As fiscal agents of the United States, Federal Reserve Banks are authorized and requested to receive subscriptions, to make allotments on the basis and up to the amounts indicated by the Secretary of the Treasury to the Federal Reserve Banks of the respective Districts, to issue allotment notices, to receive payment for certificates allotted, to make delivery of certificates on full-paid subscriptions allotted, and they may issue interim receipts pending delivery of the definitive certificates.

2. The Secretary of the Treasury may at any time, or from time to time, prescribe supplemental or amendatory rules and regulations governing the offering, which will be communicated promptly to the Federal Reserve Banks.

[SEAL] JOHN W. SNYDER,
Secretary of the Treasury.

[F. R. Doc. 49–4989; Filed, June 21, 1949; 8:51 a. m.]

DEPARTMENT OF LABOR

Wage and Hour and Public Contracts Divisions

EMPLOYMENT OF HANDICAPPED CLIENTS BY SHELTERED WORKSHOPS

NOTICE OF ISSUANCE OF SPECIAL CERTIFICATES

Notice is hereby given that special certificates authorizing the employment of handicapped clients at hourly wage rates lower than the minimum wage rates applicable under section 6 of the Fair Labor Standards Act of 1938 and section 1 (b) of the Walsh-Healey Public Contracts Act have been issued to the sheltered workshops hereinafter mentioned, under section 14 of the Fair Labor Standards Act of 1938 (sec. 14, 52 Stat. 1068; 29 U. S. C. 214) and Part 525 of the regulations issued thereunder (29 CFR, Cum. Supp., Part 525, amended 11 F. R. 9556), and under sections 4 and 6 of the Walsh-Healey Public Contracts Act (secs. 4, 6, 49 Stat. 2038; 41 U. S. C. 38, 40) and Article 1102 of the regulations issued pursuant thereto (41 CFR, Cum. Supp., 201.1102).

The names and addresses of the sheltered workshops to which certificates were issued, wage rates, and the effective and expiration dates of the certificates are as follows:

The Bridgeport Rehabilitation Center, Inc., 326 Hollister Avenue, Bridgeport 7, Connecticut; at a wage rate of not less than the piece rate paid non-handicapped employees engaged in the same occupation in regular commercial industry maintaining approved labor standards, or not less than 15 cents per hour, whichever is higher, and a rate of not less than 10 cents for each new client during his initial 4-week evaluation period in the workshop; certificate is effective June 1, 1949, and expires May 31, 1950.

Evansville Association for the Blind, 621–23 Ingle Street, Evansville, Indiana; at a wage rate of not less than the piece rate paid non-handicapped employees engaged in the same occupation in regular commercial industry maintaining approved labor standards, or not less than 30 cents per hour, whichever is higher, and a rate of not less than 20 cents for each new client during his initial 4-week evaluation period in the workshop; certificate is effective June 29, 1949, and expires June 28, 1950.

The employment of handicapped clients in the above-mentioned sheltered workshops under these certificates is limited to the terms and conditions therein contained and is subject to the provisions of Part 525 of the regulations. These certificates have been issued on the applicants' representations that they are sheltered workshops as defined in the regulations and that special services are provided their handicapped clients. A sheltered workshop is defined as, "A charitable organization or institution conducted not for profit, but for the purpose of carrying out a recognized program of rehabilitation for individuals whose earning capacity is impaired by age or physical or mental deficiency or injury, and to provide such individuals with remunerative employment or other occupational rehabilitating activity of an educational or therapeutic nature."

These certificates may be cancelled in the manner provided by the 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.

Signed at Washington, D. C., this 13th day of June 1949.

RAYMOND G. GARCEAU,
Director.

[F. R. Doc. 49–4970; Filed, June 21, 1949; 8:46 a. m.]

CIVIL AERONAUTICS BOARD

[Docket No. 3609]

AMERICAN AIRLINES, INC., AND DELTA AIR LINES, INC.; JOINT APPLICATION FOR APPROVAL OF INTERCHANGE OF EQUIPMENT AGREEMENT

NOTICE OF ORAL ARGUMENT

In the matter of the temporary approval of the interchange of equipment agreement under the joint application filed pursuant to sections 408 and 412 of the Civil Aeronautics Act by American Airlines, Inc., and Delta Air Lines, Inc.

Notice is hereby given, pursuant to the Civil Aeronautics Act of 1938, as amended, that oral argument in the above matter is assigned to be heard July 7, 1949, at 10:00 a. m., e. d. s. t., in Room 5042, Commerce Building, Fourteenth Street and Constitution Avenue

NW., Washington, D. C., before the Board.

Dated at Washington, D. C., June 17, 1949.

By the Civil Aeronautics Board.

[SEAL] M. C. MULLIGAN,
Secretary.

[F. R. Doc. 49-4995; Filed, June 21, 1949; 8:52 a. m.]

[Dockets Nos. 3808, 3809]

CENTRAL AIRLINES, INC.; CONTROL CASE

NOTICE OF HEARING

In the matter of the joint applications of Central Airlines, Inc., Keith H. Kahle, Deane Gill, and F. Kirk Johnson for approval of the acquisition of control of Central Airlines, Inc., and for approval of certain interlocking relationships resulting from the holding of positions by the individual applicants with Central Airlines, Inc., and Keith H. Kahle Aviation, Inc., under sections 408 and 409 of the Civil Aeronautics Act of 1938, as amended.

Notice is hereby given pursuant to the Civil Aeronautics Act of 1938, as amended, particularly sections 205, 408, 409, and 1001 of the said act, that a hearing in the above-entitled proceeding is assigned to be held on June 30, 1949, at 10:00 a. m. (e. d. s. t.), in Room 2015, Temporary Building 5, Sixteenth Street and Constitution Avenue NW., Washington, D. C., before Examiner Paul N. Pfeiffer.

Without limiting the scope of the issues presented by said application, particular attention will be directed to the following matters and questions:

1. Does the agreement between the stockholders of Central Airlines, Inc., and the stockholders of Keith H. Kahle Aviation, Inc., result in the acquisition of control of an air carrier by a person controlling another air carrier or by any person engaged in any other phase of aeronautics within the meaning of section 408 (a) (5) of the act so as to require the approval of the Board pursuant to section 408 (b) of the act?

2. If said agreement requires the Board's approval pursuant to section 408 (b) of the said act, is it consistent with the public interest or will it create a monopoly and thereby restrain competition or jeopardize another air carrier not a party thereto?

3. Are the terms of the agreement just and reasonable from the standpoint of the public interest?

4. Is the interlocking relationship resulting from the holding of positions by Keith H. Kahle with Central Airlines, Inc., and Keith Kahle Aviation, Inc., adverse to the public interest because such relationship has been entered into and/or continued without prior approval of the Board?

5. Are the interlocking relationships resulting from the holding of positions by Messrs. Kahle, Gill and Johnson with Central Airlines, Inc., and Keith Kahle Aviation, Inc., adverse to the public interest because there may be a conflict in the interests of Central Airlines, Inc., and Keith Kahle Aviation, Inc.?

6. If the foregoing acquisition of control and interlocking relationships are approved, should the Board impose reasonable terms and conditions to protect the public interest, and if so, what terms and conditions?

Notice is further given that any person other than parties of record as of June 17, 1949, desiring to be heard in this proceeding may file with the Board on or before June 30, 1949, a statement setting forth the facts and law in issue in this proceeding which he desires to controvert and such person may appear and participate in the hearing in accordance with § 285.6 (a) of the Board's rules of practice.

For further details, interested parties are referred to the application on file with the Civil Aeronautics Board.

Dated at Washington, D. C., June 17, 1949.

By the Civil Aeronautics Board.

[SEAL] M. C. MULLIGAN,
Secretary.

[F. R. Doc. 49-4994; Filed, June 21, 1949; 8:52 a. m.]

FEDERAL POWER COMMISSION

[Docket No. G-1216]

UNITED NATURAL GAS CO.

NOTICE OF APPLICATION

JUNE 16, 1949.

Take notice that United Natural Gas Company (Applicant), a Pennsylvania corporation with its principal office at Oil City, Pennsylvania, filed on May 31, 1949, an application for a certificate of public convenience and necessity, pursuant to section 7 of the Natural Gas Act, authorizing the delivery of 7.8 million cubic feet of gas daily, if available, to Pennsylvania Gas Company (Pennsylvania) during the months of December to March, inclusive, in lieu of the presently authorized 5 million cubic feet a day for those months, and to deliver 7.02 million cubic feet of gas daily, if available, in lieu of the presently authorized 4.5 million cubic feet during the months of April to November, inclusive of each year.

The application states that Applicant and Pennsylvania have executed a modification dated May 27, 1949, of their existing contract whereby it is now proposed that Applicant deliver the above specified additional quantities of natural gas to Pennsylvania, until gas is available to the latter from Tennessee Gas Transmission Company (Tennessee), pursuant to the terms of existing contract between Pennsylvania and Tennessee. The application further states that when natural gas is available to Pennsylvania from Tennessee, the quantities of gas delivered by Applicant will be in accordance with the terms of its contract with Pennsylvania dated November 11, 1947.

Applicant states that no additional facilities will be required to deliver the proposed increased quantities of natural gas, and no change in rates will be made. Applicant further states that with the increased deliveries of gas, Pennsylvania will be better able to supply the requirements of its consumers during the winter when demands are the greatest.

Any interested State commission is requested to notify the Federal Power Commission whether the application should be considered under the cooperative provisions of § 1.37 of the Commission's rules of practice and procedure and, if so, to advice the Federal Power Commission as to the nature of its interest in the matter and whether it desires a conference, the creation of a board, or a joint or concurrent hearing, together with reasons for such a request.

The application of United Natural Gas Company is on file with the Commission and open to public inspection. Any person desiring to be heard or to make any protest with reference to the application shall file with the Federal Power Commission, Washington 25, D. C., not later than 15 days from the date of publication of this notice in the FEDERAL REGISTER, a petition to intervene or protest.

[SEAL] LEON M. FUQUAY,
Secretary.

[F. R. Doc. 49-4969; Filed, June 21, 1949; 8:46 a. m.]

FEDERAL TRADE COMMISSION

[File No. 21-376]

LEATHER AND SHOE FINDERS INDUSTRY

NOTICE OF HOLDING OF TRADE PRACTICE CONFERENCE

At a regular session of the Federal Trade Commission held at its office in the city of Washington, D. C., on the 17th day of June 1949.

Notice is hereby given that a trade practice conference will be held by the Federal Trade Commission for the Leather and Shoe Finders Industry in the Hotel New Yorker, New York City, on July 13, 1949, commencing at 10 a. m., d. s. t.

Members of the industry are the persons, firms, corporations, or organizations engaged in the sale and distribution to shoe repairmen of leather, rubber heels, shoe polish, saddle soap, nails, laces, heel plates, shoe machinery, and other items, for use in the repair, rebuilding, alteration, servicing, cleaning, or preservation of footwear, or for resale by shoe repairmen to the consuming public. All members of the industry so engaged are cordially invited to attend or send representatives to the conference and participate in the proceedings.

The conference and further proceedings in the matter will be directed toward the eventual establishment and promulgation by the Commission of trade practice rules for the industry under which unfair methods of competition, unfair or deceptive acts or practices, and other trade abuses, may be eliminated and prevented.

By direction of the Commission.

[SEAL] D. C. DANIEL,
Secretary.

[F. R. Doc. 49-4993; Filed, June 21, 1949; 8:52 a. m.]

SECURITIES AND EXCHANGE COMMISSION

[File No. 50-28]

IROQUOIS GAS CORP. AND WANAKAH GAS CORP.

ORDER GRANTING APPLICATION

At a regular session of the Securities and Exchange Commission held at its office in the city of Washington, D. C., on the 15th day of June 1949.

Iroquois Gas Corporation ("Iroquois"), a gas utility subsidiary of National Fuel Gas Corporation, a registered holding company, has filed an application pursuant to Rule U-100 (a) of the general rules and regulations of the Commission promulgated under the Public Utility Holding Company Act of 1935, seeking exemption from the provisions of Rules U-42 and U-43 of the merger into Iroquois of its wholly-owned gas utility subsidiary, Wanakah Gas Corporation ("Wanakah").

It appearing to the Commission that the proposed merger will be consummated, pursuant to the provisions of section 85 of the New York Stock Corporation Law, only after it has been approved by the Public Service Commission of the State of New York which has regulatory jurisdiction, inter alia, over the accounts of both companies and over the proposed acquisition of property; and

It further appearing that the proposed acquisition by Iroquois of the utility assets of Wanakah is, pursuant to the provisions of section 9 (b) (1) of the act, exempt from the provisions of section 9 (a) thereof; and

It further appearing that it is not necessary or appropriate in the public interest or for the protection of investors and consumers that the proposed transaction be subject to the provisions of Rules U-42 and U-43;

It is therefore ordered, Pursuant to Rule U-100 (a), that the proposed merger of Iroquois and Wanakah and the proposed transactions incident thereto be, and the same hereby are, exempted from the provisions of Rules U-42 and U-43 promulgated under the Public Utility Holding Company Act of 1935.

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F. R. Doc. 49-4974; Filed, June 21, 1949; 8:47 a. m.]

[File No. 70-2095]

GENERAL PUBLIC UTILITIES CORP. AND STATEN ISLAND EDISON CORP.

SUPPLEMENTAL ORDER GRANTING AND PERMITTING APPLICATION-DECLARATION TO BECOME EFFECTIVE AND RELEASING JURISDICTION OVER FEES AND EXPENSES

At a regular session of the Securities and Exchange Commission, held at its office in the city of Washington, D. C., on the 16th day of June 1949.

General Public Utilities Corporation ("GPU"), a registered holding company, and its electric utility subsidiary, Staten Island Edison Corporation ("Edison"), having filed a joint application-declaration, with amendments thereto, under the Public Utility Holding Company Act of 1935 with respect to, among other things, the recapitalization of Edison and in the course thereof the issuance and sale by Edison, pursuant to the competitive bidding provisions of Rule U-50, of $2,750,000 principal amount of first mortgage bonds due 1979 and 40,000 shares of preferred stock; and

The Commission having, by order dated May 24, 1949, granted said application and permitted said declaration to become effective, except that the issuance and sale of bonds and preferred stock were not to be consummated until orders of the Public Service Commission of the State of New York authorizing such issuance and sales, and the results of competitive bidding pursuant to Rule U-50, were made a matter of record in this proceeding and a further order issued, for which purpose jurisdiction was reserved; and

Jurisdiction also having been reserved in said order of May 24, 1949, in respect of the utilization of the proposed Unearned Surplus-Special account for certain purposes and in respect of fees and expenses of all counsel incurred in connection with the issuance and sale of securities therein proposed; and

The record heretofore having been completed with respect to the bonds and a further order having been entered by the Commission on June 2, 1949, and the bonds having been issued and sold pursuant to the permission granted in said order; and

Edison having filed a further amendment to the application-declaration in which it is stated that, in accordance with the permission granted by the said order of the Commission dated May 24, 1949, it offered preferred stock for sale pursuant to the competitive bidding requirements of Rule U-50 and received the following bids:

	Dividend rate	Price to company	Cost to company
	Percent		*Percent*
W. C. Langley & Co	4.90	100.30	4.88534
Kidder, Peabody & Co	4.90	100.09	4.89559

Said amendment having further stated that Edison has accepted the bid of W. C. Langley & Company for the preferred stock as set forth above, and that the preferred stock will be offered for sale to the public at a price of $103.25 per share, resulting in an underwriter's spread of $2.95 per share; and

Said amendment also including a copy of the order of the Public Service Commission of the State of New York authorizing the issuance and sale of the preferred stock at the price and dividend rate set forth above; and

Said amendment also including statements of the nature and extent of the legal services rendered by (i) Naylon, Foster & Shepard, as counsel for Edison in connection with its recapitalization and the issuance and sale of the $2,750,000 principal amount of bonds and 40,000 shares of preferred stock for which services a fee of $15,000 is requested and (ii) Beekman & Bogue as counsel for the underwriters of the bonds and preferred stock for which service fees of $3,000 and $4,000, respectively, are requested; and

The Commission having examined said amendment and having considered the record herein and finding that the fees and expenses of all counsel are not unreasonable and that no reason exists for imposing terms and conditions with respect to said matter:

It is ordered, That the application-declaration, as amended, be granted and permitted to become effective forthwith, and that the jurisdiction heretofore reserved over the issuance and sale of the preferred stock with respect to the results of competitive bidding, and order of the Public Service Commission of the State of New York, be, and the same hereby is, released.

It is further ordered, That the jurisdiction heretofore reserved over the fees and expenses of all counsel, be, and the same hereby is released, and that the jurisdiction heretofore reserved over the utilization of the Unearned Surplus—Special account be, and the same hereby is, continued.

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F. R. Doc. 49-4971; Filed, June 21, 1949; 8:46 a. m.]

[File No. 70-2146]

PHILADELPHIA GAS WORKS CO.

ORDER GRANTING APPLICATION

At a regular session of the Securities and Exchange Commission, held at its office in the city of Washington, D. C., on the 15th day of June 1949.

The Philadelphia Gas Works Company ("PGW"), a subsidiary of the United Gas Improvement Company, a registered holding company, having filed an application pursuant to the provisions of section 6 (b) of the Public Utility Holding Company Act of 1935, with respect to the following proposed transactions:

PGW proposes to issue and sell to three banks in the City of Philadelphia 2⅝% promissory notes at their principal amounts as follows, not later than August 31, 1949:

Bank	Notes to be dated on or about	Principal amount of notes and proceeds to be received by company
The Pennsylvania Co. for Banking and Trusts	June 17, 1949 Aug. 15, 1949	$500,000 750,000
The Corn Exchange National Bank & Trust Co.	June 17, 1949 Aug. 15, 1949	312,500 468,750
The First National Bank of Philadelphia	June 17, 1949 Aug. 15, 1949	187,500 281,250
Total		2,500,000

All said notes will be due in equal installments (1/10th of the original principal amount thereof), payable semi-annually beginning on December 1, 1949, and will mature June 1, 1954. Interest will be paid semi-annually upon the un-

paid principal of said notes at the rate of 2⅝% per annum, the first payment of interest to be made on December 1, 1949. PGW will pay, in addition to such interest, a standby charge, payable December 1, 1949, of ¼ of 1% per annum upon the unborrowed portion of the total commitments, calculated from ten days after receiving necessary regulatory authority until the money is actually received from the banks. The said notes may be prepaid at the option of the PGW, in whole or in part, at any time upon ten days' notice, without premium, provided such prepayment is not by means of other borrowing or refinancing, in which event the premium shall be ¼ of 1% per annum of the amount of such prepayments to the maturity date.

PGW operates the Philadelphia Municipal Gas Works under an agreement dated October 5, 1938, as amended by two agreements dated June 31, 1939, between the City of Philadelphia and PGW. PGW proposes to advance the $2,500,000 received from the banks upon the same terms as set forth above, in connection with its operations of the Gas Works, such amount of $2,500,000 to be expended for property additions to the Gas Works in the fiscal year ending August 31, 1949, pursuant to Clause 3 of said agreement dated October 5, 1938, as amended, and the ordinance of the Council of the City of Philadelphia approved by the Mayor of the City of Philadelphia on May 16, 1949.

As permitted by said agreement and ordinance, the amount so advanced with the interest thereon, and standby charges, will be included in the expenses of operations of the Gas Works and will be repaid to PGW by charging the same to the cost of gas in the succeeding years (not exceeding five) as determined by the Gas Commission provided for in said agreement and said advance will in turn be repaid by PGW to the banks.

The issue and sale of the proposed notes was approved by the Pennsylvania Public Utility Commission by order dated June 6, 1949.

Such application having been duly filed and notice of said filing having been duly given in the form and manner prescribed by Rule U-23 promulgated pursuant to said act, and the Commission not having received a request for hearing with respect to said application within the period specified in said notice, or otherwise, and not having ordered a hearing thereon; and

The Commission finding with respect to said application that the requirements of the applicable provisions of the act and rules thereunder are satisfied, and deeming it appropriate in the public interest and in the interest of investors and consumers that the said application be granted:

It is ordered, Pursuant to Rule U-23 and the applicable provisions of said act, that the said application be, and hereby is, granted forthwith subject to the terms and conditions prescribed in Rule U-24.

By the Commission.

[SEAL] ORVAL L. DUBOIS,
Secretary.

[F. R. Doc. 49-4972; Filed, June 21, 1949; 8:46 a. m.]

[File No. 70-2156]

NORTH AMERICAN CO.

ORDER GRANTING APPLICATION

At a regular session of the Securities and Exchange Commission held at its office in the city of Washington, D. C., on the 15th day of June 1949.

The North American Company ("North American"), a registered holding company, has filed an application pursuant to sections 9 and 10 of the Public Utility Holding Company Act of 1935 ("act") relating to the transactions summarized below:

North American proposes to purchase on the New York Stock Exchange such number of shares of the Six Per Cent Preferred Capital Stock, par value $100 per share, of Wisconsin Electric Power Company ("Wisconsin") as it may deem necessary or appropriate for the purpose of stabilizing the market price of such stock during the period commencing at 10:00 a. m., e. d. s. t., on the day fixed for the opening by North American of bids for the purchase of 13,494 shares of such stock, presently owned and to be sold by North American, and ending at the time of acceptance of a bid or the rejection of all bids. It is proposed that any shares which North American may purchase pursuant to the stabilizing program will be sold on the New York Stock Exchange as soon as practicable after the consummation of the sale of the said 13,494 shares.

Appropriate notice pursuant to Rule U-44 (c) with respect to the proposed sale of the 13,494 shares and of any shares acquired as the result of stabilization has been given to the Commission by North American and no filing has been required by the Commission with respect to such sales. North American states that it will report the results of its request for competitive bids and its acceptance of any bid will be subject to the entry by the Commission of a supplemental order, conforming to the requirements of Supplement R and section 1808 (f) of the Internal Revenue Code, as amended.

The application having been filed on May 26, 1949, notice of said filing having been given in the form and manner prescribed by Rule U-23 promulgated pursuant to said act, and the Commission not having received a request for a hearing with respect to said application within the period specified in said notice, or otherwise, and not having ordered a hearing thereon; and

The Commission finding, with respect to the proposal to acquire shares of Six Per Cent Preferred Capital Stock of Wisconsin for the purpose of stabilizing the market price of said stock, that the requirements of the applicable provisions of the act and the rules and regulations promulgated thereunder are satisfied, and that it is not necessary to impose any terms and conditions other than those set forth below, and the Commission deeming it appropriate in the public interest and in the interest of investors and consumers that the said application be granted:

It is ordered, Pursuant to said Rule U-23 and the applicable provisions of the act that said application be, and the same hereby is, granted, to be effective forthwith, subject to the terms and conditions prescribed in Rule U-24.

It is further ordered, That the Commission's order of April 14, 1942, requiring, among other things, that the North American Company sever its relationship with Wisconsin Electric Power Company by disposing of or causing the disposition of, in any appropriate manner not in contravention of the applicable provisions of the act or of the rules and regulations promulgated thereunder, its direct and indirect ownership, control and holding of securities issued and properties owned, controlled or operated by Wisconsin Electric Power Company, shall be deemed to require the disposition of any shares of Six Per Cent Preferred Capital Stock of Wisconsin Electric Power Company acquired by the North American Company as a result of stabilizing the market price of such stock, as authorized herein, with the same force and effect as if said shares had been held by the North American Company as of the date of the said order.

By the Commission.

[SEAL] ORVAL L. DUBOIS,
Secretary.

[F. R. Doc. 49-4975; Filed, June 21, 1949; 8:47 a. m.]

[File No. 70-2163]

HEVI DUTY ELECTRIC CO.

NOTICE OF FILING

At a regular session of the Securities and Exchange Commission, held at its office in the city of Washington, D. C., on the 14th day of June 1949.

Notice is hereby given that a declaration has been filed with this Commission pursuant to the Public Utility Holding Company Act of 1935 ("act") by Hevi Duty Electric Company ("Hevi Duty") a non-utility subsidiary of the North American Company ("North American"), a registered holding company. Hevi Duty has designated sections 6 (a) and 7 of the act as applicable to the proposed transactions.

Notice is further given that any interested person may, not later than June 30, 1949, at 5:30 p. m., e. d. s. t., request the Commission in writing that a hearing be held on such matter, stating the nature of his interest, the reasons for such request and the issues, if any, of fact or law raised by said declaration which he desires to controvert, or may request that he be notified if the Commission should order a hearing thereon. Any such request should be addressed to the Secretary, Securities and Exchange Commission, 425 Second Street NW., Washington 25, D. C. At any time after June 30, 1949, said declaration may be permitted to become effective as provided in Rule U-23 of the rules and regulations promulgated under the act or the Commission may exempt such transactions as provided in Rules U-20 (a) and U-100 thereof.

All interested persons are referred to said declaration, which is on file in the office of the Commission, for a statement

of the transactions therein proposed, which are summarized below.

Hevi Duty is a Wisconsin Corporation engaged solely in Wisconsin in the business of manufacturing electrical equipment. Its authorized and outstanding capital stock consists of 2,500 shares of Preferred Stock, 6% non-cumulative, $100 par value ("Preferred Stock"), held by three public stockholders, and 2,500 shares of Common Stock, without par value, of which 96% is held by North American. Hevi Duty has no funded debt; its current and accrued liabilities as of March 31, 1949, amounted to $235,805.62, including $100,000 in 5% Demand Notes held by North American.

Hevi Duty's Articles of Incorporation provide (1) that before dividends may be declared and paid on the Preferred Stock, Hevi Duty must have provided for the payment of all indebtedness and (2) that any net profits remaining after provision for the payment of indebtedness and the payment of the 6% Preferred Stock dividend are to be applied to redeem the outstanding Preferred Stock. Dividends may be declared and paid on the Common Stock after provision has been made for the payment of indebtedness and all the Preferred Stock has been redeemed.

Hevi Duty proposes to amend its Articles of Incorporation so as to

(1) Reclassify its 2,500 authorized and outstanding shares of Preferred Stock into 2,500 shares of 6% Cumulative Preferred Stock, $100 par value ("Cumulative Preferred Stock");

(2) Eliminate the requirement that net profits be applied (a) to provide for the payment of indebtedness before dividends may be paid on its Preferred Stock and (b) to redeem outstanding Preferred Stock before dividends may be paid on the Common Stock;

(3) Provide that the Cumulative Preferred Stock shall have a liquidation preference which shall amount to and be limited to $100 per share, plus dividends, at the rate of 6% per annum, accrued and unpaid since January 1, 1949;

(4) Add certain provisions, for the protection of the Cumulative Preferred Stock, regarding (a) the authorization or issuance of any shares of senior or parity stock, or of shares of Cumulative Preferred Stock in excess of 2,500, (b) the alteration of the express terms of the Cumulative Preferred Stock in any manner substantially prejudicial to the holders thereof, (c) corporate merger or consolidation, and (d) election of directors by the holders of the Cumulative Preferred Stock in the event of default in dividend payments;

(5) Eliminate Article Sixth thereof, in order to remove any possible ambiguity as to the voting rights of the holders of the Preferred Stock.

Hevi Duty further proposes to assign to the 2,500 shares of its Common Stock, without par value, a stated value of $20 per share. The Common Stock is now carried on Hevi Duty's books in combination with Surplus as a single figure, which at March 31, 1949, amounted to $406,399.34; and in connection with assigning the said stated value to the Common Stock, Hevi Duty proposes to transfer $50,000 from the omnibus Common Stock-Surplus account to Capital Stock account.

When the foregoing transactions have been effected, Hevi Duty further proposes to designate as Surplus the balance remaining in the above-mentioned omnibus Common Stock-Surplus account and to write off certain expired patents by a charge to such Surplus account in the aggregate amount of $306,998.13, representing the carrying value of such patents.

Hevi Duty states that the above-mentioned amendments to its Articles of Incorporation were unanimously approved by its Preferred and Common stockholders at a special meeting thereof, and that the assignment of a stated value of $20 per share to its Common Stock was approved at the same meeting by the holders of the Common Stock.

Hevi Duty requests that the Commission's order authorizing the proposed transactions be issued on July 1, 1949, and that it become effective forthwith.

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F. R. Doc. 49-4973; Filed, June 21, 1949; 8:47 a. m.]

LEWIS ANKENY AND CO.

ORDER REVOKING REGISTRATION AS BROKER AND DEALER

At a regular session of the Securities and Exchange Commission, held at its office in the city of Washington, D. C., on the 14th day of June A. D. 1949.

In the matter of Lewis H. Ankeny doing business as Lewis Ankeny and Company, Medical Dental Building, Klamath Falls, Oregon.

Proceedings having been instituted to determine whether the registration of Lewis H. Ankeny, doing business as Lewis Ankeny and Company, should be revoked pursuant to section 15 (b) of the Securities Exchange Act of 1934;

A hearing having been held after appropriate notice, and the Commission having this day issued its findings and opinion; on the basis of said findings and opinion

It is ordered, That the registration of the said Lewis Ankeny, doing business as Lewis Ankeny and Company, be, and the same hereby is, revoked.

By the Commission.

[SEAL] ORVAL L. DUBOIS, *Secretary.*

[F. R. Doc. 49-4976; Filed, June 21, 1949; 8:47 a. m.]

DEPARTMENT OF JUSTICE

Office of Alien Property

AUTHORITY: 40 Stat. 411, 55 Stat. 839, Pub. Laws 322, 671, 79th Cong., 60 Stat. 50, 925; 50 U. S. C. and Supp. App. 1, 616; E. O. 9193, July 6, 1942, 3 CFR, Cum. Supp., E. O. 9567, June 8, 1945, 3 CFR, 1945 Supp., E. O. 9788, Oct. 14, 1946, 11 F. R. 11981.

[Vesting Order 13353]

MARGARETHA BOYLE

In re: Stock and certificates of indebtedness owned by and debts owing to Margaretha Boyle. F-28-8475-A-1.

Under the authority of the Trading With the Enemy Act, as amended, Executive Order 9193, as amended, and Executive Order 9788, and pursuant to law, after investigation, it is hereby found:

1. That Margaretha Boyle, whose last known address is Markplatz, 135 Dettelbach-au-Main, Berjern, Germany, is a resident of Germany and a national of a designated enemy country (Germany);

2. That the property described as follows:

a. Ten (10) shares of $50 par value 7% Regular Guaranteed capital stock of Cleveland & Pittsburgh Railroad Company, National City Bank Building, Cleveland, Ohio, a corporation organized under the laws of the State of Ohio, evidenced by a certificate numbered B 14041, registered in the name of Steere & Co., and presently in the custody of Girard Trust Company, Broad and Chestnut Streets, Philadelphia 2, Pennsylvania, in an agency account entitled "Margaretha Boyle," Number 7954, together with all declared and unpaid dividends thereon,

b. Nine (9) shares of $100 par value 7% cumulative preferred capital stock of Christiana Securities Company, du Pont Building, Wilmington, Delaware, a corporation organized under the laws of the State of Delaware, evidenced by a certificate numbered P 4474, registered in the name of Steere & Co., and presently in the custody of Girard Trust Company, Broad and Chestnut Streets, Philadelphia 2, Pennsylvania, in an agency account entitled "Margaretha Boyle," Number 7954, together with all declared and unpaid dividends thereon,

c. United States of America 1⅛% Certificate or Certificates of Indebtedness, Series E, due June 1, 1949, of $1,000 aggregate face value, presently in the custody of Girard Trust Company, Broad and Chestnut Streets, Philadelphia 2, Pennsylvania, in an agency account entitled "Margaretha Boyle," Number 7954, together with any and all rights thereunder and thereto,

d. United States of America 1¼% Certificate or Certificates of Indebtedness, Series A, due January 1, 1950, of $1,000 aggregate face value, presently in the custody of Girard Trust Company, Broad and Chestnut Streets, Philadelphia 2, Pennsylvania, in an agency account entitled "Margaretha Boyle," Number 7954, together with any and all rights thereunder and thereto,

e. United States of America 1⅜% Taxable Treasury note or notes, Series A, due April 1, 1950, of $2,000 aggregate face value, presently in the custody of Girard Trust Company, Broad and Chestnut Streets, Philadelphia 2, Pennsylvania, in an agency account entitled "Margaretha Boyle," Number 7954, together with any and all rights thereunder and thereto,

f. That certain debt or other obligation owing to Margaretha Boyle, by Gi-

rard Trust Company, Broad and Chestnut Streets, Philadelphia 2, Pennsylvania, arising out of an uninvested principal cash balance, in an agency account entitled "Margaretha Boyle," Number 7954, together with any and all accruals thereto and any and all rights to demand, enforce and collect the same, and

g. That certain debt or other obligation owing to Margaretha Boyle, by Girard Trust Company, Broad and Chestnut Streets, Philadelphia 2, Pennsylvania, arising out of an undistributed income cash balance, in an agency account entitled "Margaretha Boyle," Number 7954, together with any and all accruals thereto and any and all rights to demand, enforce and collect the same,

is property within the United States owned or controlled by, payable or deliverable to, held on behalf of or on account of, or owing to, or which is evidence of ownership or control by, Margaretha Boyle, the aforesaid national of a designated enemy country (Germany);

and it is hereby determined:

3. That to the extent that the person named in subparagraph 1 hereof is not within a designated enemy country, the national interest of the United States requires that such person be treated as a national of a designated enemy country (Germany);

All determinations and all action required by law, including appropriate consultation and certification, having been made and taken, and, it being deemed necessary in the national interest,

There is hereby vested in the Attorney General of the United States the property described above, to be held, used, administered, liquidated, sold or otherwise dealt with in the interest of and for the benefit of the United States.

The terms "national" and "designated enemy country" as used herein shall have the meanings prescribed in section 10 of Executive Order 9193, as amended.

Executed at Washington, D. C., on June 1, 1949.

For the Attorney General.

[SEAL] DAVID L. BAZELON,
Assistant Attorney General,
Director, Office of Alien Property.

[F. R. Doc. 49-4990; Filed, June 21, 1949; 8:51 a. m.]

[Vesting Order 11090, Amdt.]

HANS BENDER

In re: Stock and a bank account owned by Hans Bender.

Vesting Order 11090, dated April 15, 1948, is hereby amended as follows and not otherwise:

a. By deleting from Exhibit A attached to and by reference made a part of the aforesaid Vesting Order 11090 the certificate number No. 32903 set forth with respect to ten (10) shares $20.00 par value capital stock of Container Corporation of America, 111 West Washington Street, Chicago, Illinois and substituting therefor certificate number NC/0329, and

b. By adding to the aforesaid Vesting Order 11090 after subparagraph 2 (b) a new subparagraph numbered 2 (c) and reading as follows:

(c) One (1) Segal Lock & Hardware Co., Inc. subscription warrant for 100 rights for $100.00 15 year 6% Convertible Sinking Fund Debenture due May 1, 1963 of the aforesaid Company, said warrant bearing the number 6149, registered in the name of C. A. England & Co., c/o Chemical Bank & Trust Company, 165 Broadway, New York, New York, together with any and all rights thereunder and thereto,

All other provisions of said Vesting Order 11090 and all actions taken by or on behalf of the Attorney General of the United States in reliance thereon, pursuant thereto and under the authority thereof are hereby ratified and confirmed.

Executed at Washington, D. C., on June 14, 1949.

For the Attorney General.

[SEAL] DAVID L. BAZELON,
Assistant Attorney General,
Director, Office of Alien Property.

[F. R. Doc. 49-4991; Filed, June 21, 1949; 8:52 a. m.]