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Title 39—POSTAL SERVICE

Chapter I—Post Office Department

MISCELLANEOUS AMENDMENTS

The following amendments are made to Chapter I of Title 39:

PART 16—SECOND CLASS BULK MAILINGS

I. In § 16.3 *Mailing*, make the following changes:

1. In paragraph (d)(3) amend the label form to read as follows:

PHILADELPHIA, PA., 191
Fr. Progress, Boston, Mass., 021

2. In paragraph (d)(4) amend the label form to read as follows:

DENVER, COLO. TERM. ANNEX, 802
KANSAS
Fr. The Star, Fresno, Calif., 937

3. In paragraph (d)(5) amend the example to read as follows:

CHICAGO, ILL. DIS., 606
MIXED STATES
Fr. Fair, Chicago, Ill., 606

4. Amend paragraph (d)(8) to read as follows:

(8) *Unauthorized labels.* Sacks with unauthorized labels, tags, or markings are not acceptable for dispatch.

5. In paragraph (e)(3) amend the label form appearing under the parenthetical instructions to read as follows:

PCC SAN FRANCISCO, CALIF., 962
APO 165
Fr. The Recorder, New York, N.Y., 100

6. In paragraph (e)(4) amend the label form appearing under the parenthetical instructions to read as follows:

PCC NEW YORK, N.Y., 110
APO Mail
Fr. The Recorder, New York, N.Y., 100

NOTE: The corresponding Postal Manual sections are 126.34 and 126.35.

II. In § 16.4 *Newspaper treatment*, make the following changes in paragraph (b):

(1) Amend the label in subparagraph (1) to read as follows:

CINCINNATI, OHIO, 452
Newspapers Via Pitts and St Lou Train, 77
Fr The Register, Columbus, Ohio, 432

1. Amend the label in subparagraph (2) to read as follows:

PITTS & ST LOU TR, 32
Pa. Newspapers
Fr The Register, Columbus, Ohio, 432

NOTE: The corresponding Postal Manual section is 126.42.

(R.S. 161, as amended; 5 U.S.C. 22, 39 U.S.C. 501, 4351–4370, 4421, 4422)

PART 22—SECOND CLASS

In § 22.2 *Qualifications for second-class privileges*, 29 F.R. 563, amend paragraph (e)(6) to read as follows:

(6) Name of known office of publication, including ZIP code, and street and number when there is letter-carrier service, must be printed in a position or in a style and size of type or with a designation that will make it clearly distinguishable from the names of other offices of the publication. When there is no post office at the place where published, the name of the post office where mailed must be shown as the office of publication. Addresses in mastheads and date lines must be printed so they will clearly show where change of address notices, undeliverable copies, orders for subscriptions, and other mail items are to be sent. See § 16.2(f) of this chapter.

NOTE: The corresponding Postal Manual section is 132.25f.

(R.S. 161, as amended; 5 U.S.C. 22, 39 U.S.C. 501, 4351–4370)

PART 24—THIRD CLASS

In § 24.4 *Preparation—payment of postage*, make the following changes:

1. Subdivision (i) of paragraph (b)(5) is amended to read as follows:

(i) *Direct package.* When there are 10 or more pieces for any one post office (or station or branch if its name forms part of the address), all addresses must be faced one way except the last which must be reversed to expose its address on the outside of the package. Direct packages should not be labeled except when separations are made to delivery zones within a city. Each package containing mail for a single delivery unit should be labeled to show the name of the post office and should be marked *All for ZIP Code No.* _____. The name of the post office may be omitted from the label of ZIP Code direct packages when the mailer includes all such packages in direct sacks. See subparagraph (6) of this paragraph.

2. In paragraph (b)(6) make the following changes:

a. In subdivision (i) amend the label to read as follows:

PHILADELPHIA, PA., 191
CIRCS.
Fr. Jay Mailing Co., Cincinnati, Ohio, 452

b. In subdivision (ii)(*a*) amend the label to read as follows:

COUNCIL BLUFFS, IOWA TERM, 515
Calif. CIRCS. Direct
Fr. D.C. Mailers, Washington, D.C., 200

c. In subdivision (ii)(*b*) amend the label to read as follows:

OGDEN, UTAH TERM, 843
CALIF. CIRCS.
Fr. D.C. Mailers, Washington, D.C., 200

d. Subdivision (v) is amended to read as follows:

(v) *Unauthorized labels.* Sacks with unauthorized labels, tags, or markings are not acceptable for dispatch.

NOTE: The corresponding Postal Manual sections are 134.425 and 134.426.

(R.S. 161, as amended; 5 U.S.C. 22, 39 U.S.C. 501, 4451–4453)

PART 61—MONEY ORDERS

In § 61.2 *Issuance of international money orders*, make the following changes:

1. Amend paragraph (b)(2) to read as follows:

(2) Purchasers must complete Form 6083, *Supplemental International Money Order Advice*, written in the foreign language, if possible, when they send money orders payable in Greece, Lebanon, Syria, Yugoslavia, and Japan.

2. In paragraph (h) make the following changes:

a. In the listing of foreign countries add footnote number 2 to Japan, Lebanon, Greece, and Yugoslavia.

b. Strike out the present text of footnote 2, and insert in lieu thereof the following:

[2] Money orders to be accompanied by Form 6083, *Supplemental International Money Order Advice*. See paragraph (d)(2)(iii) of this section.

NOTE: The corresponding Postal Manual sections are 171.222 and 171.28.

(R.S. 161, as amended; 5 U.S.C. 22, 39 U.S.C. 501, 506, 507, 5101–5105)

LOUIS J. DOYLE,
General Counsel.

[F.R. Doc. 64–12344; Filed, Dec. 2, 1964; 8:47 a.m.]

Title 49—TRANSPORTATION

Chapter I—Interstate Commerce Commission

SUBCHAPTER B—CARRIER BY MOTOR VEHICLE

[Ex Parte MC–19]

PART 176—TRANSPORTATION OF HOUSEHOLD GOODS IN INTERSTATE OR FOREIGN COMMERCE

Motor Common Carriers of Household Goods; Postponement of Effective Date

Upon consideration of the record in the above-entitled proceeding; and good cause appearing therefor:

It is ordered, That the effective date of the order of May 6, 1964 (29 F.R. 7390, 9711, and 14173), in said proceeding be, and it is hereby, postponed to December 30, 1964.

Dated at Washington, D.C., this 20th day of November A.D. 1964.

By the Commission.

[SEAL] HAROLD D. MCCOY,
Secretary.

[F.R. Doc. 64–12370; Filed, Dec. 2, 1964; 8:49 a.m.]

Title 41—PUBLIC CONTRACTS AND PROPERTY MANAGEMENT

Chapter 101—Federal Property Management Regulations

SUBCHAPTER H—UTILIZATION AND DISPOSAL

PART 101–47—UTILIZATION AND DISPOSAL OF REAL PROPERTY

A new Part 101–47 is added to Chapter 101 of Title 41 of the Code of Federal Regulations, reading as follows:

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101–47.000 Scope of part.

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101–47.101 Applicability.
101–47.102 [Reserved.]
101–47.103 Definitions.
101–47.103–1 Act.
101–47.103–2 GSA.
101–47.103–3 Airport.
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101–47.103–5 Decontamination.
101–47.103–6 Disposal agency.
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101–47.103–8 Industrial property.
101–47.103–9 Landing area.
101–47.103–10 Management.
101–47.103–11 Protection.
101–47.103–12 Real property.
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101–47.103–14 Other terms defined in the Act.
101–47.103–15 Other terms.

Subpart 101–47.2—Utilization of Excess Real Property

101–47.200 Scope of subpart.
101–47.201 General provisions of subpart.
101–47.201–1 Policy.
101–47.201–2 Policy guidelines.
101–47.201–3 Lands withdrawn or reserved from the public domain.
101–47.201–4 Transfers under other laws.
101–47.202 Reporting of excess real property.
101–47.202–1 Reporting requirements.
101–47.202–2 Report forms.
101–47.202–3 Submission of reports.
101–47.202–4 Exceptions to reporting.
101–47.202–5 Reporting after submissions to the Congress.
101–47.202–6 Reports involving the public domain.
101–47.202–7 Reports involving contaminated property.
101–47.202–8 Notice of receipt.
101–47.202–9 Expense of care and handling.
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101–47.204–1 Reported property.
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101–47.301 General provisions of subpart.
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101–47.301–2 Applicability of antitrust laws.
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101–47.4902–3 Standard Form 118c, Related Personal Property.
101–47.4902–4 Instructions for the preparation of Standard Form 118, and Attachments, Standard Forms 118a, 118b, and 118c.

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101–47.4904–1	Instructions for preparation of GSA Form 1334, Request for Transfer of Excess Real Property and Related Personal Property.
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101–47.4906–1	Sample letter for transmission of notice of surplus determination.
101–47.4907	List of Federal real property holding agencies.
101–47.4908	Bureau of the Budget Circular No. A–2.
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101–47.4910	Field offices of Department of Health, Education, and Welfare to receive notices of availability.
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101–47.4912	Field offices of Department of the Interior, Bureau of Outdoor Recreation.
101–47.4913	Outline for protection and maintenance of excess and surplus real property.

AUTHORITY: The provisions of this Part 101–47 issued under sec. 205(c), 63 Stat. 390; 40 U.S.C. 486(c).

§ 101–47.000 Scope of part.

This part prescribes the policies and methods governing the utilization and disposal of excess and surplus real property and related personal property within the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and the Virgin Islands.

Subpart 101–47.1—General Provisions

§ 101–47.100 Scope of subpart.

This subpart sets forth the applicability of this Part 101–47, and other introductory information.

§ 101–47.101 Applicability.

The provisions of this Part 101–47 apply to all Federal agencies, except as may otherwise be specifically provided under each section or subpart.

§ 101–47.102 [Reserved]

§ 101–47.103 Definitions.

As used throughout this Part 101–47, the following terms shall have the meanings as set forth in this Subpart 101–47.1.

§ 101–47.103–1 Act.

The Federal Property and Administrative Services Act of 1949, 63 Stat. 377, as amended.

§ 101–47.103–2 GSA.

The General Services Administration, acting by or through the Administrator of General Services, or a designated official to whom functions under this Part 101–47 have been delegated by the Administrator of General Services.

§ 101–47.103–3 Airport.

Any area of land or water which is used, or intended for use, for the landing and takeoff of aircraft, and any appurtenant areas which are used, or intended for use, for airport buildings or other airport facilities or rights-of-way, together with all airport buildings and facilities located thereon.

§ 101–47.103–4 Chapel.

Any Government-owned building and improvements, including surplus fixtures or furnishings therein, related or essential to the religious activities and services for which the building is to be used and maintained, was designed for and used, or was intended to be used.

§ 101–47.103–5 Decontamination.

The complete removal or destruction by flashing of explosive powders; the neutralizing and cleaning-out of acid and corrosive materials; the removal, destruction, or neutralizing of toxic or infectious substances; and the complete removal and destruction by burning or detonation of live ammunition from contaminated areas and buildings.

§ 101–47.103–6 Disposal agency.

The executive agency designated by the Administrator of General Services to dispose of surplus real property.

§ 101–47.103–7 Holding agency.

The Federal agency which has accountability for the property involved.

§ 101–47.103–8 Industrial property.

Any real property and related personal property which has been used or which is suitable to be used for manufacturing, fabricating, or processing of products; mining operations; construction or repair of ships and other waterborne carriers; power transmission facilities; railroad facilities; and pipeline facilities for transporting petroleum or gas.

§ 101–47.103–9 Landing area.

Any land or combination of water and land, together with improvements thereon and necessary operational equipment used in connection therewith, which is used for landing, takeoff, and parking of aircraft. The term includes, but is not limited to, runways, strips, taxiways, and parking aprons.

§ 101–47.103–10 Management.

The safeguarding of the Government's interest in property, in an efficient and economical manner consistent with the best business practices.

§ 101–47.103–11 Protection.

The provisions of adequate measures for prevention and extinguishment of fires, special inspections to determine and eliminate fire and other hazards, and necessary guards to protect property against thievery, vandalism, and unauthorized entry.

§ 101–47.103–12 Real property.

(a) Any interest in land (including improvements of any kind, structures, and fixtures located on the premises), and appurtenances thereto, under the control of any Federal agency, except:

(1) The public domain;

(2) Lands reserved or dedicated for national forest or national park purposes;

(3) Minerals in lands or portions of lands withdrawn or reserved from the public domain which the Secretary of the Interior determines are suitable for disposition under the public land mining and mineral leasing laws;

(4) Lands withdrawn or reserved from the public domain but not including lands or portions of lands so withdrawn or reserved which the Secretary of the Interior, with the concurrence of the Administrator of General Services, determines are not suitable for return to the public domain for disposition under the general public land laws because such lands are substantially changed in character by improvements or otherwise; and

(5) Crops, gravel, sand, stone, and timber when designated by such agency for removal from the land.

(b) Improvements of any kind, structures, and fixtures under the control of any Federal agency when designated by such agency for disposition without the underlying land (including such as may be located on the public domain, or lands withdrawn or reserved from the public domain, or lands reserved or dedicated for national forest or national park purposes, or on lands that are not owned by the United States) excluding, however, prefabricated movable structures, such as Butler-type storage warehouses and quonset huts, and house-trailers (with or without undercarriages).

§ 101–47.103–13 Related personal property.

Any personal property:

(a) Which is located on, or is an integral part of, real property, or used or useful in connection with such property or the productive capacity thereof; or

(b) Determined by the Administrator of General Services to be otherwise related to the real property.

§ 101–47.103–14 Other terms defined in the Act.

Other terms which are defined in the Act shall have the meanings given them by such Act.

§ 101–47.103–15 Other terms.

Other terms not applicable throughout this part are defined in the sections or subparts to which they apply.

Subpart 101–47.2—Utilization of Excess Real Property

§ 101–47.200 Scope of subpart.

This subpart prescribes the policies and methods governing the reporting by executive agencies and utilization by Federal agencies of excess real property, including related personal property, within the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and the Virgin Islands. This subpart does not apply to the abandonment, destruction, or donation to public bodies, under section 202(h) of the Act (covered by Subpart 101–47.5).

§ 101–47.201 General provisions of subpart.

§ 101–47.201–1 Policy.

It is the policy of the Administrator of General Services:

(a) To stimulate the identification and reporting by executive agencies of excess real property consistent with the objective expressed in the Bureau of the Budget Circular No. A–2 (see § 101–47.4908).

(b) To achieve the maximum utilization by executive agencies, in terms of economy and efficiency, of excess real property in order to minimize expenditures for the purchase of real property.

(c) To provide for the transfer of excess real property among Federal agencies, to mixed-ownership Government corporations, and to the municipal government of the District of Columbia.

§ 101–47.201–2 Policy guidelines.

(a) Each executive agency shall:

(1) Continuously survey real property under its control (including property assigned on a permit basis to other Federal agencies, or outleased to States, local governments, other public bodies, or private interests) to determine that which is excess property;

(2) Maintain its inventory of real property at the absolute minimum consistent with economical and efficient conduct of the affairs of the agency; and

(3) Promptly report to GSA real property which it has determined to be excess.

(b) Each executive agency shall, so far as practicable, pursuant to the provisions of this subpart, fulfill its needs for real property by utilization of excess real property.

(c) To preclude the acquisition by purchase of real property, when excess or surplus property of another Federal agency may be available which would meet the need, each executive agency shall notify GSA of its needs and ascertain whether any such property is available.

(d) In every case of a proposed transfer of excess real property, the paramount consideration shall be the validity and appropriateness of the requirement upon which the proposal is based.

(1) A proposed transfer should not establish a new program of an executive agency which has never been reflected in any previous budget submission or congressional action; nor should it substantially increase the level of an agency's existing programs beyond that which has been contemplated in the President's budget or by the Congress.

(2) Before requesting a transfer of excess real property, an executive agency should:

(i) Screen the holdings of the bureaus, or other organizations, within the agency to determine whether any property under the control of the agency, which is not being utilized, in whole or in part, might be available for the proposed need; and

(ii) Review all real property under its accountability which it has assigned on a permit basis to other Federal agencies, or outleased to States, local governments, other public bodies, or private interests and terminate the permit or lease for any property, or portion thereof, that is suitable for the proposed need whenever such termination is not prohibited by the terms of the permit or lease.

(3) Property found to be available under § 101–47.201–2(d)(2) (i) or (ii), should be utilized for the proposed need in lieu of requesting a transfer of excess real property. Reassignments of such property within the agency should be made in appropriate cases.

(4) The appraised fair market value of the excess real property proposed for transfer should not substantially exceed the probable purchase price of other real property which would be suitable for the intended purpose.

(5) The size and quantity of excess real property to be transferred should be limited to the actual requirements. Other portions of an excess installation which can be separated should be withheld from transfer and made available for disposal to other agencies or to the public.

(6) Consideration should be given to the design, layout, geographic location, age, state of repair, and expected maintenance costs of excess real property proposed for transfer. It should be clearly demonstrated that the transfer will prove more economical over a sustained period of time than acquisition of a new facility specifically planned for the purpose.

(7) Excess real property should not be permanently transferred to agencies for programs which appear to be scheduled for substantial curtailment or termination. In such cases, the property may be temporarily transferred on a conditional basis, with an understanding that the property will be released for further Federal utilization or disposal as surplus property, at a time agreed upon when the transfer is arranged (see § 101-47.-203-8).

(e) Excess real property of a type which may be used for office, storage, and related purposes normally will be assigned by, or at the direction of, GSA for use to the requesting agency in lieu of being transferred to the agency.

(f) Federal agencies which normally do not require real property, other than for office, storage, and related purposes, or which may not have statutory authority to acquire such property, may obtain the use of excess real property for an approved program when authorized by GSA.

§ 101-47.201-3 Lands withdrawn or reserved from the public domain.

(a) Agencies holding lands withdrawn or reserved from the public domain, which they no longer need, shall send to the GSA regional office for the region in which the lands are located an information copy of each notice of intention to relinquish filed with the Department of the Interior (43 CFR 2312.0-1, et seq.).

(b) Section 101-47.202-6 prescribes the procedure for reporting to GSA as excess property, certain lands or portions of lands withdrawn or reserved from the public domain for which such notices have been filed with the Department of the Interior.

§ 101-47.201-4 Transfers under other laws.

Pursuant to section 602(c) of the Act, transfers of real property shall not be made under other laws, but shall be made only in strict accordance with the provisions of this subpart unless the Administrator of General Services, upon written application by the disposal agency, shall determine in each case that the provisions of any such other law, pursuant to which a transfer is proposed to be made, are not inconsistent with the authority conferred by this Act. The provisions of this section shall not apply to transfers of real property authorized to be made by section 602(d) of the Act or by any special statute which directs or requires an executive agency named therein to transfer or convey specifically described real property in accordance with the provisions of such statute.

§ 101-47.202 Reporting of excess real property.

§ 101-47.202-1 Reporting requirements.

Each executive agency shall report to GSA, pursuant to the provisions of this section, all excess real property except as provided in § 101-47.202-4. Reports of excess real property shall be based on the agency's official real property records and accounts.

(a) All excess related personal property shall be reported as a part of the same report covering the excess real property.

(b) Upon request of the Administrator of General Services, executive agencies shall institute specific surveys to determine that portion of real property, including unimproved property, under their control which might be excess and suitable for office, storage, and related facilities, and shall report promptly to the Administrator of General Services as soon as each survey is completed.

§ 101-47.202-2 Report forms.

Reports of excess real property and related personal property shall be prepared on Standard Form 118, Report of Excess Real Property (see § 101-47.4902), and accompanying Standard Form 118a, Buildings Structures, Utilities, and Miscellaneous Facilities, Schedule A (§ 101-47.4902-1); Standard Form 118b, Land, Schedule B (see § 101-47.4902-2); and Standard Form 118c, Related Personal Property, Schedule C (see § 101-47.4902-3). Instructions for the preparation of Standard Forms 118, 118a, 118b, and 118c are set forth in § 101-47.4902-4.

(a) Property for which the holding agency is designated as the disposal agency under the provisions of § 101-47.302-2 and which is required to be reported to GSA under the provisions of this section shall be reported on Standard Form 118, without the accompanying Schedules A, B, and C, unless the holding agency requests GSA to act as disposal agency and a statement to that effect is inserted in Block 18, Remarks, of Standard Form 118.

(b) In all cases where Government-owned land is reported, there shall be attached to and made a part of Standard Form 118 (original and copies thereof) a report prepared by a qualified employee of the holding agency on the Government's title to the property based upon his review of the records of the agency. The report shall recite:

(1) The description of the property.

(2) The date title vested in the United States.

(3) All exceptions, reservations, conditions, and restrictions, relating to the title acquired.

(4) Detailed information concerning any action, thing, or circumstance that occurred from the date of the acquisition of the property by the United States to the date of the report which in any way affected or may have affected the right, title, and interest of the United States in and to the real property (together with copies of such legal comments or opinions as may be contained in the file concerning the manner in which and the extent to which such right, title, or interest may have been affected). In the absence of any such action, thing, or circumstance, a statement to that effect shall be made a part of the report.

(5) The status of civil and criminal jurisdiction over the land that is peculiar to the property by reason of it being Government-owned land. In the absence of any special circumstances, a statement to that effect shall be made a part of the report.

(c) There shall be transmitted with Standard Form 118:

(1) A legible, reproducible copy of all instruments in possession of the agency which affect the right, title, or interest of the United States in the property reported or the use and operation of such property (including agreements covering and licenses to use, any patents, processes, techniques, or inventions). In cases where the agency considers it to be impracticable to transmit the abstracts of title and related title evidence, such documents need not be transmitted; however, the name and address of the custodian of such documents shall be stated in the title report referred to in § 101-47.202-2(b) and they shall be furnished if requested by GSA; and

(2) Any appraisal reports in the possession of the holding agency of the fair market value or the fair annual rental of the property reported.

§ 101-47.202-3 Submission of reports.

Reports of excess shall be filed with the regional office of GSA for the region in which the excess property is located, as follows:

(a) Government-owned real property and related personal property shall be reported by the holding agencies 90-calendar days in advance of the date such excess property shall become available for transfer to another Federal agency or for disposal. Where the circumstances will not permit excess real property and related personal property to be reported a full 90-calendar days in advance of the date it will be available, the report shall be made as far in advance of such date as possible.

(b) Leasehold interests in real property determined to be excess shall be reported at least 60-calendar days prior to the date on which notice of termination or cancellation is required by the terms of the instrument under which the property is occupied.

(c) All reports submitted by the Department of Defense shall bear the certification "This property has been screened against the known needs of the Department of Defense." All reports submitted by civilian agencies shall bear the certification "This property has been screened against the known needs of the holding agency."

§ 101–47.202–4 Exceptions to reporting.

(a) A holding agency shall not report to GSA leased space assigned to the agency by GSA and determined by the agency to be excess.

(b) Also, except for those instances set forth in § 101–47.202–4(c) a holding agency shall not report to GSA property used, occupied, or controlled by the Government under a lease, permit, license, easement, or similar instrument when:

(1) The lease or other instrument is subject to termination by the grantor or owner of the premises within nine months;

(2) The remaining term of the lease or other instrument, including renewal rights, will provide for less than nine months of use and occupancy;

(3) The term of the lease or other instrument would preclude transfer to, or use by, another Federal agency or disposal to a third party; or

(4) The lease or other instrument provides for use and occupancy of space for office, storage, and related facilities, which does not exceed a total of 2,500 sq. feet.

(c) Property, which otherwise would not be reported because it falls within the exceptions set forth in § 101–47.202–4 (b) shall be reported:

(1) If there are Government-owned improvements located on the premises; or

(2) If the continued use, occupancy, or control of the property by the Government is needful for the operation, production, or maintenance of other property owned or controlled by the Government that has been reported excess or is required to be reported to GSA under the provisions of this section.

§ 101–47.202–5 Reporting after submissions to the Congress.

Reports of excess covering property of the military departments and of the Office of Emergency Planning prepared after the expiration of 30 days from the date upon which a report of the facts concerning the reporting of such property was submitted to the Committees on Armed Services of the Senate and House of Representatives, 10 U.S.C. 2662 and the Act of August 10, 1956, 70A Stat. 636, as amended (50 U.S.C. App. 2285), shall contain a statement that the requirements of the statute have been met.

§ 101–47.202–6 Reports involving the public domain.

(a) Agencies holding land withdrawn or reserved from the public domain which they no longer need, shall report on Standard Form 118, with appropriate Schedules A, B, and C, land or portions of land so withdrawn or reserved and the improvements thereon, if any, to the regional office of GSA for the region in which the lands are located when the agency has:

(1) Filed a notice of intention to relinquish with the Department of the Interior and sent a copy of the notice to the regional office of GSA (§ 101–47.201–3);

(2) Been notified by the Department of the Interior that the Secretary of the Interior, with the concurrence of the Administrator of General Services, has determined the lands are not suitable for return to the public domain for disposition under the general public land laws because the lands are substantially changed in character by improvements or otherwise; and

(3) Obtained from the Department of the Interior a report as to whether any agency (other than the holding agency) claims primary, joint, or secondary jurisdiction over the lands and whether the Department's records show the lands to be encumbered with any existing valid rights or privileges under the public land laws.

(b) Should the Department of the Interior determine that minerals in the lands are not suitable for disposition under the public land mining and mineral leasing laws, the Department will notify the appropriate regional office of GSA of such determination and will authorize the holding agency to include the minerals in its report to GSA.

(c) When reporting the property to GSA, a true copy of the notification (§ 101–47.202–6(a)(2)) and report (§ 101–47.202–6(a)(3)) shall be submitted as a part of the holding agency's report on the Government's legal title which shall accompany Standard Form 118.

§ 101–47.202–7 Reports involving contaminated property.

Any report of excess covering property which in its present condition is dangerous or hazardous to health and safety, shall state the extent of such contamination, the plans for decontamination, and the extent to which the property may be used without further decontamination.

§ 101–47.202–8 Notice of receipt.

GSA shall promptly notify the holding agency of the date of receipt of each Report of Excess Real Property (Standard Form 118).

§ 101–47.202–9 Expense of care and handling.

In each case where the provisions of § 101–47.402–2 relating to the expense of physical care, handling, protection, maintenance, and repairs are applicable to the property reported, the notice provided in § 101–47.202–8 shall also inform the holding agency that the provisions of § 101–47.402–2 became effective as of the date of the receipt of the report.

§ 101–47.202–10 Examination for acceptability.

Each report of excess shall be reviewed by GSA to ascertain whether the report was prepared in accordance with the provisions of this section. Within fifteen calendar days after receipt of a report, the holding agency shall be informed by letter of the findings of GSA.

(a) Where it is found that a report is adequate to the extent that GSA can proceed with utilization and disposal actions for the property, the report shall be accepted and the holding agency shall be informed of the date of such acceptance. However, the holding agency shall, upon request, promptly furnish such additional information or documents relating to the property as may be required by GSA to accomplish a transfer or a disposal.

(b) Where it is found that a report is insufficient to the extent that GSA would be unable to proceed with any utilization or disposal actions for the property, the report shall be returned and the holding agency shall be informed of the facts and circumstances that required the return of the report. The holding agency promptly shall take such action as may be appropriate to submit an acceptable report to GSA. Should the holding agency be unable to submit an acceptable report, the property shall be removed from under the provisions of § 101–47.402–2.

§ 101–47.203 Utilization.

§ 101–47.203–1 Reassignment of real property by the agencies.

Each executive agency shall, as far as practicable and within the policies expressed in this Subpart 101–47.2 and in Bureau of the Budget Circular No. A–2 (see § 101–47.4908), make reassignments of real property and related personal property under its control and jurisdiction among activities within the agency in lieu of acquiring such property from other sources.

§ 101–47.203–2 Transfer and utilization.

Each executive agency shall, as far as practicable and within the policies expressed in this Subpart 101–47.2 and in Bureau of the Budget Circular No. A–2, transfer excess real property under its control to other Federal agencies and to the organizations specified in § 101–47.203–7, and fulfill its requirements for real property by obtaining excess real property from other Federal agencies. Transfers of property shall be made in accordance with the provisions of this subpart.

§ 101–47.203–3 Notification of agency requirements.

Each executive agency shall notify the proper GSA regional office, in writing, whenever real property is needed for an authorized program of the agency. The notice shall state the land area of the property needed, the preferred location or suitable alternate locations, and describe the type of property needed in sufficient detail to enable GSA to review its records of property that it knows will be reported excess by holding agencies, its inventory of excess property, and its inventory of surplus property, to ascertain whether any such property may be suitable for the needs of the agency. The agency shall be promptly informed by the GSA regional office as to whether or not any such property is available.

§ 101–47.203–4 Real property excepted from reporting.

Agencies having transferable excess real property and related personal property in the categories excepted from reporting by § 101–47.202–4 shall, before disposal, satisfy themselves in a manner consistent with the provisions of this section that such property is not needed by other Government agencies.

§ 101–47.203–5 Screening of excess real property.

Excess real property and related personal property reported by executive agencies shall, unless such screening is waived, be screened by GSA for utilization by Federal real property holding agencies (listed in § 101–47.4907), which may reasonably be expected to have use for the property as follows:

(a) Notices of availability shall be submitted to each such agency which shall, within 30 days from the date of notice, advise GSA if there is a firm requirement or a tentative requirement for the property.

(1) In the event a tentative requirement exists, the agency shall, within an additional 30 days, advise GSA if there is a firm requirement.

(2) Within 60 days after advice to GSA that a firm requirement exists, the agency shall furnish GSA a request for transfer of the property pursuant to § 101–47.203–7.

(b) Notices of availability for information of the Secretary of Health, Education, and Welfare in connection with the exercise of the authority vested in him under the provisions of section 203 (k)(1) of the Act and for information of the Secretary of the Interior in connection with a possible determination under the provisions of section 13(h) of the Surplus Property Act of 1944 (50 U.S.C. App. 1622(h)), shall be sent to the offices designated by the Secretaries to serve the areas in which the properties are located. (See §§ 101–47.4912 and 101–47.4914.) With the prior consent of GSA, on a case-by-case basis, the Department of Health, Education, and Welfare may initiate screening for potential educational or public health applicants for property described in any such notice, or with such consent may develop a known potential educational or public health need, conditioned upon the property being determined surplus to Federal requirements and available for assignment to the Secretary for disposal for educational or public health purposes in the event it is so determined surplus. Also, with the prior approval of GSA, on a case-by-case basis, and subject to the same conditions set for the Department of Health, Education, and Welfare, the Bureau of Outdoor Recreation, Department of the Interior, may apprise eligible local public agencies of excess property peculiarly adaptable for use for public park, public recreation, or historic monument purposes.

§ 101–47.203–6 Prefabricated movable structures and trailers.

Prefabricated movable structures such as Butler-type storage warehouses, quonset huts, and housetrailers (with or without undercarriages) reported to GSA with the land on which they are located may, in the discretion of GSA, be designated for disposition as personal property for off-site use.

§ 101–47.203–7 Transfers.

(a) The agency requesting transfer of excess real property and related personal property reported to GSA shall prepare and submit to the proper GSA regional office, GSA Form 1334, Request for Transfer of Excess Real Property and Related Personal Property (§ 101–47.4904). Instructions for the preparation of GSA Form 1334 are set forth in § 101–47.4904–1.

(b) Upon determination by GSA, with the concurrence of the Bureau of the Budget when required (see § 101–47.203–7(c)), that a transfer of the property requested is in the best interest of the Government and that the requesting agency is the appropriate agency to hold the property, such transfer may be made among Federal agencies and to mixed-ownership Government corporations, and the municipal government of the District of Columbia.

(c) In the case of transfers involving excess land, which together with any improvements thereon has a total appraised fair market value of $100,000 or more, GSA shall secure the concurrence of the Bureau of the Budget to the transfer.

(d) Transfers of property to executive agencies shall be consistent with the policy of the Administrator of General Services prescribed in § 101–47.201–1 and the policy guidelines prescribed in § 101–47.201–2. In determining whether a proposed transfer should be approved under the policy guidelines, GSA and the Bureau of the Budget may consult informally to obtain all available data concerning actual program needs for the property.

(e) GSA will execute or authorize all approved transfers to the requesting agency of property reported to GSA. Agencies may transfer without reference to GSA excess real property which is not reported to GSA under the provisions of § 101–47.202–4(b) (1), (2), and (4). However, such transfers shall be made in accordance with the principles set forth in this section.

(f) Pursuant to an agreement between the Director, Bureau of the Budget, and the Administrator of General Services, reimbursement for transfers of excess real property is prescribed as follows:

(1) Where the transferor agency has requested the net proceeds of the transfer pursuant to section 204(c) of the Act, or where either the transferor or transferee agency (or organizational unit affected) is subject to the Government Corporation Control Act (31 U.S.C. 841) or is a mixed-ownership Government corporation, or the municipal government of the District of Columbia, reimbursement for the transfer shall be an amount equal to the appraised fair market value of the property requested: *Provided*, That where the transferor agency is a wholly owned Government corporation, the reimbursement shall be either an amount equal to the appraised fair market value of the property requested or the corporation's book value thereof, as may be agreed upon by GSA and the corporation.

(2) Reimbursement in all other transfers of excess real property shall be:

(i) In an amount equal to 50 percent of the appraised fair market value of the property requested, or if the transfer is for the purpose of upgrading facilities (i.e., for the purpose of replacing other property of the transferee agency which because of the location, nature, or condition thereof, is less efficient for use), the reimbursement shall be an amount equal to 50 percent of the difference between the appraised fair market value of the property to be replaced and the appraised fair market value of the property requested; or

(ii) Without reimbursement when the transfer is to be made under any one of the following conditions:

(A) The transferee agency clearly demonstrates that it cannot furnish the required reimbursement without obtaining an additional appropriation for that specific purpose.

(B) The transferee agency demonstrates that reimbursement could be made only by diverting funds which were justified to Congress to be used for some other purpose.

(C) The Congress appropriated funds for the transferee agency's program with the understanding that the transfer would be made without reimbursement.

(D) Congress has specifically authorized the transfer without reimbursement.

(E) The excess real property is to be transferred to the Department of Agriculture, is within the exterior boundaries of, and is suitable for addition to a national forest, and the Administrator of General Services determines that such property is available for that purpose.

(iii) A transfer without reimbursement, based on § 101–47.203–7(f)(2)(ii)(A), (B), or (C), shall be supported by a written certification by the head of the transferee agency or military department, or his designee (not below departmental level), with regard to those matters, and in the case of (A) and (B) documented with appropriate financial statements, and in the case of (C) include appropriate citations to congressional hearings, reports, etc. A transfer based on (D) shall be supported by appropriate statutory citations. A transfer based on (E) shall be supported by appropriate maps and land descriptions concerning the exterior boundaries of the national forest in relationship to the property proposed for transfer and the authority or order establishing the national forest. The above required data and documents shall be attached to GSA Form 1334 by the transferee agency on submission of that form to GSA.

(g) Excess property may be transferred to the Senate, the House of Representatives, and the Architect of the Capitol and any activities under his direction, pursuant to the provisions of section 602(e) of the Act. The amount of reimbursement for such transfer shall

be the same as would be required for a transfer of excess property to an executive agency under similar circumstances.

§ 101–47.203–8 Temporary utilization.

(a) Whenever GSA determines that the temporary assignment or reassignment to a Federal agency of any space in excess real property for office, storage, or related facilities would be more advantageous than the permanent transfer of the property to a Federal agency, it will execute or authorize such assignment or reassignment for such period of time as it shall determine. The agency to which the space is made available shall make appropriate reimbursement for the expense of maintaining such space in the absence of appropriation available to GSA therefor.

(b) GSA may approve the temporary assignment or reassignment to a Federal agency of excess real property other than space for office, storage, or related facilities whenever such action would be in the best interest of the Government. In such cases, the agency to which the property is made available may be required to pay a rental or users charge based upon the fair value of such property, as determined by GSA. Where such property will be required by the agency for a period of more than 1 year, it may be transferred on a conditional basis, with an understanding that the property will be reported excess at a time agreed upon when the transfer is arranged (see § 101–47.201–2(d)(7)).

§ 101–47.203–9 Non-Federal interim use of property.

The holding agency may, with the approval of GSA, grant rights for non-Federal interim use of excess property reported to GSA, or portions thereof, when it is determined that such interim use is not required for the needs of any Federal agency.

§ 101–47.203–10 Withdrawals.

Subject to the approval of GSA, reports of excess real property and related personal property may be withdrawn in whole or in part by the reporting agency at any time prior to transfer to another Federal agency or prior to the execution of a legally binding agreement for disposal as surplus property. Requests for withdrawals shall be addressed to the GSA regional office where the report of excess real property was filed.

§ 101–47.204 Determination of surplus.

§ 101–47.204–1 Reported property.

Any real property and related personal property reported excess under this Subpart 101–47.2 which has been screened for needs of Federal agencies or waived from such screening by GSA, and not been designated by GSA for utilization by a Federal agency, shall be subject to determination as surplus property by GSA.

(a) The holding agency, the Secretary of Health, Education, and Welfare, and the Secretary of the Interior shall be notified of the date upon which determination as surplus becomes effective.

(b) The notices to the Secretaries of Health, Education, and Welfare and the Interior shall be sent to the offices designated by them to serve the area in which the property is located. (See §§ 101–47.4910 and 101–47.4912.)

(c) With regard to surplus property which GSA predetermines will not be available for assignment to the Secretary for disposal for an educational or public health purpose under a statute cited in § 101–47.4905, or whenever the holding agency has requested reimbursement of the net proceeds of disposition pursuant to section 204(c) of the Act, the notice shall contain advice of such determination or request for reimbursement. The Department of Health, Education, and Welfare shall not screen for potential educational or public health applicants for any such property. Similarly, the notice to the Department of the Interior shall contain such determination or request whenever GSA predetermines that the property will not be available for transfer for use as a public park, public recreational area, or historic monument, or whenever the holding agency has requested reimbursement.

§ 101–47.204–2 Property excepted from reporting.

Any property not reported to GSA due to § 101–47.202–4, and not designated by the holding agency for utilization by other agencies pursuant to the provisions of this Subpart 101–47.2, shall be subject to determination as surplus by the holding agency.

Subpart 101–47.3—Surplus Real Property Disposal

§ 101–47.300 Scope of subpart.

This subpart prescribes the policies and methods governing the disposal of surplus real property and related personal property within the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and the Virgin Islands. This subpart does not apply to the abandonment, destruction, or donation to public bodies, under section 202(h) of the Act (covered by Subpart 101–47.5).

§ 101–47.301 General provisions of subpart.

§ 101–47.301–1 Policy.

It is the policy of the Administrator of General Services:

(a) That surplus real property shall be disposed of in the most economical manner consistent with the best interests of the Government.

(b) That credit be extended when justified.

§ 101–47.301–2 Applicability of antitrust laws.

(a) In any case in which there is contemplated a disposal to any private interest of real and related personal property which cost $1,000,000 or more (aggregate amount of the original acquisition cost to the Government and all capital expenditures made by the Government with respect thereto), or of patents, processes, techniques, or inventions, irrespective of cost, the disposal agency shall transmit promptly to the Attorney General notice of any such proposed disposal and the probable terms or conditions thereof, as required by section 207 of the Act, for his advice as to whether the proposed disposal would tend to create or maintain a situation inconsistent with the antitrust laws, and no such real property shall be disposed of until such advice has been received. If such notice is given by any executive agency other than GSA, a copy of the notice shall be transmitted simultaneously to the office of GSA for the region in which the property is located.

(b) Upon request of the Attorney General, GSA or any other executive agency shall furnish or cause to be furnished such information as it may possess which the Attorney General determines to be appropriate or necessary to enable him to give the requested advice or to determine whether any other disposition or proposed disposition of surplus real property violates or would violate any of the antitrust laws.

§ 101–47.301–3 Disposals under other laws.

Pursuant to section 602(c) of the Act, disposals of real property shall not be made under other laws but shall be made only in strict accordance with the provisions of this Subpart 101–47.3 unless the Administrator of General Services, upon written application by the disposal agency, shall determine in each case that the provisions of any such other law, pursuant to which disposal is proposed to be made, are not inconsistent with the authority conferred by this Act. The provisions of this section shall not apply to disposals of real property authorized to be made by section 602(d) of the Act or by any special statute which directs or requires an executive agency named therein to transfer or convey specifically described real property in accordance with the provisions of such statute.

§ 101–47.301–4 Credit disposals and leases.

Where credit is extended in connection with any disposal of surplus property by a disposal agency designated under this Subpart 101–47.3, the head of that agency, or his designee, shall administer and manage such credit, lease, or permit and any security therefor and may enforce, adjust, and settle any right of the Government with respect thereto in such manner and upon such terms as that agency deems to be in the best interest of the Government.

§ 101–47.301–5 Records and reports.

All agencies designated as disposal agencies in § 101–47.302 (except GSA), shall submit to GSA reports on GSA Form 1100, Report of Surplus Real Property Disposals and Inventory (see § 101–47.4903), covering surplus real property and related personal property disposed of pursuant to the authority contained in § 101–47.302 or otherwise delegated by the Administrator of General Services. Reports shall be based on appropriate agency records which shall be maintained

to show full compliance with applicable statutory provisions relating to each disposal action and with the provisions of this Subpart 101–47.3. A disposal action shall be reported when a legally binding agreement is reached on terms and conditions mutually acceptable by an authorized official of the disposal agency and the party to which the disposal is made. Surplus real and related personal properties awaiting disposal as of the end of the reporting period shall be reported as inventory. Instructions for the preparation and submission of GSA Form 1100 are set forth in § 101–47.4903–1.

§ 101–47.302 Designation of disposal agencies.

§ 101–47.302–1 General.

Surplus real property and related personal property shall be disposed of (or assigned to the Secretary of Health, Education, and Welfare for disposal for educational and public health purposes) by the disposal agencies designated in this section in accordance with applicable provisions of this Subpart 101–47.3.

§ 101–47.302–2 Holding agency.

(a) The holding agency is hereby designated as disposal agency for:

(1) Leases, permits, licenses, easements, and similar real estate interests held by the Government in non-Government-owned property (including Government-owned improvements located on the premises), except when the retention of such real estate interests by the Government is needed for the operation, production, or maintenance of other property, owned or controlled by the Government, that has been or is being reported to GSA as excess; and

(2) Fixtures, structures, and improvements of any kind to be disposed of without the underlying land.

(b) GSA may act as the disposal agency for the type of property described in § 101–47.302–2(a) (1) and (2), whenever requested by the holding agency to perform the disposal functions.

§ 101–47.302–3 General Services Administration.

GSA is the disposal agency for all real property and related personal property not covered by the above designations or by disposal authority delegated by the Administrator of General Services in specific instances.

§ 101–47.303 Responsibility of disposal agency.

§ 101–47.303–1 Classification.

Each surplus property, or, if the property is subdivided, each unit of property shall be classified by the disposal agency to determine the methods and conditions applicable to the disposal of the property. Classification shall be according to the estimated highest and best use for the property. The property may be reclassified from time to time by the disposal agency or by GSA whenever such action is deemed appropriate.

§ 101–47.303–2 Disposals to public agencies.

The disposal agency shall allow a reasonable period of time for public agencies (non-Federal) to develop a comprehensive and coordinated plan of use and procurement for surplus real property in which they may be interested. Citations of the statutes authorizing the disposal of property to public agencies, the type of property the public agencies may procure under each such statute, and the public agencies eligible to procure such property are given in § 101–47.4905.

(a) Whenever property is determined to be surplus, the disposal agency shall, on the basis of the information given in § 101–47.4905, list the public agencies eligible under the provisions of the statutes referred to above to procure the property or portions thereof, except that such listing need not be made with respect to:

(1) Any such property when the determination of the property as surplus is conditioned upon disposal limitations which would be inconsistent with disposal under the statutes authorizing disposal to eligible public agencies; or

(2) Any such property having an estimated fair market value of less than $1,000 except where the disposal agency has any reason to believe that an eligible public agency may be interested in the property.

(b) Prior to any public advertising, negotiation, or other disposal action with regard to the property, the disposal agency shall give notice to eligible public agencies that the property has been determined surplus. Such notice shall be prepared following the sample shown in § 101–47.4906, and shall be transmitted by a letter prepared following the sample shown in § 101–47.4906–1.

(1) Where the property is located in a State, the notice shall be given to the Governor of the State, to the county clerk or other appropriate official of the county in which the property is located, to the mayor or other appropriate official of the city or town in which the property is located, and to the head of any other eligible local governmental body known to be interested in the property.

(2) Where the property is located in the District of Columbia, the notice shall be given to the President of the Board of Commissioners.

(3) Where the property is located in the Virgin Islands, the notice shall be given to the Governor of the Virgin Islands.

(4) Where the property is located in the Commonwealth of Puerto Rico, the notice shall be given to the Governor of the Commonwealth of Puerto Rico.

(c) The notice prepared pursuant to § 101–47.303–2(b) shall also be posted in the post office which serves the area in which the property is located and in other prominent places such as the State capitol building, county building, courthouse, town hall, or city hall. The notice to be posted in the post office shall be mailed to the postmaster with a request that it be posted. Arrangements for the posting of the notice in other prominent places shall be as provided for in the transmittal letters (see § 101–47.4906–1) to eligible public agencies.

(d) A copy of each transmittal letter and notice given pursuant to § 101–47.303–2(b) shall be furnished to the proper field office of the Bureau of Outdoor Recreation, Department of the Interior; Federal Aviation Agency; Fish and Wildlife Service, Department of the Interior; or Bureau of Public Roads, Department of Commerce, concerned with the disposals of property to public agencies under the statutes stated in the notice.

(e) In the case of property which may be made available for assignment to the Secretary of Health, Education, and Welfare for disposal for educational or public health purposes under a statute cited in the notice:

(1) The disposal agency shall inform the proper regional office of the Department of Health, Education, and Welfare, listed in § 101–47.4910, three working days in advance of the date the notice will be given to public agencies to permit similar notice to be given simultaneously by the Department to nonprofit institutions which have been held exempt from taxation under section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)(3)).

(2) The disposal agency shall furnish the Department with a copy of the postdated transmittal letter addressed to each public agency, twenty-five copies of the postdated notice, and a copy of the holding agency's Report of Excess Real Property (Standard Form 118, with accompanying schedules).

(3) As of the date of the transmittal letter and notice to public agencies, the Department may proceed with its screening functions for any potential educational or public health applicants and thereafter may make its determinations of need and receive applications.

(f) If the disposal agency is not informed within the 20-calendar-day period stated in the notice of the desire of a public agency to develop and submit a comprehensive and coordinated plan of use and procurement for the property, or is not notified by the Department of Health, Education, and Welfare of a potential educational or public health requirement, it shall be assumed that no public agency or nonprofit institution desires to procure the property.

(g) The disposal agency shall promptly review each response of a public agency to the notice given pursuant to § 101–47.303–2(b), and shall determine what constitutes a reasonable period of time to allow the public agency to develop and submit a plan. When making such determination, consideration shall be given to the potential suitability of the property for the use proposed, the length of time the public agency has stated it will require to develop and submit a plan, the protection and maintenance costs to the Government during such length of time, and any other relevant facts and circumstances. Such review and determination shall be coordinated with the

proper regional office of the interested Federal agency listed below:

(1) Bureau of Outdoor Recreation, Department of the Interior.

(2) Department of Health, Education, and Welfare.

(3) Federal Aviation Agency.

(4) Fish and Wildlife Service, Department of the Interior.

(5) Bureau of Public Roads, Department of Commerce.

(h) When a determination has been made as to what constitutes a reasonable period of time to develop and submit a plan, the public agency shall be so notified. The public agency shall be advised of the information required in connection with an application to procure the property and shall be requested to provide such information with its plan.

(i) Upon receipt of the plan of use and procurement for the property, it shall be considered and acted upon in accordance with the provisions of the statute and applicable regulations.

§ 101–47.303–3 Studies.

The disposal agency shall compile from the title documents and related papers appropriate information, for use in disposal actions, regarding all real property and related personal property available for disposal.

§ 101–47.303–4 Appraisal.

(a) Except as otherwise provided in this Subpart 101–47.3, the disposal agency shall in all cases obtain an appraisal of the fair market value, and in appropriate cases the fair annual rental, of property available for disposal.

(b) No appraisal need be obtained in any one of these situations:

(1) The property is classified and is to be disposed of as airport property.

(2) The property is suitable for historic monument purposes and is to be disposed of with the use limited to such purpose to a State, political subdivision, instrumentality thereof, or municipality.

(3) The estimated fair market value of property to be offered on a competitive sale basis does not exceed $2,500.

(c) The disposal agency shall have the property appraised by experienced and qualified persons familiar with the types of property to be appraised by them. Any person engaged to collect or evaluate information pursuant to this subsection shall certify that he has no interest, direct or indirect, in the property which would conflict in any manner with the preparation and submission of an impartial appraisal report.

§ 101–47.304 Advertised and negotiated disposals.

§ 101–47.304–1 Publicity.

(a) The disposal agency shall widely publicize all surplus real property and related personal property which becomes available for disposal hereunder, giving information adequate to inform interested persons of the general nature of the property and its possible uses, as well as any reservations, restrictions, and conditions imposed upon its disposal.

(b) A condensed statement of proposed sales of surplus real property by advertising for competitive bids, except where the estimated fair market value of the property is less than $2,500, shall be prepared and submitted, for inclusion in the U.S. Department of Commerce publication "Commerce Business Daily," to: U.S. Department of Commerce (S-Synopsis), Room 1300, 433 West Van Buren Street, Chicago, Illinois, 60604.

§ 101–47.304–2 Soliciting cooperation of local groups.

The disposal agency may consult with local groups and organizations and solicit their cooperation in giving wide publicity to the proposed disposal of the property.

§ 101–47.304–3 Information to interested persons.

The disposal agency shall, upon request, supply to bona fide potential purchasers and lessees adequate preliminary information, and, with the cooperation of the holding agency where necessary, shall render such assistance to such persons as may enable them, insofar as feasible, to obtain adequate information regarding the property. The disposal agency shall establish procedures so that all persons showing due diligence are given full and complete opportunity to make an offer.

§ 101–47.304–4 Invitation for offers.

The disposal agency shall prepare and furnish to all prospective purchasers or lessees written invitations to make an offer, which shall contain or incorporate by reference all the terms and conditions under which the property is offered for disposal, including all provisions required by statute to be inserted in contracts for disposal of Government property. All terms and conditions of the invitation shall be made a part of the offer. The invitation shall further specify the form of the disposal instrument, which specifications shall be in accordance with the appropriate provisions of §§ 101–47.307–1 and 101–47.307–2.

(a) Where the disposal agency has determined that the sale of specific property on credit terms is justified, the invitation shall provide for submission of offers on the following terms, except that offers to purchase of less than $2,500, shall be for cash—

Purchase price	*Terms of payment*
$2,500 but less than $10,000	Downpayment of not less than 25 percent cash, balance 8 years or less, evidenced by purchaser's note, payable in equal quarter-annual installments (together with interest on unpaid balances at an annual rate of 5 percent) secured by purchase money mortgage or deed of trust on the property, whichever the Government determines to be appropriate.
$10,000 or more	Downpayment of not less than 20 percent cash, balance 10 years or less, evidenced by purchaser's note, payable in equal quarter-annual installments (together with interest on unpaid balances at an annual rate of 5 percent secured by a purchase money mortgage or deed of trust on the property, whichever the Government determines to be appropriate.

(b) Where the disposal agency has determined that an offering of the property on more liberal credit terms is necessary to obtain greater competition in the local market, the invitation may provide for submission of offers on such alternate terms of payment as may be recommended by the disposal agency and approved by the Administrator of General Services. The sale in those cases where the downpayment is less than 20 percent shall, unless otherwise authorized by the Administrator of General Services, be under a land contract which shall provide, in effect, for conveyance of title to the purchaser by quitclaim deed or other form of conveyance in accordance with the appropriate provisions of §§ 101–47.307–1 and 101–47.307–2 upon payment of one-third of the total purchase price with accrued interest, or earlier if the Government so elects, and execution and delivery of purchaser's note and purchase money mortgage (or bond and deed of trust) satisfactory to the Government, to secure payment of the unpaid balance of the purchase price.

(c) The disposal agency may increase the cash downpayment requirement or shorten the period of amortization whenever circumstances warrant and in the case of sales of farms, may provide for payment of the unpaid balance on equal semiannual or annual installment basis.

(d) Where a sale is to be made on credit, the invitation shall provide that the purchaser agrees by appropriate provisions to be incorporated in the disposal instruments that he will not lease (unless the property was offered without leasing restrictions by the Government) or sell the property, or any part thereof or interest therein, without prior written authorization of the Government.

(1) In appropriate cases, except as provided in § 101–47.304–4(d)(2), the invitation shall state that the disposal instrument may include provisions specifically authorizing leasing and/or resale and release of portions of the property as desired by the purchaser, provided that such provisions shall, in the judgment of the Government, be adequate to protect its security for the credit extended to the purchaser.

(2) In the case of timber or mineral lands, or lands containing other saleable products, the invitation shall state that the disposal instrument may specifically provide for granting future partial releases to permit the resale of timber, minerals, and other saleable products, or authorize the leasing of mineral rights, upon payment to the Government

of such amounts as may be required by the Government but not less than the proceeds of any sale or lease less such amounts as may be determined by the Government to represent the cost of the sale or lease.

(3) All payments for such authorizations and/or releases shall, at the option of the Government, be applied against the unpaid balance of the indebtedness in inverse order of its maturity, or upon any delinquent installments of principal and interest, or used for payments of any delinquent taxes or insurance premiums.

(e) Where property is offered for disposal under a land contract or lease, the terms and conditions contained in the invitation shall provide that the purchaser or lessee will be required to pay to the proper taxing authorities or to the disposal agency, as may be directed, all taxes, payments in lieu of taxes (in the event of the existence or subsequent enactment of legislation authorizing such payments), assessments or similar charges which may be assessed or imposed on the property, or upon the occupier thereof, or upon the use or operation of the property and to assume all costs of operating obligations.

(f) Whenever property is offered for sale on credit terms or for lease, the terms and conditions contained in the invitation shall provide that the purchaser or lessee shall procure and maintain at his expense during the term credit is extended, or the period of the lease, such insurance in such amounts as may be required by the Government; required insurance shall be in companies acceptable to the Government and shall include such terms and provisions as may be required to provide coverage satisfactory to the Government.

§ 101–47.304–5 Inspection.

All persons interested in the acquisition of surplus property available for disposal under this Subpart 101–47.3 shall, with the cooperation of the holding agency, where necessary, and with due regard to its program activities, be permitted to make a complete inspection of such property, including any available inventory records, plans, specifications, and engineering reports made in connection therewith, subject to any necessary restrictions in the interest of national security and subject to such rules as may be prescribed by the disposal agency.

§ 101–47.304–6 Submission of offers.

All offers to purchase or lease shall be in writing, accompanied by any required earnest money deposit, using the form prescribed by the disposal agency and, in addition to the financial terms upon which the offer is predicated, shall set forth the willingness of the offeror to abide by the terms, conditions, reservations, and restrictions upon which the property is offered, and shall contain such other information as the disposal agency may request.

§ 101–47.304–7 Advertised disposals.

(a) All disposals or contracts for disposal of surplus property, except as provided in §§ 101–47.304–9 and 101–47.304–10, shall be made after publicly advertising for bids.

(1) The advertising for bids shall be made at such time previous to the disposal or contract, through such methods, and on such terms and conditions as shall permit that full and free competition which is consistent with the value and nature of the property involved. The advertisement shall designate the place to which the bids are to be delivered or mailed, and shall state the place, date, and time of public opening.

(2) All bids shall be publicly disclosed at the time and place stated in the advertisement.

(3) Award shall be made with reasonable promptness by notice to the responsible bidder whose bid, conforming to the invitation for bids, will be most advantageous to the Government, price and other factors considered: *Provided*, That all bids may be rejected when it is in the public interest to do so.

(b) Disposal and contracts for disposal of surplus property may be made through contract auctioneers when authorized by GSA. The auctioneer retained under contract shall be required to publicly advertise for bids in accordance with the applicable provisions of this § 101–47.304–7.

§ 101–47.304–8 Report of identical bids.

(a) Executive Order No. 10936 of April 24, 1961 (26 F.R. 3555; 3 CFR 1959–1963 Comp.), requires executive agencies to report information on identical bids to the Department of Justice. When an invitation for bids for the sale of property results in the submission of identical bids under the conditions set forth in § 101–47.304–8(a) (1), (2), and (3), a copy of the invitation and a copy of the completed abstract of bids, with identical bid prices (other than nominal or token bids) circled, shall be forwarded to the Attorney General (a copy of the report to the Attorney General shall be transmitted simultaneously to the office of GSA for the region in which the property is located) within 20 days following the disposition of all bids received in response to the invitation involved:

(1) Where bids or offers were solicited through the formal sealed bid method of sale;

(2) Where the bid value of the line item(s) on which identical bids were received exceeds $2,500 (based on the apparent high bid received for such line item); and

(3) Where the total bid value of all line items covered by the invitation exceeds $10,000 (based on the apparent high bid received for each line item).

(b) As used in this § 101–47.304–8:

(1) The term "identical bids" means two or more bids received for the same line item of an invitation for bids issued under formal advertising procedures which:

(i) Appear on the face of the bids to be identical as to unit price or total amount; or

(ii) Are found, in the contracting agency's normal process of evaluating bids for award, to be identical as to unit price or total amount.

(2) The term "line item" means each item of property specified in an invitation for bids which, under the terms of the invitation, is susceptible to a separate contract award.

(c) The Attorney General may, from time to time, request such supplemental information as he may deem necessary for effective enforcement of antitrust laws.

(d) The submission of information on identical bids is in addition to and is not to be considered as satisfying the requirements of § 101–47.301–2, for notifying the Attorney General and the Administrator of General Services regarding proposed disposals which might further a situation inconsistent with the antitrust laws.

§ 101–47.304–9 Negotiated disposals.

(a) Disposal agencies shall obtain such competition as is feasible under the circumstances in all negotiations of disposals and contracts for disposal of surplus property. They may dispose of surplus property by negotiation only in the following situations:

(1) When the estimated fair market value of the property involved does not exceed $1,000;

(2) When bid prices after advertising therefor are not reasonable (either as to all or some part of the property) or have not been independently arrived at in open competition;

(3) When the character or conditions of the property or unusual circumstances make it impractical to advertise publicly for competitive bids and the fair market value of the property and other satisfactory terms of disposal can be obtained by negotiation;

(4) When the disposals will be to States, Commonwealth of Puerto Rico, possessions, political subdivisions thereof, or tax-supported agencies therein, and the estimated fair market value of the property and other satisfactory terms of disposal are obtained by negotiation; or

(5) When negotiation is otherwise authorized by the Act or other law, such as:

(i) Disposals of power transmission lines for public or cooperative power projects (see § 101–47.308–1).

(ii) Disposals for public airport utilization (see § 101–47.308–2).

(iii) Disposals for public parks, recreational areas, or historic monument sites (see § 101–47.308–3).

(b) Appraisal data required pursuant to the provisions of § 101–47.303–4, when needed for the purpose of conducting negotiations under § 101–47.304–9(a), (3), (4), (5)(i), or (5)(iii), except in the case of historic monument sites, shall be obtained under contractual arrangements with experienced and qualified real estate appraisers familiar with the types of property to be appraised by them: *Provided, however*, That in any case where the cost of obtaining such data from a contract appraiser would be out of proportion with the expected

recoverable value of the property, or if for any other reason employing a contract appraiser would not be in the best interest of the Government, the head of the disposal agency, or his designee, should authorize such other method of obtaining an estimate of the fair market value of the property, or the fair annual rental, as he may deem to be proper.

§ 101–47.304–10 Disposals by brokers.

Disposals and contracts for disposal of surplus property through contract realty brokers, where authorized by GSA, shall be made in the manner followed in similar commercial transactions. Realty brokers retained under contracts shall be required to give wide public notice of availability of the property for disposal.

§ 101–47.304–11 Documenting determinations to negotiate.

The disposal agency shall document the factors leading to and the determination justifying disposal by negotiation of any surplus property under §§ 101–47.304–9 and 101–47.304–10, and shall retain such documentation in the files of the agency.

§ 101–47.304–12 Explanatory statements.

(a) Subject to the exceptions stated in § 101–47.304–12(b), the disposal agency shall prepare an explanatory statement, as required by section 203(e)(6) of the Act, of the circumstances of each proposed disposal by negotiation.

(b) No explanatory statement need be prepared for:

(1) A disposal of property having a fair market value of $1,000 or less; and

(2) A disposal of property authorized to be disposed of without advertising by any provision of law other than section 203(e) of the Act.

(c) An outline for the preparation of the explanatory statement is shown in § 101–47.4911. The explanatory statement shall be mimeograph or similar type process and a copy thereof shall be preserved in the files of the disposal agency.

(d) Each explanatory statement when prepared shall be submitted to the Administrator of General Services for review and transmittal by the Administrator of General Services by letters to the Committees on Government Operations and any other appropriate committees of the Senate and House of Representatives. The submission to the Administrator of General Services shall include such supporting data as may be relevant and necessary for evaluating the proposed action and 20 copies of the duplicated explanatory statement.

(e) Copies of the Administrator of General Services' transmittal letters to the committees of the Congress, § 101–47.304–12(d), will be furnished to the disposal agency.

(f) In the absence of adverse comment by an appropriate committee or subcommittee of the Congress on the proposed negotiated disposal, the disposal agency may consummate the sale on or after 35 days from the date of the Administrator of General Services letters transmitting the explanatory statement to the committees.

§ 101–47.305 Acceptance of offers.

§ 101–47.305–1 General.

(a) When the head of the disposal agency or his designee determines that bid prices (either as to all or some part of the property) received after advertising therefor or received in response to the action authorized in paragraph (b) of this § 101–47.305–1, are reasonable, i.e., commensurate with the fair market value of the property, and were independently arrived at in open competition, award shall be made with reasonable promptness by notice to the bidder whose bid, conforming to the invitation for bids, will be most advantageous to the Government, price and other factors considered. Any or all offers may be rejected when the head of the disposal agency or his designee determines it is in the public interest to do so.

(b) Where the advertising does not result in the receipt of a bid at a price commensurate with the fair market value of the property, the highest bidder may, at the discretion of the head of the disposal agency or his designee and upon determination of responsiveness and bidder responsibility, be afforded an opportunity to increase his offered price. The bidder shall be given a reasonable period of time, not to exceed five working days, to respond. At the time the bidder is afforded an opportunity to increase his bid, all other bids shall be rejected and bid deposits returned. Any sale at a price so increased may be concluded without regard to the provisions of §§ 101–47.304–9 and 101–47.304–12.

(c) The disposal agency shall allow a reasonable period of time within which the successful bidder shall consummate the transaction and shall notify the successful bidder of the period allowed.

(d) It is within the discretion of the head of the disposal agency or his designee to determine whether the procedure authorized by paragraph (b) of this § 101–47.305–1 is followed or whether the bids shall be rejected and the property reoffered for sale on a publicly advertised competitive bid basis in accordance with the provisions of § 101–47.304–7, or disposed of by negotiation pursuant to § 101–47.306–1, or offered for disposal under other applicable provisions of this Subpart 101–47.3.

§ 101–47.305–2 Equal offers.

"Equal offers" means two or more offers that are equal in all respects, taking into consideration the best interests of the Government. If equal acceptable offers are received for the same property, award shall be made by a drawing by lot limited to the equal acceptable offers received.

§ 101–47.305–3 Notice to unsuccessful bidders.

When an offer for surplus real property has been accepted, the disposal agency shall notify all other bidders of such acceptance and return their earnest money deposits, if any.

§ 101–47.306 Absence of acceptable offers.

§ 101–47.306–1 Negotiations.

(a) When the head of the disposal agency or his designee determines that bid prices after advertising therefor (including the action authorized by the provisions of § 101–47.305–1(b)) are not reasonable either as to all or some part of the property or were not independently arrived at in open competition and that a negotiated sale rather than a disposal by readvertising or under other applicable provisions of this subpart would better protect the public interest, the property or such part thereof may be disposed of by negotiated sale after rejection of all bids received: *Provided*, That no negotiated disposal may be made under this § 101–47.306–1 unless:

(1) Notification of the intention to negotiate and reasonable opportunity to negotiate shall have been given by the agency head or his designee to each responsible bidder who submitted a bid pursuant to the advertising;

(2) The negotiated price is higher than the highest rejected bid price offered by any responsible bidder, as determined by the head of the agency or his designee; and

(3) The negotiated price is the highest negotiated price offered by any responsible prospective purchaser.

(b) Any such negotiated disposal shall be subject to the applicable provisions of §§ 101–47.304–9 and 101–47.304–12.

§ 101–47.306–2 National Industrial Reserve properties.

In the event that any disposal agency is unable to dispose of any surplus industrial plant because of the application of the conditions and restrictions of the National Security Clause imposed under the National Industrial Reserve Act of 1948 (50 U.S.C. 451), after making every practicable effort to do so, it shall notify the Secretary of Defense, indicating such modifications in the National Security Clause, if any, which in its judgment will make possible the disposal of the plant. Upon agreement by the Secretary of Defense to any and all of such modifications, the plant shall be reoffered for disposal subject to such modifications as may have been so agreed upon; or if such modifications are not agreed to, and upon request of the Secretary of Defense, the plant shall be transferred to the custody of GSA.

§ 101–47.307 Conveyances.

§ 101–47.307–1 Form of deed or instrument of conveyance.

Disposals of real property shall be by quitclaim deed or deed without warranty in conformity with local law and practice, unless the disposal agency finds that another form of conveyance is necessary to obtain a reasonable price for the property or to render the title marketable, and unless the use of such other form of conveyance is approved by GSA.

§ 101–47.307–2 Conditions in disposal instruments.

(a) Where a sale is made upon credit, the purchaser shall agree by appropriate provisions to be incorporated in the disposal instruments, that he will not resell or lease (unless due to its character or type the property was offered without leasing restrictions by the disposal agency) the property, or any part thereof or interest therein, without the prior written authorization of the disposal agency and such disposal instruments in appropriate cases may specifically provide for such authorization and/or future partial releases to be granted on terms which will adequately protect the Government's security for the credit extended to the purchaser.

(b) Any deed, lease, or other instrument executed to dispose of property under this subpart, subject to reservations, restrictions, or conditions as to the future use, maintenance, or transfer of the property shall recite all representations and agreements pertaining thereto.

§ 101–47.307–3 Distribution of conformed copies of conveyance instruments.

(a) Two conformed copies of any deed, lease, or other instrument containing reservations, restrictions, or conditions regulating the future use, maintenance, or transfer of the property shall be provided the agency charged with enforcement of such reservations, restrictions, or conditions.

(b) A conformed copy of the deed, lease, or other conveyance instrument shall be provided to the holding agency by the disposal agency.

§ 101–47.307–4 Disposition of title papers.

The holding agency shall, upon request, deliver to the disposal agency all title papers in its possession relating to the property reported excess. The disposal agency may transfer to the purchaser of the property, as a part of the disposal transaction, the pertinent records authorized by § 101–11.404–2, to be so transferred. If the purchaser of the property wishes to obtain additional records, copies thereof may be furnished to the purchaser with or without charge, as determined by the agency having custody of the records.

§ 101–47.307–5 Title transfers from Government corporations.

In order to facilitate the administration and disposition of real property when record title to such property is not in the name of the United States of America, the holding agency, upon request of the Administrator of General Services, shall deliver to the disposal agency a quitclaim deed, or other instrument of conveyance without warranty, expressed or implied, transferring all of the right, title, and interest of the holding agency in such property to the United States of America.

§ 101–47.307–6 Proceeds from disposals.

All proceeds from any sale, lease, or other disposition of surplus real property and related personal property shall be covered into the Treasury as miscellaneous receipts, except as provided in sections 204 (b), (c), (d), (e), and (f) of the Act.

§ 101–47.308 Special disposal provisions.

§ 101–47.308–1 Power transmission lines.

(a) Pursuant and subject to the provisions of section 13(d) of the Surplus Property Act of 1944 (50 U.S.C. App. 1622(d)), which is continued in effect by section 602(a) of the Federal Property and Administrative Services Act of 1949, any State or political subdivision thereof, or any State or Government agency or instrumentality may certify to the disposal agency that a surplus power transmission line and the right-of-way acquired for its construction is needful for or adaptable to the requirements of a public or cooperative power project. Disposal agencies shall notify such State entities and Government agencies of the availability of such property in accordance with § 101–47.303–2.

(b) Notwithstanding any other provisions of this subpart, whenever a State or political subdivision thereof, or a State or Government agency or instrumentality certifies that such property is needful for or adaptable to the requirements of a public or cooperative power project, the property may be sold for such utilization at the fair market value thereof.

(c) In the event a sale cannot be accomplished by reason of the price to be charged or otherwise and the certification is not withdrawn, the disposal agency shall report the facts involved to the Administrator of General Services, for a determination by him as to the further action to be taken to dispose of the property.

(d) Any power transmission line and right-of-way not disposed of pursuant to the provisions of this section shall be disposed of in accordance with other applicable provisions of this subpart, including, if appropriate, reclassification by the disposal agency.

§ 101–47.308–2 Property for public airports.

(a) Pursuant and subject to the provisions of section 13(g) of the Surplus Property Act of 1944 (50 U.S.C. App. 1622(g)), which is continued in effect by section 602(a) of the Federal Property and Administrative Services Act of 1949 and amended by the Act of October 1, 1949, 63 Stat. 700, and section 1402(c) of the Federal Aviation Act of 1958, 72 Stat. 807 (50 U.S.C. App. 1622a–1622c), airport property may be conveyed or disposed of to a State, political subdivision, municipality, or tax-supported institution for a public airport. Airport property is any surplus real property including improvements and personal property located thereon as a part of the operating unit (exclusive of property the highest and best use of which is determined by the Administrator of General Services to be industrial and which shall be so classified for disposal without regard to the provisions of this section) which, in the determination of the Administrator of the Federal Aviation Agency is essential, suitable, or desirable for the development, improvement, operation, or maintenance of a public airport, as defined in the Federal Airport Act, as amended (49 U.S.C. 1101), or reasonably necessary to fulfill the immediate and foreseeable future requirements of the grantee for the development, improvement, operation, or maintenance of a public airport, including property needed to develop sources of revenue from non-aviation businesses at a public airport.

(b) The disposal agency shall notify eligible public agencies, in accordance with the provisions of § 101–47.303–2, that property which may be disposed of for use as a public airport under the Act of 1944, as amended, has been determined to be surplus. There shall be transmitted with the copy of each such notice when sent to the proper regional office of the Federal Aviation Agency, § 101–47.303–2(d), a copy of the holding agency's Report of Excess Real Property (Standard Form 118, with accompanying schedules).

(c) As promptly as possible after receipt of the copy of the notice given to eligible public agencies and the copy of Standard Form 118, the Federal Aviation Agency shall inform the disposal agency of the determination of the Administrator of the Federal Aviation Agency required by the provisions of the Act of 1944, as amended. The Federal Aviation Agency, thereafter, shall render such assistance to any eligible public agency known to have a need for the property for a public airport as may be necessary for such need to be considered in the development of a comprehensive and coordinated plan of use and procurement for the property. An application form and instructions for the preparation of an application shall be furnished to the eligible public agency by the disposal agency upon request.

(d) Whenever an eligible public agency has submitted a plan of use and application to acquire property for a public airport, in accordance with the provisions of § 101–47.303–2, the disposal agency shall transmit two copies of the plan and two copies of the application to the proper regional office of the Federal Aviation Agency. The Federal Aviation Agency shall promptly submit to the disposal agency a recommendation for disposal of the property for a public airport or shall inform the disposal agency that no such recommendation will be submitted.

(e) Upon receipt of such recommendation, the disposal agency may, with the approval of the head of the disposal agency or his designee, convey property recommended by the Federal Aviation Agency for disposal for a public airport to the eligible public agency, subject to the provisions of the Surplus Property Act of 1944, as amended.

(f) Any airport property not recommended by the Federal Aviation Agency for disposal pursuant to the provisions of this subsection for use as a public air-

port shall be disposed of in accordance with other applicable provisions of this subpart. However, the holding agency shall first be notified of the inability of the disposal agency to dispose of the property for use as a public airport and shall be allowed 30 days to withdraw the property from surplus or to waive any future interest in the property for public airport use.

(g) The Administrator of the Federal Aviation Agency has the sole responsibility for enforcing compliance with the terms and conditions of disposal, and for the reformation, correction, or amendment of any disposal instrument and the granting of releases and for taking any necessary action for recapturing such property in accordance with the provisions of the Act of October 1, 1949, 63 Stat. 700, and section 1402(c) of the Federal Aviation Act of 1958, 72 Stat. 807 (50 U.S.C. App. 1622a–1622c).

(h) In the event title to any such property is revested in the United States by reason of noncompliance with the terms and conditions of disposal, or other cause, the Administrator of the Federal Aviation Agency shall have accountability for the property and shall report the property to GSA as excess property in accordance with the provisions of § 101–47.202.

§ 101–47.303–3 Property for use as public parks, recreational areas, or historic monument sites.

(a) Pursuant and subject to the provisions of section 13(h) of the Surplus Property Act of 1944 (50 U.S.C. App. 1622 (h)), which is continued in effect by section 602(a) of the Federal Property and Administrative Services Act of 1949, land, including improvements and equipment thereon, which is determined by the Secretary of the Interior to be suitable and desirable for use as a public park, public recreational area, or historic monument, for the benefit of the public, may be conveyed or disposed of to a State, political subdivision, instrumentalities thereof, or municipality.

(b) The disposal agency shall notify eligible public agencies, in accordance with the provisions of § 101–47.303–2, that property which may be disposed of for use as a public park, public recreational area, or historic monument under the Act of 1944 has been determined to be surplus. There shall be transmitted with the copy of each such notice when sent to the proper field office of the Bureau of Outdoor Recreation listed in § 101–47.4912, as provided in § 101–47.303–2(d), a copy of the holding agency's Report of Excess Real Property (Standard Form 118, with accompanying schedules).

(c) An application form to acquire property for permanent use as a public park, public recreational area, or historic monument, and instructions for the preparation of the application, shall be furnished by the disposal agency to an eligible public agency upon request.

(d) Whenever an eligible public agency has submitted a plan of use and an application to acquire property for use as a public park, public recreational area, or historic monument, in accordance with the provisions of § 101–47.303–2, the disposal agency shall transmit a copy of the plan and a copy of the application to the Director, Bureau of Outdoor Recreation, Department of the Interior, Washington, D.C., 20240, and shall send a copy of the plan and a copy of the application to the appropriate field office of the Bureau of Outdoor Recreation. The Director shall promptly inform the disposal agency in writing as to the date the determination of the Secretary of the Interior, required by the provisions of the Act of 1944, will be available.

(e) Upon receipt of such determination, the disposal agency may, with the approval of the head of the disposal agency, or his designee, convey property determined by the Secretary of the Interior to be suitable and desirable for use as a public park, public recreational area, or historic monument, for the benefit of the public, to an eligible public agency, subject to the provisions of the Act of 1944.

(f) The Secretary of the Interior has the responsibility for enforcing compliance with the terms and conditions of disposals and for the reformation, correction, or amendment of any disposal instrument, and the granting of releases, and for taking any necessary action for recapturing such property in accordance with the provisions of section 203 (k)(2) of the Act. Any such action shall be subject to the disapproval of the head of the disposal agency.

(g) In the event title to any such property is revested in the United States by reason of noncompliance with the terms and conditions of disposal, or other cause, the Secretary of the Interior shall have accountability and shall report the property to GSA as excess property in accordance with the provisions of § 101–47.202.

(h) Notice to the head of the disposal agency by the Secretary of the Interior of any action proposed to be taken under paragraph (f) of this section shall identify the property affected, setting forth in detail the proposed action and reasons therefor.

§ 101–47.308–4 Property for educational and public health purposes.

(a) The head of the disposal agency or his designee is authorized, in his discretion, to assign to the Secretary of Health, Education, and Welfare for disposal, under section 203(k)(1) of the Act, such surplus real property, including buildings, fixtures, and equipment situated thereon, as is recommended by the Secretary as being needed for school, classroom, or other educational use or for use in the protection of public health, including research.

(b) With respect to real property and related personal property which may be made available for assignment to the Secretary of Health, Education, and Welfare for disposal under the provisions of the Act of 1949 for educational or public health purposes to nonprofit institutions which have been held exempt from taxation under section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)(3)).

(1) The Department of Health, Education, and Welfare may notify eligible nonprofit institutions, in accordance with the provisions of § 101–47.303–2(e), that such property has been determined surplus.

(2) Any such notice given by the Department to eligible nonprofit institutions shall state that any requirement for educational or public health use of the property should be coordinated with the public agency declaring to the disposal agency an intent to develop and submit a comprehensive and coordinated plan of use and procurement for the property.

(c) With respect to real property and related personal property which may be made available for assignment to the Secretary of Health, Education, and Welfare for disposal under the provisions of the Act for educational or public health purposes to eligible public agencies—

(1) The disposal agency shall notify eligible public agencies, in accordance with the provisions of § 101–47.303–2 (b) and (e), that such property has been determined to be surplus.

(2) Such notice to eligible public agencies shall state that any planning for an educational or public health use, involved in the development of a comprehensive and coordinated plan of use and procurement for the property, must be coordinated with the Department of Health, Education, and Welfare and that an application form for such use of the property and instructions for the preparation and submission of an application may be obtained from that Department.

(d) Whenever the disposal agency has not been informed by a public agency within the 20-day period stated in the notice given pursuant to the provisions of § 101–47.308–4 (b) or (c), that it desires to develop and submit a comprehensive and coordinated plan of use and procurement for the property, but the Department of Health, Education, and Welfare has notified the disposal agency within the said 20-day period of a potential educational or public health requirement for the property, the Department shall submit to the disposal agency within 25 days after the expiration of the 20-day period, a recommendation for assignment of the property to the Secretary of Health, Education, and Welfare, or shall inform the disposal agency, within the 25-day period, that a recommendation will not be made for assignment of the property to the Secretary.

(e) Whenever an eligible public agency has submitted a plan of use and procurement for property for an educational or public health requirement, in accordance with the provisions of § 101–47.303–2, the disposal agency shall transmit two copies of the plan to the regional office of the Department of Health, Education, and Welfare. The Department shall submit to the disposal agency, within 25 days after the date the plan is transmitted to the Department, a recommendation for assignment of the property to the Secretary of Health, Education, and

Welfare or shall inform the disposal agency, within the 25-day period, that a recommendation will not be made for assignment of the property to the Secretary.

(f) Any recommendation submitted by the Department of Health, Education, and Welfare pursuant to § 101–47.308–4 (d) or (e) shall set forth complete information concerning the intended educational or public health use, including (1) identification of the property, (2) the name of the applicant and the size and nature of its program, (3) the specific use planned, (4) the intended public benefit allowance, (5) the estimate of value upon which such proposed allowance is based, and (6) if the acreage or value of the property exceeds the standards established by the Secretary, an explanation therefor. The Department shall furnish to the holding agency a copy of the recommendation, unless the holding agency is also the disposal agency.

(g) Holding agencies shall cooperate to the fullest extent possible with representatives of the Department of Health, Education, and Welfare in their inspection of such property and in furnishing information relating thereto.

(h) In the absence of a recommendation § 101–47.308–4 (d) or (e), the disposal agency shall proceed with appropriate disposal action.

(i) If the recommendation is approved, the disposal agency shall assign the property by letter or other document to the Secretary of Health, Education, and Welfare for disposal and shall inform the Secretary that there will be no objection to the proposed transfer. If the recommendation is disapproved, the disposal agency shall so notify the Secretary. Such assignment or notice shall be given within 30 days after the Department of Health, Education, and Welfare has submitted the recommendation. The disposal agency shall furnish to the holding agency a copy of the assignment or notice, unless the holding agency is also the disposal agency.

(j) The Department of Health, Education, and Welfare shall prepare the transfer document and take all other actions necessary to accomplish the transfer of the property within 90 days after the date of the assignment of the property to the Secretary of Health, Education, and Welfare.

(k) The Secretary of Health, Education, and Welfare has the responsibility for enforcing compliance with the terms and conditions of transfer and for the reformation, correction, or amendment of any transfer instrument and the granting of releases and for the taking of any necessary actions for recapturing such property in accordance with the provisions of section 203(k)(2) of the Act. Any such action shall be subject to the disapproval of the head of the disposal agency. Notice to the head of the disposal agency by the Secretary of any action proposed to be taken shall identify the property affected, set forth in detail the proposed action, and state the reasons therefor.

(l) In each case of repossession under a terminated lease, or reverter of title by reason of noncompliance with the terms and conditions of sale or other cause, the Department of Health, Education, and Welfare shall, at or prior to such repossession or reversion of title, provide GSA with an accurate description of the real and related personal property involved. Standard Form 118, Report of Excess Real Property, and the appropriate schedules shall be used for this purpose. Upon receipt of advice from the Department that such property has been repossessed or title has reverted, GSA will assume accountability therefor.

§ 101–47.308–5 Property for use as shrines, memorials, or for religious purposes.

(a) Surplus military chapels shall be segregated from other buildings, and shall be disposed of intact, separate and apart from the land, for use off-site as shrines, memorials, or for religious purposes, except in cases in which the chapel is located on surplus Government-owned land and the disposal agency determines that it may properly be used in place, in which cases a suitable area of land may be set aside for such purposes, and sold with the chapel.

(1) *Application.* Applications for the purchase of surplus chapels for use off-site or for use in-place shall be solicited by public advertising. All applications received in response to advertising shall be submitted to the Chief of Chaplains of the service which had jurisdiction over the property during the period of Government use thereof for military purposes and shall be disposed of in accordance with his recommendation. If no recommendation is received from the Chief of Chaplains within 30 days from the date of such submission, the disposal agency may select the purchaser on the basis of the needs of the applicants and the best interests of the community to be served. If no application is received for transfer of the property for shrine, memorial, or religious uses, the Chief of Chaplains shall be notified accordingly, and disposal of the property shall be held in abeyance for a period not to exceed 60 days thereafter to afford additional time for the filing of applications. If no such application is received during the extended period, the property may be disposed of for uses other than shrine, memorial, or religious purposes pursuant to other applicable provisions of this subpart.

(2) *Sale price.* The sale price of the chapel shall be a price equal to its appraised fair market value in the light of conditions imposed relating to its future use and the estimated cost of removal, where required. The sale price of the land shall be a price equal to the appraised fair market value of the land based upon the highest and best use of the land at the time of the disposal.

(3) *Conditions of transfer.* All chapels disposed of pursuant to the authority of this section shall be transferred subject to the condition that during the useful life thereof they be maintained and used as shrines, memorials, or for religious purposes and not for any commercial, industrial, or other secular use; and that in the event a transferee fails to maintain and use the chapel for such purposes there shall become due and payable to the Government the difference between the appraised fair market value of the chapel, as of the date of the transfer, without restrictions on its use, and the price actually paid. Where the land on which the chapel is located is sold with the chapel, no conditions or restrictions on the use of the land shall be included in the deed.

(4) *Release of restrictions.* The disposal agency may release the conditions of transfer without payment of a monetary consideration upon a determination that the property no longer serves the purpose for which it was transferred or that such release will not prevent accomplishment of the purpose for which the property was transferred. Such determination shall be in writing, shall state the facts and circumstances involved, and shall be preserved in the files of the disposal agency.

(b) Notwithstanding the provisions of this § 101–47.308–5, a chapel and underlying land that is a component unit of a larger parcel of surplus real property recommended by the Secretary of Health, Education, and Welfare as being needed for educational or public health purposes, may be included in an assignment of such property, when so recommended by the Secretary, for disposal subject to the condition that the instrument of conveyance shall require that during the useful life of the chapel it shall be maintained and used by the grantee as a shrine, memorial, or for religious purposes.

§ 101–47.309 Disposal of leases, permits, licenses, and similar instruments.

The disposal agency may, subject to such reservations, restrictions, and conditions, if any, as the disposal agency deems necessary properly to protect the interests of the United States against liability under a lease, permit, license, or similar instrument:

(a) Dispose of the lease or other instrument subject to assumption by the transferee of the obligations in the lease or other instrument unless a transfer is prohibited by the terms of the lease or other instrument; or

(b) Terminate the lease or other instrument by notice or negotiated agreement; and

(c) Dispose of any surplus Government-owned improvements located on the premises in the following order by any one or more of the following methods:

(1) By disposition of all or a portion thereof to the transferee of the lease or other instrument (not applicable when the lease or other instrument is terminated);

(2) By disposition to the owner of the premises or grantor of a sublease, as the case may be, (i) in full satisfaction of a contractual obligation of the Govern-

ment to restore the premises, or (ii) in satisfaction of a contractual obligation of the Government to restore the premises plus the payment of a money consideration to the Government by the owner or grantor, as the case may be, that is fair and reasonable under the circumstances, or (iii) in satisfaction of a contractual obligation of the Government to restore the premises plus the payment by the Government to the owner or grantor, as the case may be, of a money consideration that is fair and reasonable under the circumstances; or

(3) By disposition for removal from the premises.

Provided, That any negotiated disposals shall be subject to the applicable provisions of §§ 101–47.304–9 and 101–47.304–12, except where the disposition under paragraph (c)(2) of this section is negotiated pursuant to any provision of law other than the Act.

§ 101–47.310 Disposal of structures and improvements on Government-owned land.

In the case of Government-owned land, the disposal agency may dispose of structures and improvements with the land or separately from the land: *Provided*, That prefabricated movable structures such as Butler-type storage warehouses, and quonset huts, and housetrailers (with or without under carriages) reported to GSA with the land on which they are located, may, in the discretion of GSA, be designated for disposal as personal property for off-site use.

§ 101–47.311 Disposal of residual personal property.

(a) Any related personal property reported to GSA on Standard Form 118 which is not disposed of by GSA as related to the real property, shall be designated by GSA for disposal as personal property.

(b) Any related personal property which is not disposed of by the holding agency, pursuant to the authority contained in § 101–47.302, or authority otherwise delegated by the Administrator of General Services as related to the real property, shall be disposed of under the applicable provisions of Part 101–45.

§ 101–47.312 Non-Federal interim use of property.

(a) A lease or permit may be granted by the holding agency with the approval of the disposal agency, for non-Federal interim use of surplus property: *Provided*, That such lease or permit shall be for a period not exceeding 1 year and shall be made revocable on not to exceed 30 days' notice by the disposal agency: *And provided further*, That the use and occupancy will not interfere with, delay, or retard the disposal of the property. In such cases, an immediate right of entry to such property may be granted pending execution of the formal lease or permit. The lease or permit shall be for a money consideration and shall be on such other terms and condtions as are deemed appropriate properly to protect the interests of the United States. Any negotiated lease or permit shall be subject to the applicable provisions of §§ 101–47.304–9 and 101–47.304–12, except that no explanatory statement to the appropriate committees of the Congress need be prepared with respect to a negotiated lease or permit providing for a net rental of $1,000 or less per month, and termination by either party on 30 days' notice.

(b) Any lease of farmlands shall be governed by the policy described in the memorandum of the President dated May 21, 1956 (see § 101–47.4909).

§ 101–47.313 Easements.

§ 101–47.313–1 Disposal of easements to owner of servient estate.

The disposal agency may dispose of an easement to the owner of the land which is subject to the easement when the continued use, occupancy, or control of the easement is not needed for the operation, production, use, or maintenance of property owned or controlled by the Government. A determination shall be made by the disposal agency as to whether the disposal shall be with or without consideration to the Government on the basis of all the circumstances and factors involved and with due regard to the acquisition cost of the easement to the Government. The extent of such consideration shall be regarded as the appraised fair market value of the easement. The disposal agency shall document the circumstances and factors leading to such determination and retain such documentation in its files.

§ 101–47.313–2 Grants of easements in or over Government property.

The disposal agency may grant easements in or over real property on appropriate terms and conditions: *Provided*, That where the disposal agency determines that the granting of such easement decreases the value of the property, the granting of the easement shall be for a consideration not less than the amount by which the fair market value of the property is decreased.

§ 101–47.314 Compliance.

§ 101–47.314–1 General.

Subject to the provisions of § 101–47.314–2(a), requiring referral of criminal matters to the Department of Justice, each disposal agency shall perform such investigatory functions as are necessary to insure compliance with the provisions of the Act and with the regulations, orders, directives, and policy statements of the Administrator of General Services.

§ 101–47.314–2 Extent of investigations.

(a) *Referral to other Government agencies.* All information indicating violations by any person of Federal criminal statutes, or violations of section 209 of the Act, including but not limited to fraud against the Government, mail fraud, bribery, attempted bribery, or criminal collusion, shall be referred immediately to the Department of Justice for further investigation and disposition. Each disposal agency shall make available to the Department of Justice, or to such other governmental investigating agency to which the matter may be referred by the Department of Justice, all pertinent information and evidence concerning the indicated violations; shall desist from further investigation of the criminal aspects of such matters except upon the request of the Department of Justice; and shall cooperate fully with the agency assuming final jurisdiction in establishing proof of criminal violations. After making the necessary referral to the Department of Justice, inquiries conducted by disposal agency compliance organizations shall be limited to obtaining information for administrative purposes. Where irregularities reported or discovered involve wrongdoing on the part of individuals holding positions in Government agencies other than the agency initiating the investigation, the case shall be reported immediately to the Administrator of General Services for an examination in the premises.

(b) *Compliance reports.* A written report shall be made of all compliance investigations conducted by each agency compliance organization. Each disposal agency shall maintain centralized files of all such reports at its respective departmental offices. Until otherwise directed by the Administrator of General Services, there shall be transmitted promptly to the Administrator of General Services one copy of any such report which contains information indicating criminality on the part of any person or indicating noncompliance with the Act or with the regulations, orders, directives, and policy statements of the Administrator of General Services. In transmitting such reports to the Administrator of General Services, the agency shall set forth the action taken or contemplated by the agency to correct the improper conditions established by the investigation. Where any matter is referred to the Department of Justice, a copy of the letter of referral shall be transmitted to the Administrator of General Services.

§ 101–47.315 Covenant against contingent fees and related procedure.

The provisions of § 101–45.311 with respect to the covenant against contingent fees and related procedure are hereby made applicable to disposals of real and related personal property.

Subpart 101–47.4—Management of Excess and Surplus Real Property

§ 101–47.400 Scope of subpart.

This subpart prescribes the policies and methods governing the physical care, handling, protection, and maintenance of excess real property and surplus real property, including related personal property, within the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and the Virgin Islands.

§ 101–47.401 General provisions of subpart.

§ 101–47.401–1 Policy.

It is the policy of the Administrator of General Services:

(a) That the management of excess real property and surplus real property, including related personal property, shall provide only those minimum services necessary to preserve the Government's interest therein, realizable value of the property considered.

(b) To place excess real property and surplus real property in productive use through interim utilization: *Provided*, That such temporary use and occupancy will not interfere with, delay, or retard its transfer to a Federal agency or disposal.

(c) That excess and surplus real property which is dangerous to the public health or safety shall be destroyed or rendered innocuous.

§ 101–47.401–2 Definitions.

As used in this subpart, the following terms shall have the meanings set forth below:

(a) *Maintenance.* The upkeep of property only to the extent necessary to offset serious deterioration; also such operation of utilities, including water supply and sewerage systems, heating, plumbing, and air-conditioning equipment, as may be necessary for fire protection, the needs of interim tenants, and personnel employed at the site, and the requirements for preserving certain types of equipment.

(b) *Repairs.* Those additions or changes that are necessary for the protection and maintenance of property to deter or prevent excessive or rapid deterioration or obsolescence, and to restore property damaged by storm, flood, fire, accident, or earthquake.

§ 101–47.401–3 Taxes and other obligations.

Payment of taxes or payments in lieu of taxes (in the event of the enactment hereafter of legislation by Congress authorizing such payments upon Government-owned property which is not legally assessable), rents, and insurance premiums and other obligations pending transfer or disposal shall be the responsibility of the holding agency.

§ 101–47.401–4 Decontamination.

The holding agency shall be responsible for all expense to the Government and for the supervision of decontamination of excess and surplus real property that has been subjected to contamination with hazardous material of any sort. Extreme care must be exercised in the decontamination, and in the management and disposal of contaminated property in order to prevent such properties becoming a hazard to the general public. The disposal agency shall be made cognizant of any and all inherent hazards involved relative to such property in order to protect the general public from hazards and to preclude the Government from any and all liability resulting from indiscriminate disposal or mishandling of contaminated property.

§ 101–47.401–5 Improvements or alterations.

Improvements or alterations which involve rehabilitation, reconditioning, conversion, completion, additions, and replacements in structures, utilities, installations, and land betterments, may be considered in those cases where disposal cannot otherwise be made, but no commitment therefor shall be entered into without prior approval of GSA.

§ 101–47.401–6 Interim use and occupancy.

When a revocable agreement to place excess real property or surplus real property in productive use has been made, the agency executing the agreement shall be responsible for the servicing thereof.

§ 101–47.402 Care and handling.

§ 101–47.402–1 Responsibility.

The holding agency shall retain custody and accountability for excess and surplus real property, including related personal property, and shall perform the physical care, handling, protection, maintenance, and repairs of such property pending its transfer to a Federal agency for disposal. Guidelines for protection and maintenance of excess and surplus real property are contained in § 101–47.4913.

§ 101–47.402–2 Expense of care and handling.

(a) The holding agency shall be responsible for the expense of physical care, handling, protection, maintenance, and repairs of such property pending transfer or disposal for not more than 12 months, plus the period to the first day of the succeeding quarter of the fiscal year after the date of receipt by GSA of the formal report of excess: *Provided, however*, That where a holding agency requests deferral of disposal on property which it has reported excess, the period for which the agency is responsible for such expense shall be extended by the length of time that disposal is deferred.

(b) In the event the property is not transferred to a Federal agency or disposed of during the period mentioned in § 101–47.402–2(a), the expense of physical care, handling, protection, maintenance, and repairs of such property from and after the expiration date of said period shall be reimbursed to the holding agency by the disposal agency.

Subpart 101–47.5—Abandonment, Destruction, or Donation to Public Bodies

§ 101–47.500 Scope of subpart.

(a) This subpart prescribes the policies and methods governing the abandonment, destruction, or donation to public bodies by Federal agencies of real property located within the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and the Virgin Islands.

(b) This subpart does not apply to surplus property assigned for disposal to educational or public health institutions pursuant to section 203(k) of the Act.

§ 101–47.501 General provisions of subpart.

§ 101–47.501–1 Definitions.

(a) "No commercial value" means real property, including related personal property, which has no reasonable prospect of being disposed of at a consideration.

(b) "Public body" means any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, or any political subdivision, agency, or instrumentality of the foregoing.

§ 101–47.501–2 Authority for disposal.

Subject to the restrictions in § 101–47.502 and § 101–47.503, any Federal agency having control of real property which has no commercial value or of which the estimated cost of continued care and handling would exceed the estimated proceeds from its sale, is authorized:

(a) To abandon or destroy Government-owned improvements and related personal property located on privately owned land.

(b) To destroy Government-owned improvements and related personal property located on Government-owned land. Abandonment of such property is not authorized.

(c) To donate to public bodies any real property (land and/or improvements and related personal property), or interests therein, owned by the Government.

§ 101–47.501–3 Dangerous property.

No property which is dangerous to public health or safety shall be abandoned, destroyed, or donated to public bodies pursuant to this subpart without first rendering such property innocuous or providing adequate safeguards therefor.

§ 101–47.501–4 Findings.

(a) No property shall be abandoned, destroyed, or donated by a Federal agency under § 101–47.501–2, unless a duly authorized official of that agency finds, in writing, either that (1) such property has no commercial value, or (2) the estimated cost of its continued care and handling would exceed the estimated proceeds from its sale. Such finding shall not be made by any official directly accountable for the property covered thereby.

(b) Whenever all the property proposed to be disposed of hereunder by a Federal agency at any one location at any one time had an original cost (estimated if not known) of more than $1,000, findings made under § 101–47.501–4(a), shall be approved by a reviewing authority before any such disposal.

§ 101–47.502 Donations to public bodies.

§ 101–47.502–1 Cost limitations.

No improvements on land or related personal property having an original cost (estimated if not known) in excess of $250,000 and no land, regardless of cost, shall be donated to public bodies without the prior concurrence of GSA. The request for such concurrence shall be made to the regional office of GSA for the region in which the property is located.

§ 101–47.502–2 Disposal costs.

Any public body receiving improvements on land or related personal property pursuant to this subpart shall pay the disposal costs incident to the donation, such as dismantling, removal, and the cleaning up of the premises.

§ 101–47.503 Abandonment and destruction.

§ 101–47.503–1 General.

(a) No improvements on land or related personal property shall be abandoned or destroyed by a Federal agency unless a duly authorized official of that agency finds, in writing, that donation of such property in accordance with the provisions of this subpart is not feasible. This finding shall be in addition to the finding prescribed in § 101–47.501–4. If at any time prior to actual abandonment or destruction the donation of the property pursuant to this subpart becomes feasible, such donation will be accomplished.

(b) No abandonment or destruction shall be made in a manner which is detrimental or dangerous to public health or safety or which will cause infringement of the rights of other persons.

(c) The concurrence of GSA shall be obtained prior to the abandonment or destruction of improvements on land or related personal property (1) which had an original cost (estimated if not known) of more than $50,000, or (2) which are of permanent type construction, or (3) where their retention would enhance the value of the underlying land, if it were to be made available for sale or lease.

§ 101–47.503–2 Notice of proposed abandonment or destruction.

Except as provided in § 101–47.503–3, improvements on land or related personal property shall not be abandoned or destroyed by a Federal agency until after public notice of such proposed abandonment or destruction. Such notice shall be given in the area in which the property is located, shall contain a general description of the property to be abandoned or destroyed, and shall include an offering of the property for sale. A copy of such notice shall be given to the regional office of GSA for the region in which the property is located.

§ 101–47.503–3 Abandonment or destruction without notice.

If (a) the property had an original cost (estimated if not known) of not more than $1,000; or (b) its value is so low or the cost of its care and handling so great that its retention in order to post public notice is clearly not economical; or (c) immediate abandonment or destruction is required by considerations of health, safety, or security; or (d) the assigned mission of the agency might be jeopardized by the delay, and a finding with respect to (a), (b), (c), or (d) is made in writing by a duly authorized official of the Federal agency and approved by a reviewing authority, abandonment or destruction may be made without public notice. Such a finding shall be in addition to the findings prescribed in §§ 101–47.501–4 and 101–47.503–1(a).

Subpart 101–47.6—Delegations

§ 101–47.600 Scope of subpart.

This subpart sets forth the special delegations of authority granted by the Administrator of General Services to other agencies for the utilization and disposal of certain real property pursuant to the Act.

§ 101–47.601 Delegation to Department of Defense.

(a) Authority is delegated to the Secretary of Defense to determine that excess real property and related personal property under the control of the Department of Defense having a total estimated fair market value, including all the component units of the property, of less than $1,000 as determined by the Department of Defense, is not required for the needs and responsibilities of Federal agencies; and thereafter to dispose of said property by means deemed advantageous to the United States.

(b) Prior to such determination and disposal, the Secretary of Defense shall take steps as may be appropriate to determine that the property is not required for the needs of any Federal agency.

(c) The authority conferred in this § 101–47.601 shall be exercised in accordance with the Act and regulations issued pursuant thereto, except any provisions of Subpart 101–47.2 relating to reporting such property to GSA.

(d) The authority delegated in this § 101–47.601 may be redelegated to any officer or employee of the Department of Defense.

§ 101–47.602 Delegation to the Department of Agriculture.

(a) Authority is delegated to the Secretary of Agriculture to determine that excess real property and related personal property under the control of the Department of Agriculture having a total estimated fair market value, including all the component units of the property, of less than $1,000 as determined by the Department of Agriculture, is not required for the needs and responsibilities of Federal agencies; and thereafter to dispose of said property by means deemed advantageous to the United States.

(b) Prior to such determination and disposal, the Secretary of Agriculture shall take steps as may be appropriate to determine that the property is not required for the needs of any Federal agency.

(c) The authority conferred in this § 101–47.602 shall be exercised in accordance with the Act and regulations issued pursuant thereto, except any provisions of Subpart 101–47.2 relating to reporting such property to GSA.

(d) The authority delegated in this § 101–47.602 may be redelegated to any officer or employee of the Department of Agriculture.

§ 101–47.603 Delegation to the Department of the Interior.

(a) Authority is delegated to the Secretary of the Interior to determine that excess real property and related personal property under the control of the Department of the Interior having a total estimated fair market value, including all the component units of the property, of less than $1,000 as determined by the Department of the Interior, is not required for the needs and responsibilities of Federal agencies; and thereafter to dispose of said property by means deemed advantageous to the United States.

(b) Prior to such determination and disposal, the Secretary of the Interior shall take steps as may be appropriate to determine that the property is not required for the needs of any Federal agency.

(c) The authority conferred in this § 101–47.603 shall be exercised in accordance with the Act and regulations issued pursuant thereto, except any provisions of Subpart 101–47.2 relating to reporting such property to GSA.

(d) The authority delegated in this § 101–47.603 may be redelegated to any officer or employee of the Department of the Interior.

§ 101–47.604 Delegation to the Department of the Interior and the Department of Health, Education, and Welfare.

(a) The Secretary of the Interior and the Secretary of Health, Education, and Welfare, are delegated authority to transfer and to retransfer to each other, upon request, any of the property of either agency which is being used and will continue to be used in the administration of any functions relating to the Indians. The term "property," as used in this § 101–47.604, includes real property and such personal property as the Secretary making the transfer or retransfer determines to be related personal property.

(b) This authority shall be exercised only in connection with property which the Secretary transferring or retransferring such property determines:

(1) Comprises a functional unit;

(2) Is located within the United States; and

(3) Has an acquisition cost of $100,000 or less: *Provided, however,* That the transfer or retransfer shall not include property situated in any area which is recognized as an urban area or place for the purpose of the most recent decennial census.

(c) No screening of the property as required by the regulations in this Part 101–47 need be conducted, it having been determined that such screening among Federal agencies would accomplish no useful purpose since the property which is subject to transfer or retransfer hereunder will continue to be used in the administration of any functions relating to the Indians.

(d) Any such transfer or retransfer of a specific property shall be without reimbursement except:

(1) Where funds programed and appropriated for acquisition of the property are available to the Secretary requesting the transfer or retransfer; or

(2) Whenever reimbursement at fair value is required by Subpart 101–47.2.

(e) Where funds were not programed and appropriated for acquisition of the property, the Secretary requesting the transfer or retransfer shall so certify. Any determination necessary to carry out the authority contained in this § 101–47.604 which otherwise would be required under this part to be made by GSA shall be made by the Secretary transferring or retransferring the property.

(f) The authority conferred in this § 101–47.604 shall be exercised in accordance with such other provisions of the regulations of GSA issued pursuant to the Act as may be applicable.

(g) The Secretary of the Interior and the Secretary of Health, Education, and Welfare, are authorized to redelegate any of the authority contained in this § 101–47.604 to any officers or employees of their respective departments.

Subpart 101–47.7—Conditional Gifts of Real Property to Further the Defense Effort

§ 101–47.700 Scope of subpart.

This subpart provides for acceptance or rejection, on behalf of the United States, of any gift of real property offered on condition that it be used for a particular defense purpose and for subsequent disposition of such property (Act of July 27, 1954, 68 Stat. 566, 40 U.S.C. 1151–1156).

§ 101–47.701 Offers and acceptance of conditional gifts.

(a) Any agency receiving an offer of a conditional gift of real property for a particular defense purpose within the purview of the Act of July 27, 1954, shall notify the appropriate regional office of GSA and shall submit a recommendation as to acceptance or rejection of the gift.

(b) Prior to such notification, the receiving agency shall acknowledge receipt of the offer and advise the donor of its referral to the GSA regional office, but should not indicate acceptance or rejection of the gift on behalf of the United States. A copy of the acknowledgment shall accompany the notification and recommendation to the regional office.

(c) When the gift is determined to be acceptable and it can be accepted and used in the form in which offered, it will be transferred without reimbursement to an agency designated by GSA for use for the particular purpose for which it was donated.

(d) If the gift is one which GSA determines may and should be converted to money, the funds, after conversion, will be deposited with the Treasury Department for transfer to an appropriate account which will best effectuate the intent of the donor, in accordance with Treasury Department procedures.

§ 101–47.702 Consultation with agencies.

Such conditional gifts of real property will be accepted or rejected on behalf of the United States or transferred to an agency by GSA, only after consultation with the interested agencies.

§ 101–47.703 Advice of disposition.

GSA will advise the donor and the agencies concerned of the action taken with respect to acceptance or rejection of the conditional gift and of its final disposition.

§ 101–47.704 Acceptance of gifts under other laws.

Nothing in this Subpart 101–47.7 shall be construed as applicable to the acceptance of gifts under the provisions of other laws.

Subparts 101–47.8—101–47.48 [Reserved]

Subpart 101–47.49—Illustrations

§ 101–47.4900 Scope of subpart.

This subpart sets forth certain forms and illustrations referred to previously in this part.

NOTE: The forms in §§ 101–47.4902—101–47.4904–1 filed as part of the original document. Copies may be obtained from Central Office, GSA.

§ 101–47.4901 [Reserved]

§ 101–47.4902 Standard Form 118, Report of Excess Real Property.

§ 101–47.4902–1 Standard Form 118a, Buildings, Structures, Utilities, and Miscellaneous Facilities.

§ 101–47.4902–2 Standard Form 118b, Land.

§ 101–47.4902–3 Standard Form 118c, Related Personal Property.

§ 101–47.4902–4 Instructions for the preparation of Standard Form 118, and Attachments, Standard Forms 118a, 118b, and 118c.

§ 101–47.4903 GSA Form 1100, Report of Surplus Real Property Disposals and Inventory.

§ 101–47.4903–1 Instructions for preparation of GSA Form 1100, Report of Surplus Real Property Disposals and Inventory.

§ 101–47.4904 GSA Form 1334, Request for Transfer of Excess Real Property and Related Personal Property.

§ 101–47.4904–1 Instructions for preparation of GSA Form 1334, Request for Transfer of Excess Real Property and Related Personal Property.

§ 101–47.4905 Extract of statutes authorizing disposal of surplus real property to public agencies.

Statute	Type of property	Eligible public agency
50 U.S.C. App. 1622(h). Disposals for public parks, public recreation areas, or historic monuments.	Any surplus real property, including improvements and equipment located thereon, exclusive of (1) minerals having a commercial value separate and apart from the surface; (2) improvements without land; (3) property subject to disposal as a shrine, memorial, or for religious purposes under the provisions of § 101–47.308–5; (4) property suitable for disposal for public airport purposes under the provisions of 50 U.S.C. App. 1622(g); (5) property the highest and best use of which is determined to be industrial and which shall be so classified for disposal; and (6) property which the holding agency has requested reimbursement of the net proceeds of disposition pursuant to section 204(c) of the Act. This statute, as amended, does not authorize the disposal, for historic monument use, of property if its historical significance relates to a period of time within the 50 years immediately preceding the determination of suitability and desirability for such use.	Any State, political subdivision and instrumentalities thereof, or municipality; Commonwealth of Puerto Rico and the Virgin Islands.
40 U.S.C. 484(k)(1)(A). Disposals for school, classroom, or other educational purposes.	Any surplus real property including buildings, fixtures, and equipment situated thereon, exclusive of (1) minerals having a commercial value separate and apart from the surface, and (2) property which the holding agency has requested reimbursement of the net proceeds of disposition pursuant to section 204(c) of the Act.	States and their political subdivisions and instrumentalities, and tax-supported, educational institutions; District of Columbia; Commonwealth of Puerto Rico; and the Virgin Islands.
40 U.S.C. 484(k)(1)(B). Disposals for public health purposes including research.	Any surplus real property, including buildings, fixtures, and equipment situated thereon, exclusive of (1) minerals having a commercial value separate and apart from the surface, and (2) property which the holding agency has requested reimbursement of the net proceeds of disposition pursuant to section 204(c) of the Act.	States and their political subdivisions and instrumentalities, and tax-supported medical institutions; District of Columbia; Commonwealth of Puerto Rico; and the Virgin Islands.

Statute	Type of property	Eligible public agency
50 U.S.C. App. 1622(g). Disposals for public airport purposes.	Any surplus real or personal property, exclusive of (1) property subject to disposal as a shrine, memorial, or for religious purposes under the provisions of § 101–47.308–5; (2) property subject to disposal as a historic monument site under the provisions of § 101–47.308–3; (3) property the highest and the best use of which is determined by the disposal agency to be industrial and which shall be so classified for disposal, and (4) property which the holding agency has requested reimbursement of the net proceeds of disposition pursuant to section 204(c) of the Act.	Any State, political subdivision, municipality or tax-supported institution; Commonwealth of Puerto Rico; and the Virgin Islands.
16 U.S.C. 667 b–d. Disposals for wildlife conservation purposes.	Any surplus real property (with or without improvements) that can be utilized for wildlife conservation purposes other than migratory birds, exclusive of (1) oil, gas, and mineral rights, and (2) property which the holding agency has requested reimbursement of the net proceeds of disposition pursuant to section 204(c) of the Act.	The agency of the State exercising the administration of the wildlife resources of the State.
2 U.S.C. 107 and 317. Disposals for Federal aid and other highways.	Any real property or interests therein determined by the Secretary of Commerce to be reasonably necessary for the right-of-way of a Federal aid or other highway (including control of access thereto from adjoining lands) or as a source of material for the construction or maintenance of any such highway adjacent to such real property or interest therein exclusive of (1) minerals having a commercial value separate and apart from the surface, and (2) property which the holding agency has requested reimbursement of the net proceeds of disposition pursuant to section 204(c) of the Act.	State wherein the property is situated (or such political subdivision of the State as its law may provide), including the District of Columbia and Commonwealth of Puerto Rico.
40 U.S.C. 345 c. Disposals for authorized widening of public highways, streets, or alleys.	Such interest in surplus real property as the head of the disposal agency determines will not be adverse to the interests of the United States, exclusive of (1) minerals having a commercial value separate and apart from the surface, (2) property subject to disposal for Federal aid and other highways under the provisions of 23 U.S.C. 107 and 317, and (3) property which the holding agency has requested reimbursement of the net proceeds of disposition pursuant to section 204(c) of the Act.	State or political subdivision of a State.
50 U.S.C. App. 1622(d). Disposals of power transmission lines needful for or adaptable to the requirements of a public power project.	Any surplus power transmission line and the right of way acquired for its construction.	Any State or political subdivision thereof or any State agency or instrumentality.
40 U.S.C. 484 (e)(3)(H). Disposals by negotiations.	Any surplus real property including related personal property.	Any State, political subdivision thereof, or tax-supported agency therein; Commonwealth of Puerto Rico; and the Virgin Islands.
40 U.S.C. 122. Transfer of jurisdiction over properties with the District of Columbia for administration and maintenance under conditions to be agreed upon.	Any surplus real property, except property which the holding agency has requested reimbursement of the net proceeds of disposition pursuant to section 204(c) of the Act.	District of Columbia.

§ 101–47.4906 Sample notice to public agencies of surplus determination.

NOTICE OF SURPLUS DETERMINATION—GOVERNMENT PROPERTY

(Date)

(Name of property)

(Location)

Notice is hereby given that the ----------, ----------, (Name of property) (Location) ----------, has been determined to be surplus Government property. The property consists of 1,333.65 acres of fee land and a 5.968-acre drainage ditch easement, together with installed landing strips, taxiways, walks, roads, parking area, electrical system, and fencing.

This property is surplus property available for disposal pursuant to the provisions of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 471 et seq.) and applicable regulations. The applicable regulations provide that public agencies (non-Federal) shall be allowed a reasonable period of time to develop a comprehensive and coordinated plan of use and procurement for surplus real property in which they may be interested. Disposal of this property, or portions thereof, may be made to public agencies for the public uses stated below whenever the Government has determined that the property is available for such uses and that disposal thereof is authorized by the statutes cited and applicable regulations:[1]

Statute	Type of disposal
50 U.S.C. App. 1622(h)	Public park, recreational area, or historic monument.
40 U.S.C. 484(k)(1)(A)	School, classroom, or other educational purposes.
40 U.S.C. 484(k)(1)(B)	Protection of public health, including research.
50 U.S.C. App. 1622(g)	Public airport.
23 U.S.C. 107 and 317	Federal aid and certain other highways.
40 U.S.C. 484(e)(3)(H)	Negotiated sales to public bodies for use for public purposes generally.

If any public agency desires to develop a comprehensive and coordinated plan of use and procurement for this property, notice thereof in writing must be filed with ----------, ----------, before (Name of disposal agency) (Address) ---------- Standard Time, ------, (Hour and zone) (Day) ----------.[2] Such notice shall: (Date)

1. Disclose the contemplated use of the property;

2. Contain a citation of the applicable statute or statutes under which the public agency desires to procure the property;

3. Disclose the nature of the interest if an interest less than fee title to the property is contemplated;

4. State the length of time required to develop and submit a comprehensive and coordinated plan of use and procurement for the property (where a payment to the Government is required under the statute, include a statement as to whether funds are available and, if not, the period required to obtain funds); and

5. Give the reason for the time required to develop and submit a plan.

Any planning for an educational or a public health use of property sought to be acquired subject to a public benefit allowance must be coordinated with the Department of Health, Education, and Welfare ---------- (Address of ----------. An application form to acquire proper regional office) property for an educational or public health requirement, and instructions for the preparation and submission of an application, may be obtained from that office. Application forms or instructions to acquire property for all other public use requirements may be obtained from ----------, ------.[3] (Name of disposal agency) (Address)

Upon receipt of such written notice, the public agency will be promptly informed concerning the period of time that will be allowed to develop a comprehensive and coordinated plan of use and procurement for the property. Such a plan of use will be the basis for subsequent determination by the Government as to whether the property is available for the proposed use and disposal thereof is authorized by applicable statutes and regulations.

In the absence of such written notice, or in the event a public use proposal is not approved, the regulations issued pursuant to authority contained in the Federal Property and Administrative Services Act of 1949, provide for offering the property for sale for its highest and best use.

§ 101–47.4906–1 Sample letter for transmission of notice of surplus determination.

(Date)

CERTIFIED MAIL—RETURN RECEIPT REQUESTED

(Addressee)

Dear ----------:

The former ----------, (Name of property) ---------- has been determined to be (Location) surplus Government property and available for disposal.

Included in the attached notice are a description of the property and procedural instructions to be followed if any public agency desires to develop a comprehensive and coordinated plan of use and procure-

[1] List only the statutes (showing type of disposal) applicable to disposal to public bodies of the property determined to be surplus.

[2] This date shall be 20-calendar days after the date of the notice.

[3] Delete this paragraph whenever property is not available for transfer for an educational or public health use.

ment for the property. Please note particularly the name and address given for filing written notice if any public agency desires to develop such a plan of use, the time limitation within which written notice must be filed, and the required content of such notice.

In order to insure that all interested parties are informed of the availability of this property, please post the additional copies of the attached notice in appropriate conspicuous places.[1]

Identical letters are being mailed to

(Other addressees)

Sincerely yours,

Attachment

§ 101–47.4907 List of Federal real property holding agencies.

1. Agriculture, Department of
2. Atomic Energy Commission
3. Commerce, Department of
4. Defense, Department of
5. Federal Aviation Agency
6. Federal Communications Commission
7. General Services Administration
8. Government Printing Office
9. Health, Education, and Welfare, Department of
10. Housing and Home Finance Agency
11. Interior, Department of the
12. Justice, Department of
13. National Aeronautics and Space Administration
14. National Capital Housing Authority
15. National Science Foundation
16. Post Office Department
17. Smithsonian Institution
18. State, Department of
19. Tennessee Valley Authority
20. Treasury, Department of the
21. United States Information Agency
22. Veterans Administration

This list does not include all agencies which may occupy or request assignment of space.

§ 101–47.4908 Bureau of the Budget Circular No. A–2.

EXECUTIVE OFFICE OF THE PRESIDENT

BUREAU OF THE BUDGET

Washington 25, D.C.

October 18, 1955 Circular No. A–2

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

Subject: Review of real property holdings (other than public domain)

1. *Purpose.* It is desirable that the Federal Government divest itself of real property holdings which are not needed. The head of each agency is requested personally to ensure that intensified action is taken to identify and declare as excess real properties which are not needed. The purpose of this Circular is to establish general guidelines for the accomplishment of this objective with respect to real properties within the continental United States, exclusive of the public domain.

2. *Policy guidelines.* Real properties or portions thereof generally shall be declared excess when:

a. They are not being used by the owning agency and there are no approved plans for future use.

b. Substantial net savings to the Government would result if properties used for essential purposes were sold at their current market values and other suitable properties of substantially lower current values were substituted for them.

c. The costs of operation and maintenance are substantially higher than for other suitable properties of equal or less value which can be made available by transfer, permit, or purchase.

d. They are being leased to private enterprise but could be sold under provisions of the leases and in accordance with existing laws, if the Government's requirements for goods or services produced on such properties would be met satisfactorily with the properties in private ownership.

e. They are being used by the Government to produce goods or services which are available from private enterprise, except when it is demonstrated clearly in each instance that it is not in the public interest to obtain such requirements from private enterprise.

3. *Financing arrangements.* It is recognized that, in some instances, action cannot be accomplished in accordance with these guidelines without first incurring expenses for which appropriate financing arrangements or legislation must be obtained. There should be no delay, however, in making the necessary studies and in submitting proposals for such financing arrangements or legislation, including estimates of replacement costs and ultimate net savings, as part of the budget submissions.

4. *Implementation.* The head of each agency should ensure that:

a. Instructions and criteria are developed and issued for the application of the guidelines established herein. It is requested that copies of such criteria and instructions be sent to the Bureau of the Budget by November 30, 1955.

b. Thorough reviews of real property holdings are initiated promptly and carried through on an annual basis.

c. Properties or portions of properties are declared excess without delay if continued ownership is not justified.

By direction of the President:

ROWLAND R. HUGHES,
Director.

§ 101–47.4909 Memorandum of the President dated May 21, 1956.

THE WHITE HOUSE

Washington, May 21, 1956

MEMORANDUM FOR THE HEADS OF ALL EXECUTIVE DEPARTMENTS AND AGENCIES

In order that the leasing of farm lands owned by the Federal Government shall be consistent with the Administration's determined effort to reduce price-depressing surpluses and to bring agricultural production into line with markets, I request that the following-described policies governing the leasing of farm lands by the Federal Government, to the extent that such policies are not inconsistent with law, be placed in effect by all departments and agencies concerned on the effective date of this memorandum:

1. Except as provided in paragraphs 2 and 4 hereof, leases of farm lands made by the Federal Government on or after the effective date of this memorandum shall prohibit the cultivation of price-supported crops in surplus supply.

2. In the case of acquisitions of farm lands by the Federal Government on or after the effective date of this memorandum, if price-supported crops in surplus supply are growing on such lands at the time of acquisition, the harvesting of such crops may be permitted.

3. No lease of farm lands by the Federal Government which is in effect on the effective date hereof shall be terminated under authority of this memorandum, but this memorandum shall not be construed to affect any authority which may otherwise exist for the termination of any such lease.

4. Upon the expiration of leases of farm lands by the Federal Government which do not prohibit the cultivation of price-supported crops in surplus supply (including those in effect on the effective date of this memorandum, and including those made as provided for in this paragraph, but not including any agreement made with respect to harvesting pursuant to paragraph 2 of this memorandum), whether such lands may thereafter be leased for the cultivation of price-supported crops in surplus supply shall be determined equitably. The controlling department or agency, according to its particular circumstances, may make such determinations on an individual lease basis or on an area basis. In arriving at such determinations, consideration shall be given to the interests of individual farmers and the local community, the supply situation of crops that might be grown on the lands, the effect on price-support programs, the objectives of the programs under which such lands were acquired or reserved, and maintenance savings and income to the Federal Government. If it is at any time determined, pursuant to this paragraph, that a lease of farm lands by the Federal Government shall prohibit the cultivation of price-supported crops in surplus supply, any lease of such lands made at any time thereafter by the Federal Government shall prohibit the cultivation of such crops.

5. In determining the acreage in each unit of farm land to be offered for lease by the Federal Government, consideration shall be given to the leasing of such land for family-size farm operations.

6. As used in this memorandum:

(a) The term "lease" shall include permits and licenses.

(b) The term "price-supported crops in surplus supply" shall mean those cultivated crops supported pursuant to the Agricultural Act of 1949, as amended and supplemented, and determined from time to time by the Secretary of Agriculture to be in surplus supply.

7. To insure that the leasing of farm lands by the Federal Government shall be consistent with the Administration's farm program, the Department of Agriculture, until such time as some appropriate interagency group or committee may be designated, shall be available as a focal agency for consultation in such matters.

8. All departments and agencies concerned shall submit to the Bureau of the Budget within sixty days from the date of this memorandum copies of implementing instructions to their operating organizations.

This memorandum shall become effective sixty days after the date hereof.

DWIGHT D. EISENHOWER

§ 101–47.4910 Field offices of Department of Health, Education, and Welfare to receive notices of availability.

Region and Jurisdiction	*Address and Telephone*
Region I—Maine, New Hampshire, Vermont, Connecticut, Massachusetts, and Rhode Island.	Regional Representative, Surplus Property Utilization Division, 120 Boylston Street, Boston, Mass. 02116. Phone: 482–6550 (Area Code 617).
Region II—Delaware, New York, New Jersey, and Pennsylvania.	Regional Representative, Surplus Property Utilization Division, Room 1200, 42 Broadway, New York, N.Y. 10004. Phone: 363–4031 (Area Code 212).

[1] Attach as many copies of the notice as may be anticipated will be required for adequate posting.

Region and Jurisdiction	*Address and Telephone*
Region III—District of Columbia, Kentucky, Maryland, North Carolina, Puerto Rico, Virgin Islands, Virginia, and West Virginia.	Regional Representative, Surplus Property Utilization Division, 700 East Jefferson Street, Charlottesville, Va. 22901. Phone: 296-5171 (Area Code 703).
Region IV—Alabama, Florida, Georgia, Mississippi, South Carolina, and Tennessee.	Regional Representative, Surplus Property Utilization Division, Room 404, 50 Seventh Street NE., Atlanta, Ga. 30323. Phone: TRinity 6-3311 (Area Code 404).
Region V—Illinois, Indiana, Michigan, Ohio, and Wisconsin.	Regional Representative, Surplus Property Utilization Division, Room 712, 433 West Van Buren Street, Chicago, Ill. 60607. Phone: 828-5197 (Area Code 312).
Region VI—Iowa, Missouri, North Dakota, South Dakota, Kansas, Minnesota, and Nebraska.	Regional Representative, Surplus Property Utilization Division, 560 Westport Road, Kansas City, Mo. 64111. Phone: BAltimore 1-7000 (Area Code 816).
Region VII—Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.	Regional Representative, Surplus Property Utilization Division, 1114 Commerce Street, Dallas, Tex. 75202. Phone: 749-3385 (Area Code 214).
Region VIII—Colorado, Idaho, Montana, Utah, and Wyoming.	Regional Representative, Surplus Property Utilization Division, Room 551, 621 17th Street, Denver, Colo. 80202. Phone: 534-4151 (Area Code 303).
Region IX—Arizona, California, Nevada, Oregon, Washington, Alaska, and Hawaii.	Regional Representative, Surplus Property Utilization Division, 447 Federal Office Building, Civic Center, San Francisco, Calif. 94102. Phone: 556-6651 (Area Code 415).

§ 101-47.4911 Outline for explanatory statements for negotiated sales.

EXPLANATORY STATEMENT OF PROPOSED NEGOTIATED DISPOSAL OF SURPLUS REAL PROPERTY SUBMITTED PURSUANT TO THE PROVISIONS OF SECTION 203(e)(6) OF THE FEDERAL PROPERTY AND ADMINISTRATIVE SERVICES ACT OF 1949, AS AMENDED

Property: (Property designation and case No.).
Location:
Reported excess by: (Holding agency and date).
Date surplus:
Description:
Acquisition cost and date: (Line item separation between land, improvements, and related personal property).
All income received from rentals:
Appraised fair market value:
Appraised by: (Name and date—If not a contract appraiser, state briefly the reason another appraisal method was authorized).
Proposed purchase price:
Proposed purchaser:
Proposed use:
Background and justification:

§ 101-47.4912 Field offices of Department of the Interior, Bureau of Outdoor Recreation.

Area	*Field office addresses*
Northeast Region—Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and West Virginia.	Regional Director, Region 6, Bureau of Outdoor Recreation, 143 South Third St., Philadelphia, Pa. 19106.
Southeast Region—Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Tennessee, South Carolina, Puerto Rico, Virgin Islands, and Virginia.	Regional Director, Region 5, Bureau of Outdoor Recreation, Post Office Box 1202, Atlanta, Ga. 30301.
Lake Central Region—Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Ohio, and Wisconsin.	Regional Director, Region 4, Bureau of Outdoor Recreation, Post Office Box 351, Downtown Station, Ann Arbor, Mich. 48107.
Mid-Continent Region—Colorado, Kansas, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming.	Regional Director, Region 3, Bureau of Outdoor Recreation, Hartford Bldg., 7860 West 16th Ave., Denver, Colo. 80215.
Pacific Northwest Region—Alaska, Idaho, Montana, Oregon, and Washington.	Regional Director, Region 1, Bureau of Outdoor Recreation, Room 310—U.S. Court House, Seattle, Wash. 98104.
Pacific Southwest Region—Arizona, California, Hawaii, and Nevada.	Regional Director, Region 2, Bureau of Outdoor Recreation, 180 New Montgomery St., San Francisco, Calif. 94105.

§ 101-47.4913 Outline for protection and maintenance of excess and surplus real property.

A. *General.* In protecting and maintaining excess and surplus properties, the adoption of the principle of "calculated risk" is considered to be essential. In taking what is termed a "calculated risk," the expected losses and deteriorations in terms of realizable values are anticipated to be less in the overall than expenditures to minimize the risks. In determining the amount of protection to be supplied under this procedure, a number of factors should be considered; such as, the availability of, and the distance to, local, public, or private protection facilities; the size and value of the facility; general characteristics of structures; physical protection involving fencing, number of gates, etc.; the location and availability of communication facilities; and the amount and type of activity at the facility. Conditions at the various excess and surplus properties are so diverse that it is impracticable to establish a definite or fixed formula for determining the extent of protection and maintenance that should be applied. The standards or criteria set forth in B and C, below, are furnished as a guide in making such determinations.

B. *Protection Standards.* The following standards are furnished as a guide in determining the amount and limits of protection.

1. *Properties not Requiring Protection Personnel.* Fire protection or security personnel are not needed at:

(a) Facilities where there are no structures or related personal property;

(b) Facilities where the realizable or recoverable value of the improvements and related personal property subject to loss is less than the estimated cost of protection for a one-year period;

(c) Facilities of little value located within public fire and police department limits, which can be locked or boarded up;

(d) Facilities where the major buildings are equipped with automatic sprinklers, supervised by American District Telegraph Company or other central station service, which do not contain large quantities of readily removable personal property, and which are in an area patrolled regularly by local police; and

(e) Facilities where agreements can be made with a lessee of a portion of the property to protect the remaining portions at nominal, or without additional cost.

2. *Properties Requiring a Resident Custodian.* A resident custodian or guard only is required at facilities of the following classes:

(a) Facilities containing little removable personal property but having a considerable number of buildings to be sold for off-site use when (a) the buildings are of low realizable value and so spaced that loss of more than a few buildings in a single fire is improbable, or (b) the buildings are so located that water for firefighting purposes is available and municipal or other fire department services will respond promptly;

(b) Small, inactive industrial and commercial facilities which must be kept open for inspection and which are so located that public fire and police protection can be secured by telephone;

(c) Facilities where the highest and best use has been determined to be salvage; and

(d) Facilities of little, or salvage, value but potentially dangerous and attractive to children and curiosity seekers where the posting of signs is not sufficient to protect the public.

3. *Properties Requiring Continuous Guard Service.* One guard on duty at all times (a total of 5 guards required) is required at facilities of high market value which are fenced; require only one open gate which can be locked during patrols; all buildings of which can be locked; and where local police and fire protection can be secured by telephone.

4. *Properties Requiring High Degree of Protection.* More than one firefighter-guard will be required to be on duty at all times at facilities of the classes listed below. The number, and the assignment, of firefighter-guards in such cases should be determined by taking into consideration all pertinent factors.

(a) Facilities of high market value which are distant from public assistance and require an on-the-site firefighting force adequate to hold fires in check until outside assistance can be obtained.

(b) Facilities of high market value which can obtain no outside assistance and require an on-the-site firefighting force adequate to extinguish fires.

(c) Facilities of high market value at which the patrolling of large areas is necessary.

(d) Facilities of high market value not fenced and containing large quantities of personal property of a nature inviting pilferage.

(e) Facilities of high market value at which several gates must be kept open for operating purposes.

5. *Standards for All Protected Properties.*

(a) All facilities within the range of municipal or other public protection, but outside the geographic limits of such public body, should be covered by advance arrangements with appropriate authorities for police and fire protection service, at a monthly or other service fee if necessary.

(b) Patrolling of all facilities with large areas to be protected should be accomplished by use of automotive vehicles.

(c) At fenced facilities, a minimum number of gates should be kept open.

6. *Firefighter-Guards.* Firefighters and guards are the normal means for carrying out the fire protection and security programs at excess and surplus real properties where both such programs are required. The duties of firefighters and guards should be combined to the maximum extent possible in the interest of both economy and efficiency. Such personnel would also be available in many cases for other miscellaneous services, such as, removing grass and weeds or other fire hazards, servicing fire extinguishers, and other activities related to general protection of property.

7. *Operating Requirements of Protection Units.* Firefighter-guards or guards, should be required to make periodic rounds of facilities requiring protection. The frequency of these rounds would be based upon a number of factors; such as, location and size of the facility, type of structures and physical barriers, and the amount and type of activity at the facility. There may be instances where some form of central station supervision, such as American District Telegraph Company, will effect reduction in costs by reducing the number of firefighter-guards, or guards, required to adequately protect the premises.

8. *Watchman's Clock.* To insure adequate coverage of the entire property by the guards, or firefighter-guards, an approved watchman's clock should be provided, with key stations strategically located so that, in passing from one to the other, the guards will cover all portions of the property.

9. *Protection Alarm Equipment.* Automatic fire detection devices and allied equipment and services may materially assist in minimizing protection costs. However, use of devices of this type, like guards, are purely secondary fire protection and are primarily a means of obtaining fire and police protection facilities at the property in an emergency. There are various types of devices, each of which can be considered separately or in combination as supplementing guard patrols, which may assist in reduction of costs and, in some instances, it may be possible to eliminate all guards.

C. *Maintenance Standards.* The following standards or criteria are furnished as a guide in connection with the upkeep of excess and surplus real properties:

1. *Temporary Type Buildings and Structures.* Temporary buildings housing personal property which cannot be readily removed to permanent type storage should be maintained only to the extent necessary to protect the personal property. Vacant temporary structures should not be maintained except in unusual circumstances.

2. *Permanent Type Buildings and Structures.*

(a) No interior painting should be done. Where exterior wood or metal surfaces require treatment to prevent serious deterioration, spot painting only should be done when practicable.

(b) Carpentry and glazing should be limited to: work necessary to close openings against weather and pilferage; making necessary repairs to floors, roofs, and sidewalls as a protection against further damage; shoring and bracing of structures to preclude structural failures; and similar operations.

(c) Any necessary roofing and sheet metal repairs should, as a rule, be on a patch basis.

(d) Masonry repairs, including brick, tile, and concrete construction, should be undertaken only to prevent leakage or disintegration, or to protect against imminent structural failure.

(e) No buildings should be heated for maintenance purposes except in unusual circumstances.

3. *Mechanical and Electrical Installations.* These include plumbing, heating, ventilating, air conditioning, sprinkler systems, fire alarm systems, electrical equipment, elevators, and similar items.

(a) At facilities in inactive status, maintenance of mechanical and electrical installations should be limited to that which is necessary to prevent or arrest serious deterioration. In most cases, personnel should not be employed for this work except on a temporary basis at periodic intervals when it is determined by inspections that the work is necessary. Wherever possible electrical systems should be deenergized, water drained from all fixtures, heat turned off, and buildings secured against unauthorized entry. Sprinkler systems should be drained during freezing weather and reactivated when danger of freezing has passed.

(b) At facilities in active status, such as multiple-tenancy operations, equipment should be kept in reasonable operating condition. Operation of equipment to furnish services to private tenants, as well as the procurement of utility services for distribution to tenants, should be carried on only to the extent necessary to comply with lease or permit conditions, or in cases where it is impracticable for tenants to obtain such services directly from utility companies or other sources.

(c) At facilities where elevators and/or high-pressure boilers and related equipment are in operation, arrangements should be made for periodic inspections by qualified and licensed inspectors to insure that injury to personnel, loss of life, or damage to property does not occur.

(d) Individual heaters should be used, when practicable, in lieu of operating heating plants.

4. *Grounds, Roads, Railroads, and Fencing.*

(a) Maintenance of grounds should be confined largely to removal of vegetation where necessary to avoid fire hazards and to control poisonous and noxious plant growth in accordance with local and State laws and regulations; plowing of fire lanes where needed; and removal of snow from roads and other areas only to the extent necessary to provide access for maintenance, fire protection, and similar activities. Wherever practicable, hay crops should be sold to the highest bidders with the purchaser performing all labor in connection with cutting and removal. Also, agricultural and/or grazing leases may be resorted to, if practicable, as other means of reducing the cost of grounds maintenance. Any such leases shall be subject to the provisions of § 101–47.203–9 or § 101–47.312.

(b) Only that portion of the road network necessary for firetruck and other minimum traffic should be maintained. The degree to which such roads are to be maintained should be only that necessary to permit safe passage at a reasonable speed.

(c) Railroads should not be maintained except as might be required for protection and maintenance operations, or as required under the provisions of a lease or permit.

(d) Ditches and other drainage facilities should be kept sufficiently clear to permit surface water to run off.

(e) Fencing, or other physical barrier, should be kept in repair sufficiently to afford protection against unauthorized entry.

5. *Utilities.*

(a) At inactive properties, water systems, sewage disposal systems, electrical distribution systems, etc., should be maintained only to the extent necessary to provide the minimum services required. Buildings or areas not requiring electrical service or water should be deenergized electrically and the water valved off. Utilities not in use, or which are serving dismantled or abandoned structures, should not be maintained.

(b) At active properties, water supply, electrical power, and sewage disposal facilities frequently must be operated at rates much below designed capacities. Engineering studies should determine the structural and operating changes necessary for maximum economy. Where leakage is found in water distribution lines, such lines may be valved off rather than repaired, unless necessary for fire protection or other purposes.

(c) Where utilities are purchased by contract, such contracts should be reviewed to determine if costs can be reduced by revision of the contracts.

6. *Properties to be Disposed of as Salvage.* No funds should be expended for maintenance on properties where the highest and best use has been determined to be salvage.

D. *Repairs.* Repairs should be limited to those additions or changes that are necessary for the preservation and maintenance of the property to deter or prevent excessive, rapid, or dangerous deterioration or obsolescence and to restore property damaged by storm, flood, fire, accident, or earthquake only where it has been determined that restoration is required.

E. *Improvements.* No costs should be incurred to increase the sales value of a property, and no costs should be incurred to make a property disposable without the prior approval of GSA. (See § 101–47.401–5.)

Effective date. These regulations are effective December 22, 1964.

Dated: November 20, 1964.

LAWSON B. KNOTT, Jr.,
Acting Administrator of General Services.

[F.R. Doc. 64–12287; Filed, Dec. 2, 1964; 8:45 a.m.]

Title 14—AERONAUTICS AND SPACE

Chapter I—Federal Aviation Agency

[Reg. Docket No. 5084]

PART 29—AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY ROTORCRAFT [NEW]

This amendment adds Part 29 [New] to the Federal Aviation Regulations to replace Part 7 of the Civil Air Regulations, and is a part of the Agency recodification program announced in Draft Release 61-25, published in the FEDERAL REGISTER on November 15, 1961 (26 F.R. 10698).

Part 29 [New] was published as a notice of proposed rule making in the FEDERAL REGISTER on May 28, 1964 (29 F.R. 7050), and given further distribution as Notice No. 64-30.

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

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

Present CAR Part 7 reflects the various writing styles used by those who have worked on it in the past. Consistency in language is vital to consistency in interpretation and fairness in application, especially in technical, complex rules such as this one. The recodification has allowed us to use one style throughout Part 29 [New]. The style changes that have been made do not affect substance.

Part 29 [New] substitutes the word "must" for "shall". This has been done because airworthiness standards are conditions precedent that must be met for the issue of a type certificate. The imperative "shall" would be inappropriate since the failure to meet these standards simply results in a denial of the certificate without further penalty.

The sections in Part 29 [New] have been rearranged and renumbered so that the requirements of this part have the same number as comparable requirements in Parts 23 [New], 25 [New], and 27 [New]. This explains apparent gaps in section numbers in this part, such as that between § 29.79 *Limiting height-speed envelope* and § 29.141 *General*. (This gap, for instance, is assigned to the turbine engine performance requirements of Part 25 [New], and includes the normal "growth" gap between subtopics). Comparative review of specific requirements between airworthiness parts is greatly facilitated by this rearrangement, and has already resulted, for example, in the deletion of §§ 7.202(c), 7.331, 7.433, 7.600, 7.602, 7.610, 7.620, 7.700(a), and 7.744 as surplusage. Further, this rearrangement allows more efficient review of all parts in the light of comments received on any single part. For example, a comment received on Part 23 [New] has resulted in the deletion of all but the last sentence of the requirement that now appears in § 29.607. As industry becomes acquainted with the new format, the effectiveness of comments received should be greatly magnified.

As was stated in the preamble of the notice of proposed rule making of Part 29, those definitions in present Part 7 (and not now in Part 1 or executed in this part) that are necessary will be recodified with the definitions of other airworthiness parts and added to Part 1 [New]. The detailed disposition of § 7.1 in the distribution table should resolve most definition problems that may arise.

The definitions, abbreviations, and rules of construction in Part 1 [New] of the Federal Aviation Regulations apply to Part 29 [New].

The most significant changes to Part 29 since the notice are listed below. The numbers in parentheses refer to the section numbers in the notice and in former Part 7, respectively.

(1) In § 29.143 (29.71) (7.121), paragraph (b), subparagraph (2) has been deleted from the section as it appeared in the notice. This effectuates the second paragraph of the preamble in CAR amendment 6-4, effective October 1, 1959, in which it was intended that 6.121 be revised to replace the requirement for a demonstration of controlability after power failure at only one high speed condition, namely 6.121(c), with a requirement for controllability after power failure over the range of airspeeds and altitudes for which certification is sought, namely 6.121(e). While the amendment modified Part 6, its applicability to Part 7 is desirable and apparent. Insofar as the intended deletion was not made in the rule at that time and both requirements remained outstanding, the deletion of 7.121(c) at this time is relaxatory.

(2) The Aerospace Industries Association, Inc. (AIA) suggested that the word "maximum" between "A" and "wind velocity" in § 27.143 (27.65) (6.121) was ambiguous, since in context it could refer either to a performance maximum or to the "maximum" safe wind for operation near the ground in § 27.1587 (27.789) (6.743). This comment is relevant to Part 29. Since ultimate performance capability need not be shown under § 29.143, the word "maximum" has been deleted.

(3) In § 29.301 (29.121) (7.200), the descriptions of limit and ultimate loads have been put back in. It is felt that their utility will be greater in the basic rule than in Part 1 [New].

(4) As a result of a comment from AIA, § 29.397 (29.165) (7.225) has been revised. The major change is to paragraph (b), which now reflects the original language in Part 7 with only stylistic changes. This was done to assure preservation of existing practices with respect to the application of the factor "0.60". It is recognized that § 7.225(a) is confusing and that substantive review of that paragraph is necessary.

(5) In § 29.601 (29.251) (7.300), the reference to experience as an element in determining which "hazardous or unreliable" features are covered by the rule has been put back in. This change was made at the request of AIA and is clarifying only.

(6) In § 29.611 (29.261) (7.305), paragraph (a), "periodic inspection" has been replaced with "recurring inspection". This avoids any potential conflict between the intent in the subject section to cover all inspections that occur at regular intervals and the more specific use of the term "periodic inspection" in Parts 43 [New] and 91 [New].

(7) AIA suggested that the language in § 29.775 (29.355) (7.352) be revised to make it clear that (1) materials other than glass may be used in the windows and (2) only glass panes need contain nonsplintering safety glass. This has been done.

(8) In § 29.785 (29.361) (7.355), paragraph (f), the phrase "an occupant" has been added between "designed for" and "weight". This was done to make it clear that the weight of the seat itself is not included within the meaning of this paragraph.

(9) In § 29.807 (29.365) (7.357), paragraph (a), the note following 7.357(a) has been added as a flush paragraph. It was inadvertently omitted in the notice.

(10) Aero Flow Dynamics, Inc. suggested that the heading and language in § 29.997 (29.509) (7.435) be conformed to that in other airworthiness Parts. This has been done.

(11) As a result of a comment from AIA, the "two shot" requirements of § 29.1195 (29.639) (7.484) have been modified to make it clear that the two shot capability need only be provided by a single fire extinguishing system.

(12) In § 29.1307 (29.675) (7.605), paragraph (i), a cross reference to § 29.1145 has been provided to make it clear that ganged ignition switches may be used to satisfy the subject paragraph. This was done in response to a comment from AIA.

(13) Section 29.1309 (29.677) (7.625) has been revised to make it clear, as in the original rule, that the general requirement of guarding against hazard in the event of malfunction or failure applies to all equipment, systems, and installations, not only to those whose functioning is necessary to show compliance with any regulation in this subchapter.

(14) At the suggestion of AIA, § 29.1505 (29.823) (7.711), paragraph

(b), has been reworded to clarify the permissive aspect of this section.

Other minor changes of a technical clarifying nature have been made. They are not substantive and do not impose any burden on regulated persons.

In the notice, it was proposed to convert references to "miles" and "miles per hour" to their exact nautical equivalents. Many formulae have been derived under the existing system. The effect of rounding off to the nearest whole number is unclear in certain cases. Although specifically invited, few comments have been received on this problem. Because of this it is felt that wholesale conversion should be made separately at a later date.

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

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

1. By deleting Part 7.

2. By adding a Part 29 [New] reading as hereinafter set forth.

Issued in Washington, D.C., on October 13, 1964.

N. E. HALABY,
Administrator.

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AUTHORITY: The provisions of this Part 29 issued under secs. 313(a), 601, 603, Federal Aviation Act of 1958; 49 U.S.C. 1354(a), 1421, 1423.

Subpart A—General

§ 29.1 Applicability.

(a) This part prescribes airworthiness standards for the issue of type certificates, and changes to those certificates, for—

(1) Multiengine rotorcraft that meet the requirements for transport category A;

(2) Rotorcraft with maximum weights of 20,000 pounds or less that meet the requirements for transport category B; and

(3) Multiengine rotorcraft that meet the requirements for transport category A or B.

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

Subpart B—Flight

GENERAL

§ 29.21 Proof of compliance.

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

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

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

(b) The controllability, stability, and trim of the rotorcraft must be shown for each altitude up to the maximum expected in operation.

§ 29.25 Weight limits.

(a) *Maximum weight.* The maximum weight (the highest weight at which compliance with each applicable requirement of this part is shown) or, at the option of the applicant, the highest weight for each altitude and for each practicably separable operating condition, such as takeoff, en route operation, and landing, must be established so that it is not more than—

(1) The highest weight selected by the applicant;

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

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

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

(1) The lowest weight selected by the applicant;

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

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

§ 29.27 Center of gravity limits.

The extreme forward and the extreme aft center of gravity must be established for each weight established under § 29.25. Such an extreme may not lie beyond—

(a) The extremes selected by the applicant;

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

(c) The extremes within which compliance with the applicable flight requirements is shown.

§ 29.29 Empty weight and corresponding center of gravity.

(a) The empty weight and corresponding center of gravity must be determined by weighing the rotorcraft without the crew and payload, but with—

(1) Fixed ballast;

(2) Unusable fuel;

(3) Undrainable oil;

(4) Engine coolant; and

(5) Hydraulic fluid.

(b) The condition of the rotorcraft at the time of determining empty weight must be one that is well defined and can be easily repeated, particularly with respect to the weights of fuel, oil, coolant, and installed equipment.

§ 29.31 Removable ballast.

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

§ 29.33 Main rotor speed and pitch limits.

(a) *Main rotor speed limits.* A range of main rotor speeds must be established that—

(1) With power on, provides adequate margin to accommodate the variations in rotor speed occurring in any appropriate maneuver, and is consistent with the kind of governor or synchronizer used; and

(2) With power off, allows each appropriate autorotative maneuver to be performed throughout the ranges of airspeed and weight for which certification is requested.

(b) *Normal main rotor pitch limits.* The range of main rotor pitch settings must be limited as follows:

(1) A means must be provided so that the normal high pitch limit, with full throttle, does not result in rotor speeds

substantially less than the minimum approved for any sustained flight condition. This means need not be provided, however, if—

(i) The inherent characteristics of the rotorcraft make it unnecessary; or

(ii) There are adequate means to warn the pilot of unsafe main rotor speeds.

(2) With power off, the low pitch limit must—

(i) Provide rotor speeds within the approved range for autorotative conditions under the most critical combinations of weight and airspeed; and

(ii) Allow the pilot, without exceptional skill, to prevent overspeeding of the rotor.

(c) *Emergency high pitch.* A main rotor pitch higher than the normal high pitch limit prescribed in paragraph (b)(1) of this section may be made available for emergency use if the normal high pitch limit cannot be exceeded inadvertently.

PERFORMANCE

§ 29.45 General.

(a) The performance prescribed in this subpart must be determined—

(1) With normal piloting skill;

(2) Without exceptionally favorable conditions; and

(3) With each powerplant accessory absorbing the amount of power that is normal for the flight condition being investigated.

(b) Compliance with the performance requirements of this subpart must be shown—

(1) For still air at sea level with a standard atmosphere;

(2) For the range of atmospheric variables selected by the applicant; and

(3) Where engine power affects performance, with air at 80 percent relative humidity, or 0.7" Hg. vapor pressure, whichever is less.

§ 29.51 Takeoff data: general.

(a) The takeoff data required by §§ 29.53(b), 29.59, 29.63, and 29.67(a)(1) and (2) must be determined—

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

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

(b) Takeoff data must—

(1) Be determined on a smooth, dry, hard surface; and

(2) Be corrected to assume a level takeoff surface.

(c) No takeoff made to determine the data required by this section may require exceptional piloting skill or alertness, or exceptionally favorable conditions.

§ 29.53 Takeoff: category A.

(a) *General.* The takeoff performance must be determined and scheduled so that, if one engine fails at any time after the start of takeoff, the rotorcraft can—

(1) Return to, and stop safely on, the takeoff area; or

(2) Continue the takeoff and climbout, and attain a configuration and airspeed allowing compliance with § 29.67(a)(2).

(b) *Critical decision point.* The critical decision point must be a combination of height and speed selected by the applicant in establishing the flight paths under § 29.59. The critical decision point must be obtained so as to avoid the critical areas of the limiting height-speed envelope established under § 29.79.

§ 29.59 Takeoff path: category A.

(a) The takeoff climbout path, and the rejected takeoff path must be established so that the takeoff, climbout, and rejected takeoff are accomplished with a safe, smooth transition between each stage of the maneuver. The takeoff may be begun in any manner if—

(1) The takeoff surface is defined; and

(2) Adequate safeguards are maintained to ensure proper center of gravity and control positions.

(b) The rejected takeoff path must be established with takeoff power on each engine from the start of takeoff to the critical decision point, at which point it is assumed that the critical engine becomes inoperative, and that the rotorcraft is brought to a safe stop with the remaining engines operating within approved operating limitations.

(c) The takeoff climbout path must be established with takeoff power on each engine from the start of takeoff to the critical decision point, at which point it is assumed that the critical engine becomes inoperative. With the remaining engines operating within approved operating limitations, the rotorcraft must be accelerated to the takeoff safety speed by the end of the rejected takeoff distance, and the climbout must be made—

(1) At not less than the takeoff safety speed used in meeting the rate of climb requirements of § 29.67(a)(1); and

(2) So that the airspeed and configuration used in meeting the climb requirement of § 29.67(a)(2) are attained.

§ 29.63 Takeoff: category B.

The takeoff and climbout must be established with the most unfavorable center of gravity. The takeoff may be begun in any manner if—

(a) The takeoff surface is defined;

(b) Adequate safeguards are maintained to ensure proper center of gravity and control positions; and

(c) A landing can be made safely at any point along the flight path if an engine fails.

§ 29.65 Category B climb: all engines operating.

(a) The steady rate of climb at V_Y must be determined for each category B rotorcraft—

(1) With maximum continuous power on each engine;

(2) With the landing gear retracted; and

(3) For the weights, altitudes, and temperatures for which certification is requested.

(b) For each category B rotorcraft except helicopters, the rate of climb determined under paragraph (a) of this section must provide a steady climb gradient of at least 1:6 under standard sea level conditions.

§ 29.67 Climb: one engine inoperative.

(a) For category A rotorcraft, the following apply:

(1) The steady rate of climb without ground effect must be at least 100 feet per minute for each weight, altitude, and temperature for which takeoff data are to be scheduled, with—

(i) The critical engine inoperative and the remaining engines within approved operating limitations;

(ii) The most unfavorable center of gravity for takeoff;

(iii) The landing gear extended;

(iv) The speed selected by the applicant; and

(v) Cowl flaps or other means of controlling the engine-cooling air supply in the position that provides adequate cooling at the temperatures and altitudes for which certification is requested.

(2) The steady rate of climb without ground effect must be at least 150 feet per minute for each weight, altitude, and temperature for which takeoff data are to be scheduled, with—

(i) The critical engine inoperative and the remaining engines at maximum continuous power;

(ii) The most unfavorable center of gravity for takeoff;

(iii) The landing gear retracted;

(iv) The speed selected by the applicant; and

(v) Cowl flaps or other means of controlling the engine-cooling air supply in the position that provides adequate cooling at the temperatures and altitudes for which certification is requested.

(3) The steady rate of climb, in feet per minute, at any altitude at which the rotorcraft is expected to operate, and at any weight within the range of weights for which certification is requested, must be determined with—

(i) The critical engine inoperative, and the remaining engines at the maximum continuous power available at each altitude;

(ii) The most unfavorable center of gravity;

(iii) The landing gear retracted;

(iv) The speed selected by the applicant; and

(v) Cowl flaps or other means of controlling the engine-cooling air supply in the position that provides adequate cooling at the temperatures and altitudes for which certification is requested.

(b) For multiengine category B helicopters meeting the requirements for category A in § 29.79, the steady rate of climb (or descent) must be determined at the speed for best rate of climb (or minimum rate of descent) with one engine inoperative and the remaining engines at maximum continuous power.

§ 29.71 Helicopter angle of glide: category B.

For each category B helicopter, the steady angle of glide must be determined in autorotation—

(a) At the maximum and minimum rates of descent;

(b) At maximum weight; and

(c) With the optimum forward speed.

§ 29.73 Performance at minimum operating speed.

(a) For each category A rotorcraft, the hovering performance must be determined over the ranges of weight, altitude, and temperature for which takeoff data are scheduled—

(1) With not more than takeoff power on each engine;

(2) With the landing gear extended; and

(3) At a height consistent with the procedure used in establishing the takeoff climbout and rejected takeoff paths.

(b) For each category B helicopter—

(1) The hovering performance must be determined over the ranges of weight, altitude, and temperature for which certification is requested, with—

(i) Takeoff power on each engine;

(ii) The landing gear extended; and

(iii) The helicopter in ground effect at a height consistent with normal takeoff procedures; and

(2) The hovering ceiling determined under subparagraph (1) of this paragraph must be at least 4,000 feet with maximum weight and standard atmosphere.

(c) For rotorcraft other than helicopters, the steady rate of climb at the minimum operating speed must be determined, over the ranges of weight, altitude, and temperature for which certification is requested, with—

(1) Takeoff power; and

(2) The landing gear extended.

§ 29.75 Landing.

(a) *General.* For each rotorcraft—

(1) The corrected landing data must—

(i) Be determined on a smooth, dry, hard surface; and

(ii) Assume a level landing surface;

(2) The approach and landing may not require exceptional piloting skill or exceptionally favorable conditions;

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

(4) The landing data required by paragraphs (b) and (c) of this section and by § 29.77 must be determined—

(i) At each weight, altitude, and temperature selected by the applicant; and

(ii) With each operating engine within approved operating limitations.

(b) *Category A.* For category A rotorcraft—

(1) The landing performance must be determined and scheduled so that, if one engine fails at any point in the approach path, the rotorcraft can either land and stop safely or climb out from a point in the approach path and attain a rotorcraft configuration and speed allowing compliance with the climb requirement of § 29.67(a)(2);

(2) The approach, balked landing, and landing paths must be established, with one engine inoperative, so that the transition between each stage can be made smoothly and safely;

(3) The approach and landing speeds must be selected by the applicant and must be appropriate to the type of rotorcraft;

(4) The approach and landing path must be established to avoid the critical areas of a limiting height-speed envelope established—

(i) Under § 29.79; or

(ii) For the landing condition with one engine inoperative;

(5) It must be possible to make a safe landing on a prepared landing surface after complete power failure occurring during normal cruise; and

(6) The maximum allowable rate of descent in autorotation must be determined.

(c) *Category B.* For each category B rotorcraft—

(1) The horizontal distance required to land and come to a complete stop (or to a speed of approximately three m.p.h. for water landings), from a point 50 feet above the landing surface, must be determined with—

(i) Glide speeds appropriate to the type of rotorcraft and chosen by the applicant; and

(ii) The approach and landing made with power off and entered from steady autorotation; and

(2) Each multiengine category B rotorcraft that meets the powerplant installation requirements for category A must meet the requirements of—

(i) Subparagraph (1) of this paragraph; or

(ii) Paragraph (b)(2) through (6) of this section:

§ 29.77 Balked landing: category A.

For category A rotorcraft, the balked landing path must be established so that—

(a) With one engine inoperative, the transition from each stage of the maneuver to the next stage can be made smoothly and safely; and

(b) From a combination of height and speed in the approach path selected by the applicant, a safe climbout can be made at speeds allowing compliance with the climb requirements of § 29.67(a)(1) and (2).

§ 29.79 Limiting height-speed envelope.

(a) If there is any combination of height and forward speed (including hover) under which a safe landing cannot be made under the applicable power failure condition in paragraph (b) of this section, a limiting height-speed envelope must be established for that condition.

(b) The applicable power failure conditions are—

(1) For category A rotorcraft, sudden failure of the critical engine with the remaining engines at takeoff power;

(2) For category B rotorcraft, complete power failure; and

(3) For multiengine, category B rotorcraft for which certification under the powerplant installation requirements of category A is requested, the condition specified in either subparagraph (1) or (2) of this paragraph.

FLIGHT CHARACTERISTICS

§ 29.141 General.

The rotorcraft must—

(a) Meet the requirements of this section and of §§ 29.143, 29.161, and 29.171 through 29.175—

(1) At the normally expected operating altitudes;

(2) Under any critical loading condition within the range of weights and centers of gravity for which certification is requested; and

(3) Under any condition of speed, power, and rotor r.p.m. for which certification is requested;

(b) Be able to maintain any required flight condition and make a smooth transition from any flight condition to any other flight condition without exceptional piloting skill, alertness or strength, and without danger of exceeding the limit load factor under any operating condition probable for the type, including sudden powerplant failure; and

(c) Have any additional characteristics required for night or instrument operation, if certification for those kinds of operation is requested.

§ 29.143 Controllability and maneuverability.

(a) The rotorcraft must be safely controllable and maneuverable—

(1) During steady flight; and

(2) During any maneuver appropriate to the type, including—

(i) Takeoff;

(ii) Climb;

(iii) Level flight;

(iv) Turning flight;

(v) Glide; and

(vi) Landing (power on and power off).

(b) The margin of cyclic control must allow satisfactory roll and pitch control at V_{NE}, with—

(1) Maximum weight;

(2) Critical center of gravity;

(3) Critical rotor r.p.m.; and

(4) Power on and power off.

(c) A wind velocity of not less than 20 miles per hour must be established in which the rotorcraft can be operated without loss of control on or near the ground in any maneuver appropriate to the type (such as crosswind takeoffs, sideward flight, and rearward flight), with—

(1) Critical center of gravity; and

(2) Critical rotor r.p.m.

(d) The rotorcraft, after power failure, must be controllable over the range of speeds and altitudes for which certification is requested, when the power failure occurs with maximum continuous power and critical weight. No corrective action time delay for any condition following power failure may be less than—

(1) For the cruise condition, one second, or normal pilot reaction time (whichever is greater); and

(2) For any other condition, normal pilot reaction time.

§ 29.161 Trim control.

The trim control—

(a) Must trim any steady longitudinal and lateral control forces to zero in level flight at any appropriate speed; and

(b) May not introduce any undesirable discontinuities in control force gradients.

§ 29.171 Stability: general.

The rotorcraft must be able to be flown, without undue pilot fatigue or strain, in any normal maneuver for a period of time as long as that expected in normal operation. At least three landings and takeoffs must be made during this demonstration.

§ 29.173 Static longitudinal stability.

(a) The longitudinal cyclic control must be designed so that, for the ranges of altitude and rotor r.p.m. for which certification is requested, and with throttle and collective pitch held constant during the maneuvers specified in § 29.175—

(1) A rearward movement of the control is necessary to obtain airspeeds less than the trim speed; and

(2) A forward movement of the control is necessary to obtain airspeeds greater than the trim speed.

(b) The stick position versus speed curve may have a negative slope within the speed ranges specified for each maneuver in § 29.175 (a) through (c) if the necessary negative stick travel is not greater than ten percent of the total stick travel.

§ 29.175 Demonstration of static longitudinal stability.

(a) *Climb.* Static longitudinal stability must be shown in the climb condition at speeds from 0.85 V_Y to 1.2 V_Y, with—

(1) Critical weight;

(2) Critical center of gravity;

(3) Maximum continuous power;

(4) The landing gear retracted; and

(5) The rotorcraft trimmed at V_Y.

(b) *Cruise.* Static longitudinal stability must be shown in the cruise condition at speeds from 0.7 V_H or 0.7 V_{NE}, whichever is less, to 1.1 V_H or 1.1 V_{NE}, whichever is less, with—

(1) Critical weight;

(2) Critical center of gravity;

(3) Power for level flight at 0.9 V_H or 0.9 V_{NE}, whichever is less;

(4) The landing gear retracted; and

(5) The rotorcraft trimmed at 0.9 V_H or 0.9 V_{NE}, whichever is less.

(c) *Autorotation.* Static longitudinal stability must be shown in autorotation throughout the speed range for which certification is requested, with—

(1) Critical weight;

(2) Critical center of gravity;

(3) Power off;

(4) The landing gear (i) retracted and (ii) extended; and

(5) The rotorcraft trimmed at the speed for minimum rate of descent.

(d) *Hovering.* For helicopters in the hovering condition—

(1) The longitudinal cyclic control must operate with the sense and direction of motion prescribed in § 29.173; and

(2) The stick position curve must have a stable slope, between the maximum approved rearward speed and a forward speed of 20 miles per hour, with—

(i) The determined hovering weight (for category A helicopters), or critical weight (for other helicopters);

(ii) The critical center of gravity;

(iii) Power required for hovering in still air;

(iv) The landing gear retracted; and

(v) The helicopter trimmed for hovering.

GROUND AND WATER HANDLING CHARACTERISTICS

§ 29.231 General.

The rotorcraft must have satisfactory ground and water handling characteristics, including freedom from uncontrollable tendencies in any condition expected in operation.

§ 29.235 Taxiing condition.

The rotorcraft must be designed to withstand the loads that would occur when the rotorcraft is taxied over the roughest ground that may reasonably be expected in normal operation.

§ 29.239 Spray characteristics.

If certification for water operation is requested, no spray characteristics during taxiing, takeoff, or landing may obscure the vision of the pilot or damage the rotors, propellers, or other parts of the rotorcraft.

§ 29.241 Ground resonance.

The rotorcraft may have no dangerous tendency to oscillate on the ground with the rotor turning.

MISCELLANEOUS FLIGHT REQUIREMENTS

§ 29.251 Vibration.

Each part of the rotorcraft must be free from excessive vibration under each appropriate speed and power condition.

Subpart C—Strength Requirements

GENERAL

§ 29.301 Loads.

(a) Strength requirements are specified in terms of limit loads (the maximum loads to be expected in service) and ultimate loads (limit loads multiplied by prescribed factors of safety). Unless otherwise provided, prescribed loads are limit loads.

(b) Unless otherwise provided, the specified air, ground, and water loads must be placed in equilibrium with inertia forces, considering each item of mass in the rotorcraft. These loads must be distributed to closely approximate or conservatively represent actual conditions.

(c) If deflections under load would significantly change the distribution of external or internal loads, this redistribution must be taken into account.

§ 29.303 Factor of safety.

Unless otherwise provided, a factor of safety of 1.5 must be used. This factor applies to external and inertia loads unless its application to the resulting internal stresses is more conservative.

§ 29.305 Strength and deformation.

(a) The structure must be able to support limit loads without detrimental or permanent deformation. At any load up to limit loads, the deformation may not interfere with safe operation.

(b) The structure must be able to support ultimate loads without failure. This must be shown by—

(1) Applying ultimate loads to the structure in a static test for at least three seconds; or

(2) Dynamic tests simulating actual load application.

§ 29.307 Proof of structure.

(a) Compliance with the strength and deformation requirements of this subpart must be shown for each critical loading condition. Structural analysis may be used only if the structure conforms to those for which experience has shown this method to be reliable. In other cases, substantiating load tests must be made.

(b) Proof of compliance with the strength requirements of this subpart must include—

(1) Dynamic and endurance tests of rotors, rotor drives, and rotor controls;

(2) Limit load tests of the control system, including control surfaces;

(3) Operation tests of the control system;

(4) Flight stress measurement tests;

(5) Landing gear drop tests; and

(6) Any additional tests required for new or unusual design features.

§ 29.309 Design limitations.

The following values and limitations must be established to show compliance with the structural requirements of this subpart:

(a) The design maximum and design minimum weights.

(b) The main rotor r.p.m. ranges, power on and power off.

(c) The maximum forward speeds for each main rotor r.p.m. within the ranges determined under paragraph (b) of this section.

(d) The maximum rearward and sideward flight speeds.

(e) The center of gravity limits corresponding to the limitations determined under paragraphs (b), (c), and (d) of this section.

(f) The rotational speed ratios between each powerplant and each connected rotating component.

(g) The positive and negative limit maneuvering load factors.

FLIGHT LOADS

§ 29.321 General.

(a) The flight load factor must be assumed to act normal to the longitudinal axis of the rotorcraft, and to be equal in magnitude and opposite in direction to the rotorcraft inertia load factor at the center of gravity.

(b) Compliance with the flight load requirements of this subpart must be shown—

(1) At each weight from the design minimum weight to the design maximum weight; and

(2) With any practical distribution of disposable load within the operating limitations in the Rotorcraft Flight Manual.

§ 29.337 Limit maneuvering load factor.

The rotorcraft must be designed for—

(a) A positive limit maneuvering load factor of 3.5 and a negative limit maneuvering load factor of 1.0; or

(b) Any lesser positive limit maneuvering load factor not less than 2.0, and lesser negative limit maneuvering load factor not less than 0.5, for which—

(1) The probability of being exceeded is shown by analysis and flight tests to be extremely remote; and

(2) The selected values are appropriate to each weight condition between the design maximum and design minimum weights.

§ 29.339 Resultant limit maneuvering loads.

The loads resulting from the application of limit maneuvering load factors are assumed to act at the center of each rotor hub and at each auxiliary lifting surface, and to act in directions and with distributions of load among the rotors and auxiliary lifting surfaces, so as to represent each critical maneuvering condition, including power-on and power-off flight with the maximum design rotor tip speed ratio. The rotor tip speed ratio is the ratio of the rotorcraft flight velocity component in the plane of the rotor disc to the rotational tip speed of the rotor blades, and is expressed as follows:

$$\mu=\frac{V\cos a}{\Omega R}$$

where—

V = The airspeed along the flight path (f.p.s.);

a = The angle between the projection, in the plane of symmetry, of the axis of no feathering and a line perpendicular to the flight path (radians, positive when axis is pointing aft);

Ω = The angular velocity of rotor (radians per second); and

R = The rotor radius (ft.).

§ 29.341 Gust loads.

Each rotorcraft must be designed to withstand, at each critical airspeed including hovering, the loads resulting from vertical and horizontal gusts of 30 feet per second.

§ 29.351 Yawing conditions.

(a) Each rotorcraft must be designed for the loads resulting from the maneuver specified in paragraph (b) of this section, with—

(1) Unbalanced aerodynamic moments about the center of gravity reacted in a rational or conservative manner considering the principal masses furnishing the reacting inertia forces;

(2) Maximum main rotor speed; and

(3) Forward speeds up to V_{NE} or V_H, whichever is less.

(b) In unaccelerated flight with zero yaw, it is assumed that—

(1) The cockpit directional control is suddenly displaced to the maximum deflection limited by the control stops or by maximum pilot effort;

(2) The rotorcraft then yaws to a resulting sideslip angle; and

(3) The directional control is then suddenly returned to neutral.

§ 29.361 Engine torque.

The limit engine torque may not be less than—

(a) For turbine engines, the mean torque for maximum continuous power multiplied by a factor of 1.25; and

(b) For reciprocating engines, the mean torque multiplied by—

(1) 1.33, for engines with five or more cylinders; and

(2) Two, three, and four, for engines with four, three, and two cylinders, respectively.

CONTROL SURFACE AND SYSTEM LOADS

§ 29.391 General.

Each auxiliary rotor, each fixed or movable stabilizing or control surface, and each system operating any flight control must meet the requirements of §§ 29.395 through 29.403, 29.411, and 29.413.

§ 29.395 Control system.

(a) The reaction to the loads prescribed in § 29.397 must be provided by—

(1) The control stops only;

(2) The control locks only;

(3) The irreversible mechanism only (with the mechanism locked and with the control surface in the critical positions for the effective parts of the system within its limit of motion);

(4) The attachment of the control system to the rotor blade pitch control horn only (with the control in the critical positions for the affected parts of the system within the limits of its motion); and

(5) The attachment of the control system to the control surface horn (with the control in the critical positions for the affected parts of the system within the limits of its motion).

(b) Each primary control system, including its supporting structure, must be designed to withstand the loads resulting from the limit pilot forces prescribed in § 29.397, or the maximum loads that can be obtained in normal operation, including any single power boost system failure, whichever are greater. Where the system design or the normal operating loads are such that a part of the system cannot react the pilot-applied forces prescribed in § 29.397, that part of the system must be designed to withstand the maximum loads that can be obtained in normal operation. The minimum design loads must, in any case, provide a rugged system for service use, including consideration of fatigue, jamming, ground gusts, control inertia, and friction loads. In the absence of a rational analysis, the design loads resulting from 0.60 of the specified pilot-applied forces are acceptable minimum design loads.

§ 29.397 Limit pilot forces.

The limit pilot forces are as follows:

(a) For foot controls, 130 pounds.

(b) For stick controls, 100 pounds fore and aft, and 67 pounds laterally.

(c) For wheel controls, 100 pounds fore and aft, and a lateral couple of 53D inch-pounds applied at the rim of the control wheel (where D is the wheel diameter in inches).

§ 29.399 Dual control system.

Each dual primary flight control system must be able to withstand the loads that result when pilot forces not less than 0.75 times those obtained under § 29.395 are applied—

(a) In opposition; and

(b) In the same direction.

§ 29.401 Auxiliary rotor assemblies.

(a) *Auxiliary rotor assemblies.* Each auxiliary rotor assembly must be tested as prescribed in § 29.923.

(b) *Assemblies with detachable blades.* Each auxiliary rotor assembly with detachable blades must be designed to withstand the centrifugal loads resulting from the maximum design rotor r.p.m.

(c) *Highly stressed metal components.* For each auxiliary rotor with highly stressed metal components, the vibration stresses must be determined in flight and shown not to exceed safe values for continuous operation.

§ 29.403 Auxiliary rotor attachment structure.

The attachment structure for each auxiliary rotor must be designed to withstand a limit load equal to the maximum loads occurring in the structure in any flight and landing condition.

§ 29.411 Ground clearance: tail rotor guard.

(a) It must be impossible for the tail rotor to contact the landing surface during a normal landing.

(b) If a tail rotor guard is required to show compliance with paragraph (a) of this section—

(1) Suitable design loads must be established for the guard; and

(2) The guard and its supporting structure must be designed to withstand those loads.

§ 29.413 Stabilizing and control surfaces.

(a) Each stabilizing and control surface must be designed so that—

(1) Limit loads are not less than the greater of—

(i) 15 pounds per square foot; or

(ii) The load resulting where C_N equals 0.55 at the maximum design speed; and

(2) The surface can withstand the critical loads resulting from maneuvers and from combined maneuvers and gusts.

(b) Compliance with paragraph (a) of this section must be shown with load distributions that closely simulate actual pressure distribution conditions.

GROUND LOADS

§ 29.471 General.

(a) *Loads and equilibrium.* For limit ground loads—

(1) The limit ground loads obtained in the landing conditions in this part must be considered to be external loads that would occur in the rotorcraft structure if it were acting as a rigid body; and

(2) In each specified landing condition, the external loads must be placed in equilibrium with linear and angular inertia loads in a rational or conservative manner.

(b) *Critical centers of gravity.* The critical centers of gravity within the range for which certification is requested must be selected so that the

maximum design loads are obtained in each landing gear element.

§ 29.473 Ground loading conditions and assumptions.

(a) For specified landing conditions, a design maximum weight must be used that is not less than the maximum weight. A rotor lift may be assumed to act through the center of gravity throughout the landing impact. This lift may not exceed—

(1) Two-thirds of the design maximum weight; or

(2) Any greater lift proven to be appropriate by tests or data that are applicable to the particular rotorcraft.

(b) Unless otherwise prescribed, for each specified landing condition, the rotorcraft must be designed for a limit load factor of not less than the limit inertia load factor substantiated under §§ 29.725 and 29.727.

§ 29.475 Tires and shock absorbers.

Unless otherwise prescribed, for each specified landing condition, the tires must be assumed to be in their static position and the shock absorbers to be in their most critical position.

§ 29.477 Landing gear arrangement.

Sections 29.235, 29.479 through 29.485, and 29.493 apply to landing gear with two wheels aft, and one or more wheels forward, of the center of gravity.

§29.479 Level landing conditions.

(a) *Attitudes.* Under each of the loading conditions prescribed in paragraph (b) of this section, the rotorcraft is assumed to be in each of the following level landing attitudes:

(1) An attitude in which each wheel contacts the ground simultaneously.

(2) An attitude in which the aft wheels contact the ground with the forward wheels just clear of the ground.

(b) *Loading conditions.* The rotorcraft must be designed for the following landing loading conditions:

(1) Vertical loads applied under § 29.471.

(2) The loads resulting from a combination of the loads applied under subparagraph (1) of this paragraph with drag loads at each wheel of not less than 25 percent of the vertical load at that wheel.

(3) The vertical load at the instant of peak drag load combined with a drag component simulating the forces required to accelerate the wheel rolling assembly up to the specified ground speed, with—

(i) The ground speed for determination of the spin-up loads being at least 75 percent of the optimum forward flight speed for minimum rate of descent in autorotation; and

(ii) The loading conditions of this subparagraph applied to the landing gear and its attaching structure only.

(4) If there are two wheels forward, a distribution of the loads applied to those wheels under subparagraphs (1) and (2) of this paragraph in a ratio of 40:60.

(c) *Pitching moments.* Pitching moments are assumed to be resisted by—

(1) In the case of the attitude in paragraph (a)(1) of this section, the forward landing gear; and

(2) In the case of the attitude in paragraph (a)(2) of this section, the angular inertia forces.

§ 29.481 Tail-down landing conditions.

(a) The rotorcraft is assumed to be in the maximum nose-up attitude allowing ground clearance by each part of the rotorcraft.

(b) In this attitude, ground loads are assumed to act perpendicular to the ground.

§ 29.483 One-wheel landing conditions.

For the one-wheel landing condition, the rotorcraft is assumed to be in the level attitude and to contact the ground on one aft wheel. In this attitude—

(a) The vertical load must be the same as that obtained on that side under § 29.479(b)(1); and

(b) The unbalanced external loads must be reacted by rotorcraft inertia.

§ 29.485 Lateral drift landing conditions.

(a) The rotorcraft is assumed to be in the level landing attitude, with—

(1) Side loads combined with one-half of the maximum ground reactions obtained in the level landing conditions of § 29.479(b)(1); and

(2) The loads obtained under subparagraph (1) of this paragraph applied—

(i) At the ground contact point; or

(ii) For full-swiveling gear, at the center of the axle.

(b) The rotorcraft must be designed to withstand, at ground contact—

(1) When only the aft wheels contact the ground, side loads of 0.8 times the vertical reaction acting inward on one side and 0.6 times the vertical reaction acting outward on the other side, all combined with the vertical loads specified in paragraph (a) of this section; and

(2) When the wheels contact the ground simultaneously—

(i) For the aft wheels, the side loads specified in subparagraph (1) of this paragraph; and

(ii) For the forward wheels, a side load of 0.8 times the vertical reaction combined with the vertical load specified in paragraph (a) of this section.

§ 29.493 Braked roll conditions.

Under braked roll conditions with the shock absorbers in their static positions—

(a) The limit vertical load must be based on a load factor of at least—

(1) 1.33, for the attitude specified in § 29.479(a)(1); and

(2) 1.0, for the attitude specified in § 29.479(a)(2); and

(b) The structure must be designed to withstand, at the ground contact point of each wheel with brakes, a drag load of at least the lesser of—

(1) The vertical load multiplied by a coefficient of friction of 0.8; and

(2) The maximum value based on limiting brake torque.

§ 29.497 Ground loading conditions: landing gear with tail wheels.

(a) *General.* Rotorcraft with landing gear with two wheels forward and one wheel aft of the center of gravity must be designed for loading conditions as prescribed in this section.

(b) *Level landing attitude with only the forward wheels contacting the ground.* In this attitude—

(1) The vertical loads must be applied under §§ 29.471 through 29.475;

(2) The vertical load at each axle must be combined with a drag load at that axle of not less than 25 percent of that vertical load; and

(3) Unbalanced pitching moments are assumed to be resisted by angular inertia forces.

(c) *Level landing attitude with all wheels contacting the ground simultaneously.* In this attitude, the rotorcraft must be designed for landing loading conditions as prescribed in paragraph (b) of this section.

(d) *Maximum nose-up attitude with only the rear wheel contacting the ground.* The attitude for this condition must be the maximum nose-up attitude expected in normal operation, including autorotative landings. In this attitude—

(1) The appropriate ground loads specified in paragraph (b)(1) and (2) of this section must be determined and applied, using a rational method to account for the moment arm between the rear wheel ground reaction and the rotorcraft center of gravity; or

(2) The probability of landing with initial contact on the rear wheel must be shown to be extremely remote.

(e) *Level landing attitude with only one forward wheel contacting the ground.* In this attitude, the rotorcraft must be designed for ground loads as specified in paragraph (b)(1) and (3) of this section.

(f) *Side loads in the level landing attitude.* In the attitudes specified in paragraphs (b) and (c) of this section, the following apply:

(1) The side loads must be combined at each wheel with one-half of the maximum vertical ground reactions obtained for that wheel under paragraphs (b) and (c) of this section. In this condition, the side loads must be—

(i) For the forward wheels, 0.8 times the vertical reaction (on one side) acting inward, and 0.6 times the vertical reaction (on the other side) acting outward; and

(ii) For the rear wheel, 0.8 times the vertical reaction.

(2) The loads specified in subparagraph (1) of this paragraph must be applied—

(i) At the ground contact point with the wheel in the trailing position (for non-full swiveling landing gear or for full swiveling landing gear with a lock, steering device, or shimmy damper to keep the wheel in the trailing position); or

(ii) At the center of the axle (for full swiveling landing gear without a lock, steering device, or shimmy damper).

(g) *Braked roll conditions in the level landing attitude.* In the attitudes specified in paragraphs (b) and (c) of this section, and with the shock absorbers in their static positions, the rotor-

craft must be designed for braked roll loads as follows:

(1) The limit vertical load must be based on a limit vertical load factor of not less than—

(i) 1.0, for the attitude specified in paragraph (b) of this section; and

(ii) 1.33, for the attitude specified in paragraph (c) of this section.

(2) For each wheel with brakes, a drag load must be applied, at the ground contact point, of not less than the lesser of—

(i) 0.8 times the vertical load; and

(ii) The maximum based on limiting brake torque.

(h) *Rear wheel turning loads in the static ground attitude.* In the static ground attitude, and with the shock absorbers and tires in their static positions, the rotorcraft must be designed for rear wheel turning loads as follows:

(1) A vertical ground reaction equal to the static load on the rear wheel must be combined with an equal side load.

(2) The load specified in subparagraph (1) of this paragraph must be applied to the rear landing gear—

(i) Through the axle, if there is a swivel (the rear wheel being assumed to be swiveled 90 degrees to the longitudinal axis of the rotorcraft); or

(ii) At the ground contact point if there is a lock, steering device or shimmy damper (the rear wheel being assumed to be in the trailing position).

(i) *Taxiing condition.* The rotorcraft and its landing gear must be designed for the loads that would occur when the rotorcraft is taxied over the roughest ground that may reasonably be expected in normal operation.

§ 29.505 Ski landing conditions.

If certification for ski operation is requested, the rotorcraft, with skis, must be designed to withstand the following loading conditions (where P is the maximum static weight on each ski with the rotorcraft at design maximum weight, and n is the limit load factor determined under § 29.473(b)):

(a) Up-load conditions in which—

(1) A vertical load of Pn and a horizontal load of $Pn/4$ are simultaneously applied at the pedestal bearings; and

(2) A vertical load of 1.33 P is applied at the pedestal bearings.

(b) A side load condition in which a side load of 0.35 Pn is applied at the pedestal bearings in a horizontal plane perpendicular to the centerline of the rotorcraft.

(c) A torque-load condition in which a torque load of 1.33 P (in foot-pounds) is applied to the ski about the vertical axis through the centerline of the pedestal bearings.

WATER LOADS

§ 29.521 Float landing conditions.

If certification for float operation is requested, the rotorcraft, with floats, must be designed to withstand the following loading conditions (where the limit load factor is determined under § 29.473(b) or assumed to be equal to that determined for wheel landing gear):

(a) Up-load conditions in which—

(1) A load is applied so that, with the rotorcraft in the static level attitude, the resultant water reaction passes vertically through the center of gravity; and

(2) The vertical load prescribed in subparagraph (1) of this paragraph is applied simultaneously with an aft component of 0.25 times the vertical component.

(b) A side load condition in which—

(1) A vertical load of 0.75 times the total vertical load specified in paragraph (a)(1) of this section is divided equally among the floats; and

(2) For each float, the load share determined under subparagraph (1) of this paragraph, combined with a total side load of 0.25 times the total vertical load specified in subparagraph (1) of this paragraph, is applied to that float only.

MAIN COMPONENT REQUIREMENTS

§ 29.547 Main rotor structure.

(a) Each main rotor assembly (including rotor hubs and blades) must be designed as prescribed in this section.

(b) Each hub, blade, blade attachment, and blade control subject to alternating stresses must be designed to withstand any repeated loading conditions likely to occur within their established service lives. In addition—

(1) The stresses of critical parts must be determined in flight in each attitude appropriate to the type of rotorcraft throughout the ranges of limitations prescribed in § 29.309; and

(2) The service life of each critical part must be established on the basis of—

(i) Fatigue tests; or

(ii) Any other acceptable method.

(c) The main rotor structure must be designed to withstand the following loads prescribed in §§ 29.337 through 29.341, and 29.351:

(1) Critical flight loads.

(2) Limit loads occurring under normal conditions of autorotation.

(d) The main rotor structure must be designed to withstand loads simulating—

(1) For the rotor blades, hubs, and flapping hinges, the impact force of each blade against its stop during ground operation; and

(2) Any other critical condition expected in normal operation.

(e) The main rotor structure must be designed to withstand the limit torque at any rotational speed, including zero. In addition:

(1) The limit torque need not be greater than the torque defined by a torque limiting device (where provided), and may not be less than the greater of—

(i) The maximum torque likely to be transmitted to the rotor structure, in either direction, by the rotor drive or by sudden application of the rotor brake; and

(ii) The limit engine torque specified in § 29.361.

(2) The limit torque must be equally and rationally distributed to the rotor blades.

§ 29.549 Fuselage and rotor pylon structures.

(a) Each fuselage and rotor pylon structure must be designed to withstand—

(1) The critical loads prescribed in §§ 29.337 through 29.341, and 29.351;

(2) The applicable ground loads prescribed in §§ 29.235, 29.471 through 29.485, 29.493, 29.497, 29.505, and 29.521; and

(3) The loads prescribed in § 29.547 (d)(1) and (e)(1)(i).

(b) Auxiliary rotor thrust, the torque reaction of each rotor drive system, and the balancing air and inertia loads occurring under accelerated flight conditions, must be considered.

(c) Each engine mount and adjacent fuselage structure must be designed to withstand the loads occurring under accelerated flight and landing conditions, including engine torque.

(d) For critical parts (parts whose sudden failure would threaten the structural integrity of the rotorcraft) the following apply:

(1) Each part must be designed to withstand any repeated loading conditions likely to occur within its established service life.

(2) Stresses must be determined in flight—

(i) For each attitude appropriate to the rotorcraft; and

(ii) For each attitude, throughout the ranges of limitations prescribed in § 29.309.

(3) The service life of each part must be established by—

(i) Fatigue tests; or

(ii) Any other acceptable method.

§ 29.551 Auxiliary lifting surfaces.

Each auxiliary lifting surface must be designed to withstand—

(a) The critical flight loads in §§ 29.337 through 29.341, and 29.351;

(b) the applicable ground loads in §§ 29.235, 29.471 through 29.485, 29.493, 29.505, and 29.521; and

(c) Any other critical condition expected in normal operation.

EMERGENCY LANDING CONDITIONS

§ 29.561 General.

(a) The rotorcraft, although it may be damaged in emergency landing conditions on land or water, must be designed as prescribed in this section to protect the occupants under those conditions.

(b) The structure must be designed to give each occupant every reasonable chance of escaping serious injury in a minor crash landing when—

(1) Proper use is made of seats, belts, and other safety design provisions;

(2) The wheels are retracted (where applicable); and

(3) The occupant experiences the following ultimate inertia forces relative to the surrounding structure:

(i) Upward—1.5 g.

(ii) Forward—4.0 g.

(iii) Sideward—2.0 g.

(iv) Downward—4.0 g, or any lower force that will not be exceeded when the rotorcraft absorbs the landing loads resulting from impact with an ultimate descent velocity or five f.p.s. at design maximum weight.

(c) The supporting structure must be designed to restrain, under any load up to those specified in paragraph (b)(3) of this section, any item of mass that could injure an occupant if it came loose in a minor crash landing.

(d) Any fuselage structure in the area of internal fuel tanks below the passenger floor level must be designed to resist the crash impact loads specified in this section, and to protect the fuel tanks from rupture, if rupture is likely when those loads are applied to that area.

Subpart D—Design and Construction

General

§ 29.601 Design.

(a) The rotorcraft may have no design features or details that experience has shown to be hazardous or unreliable.

(b) The suitability of each questionable design detail and part must be established by tests.

§ 29.603 Materials.

The suitability and durability of materials used in the structure must—

(a) Be established on the basis of experience or tests; and

(b) Meet approved specifications that ensure their having the strength and other properties assumed in the design data.

§ 29.605 Fabrication methods.

The methods of fabrication used must produce consistently sound structures. If a fabrication process (such as gluing, spot welding, or heat-treating) requires close control to reach this objective, the process must be performed according to an approved process specification.

§ 29.607 Self-locking nuts.

No self-locking nut may be used on any bolt subject to rotation in operation.

§ 29.609 Protection of structure.

Each part of the structure must—

(a) Be suitably protected against deterioration or loss of strength in service due to any cause, including—

(1) Weathering;

(2) Corrosion; and

(3) Abrasion; and

(b) Have provisions for ventilation and drainage where necessary to prevent the accumulation of corrosive, flammable, or noxious fluids.

§ 29.611 Inspection provisions.

There must be means to allow close examination of each part that requires—

(a) Recurring inspection;

(b) Adjustment for proper alignment and functioning; or

(c) Lubrication.

§ 29.613 Material strength properties and design values.

(a) Material strength properties must be based on enough tests of material meeting specifications to establish design values on a statistical basis;

(b) Design values must be chosen so that the probability of any structure being understrength because of material variations is extremely remote;

(c) The strength, detail design, and fabrication of the structure must minimize the probability of disastrous fatigue failure, particularly at points of stress concentration;

(d) Unless they are inapplicable in a particular case, the design values must be those contained in the following publications, obtainable from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20401:

(1) MIL—HDBK-5, "Metallic Materials and Elements for Flight Vehicle Structure".

(2) MIL—HDBK-17, "Plastics for Flight Vehicles".

(3) ANC-18, "Design of Wood Aircraft Structures".

(4) MIL—HDBK-23, "Composite Construction for Flight Vehicles".

§ 29.619 Special factors.

(a) The special factors prescribed in §§ 29.621 through 29.625 apply to each part of the structure whose strength is—

(1) Uncertain;

(2) Likely to deteriorate in service before normal replacement; or

(3) Subject to appreciable variability due to—

(i) Uncertainties in manufacturing processes; or

(ii) Uncertainties in inspection methods.

(b) For each part of the rotorcraft to which §§ 29.621 through 29.625 apply, the factor of safety prescribed in § 29.303 must be multiplied by a special factor equal to—

(1) The applicable special factors prescribed in §§ 29.621 through 29.625; or

(2) Any other factor great enough to ensure that the probability of the part being understrength because of the uncertainties specified in paragraph (a) of this section is extremely remote.

§ 29.621 Casting factors.

(a) *General.* The factors, tests, and inspections specified in paragraphs (b) and (c) of this section must be applied in addition to those necessary to establish foundry quality control. The inspec-

tions must meet approved specifications. Paragraphs (c) and (d) of this section apply to structural castings except castings that are pressure tested as parts of hydraulic or other fluid systems and do not support structural loads.

(b) *Bearing stresses and surfaces.* The casting factors specified in paragraphs (c) and (d) of this section—

(1) Need not exceed 1.25 with respect to bearing stresses regardless of the method of inspection used; and

(2) Need not be used with respect to the bearing surfaces of a part whose bearing factor is larger than the applicable casting factor.

(c) *Critical castings.* For each casting whose failure would preclude continued safe flight and landing of the rotorcraft or result in serious injury to any occupant, the following apply:

(1) Each critical casting must—

(i) Have a casting factor of not less than 1.25; and

(ii) Receive 100 percent inspection by visual, radiographic, and magnetic particle (for ferromagnetic materials) or penetrate (for nonferromagnetic materials) inspection methods or approved equivalent inspection methods.

(2) For each critical casting with a casting factor less than 1.50, three sample castings must be static tested and shown to meet—

(i) The strength requirements of § 29.305 at an ultimate load corresponding to a casting factor of 1.25; and

(ii) The deformation requirements of § 29.305 at a load of 1.15 times the limit load.

(d) *Noncritical castings.* For each casting other than those specified in paragraph (c) of this section, the following apply:

(1) Except as provided in subparagraphs (2) and (3) of this paragraph, the casting factors and corresponding inspections must meet the following table:

Casting factor	*Inspection*
2.0 or greater	100 percent visual.
Less than 2.0, greater than 1.5.	100 percent visual, and magnetic particle (ferromagnetic materials), penetrant (nonferromagnetic materials), or approved equivalent inspection methods.
1.25 through 1.50	100 percent visual, and magnetic particle (ferromagnetic materials), penetrant (nonferromagnetic materials), and radiographic or approved equivalent inspection methods.

(2) The percentage of castings inspected by nonvisual methods may be reduced below that specified in subparagraph (1) of this paragraph when an approved quality control procedure is established.

(3) For castings procured to a specification that guarantees the mechanical properties of the material in the casting and provides for demonstration of these properties by test of coupons cut from the castings on a sampling basis—

(i) A casting factor of 1.0 may be used; and

(ii) The castings must be inspected as provided in subparagraph (1) of this paragraph for casting factors of "1.25 through 1.50" and tested under paragraph (c)(2) of this section.

§ 29.623 Bearing factors.

(a) Except as provided in paragraph (b) of this section, each part that has clearance (free fit), and that is subject to pounding or vibration, must have a bearing factor large enough to provide for the effects of normal relative motion.

(b) No bearing factor need be used on a part for which any larger special factor is prescribed.

§ 29.625 Fitting factors.

For each fitting (part or terminal used to join one structural member to another) the following apply:

(a) For each fitting whose strength is not proven by limit and ultimate load tests in which actual stress conditions are simulated in the fitting and surrounding structures, a fitting factor of at least 1.15 must be applied to each part of—

(1) The fitting;

(2) The means of attachment; and

(3) The bearing on the joined members.

(b) No fitting factor need be used—

(1) For joints made under approved practices and based on comprehensive test data (such as continuous joints in metal plating, welded joints, and scarf joints in wood); and

(2) With respect to any bearing surface for which a larger special factor is used.

(c) For each integral fitting, the part must be treated as a fitting up to the point at which the section properties become typical of the member.

§ 29.629 Flutter.

Each part of the rotorcraft must be free from flutter under each appropriate speed and power condition.

MAIN ROTOR

§ 29.653 Pressure venting and drainage of main rotor blades.

For each main rotor blade—

(a) There must be means for venting the internal pressure of the blade;

(b) Drainage holes must be provided for the blade; and

(c) The blade must be designed to prevent water from becoming trapped in it.

§ 29.659 Mass balance.

The rotors and blades must be mass balanced as necessary to—

(a) Prevent excessive vibration; and

(b) Prevent flutter at any speed up to the maximum forward speed.

§ 29.661 Rotor blade clearance.

There must be enough clearance between the main rotor blades and other parts of the structure to prevent the blades from striking any part of the structure during any operating condition.

CONTROL SYSTEMS

§ 29.671 General.

(a) Each control and control system must operate with the ease, smoothness, and positiveness appropriate to its function.

(b) Each element of each flight control system must be designed, or distinctively and permanently marked, to minimize the probability of any incorrect assembly that could result in the malfunction of the system.

§ 29.675 Stops.

(a) Each control system must have stops that positively limit the range of motion of the pilot's controls.

(b) Each stop must be located in the system so that the range of travel of its control is not appreciably affected by—

(1) Wear;

(2) Slackness; or

(3) Takeup adjustments.

(c) Each stop must be able to withstand the loads corresponding to the design conditions for the system.

(d) For each main rotor blade—

(1) The blade must have stops, appropriate to the design, to limit its travel about its hinges; and

(2) There must be means to keep the blade from hitting the droop stops during any operation other than starting and stopping the rotor.

§ 29.679 Control system locks.

If there is a device to lock the control system with the rotorcraft on the ground or water, there must be means to—

(a) Automatically disengage the lock when the pilot operates the controls in a normal manner, or limit the operation of the rotorcraft so as to give unmistakable warning to the pilot before takeoff; and

(b) Prevent the lock from engaging in flight.

§ 29.681 Limit load static tests.

(a) Compliance with the limit load requirements of this part must be shown by tests in which—

(1) The direction of the test loads produces the most severe loading in the control system; and

(2) Each fitting, pulley, and bracket used in attaching the system to the main structure is included;

(b) Compliance must be shown (by analyses or individual load tests) with the special factor requirements for control system joints subject to angular motion.

§ 29.683 Operation tests.

It must be shown by operation tests that, when the controls are operated from the pilot compartment with the control system loaded to correspond with loads specified for the system, the system is free from—

(a) Jamming;

(b) Excessive friction; and

(c) Excessive deflection.

§ 29.685 Control system details.

(a) Each detail of each control system must be designed to prevent jamming, chafing, and interference from cargo, passengers, or loose objects.

(b) There must be means in the cockpit to prevent the entry of foreign objects into places where they would jam the system.

(c) There must be means to prevent the slapping of cables or tubes against other parts.

(d) Cable systems must be designed as follows:

(1) Cables, cable fittings, turnbuckles, splices, and pulleys must be of an acceptable kind.

(2) The design of cable systems must prevent any hazardous change in cable tension throughout the range of travel under any operating conditions and temperature variations.

(3) No cable smaller than ⅛ inch diameter may be used in any primary control system.

(4) Pulley kinds and sizes must correspond to the cables with which they are used. The pulley-cable combinations and strength values specified in MIL-HDBK-5 must be used unless they are inapplicable.

(5) Pulleys must have close fitting guards to prevent the cables from being displaced or fouled.

(6) Pulleys must lie close enough to the plane passing through the cable to prevent the cable from rubbing against the pulley flange.

(7) No fairlead may cause a change in cable direction of more than three degrees.

(8) No clevis pin subject to load or motion and retained only by cotter pins may be used in the control system.

(9) Turnbuckles attached to parts having angular motion must be installed to prevent binding throughout the range of travel.

(10) There must be means for visual inspection at each fairlead, pulley, terminal, and turnbuckle.

(e) Control system joints subject to angular motion must incorporate the following special factors with respect to the ultimate bearing strength of the softest material used as a bearing:

(1) 3.33 for push-pull systems other than ball and roller bearing systems.

(2) 2.0 for cable systems.

(f) For control system joints, the manufacturer's static, non-Brinell rating of ball and roller bearings may not be exceeded.

§ 29.687 Spring devices.

(a) Each control system spring device whose failure could cause flutter or other unsafe characteristics must be reliable.

(b) Compliance with paragraph (a) of this section must be shown by tests simulating service conditions.

§ 29.691 Autorotation control mechanism.

Each main rotor blade pitch control mechanism must allow rapid entry into autorotation after power failure.

§ 29.695 Power boost and power-operated control system.

(a) If a power boost or power-operated control system is used, an alternate system must be immediately available that allows continued safe flight and landing in the event of—

(1) Any single failure in the power portion of the system; or

(2) The failure of all engines.

(b) Each alternate system may be a duplicate power portion or a manually operated mechanical system. The power portion includes the power source (such as hydraulic pumps), and such items as valves, lines, and actuators.

(c) The failure of mechanical parts (such as piston rods and links), and the jamming of power cylinders, must be considered unless they are extremely improbable.

§ 29.723 Shock absorption tests.

The landing inertia load factor and the reserve energy absorption capacity of the landing gear must be substantiated by the tests prescribed in §§ 29.725 and 29.727, respectively. These tests must be conducted on the complete rotorcraft or on units consisting of wheel, tire, and shock absorber in their proper relation.

§ 29.725 Limit drop test.

The limit drop test must be conducted as follows:

(a) The drop height must be—

(1) 13 inches from the lowest point of the landing gear to the ground; or

(2) Any lesser height, not less than eight inches, resulting in a drop contact velocity equal to the greatest probable sinking speed likely to occur at ground contact in normal power-off landings.

(b) If considered, the rotor lift specified in § 29.473(a) must be introduced into the drop test by appropriate energy absorbing devices or by the use of an effective mass.

(c) Each landing gear unit must be tested in the attitude simulating the landing condition that is most critical from the standpoint of the energy to be absorbed by it.

(d) When an effective mass is used in showing compliance with paragraph (b) of this section, the following formulae may be used instead of more rational computations.

$$W_e = W\left[\frac{h+(1-L)d}{h+d}\right]; \text{ and } n = n_j\frac{W_e}{W} + L$$

where:

W_e = the effective weight to be used in the drop test (lbs.).

$W = W_M$ for main gear units (lbs.), equal to the static reaction on the particular unit with the rotorcraft in the most critical attitude. A rational method may be used in computing a main gear static reaction, taking into consideration the moment arm between the main wheel reaction and the rotorcraft center of gravity.

$W = W_N$ for nose gear units (lbs.), equal to the vertical component of the static reaction that would exist at the nose wheel, assuming that the mass of the rotorcraft acts at the center of gravity and exerts a force of $1.0g$ downward and $0.25g$ forward.

$W = W_T$ for tailwheel units (lbs.) equal to whichever of the following is critical—

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

(2) The vertical component of the ground reaction that would occur at the tailwheel assuming that the mass of the rotorcraft acts at the center of gravity and exerts a force of $1g$ downward with the rotorcraft in the maximum nose-up attitude considered in the nose-up landing conditions.

h = specified free drop height (inches).

L = ratio of assumed rotor lift to the rotorcraft weight.

d = deflection under impact of the tire (at the proper inflation pressure) plus the vertical component of the axle travel (inches) relative to the drop mass.

n = limit inertia load factor.

n_j = the load factor developed during impact on the mass used in the drop test (i.e., the acceleration dv/dt in g's recorded in the drop test plus 1.0).

§ 29.727 Reserve energy absorption drop test.

The reserve energy absorption drop test must be conducted as follows:

(a) The drop height must be 1.5 times that specified in § 29.725(a).

(b) Rotor lift, where considered in a manner similar to that prescribed in § 29.725(b), may not exceed 1.5 times the lift allowed under that paragraph.

(c) The landing gear must withstand this test without collapsing.

§ 29.729 Retracting mechanism.

(a) *General.* The landing gear, retracting mechanism, wheel well doors, and supporting structure must be designed for—

(1) The loads occurring in any maneuvering condition with the gear retracted;

(2) The combined friction, inertia, and air loads occurring during retraction and extension at any airspeed up to the design maximum landing gear operating speed; and

(3) The flight loads, including those in yawed flight, occurring with the gear extended at any airspeed up to the design maximum landing gear extended speed.

(b) *Landing gear lock.* A positive means must be provided to keep the gear extended.

(c) *Emergency operation.* When other than manual power is used to operate the gear, emergency means must be provided for extending the gear in the event of—

(1) Any reasonably probable failure in the normal retraction system; or

(2) The failure of any single source of hydraulic, electric, or equivalent energy.

(d) *Operation tests.* The proper functioning of the retracting mechanism must be shown by operation tests.

(e) *Position indicator.* There must be means to indicate to the pilot when the gear is secured in the extreme positions.

(f) *Control.* The location and operation of the retraction control must meet the requirements of § 29.777.

§ 29.731 Wheels.

(a) Each landing gear wheel must be approved.

(b) The maximum static load rating of each wheel may not be less than the corresponding static ground reaction with—

(1) Maximum weight; and

(2) Critical center of gravity.

(c) The maximum limit load rating of each wheel must equal or exceed the maximum radial limit load determined under the applicable ground load requirements of this part.

§ 29.733 Tires.

Each landing gear wheel must have a tire—

(a) That is a proper fit on the rim of the wheel; and

(b) Of a rating that is not exceeded under—

(1) The design maximum weight;

(2) A load on each main wheel tire equal to the static ground reaction corresponding to the critical center of gravity; and

(3) A load on nose wheel tires (to be compared with the dynamic rating established for those tires) equal to the reaction obtained at the nose wheel, assuming that the mass of the rotorcraft acts at the most critical center of gravity and exerts a force of 1.0 *g* downward and 0.25 *g* forward, the reactions being distributed to the nose and main wheels according to the principles of statics with the drag reaction at the ground applied only at wheels with brakes.

§ 29.735 Brakes.

A braking device must be installed that is—

(a) Controllable by the pilot;

(b) Usable during power-off landings; and

(c) Adequate to—

(1) Counteract any normal unbalanced torque when starting or stopping the rotor; and

(2) Hold the rotorcraft parked on a 10 degree slope on a dry, smooth pavement.

§ 29.737 Skis.

(a) The maximum limit load rating of each ski must equal or exceed the maximum limit load determined under the applicable ground load requirements of this part.

(b) There must be a stabilizing means to maintain the ski in an appropriate position during flight. This means must have enough strength to withstand the maximum aerodynamic and inertia loads on the ski.

FLOATS AND HULLS

§ 29.751 Main float buoyancy.

(a) For main floats, the buoyancy necessary to support the maximum weight of the rotorcraft in fresh water must be exceeded by—

(1) 50 percent, for single floats; and

(2) 60 percent, for multiple floats.

(b) Each main float must have at least five watertight compartments approximately equal in volume.

§ 29.753 Main float design.

(a) *Bag floats.* Each bag float must be designed to withstand—

(1) The maximum pressure differential that might be developed at the maximum altitude for which certification with that float is requested; and

(2) The vertical loads prescribed in § 29.521(a), distributed along the length of the bag over three-quarters of its projected area.

(b) *Rigid floats.* Each rigid float must be able to withstand the vertical, horizontal, and side loads prescribed in § 29.521. An appropriate load distribution under critical conditions must be used.

§ 29.755 Hulls.

For each rotorcraft, with a hull and auxiliary floats, that is to be approved for both taking off from and landing on water, the hull and auxiliary floats must have enough watertight compartments so that, with any single compartment flooded, the buoyancy of the hull and auxiliary floats (and wheel tires if used) provides a margin of positive stability great enough to minimize the probability of capsizing.

PERSONNEL AND CARGO ACCOMMODATIONS

§ 29.771 Pilot compartment.

For each pilot compartment—

(a) The compartment and its equipment must allow each pilot to perform his duties without unreasonable concentration or fatigue;

(b) If there is provision for a second pilot, the rotorcraft must be controllable with equal safety from either pilot seat;

(c) The vibration and noise characteristics of cockpit appurtenances may not interfere with safe operation;

(d) Inflight leakage of rain or snow that could distract the crew or harm the structure must be prevented;

(e) A passageway must be provided between the pilot compartment and the passenger compartment; and

(f) There must be suitable means to prevent passengers from entering the pilot compartment without permission.

§ 29.773 Pilot compartment view.

(a) *Nonprecipitation conditions.* For nonprecipitation conditions, the following apply:

(1) Each pilot compartment must be arranged to give the pilots a sufficiently extensive, clear, and undistorted view for safe operation.

(2) Each pilot compartment must be free of glare and reflection that could interfere with the pilot's view. If certification for night operation is requested, this must be shown by night flight tests.

(b) *Precipitation conditions.* For precipitation conditions, the following apply:

(1) Each pilot must have a sufficiently extensive view for safe operation—

(i) In heavy rain at forward speeds up to V_H; and

(ii) In the most severe icing condition for which certification is requested.

(2) The pilots must have a window that—

(i) Is openable under the conditions prescribed in subparagraph (1) of this paragraph; and

(ii) Provides the view prescribed in that subparagraph.

§ 29.775 Windshield and windows.

Nonsplintering safety glass must be used in glass windshields and windows.

§ 29.777 Cockpit controls.

Cockpit controls must be—

(a) Located to provide convenient operation and to prevent confusion and inadvertent operation; and

(b) Located and arranged with respect to the pilot's seats so that there is full and unrestricted movement of each control without interference from the cockpit structure or the pilot's clothing when pilots from 5'2'' to 6'0'' in height are seated.

§ 29.783 Doors.

(a) Each closed cabin must have at least one adequate and easily accessible external door.

(b) No passenger door may be located with respect to any rotor disc so as to endanger persons following appropriate instructions for the use of that door.

(c) There must be means for locking crew and external passenger doors and for preventing their opening in flight inadvertently or as a result of mechanical failure. It must be possible to open external doors from inside and outside the cabin with the rotorcraft on the ground. The means of opening must be simple, obvious, and so arranged and marked that it can be readily located and operated.

(d) There must be reasonable provisions to prevent the jamming of any external door, in a minor crash, as a result of fuselage deformation.

(e) There must be means for direct visual inspection of the locking mechanism by crewmembers to determine whether the external doors (including passenger, crew, service, and cargo doors) are fully locked. There must be visual means to signal to appropriate crewmembers when normally used external doors are closed and fully locked.

(f) For outward opening external doors usable for entrance or egress, there must be an auxiliary safety latching device to prevent the door from opening when the primary latching mechanism fails. If the door does not meet the requirements of paragraph (c) of this section with this device in place, suitable operating procedures must be established to prevent the use of the device during takeoff and landing.

§ 29.785 Seats, safety belts, and harnesses.

(a) The seats, safety belts, shoulder harnesses, and adjacent parts of the rotorcraft, at each station designated for occupancy during takeoff and landing, must be designed so that a person making proper use of these facilities will not suffer serious injury in an emergency landing as a result of the inertia forces specified in § 29.561.

(b) Each seat must be approved.

(c) Each occupant must be protected from head injury by—

(1) A safety belt and harness that will prevent the head from contacting any injurious object;

(2) A safety belt plus the elimination of any injurious objects within striking radius of the head; or

(3) A safety belt plus a cushioned rest that will support the arms, shoulders, head, and spine.

(d) If seat backs do not have a firm handhold, there must be hand grips or rails along each aisle to let the occupants steady themselves while using the aisle in moderately rough air; and

(e) Each projecting object that would injure persons seated or moving about in the rotorcraft in normal flight must be padded.

(f) Each seat and its supporting structure must be designed for an occupant weight of 170 pounds, considering the maximum load factors, inertia forces, and reactions between the occupant, seat, and safety belt or harness corresponding with the applicable flight and ground load conditions, including the emergency landing conditions of § 29.561. In addition—

(1) Each pilot seat must be designed for the reactions resulting from the application of the pilot forces prescribed in § 29.397; and

(2) The inertia forces prescribed in § 29.561 must be multiplied by a factor of 1.33 in determining the strength of the attachment of—

(i) Each seat to the structure; and

(ii) Each safety belt or harness to the seat or structure.

§ 29.787 Cargo and baggage compartments.

(a) Each cargo and baggage compartment must be designed for its placarded maximum weight of contents and for the critical load distributions at the appropriate maximum load factors corresponding to the specified flight and ground load conditions, except the emergency landing conditions of § 29.561.

(b) There must be means to prevent the contents of any compartment from becoming a hazard by shifting under the loads specified in paragraph (a) of this section.

(c) There must be means to protect each occupant from injury by the contents of any compartment when the ultimate forward inertia force is 4 *g*.

§ 29.803 Emergency evacuation.

(a) Each crew and passenger area must have means for rapid evacuation in a crash landing, with the landing gear (1) extended and (2) retracted, considering the possibility of fire.

(b) Passenger entrance, crew, and service doors may be considered as emergency exits if they meet the requirements of this section and of §§ 29.805 through 29.815.

§ 29.805 Flight crew emergency exits.

For rotorcraft with passenger emergency exits that are not convenient to the flight crew, there must be flight crew emergency exits in the crew area for rapid evacuation. These exits must be located—

(a) On both sides of the rotorcraft; or

(b) As a top hatch.

§ 29.807 Passenger emergency exits.

(a) *Type.* For the purpose of this part, the types of passenger emergency exit are as follows:

(1) *Type I.* This type must have a rectangular opening at least 24 inches wide by 48 inches high, with corner radii not greater than four inches, in the passenger area in the side of the fuselage at floor level and as far away as practicable from areas that might become potential fire hazards in a crash.

(2) *Type II.* This type is the same as Type I, except that the opening must be at least 20 inches wide by 44 inches high.

(3) *Type III.* This type is the same as Type I, except that—

(i) The opening must be at least 20 inches wide by 36 inches high; and

(ii) The exits need not be at floor level.

(4) *Type IV.* This type must have a rectangular opening at least 19 inches wide by 26 inches high, with corner radii not greater than four inches, in the side of the fuselage with a step-up inside the rotorcraft of not more than 29 inches.

Openings with dimensions larger than those specified in this section may be used, regardless of shape, if the base of the opening has a flat surface of not less than the specified width.

(b) *Passenger emergency exits; side-of-fuselage.* Emergency exits must be accessible to the passengers and must be provided in accordance with the following table:

Passenger seating capacity	Emergency exits for each side of the fuselage			
	Type I	Type II	Type III	Type IV
1 through 19			1	
20 through 39		1		1
40 through 69	1			1

(c) *Passenger emergency exits; other than side-of-fuselage.* In addition to the requirements of paragraph (b) of this section—

(1) There must be enough openings in the top, bottom, or ends of the fuselage to allow evacuation with the rotorcraft on its side; or

(2) The probability of the rotorcraft coming to rest on its side in a crash landing must be extremely remote.

(d) *Tests.* The proper functioning of each emergency exit must be shown by test.

§ 29.809 Emergency exit arrangement.

(a) Each emergency exit must consist of a movable door or hatch in the external walls of the fuselage and must provide an unobstructed opening to the outside.

(b) Each emergency exit must be openable from the inside and from the outside.

(c) The means of opening each emergency exit must be simple and obvious and may not require exceptional effort.

(d) There must be means for locking each emergency exit and for preventing opening in flight inadvertently or as a result of mechanical failure.

(e) There must be means to minimize the probability of the jamming of any emergency exit in a minor crash landing as a result of fuselage deformation.

(f) For each emergency exit (other than Type IV exits above a wing) that is more than six feet from the ground with the rotorcraft on the ground and the landing gear extended, there must be means to assist the occupants to the ground.

§ 29.811 Emergency exit marking.

(a) Each emergency exit, its means of access, and its means of opening must be conspicuously marked.

(b) The identity and location of each emergency exit must be recognizable from a distance equal to the width of the cabin.

(c) The location of each emergency exit operating handle and the instructions for opening must be marked on or near the emergency exit. This marking must be readable from a distance of 30 inches.

(d) A source of light, independent of the main lighting system, must be installed to light each emergency exit marking.

(e) Each exit light must be designed to function automatically in a crash landing and to operate manually.

(f) Each emergency exit and its means of opening must be marked on the outside of the rotorcraft.

§ 29.813 Emergency exit access.

(a) Each passageway between passenger compartments, and each passageway leading to Type I and Type II emergency exits, must be—

(1) Unobstructed; and

(2) At least 20 inches wide.

(b) For each emergency exit covered by § 29.809(f), there must be enough space adjacent to that exit to allow a crewmember to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required for that exit.

§ 29.815 Main aisle width.

The main passenger aisle width between seats must equal or exceed the values in the following table:

Passenger seating capacity	Minimum main passenger aisle width	
	Less than 25 inches from floor	25 inches and more from floor
	Inches	*Inches*
10 or less	12	18
11 through 19	12	20
20 or more	15	20

§ 29.831 Ventilation.

(a) Each passenger and crew compartment must be ventilated, and each

crew compartment must have enough fresh air (but not less than 10 cu. ft. per minute per crewmember) to let crewmembers perform their duties without undue discomfort or fatigue.

(b) Crew and passenger compartment air must be free from harmful or hazardous concentrations of gases or vapors.

(c) The concentration of carbon monoxide may not exceed one part in 20,000 parts of air during forward flight. If the concentration exceeds this value under other conditions, there must be suitable operating restrictions.

(d) There must be means to ensure compliance with paragraphs (b) and (c) of this secton under any reasonably probable failure of any ventilating, heating, or other system or equipment.

§ 29.833 Heaters.

Each combustion heater must be approved.

FIRE PROTECTION

§ 29.851 Fire extinguishers.

(a) *Hand fire extinguishers.* For hand fire extinguishers the following apply:

(1) Each hand fire extingusher must be approved.

(2) The kinds and quantities of each extinguishing agent used must be appropriate to the kinds of fires likely to occur where that agent is used.

(3) Each extinguisher for use in a personnel compartment must be designed to minimize the hazard of toxic gas concentrations.

(b) *Built-in fire extinguishers.* If a built-in fire extinguishing system is required—

(1) The capacity of each system, in relation to the volume of the compartment where used and the ventilation rate, must be adequate for any fire likely to occur in that compartment.

(2) Each system must be installed so that—

(i) No extinguishing agent likely to enter personnel compartments will be present in a quantity that is hazardous to the occupants; and

(ii) No discharge of the extinguisher can cause structural damage.

§ 29.853 Compartment interiors.

For each compartment to be used by the crew or passengers—

(a) The materials must be at least flash-resistant;

(b) The wall and ceiling linings, and the covering of upholstery, floors, and furnishings must be at least flame resistant;

(c) Each compartment where smoking is to be allowed must have self-contained, removable ash trays, and other compartments must be placarded against smoking;

(d) Each receptacle for towels, paper, or waste must be at least fire-resistant and must have means for containing possible fires;

(e) There must be a hand fire extinguisher for the flight crewmembers; and

(f) At least the following number of hand fire extinguishers must be conveniently located in passenger compartments:

Passenger capacity:	*Fire extinguishers*
7 through 30	1
31 through 60	2

§ 29.855 Cargo and baggage compartments.

(a) Each cargo and baggage compartment must be constructed of, or lined with, materials that are at least fire resistant.

(b) No compartment may contain any controls, wiring, lines, equipment, or accessories whose damage or failure would affect safe operation, unless those items are protected so that—

(1) They cannot be damaged by the movement of cargo in the compartment; and

(2) Their breakage or failure will not create a fire hazard.

(c) The design and sealing of inaccessible compartments must be adequate to contain compartment fires until a landing and safe evacuation can be made.

(d) Each cargo and baggage compartment must be designed, or must have a device, to ensure detection of fires by a crewmember at his station and to prevent the entry of harmful quantities of smoke, flame, extinguishing agents, and other noxious gases into any crew or passenger compartment. This must be shown in flight.

§ 29.859 Combustion heater fire protection.

(a) *Combustion heater fire zones.* The following combustion heater fire zones must be protected against fire under the applicable provisions of §§ 29.1181 through 29.1191, and 29.1195 through 29.1203:

(1) The region surrounding any heater, if that region contains any flammable fluid system components (including the heater fuel system), that could—

(i) Be damaged by heater malfunctioning; or

(ii) Allow flammable fluids or vapors to reach the heater in case of leakage.

(2) Each part of any ventilating air passage that—

(i) Surrounds the combustion chamber; and

(ii) Would not contain (without damage to other rotorcraft components) any fire that may occur within the passage.

(b) *Ventilating air ducts.* Each ventilating air duct passing through any fire zone must be fireproof. In addition—

(1) Unless isolation is provided by fireproof valves or by equally effective means, the ventilating air duct downstream of each heater must be fireproof for a distance great enough to ensure that any fire originating in the heater can be contained in the duct; and

(2) Each part of any ventilating duct passing through any region having a flammable fluid system must be so constructed or isolated from that system that the malfunctioning of any component of that system cannot introduce flammable fluids or vapors into the ventilating airstream.

(c) *Combustion air ducts.* Each combustion air duct must be fireproof for a distance great enough to prevent damage from backfiring or reverse flame propagation. In addition—

(1) No combustion air duct may communicate with the ventilating airstream unless flames from backfires or reverse burning cannot enter the ventilating airstream under any operating condition, including reverse flow or malfunction of the heater or its associated components; and

(2) No combustion air duct may restrict the prompt relief of any backfire that, if so restricted, could cause heater failure.

(d) *Heater controls; general.* There must be means to prevent the hazardous accumulation of water or ice on or in any heater control component, control system tubing, or safety control.

(e) *Heater safety controls.* For each combustion heater, safety control means must be provided as follows:

(1) Means independent of the components provided for the normal continuous control of air temperature, airflow, and fuel flow must be provided, for each heater, to automatically shut off the ignition and fuel supply of that heater at a point remote from that heater, when—

(i) The heat exchanger temperature or ventilating air temperature exceeds safe limits; or

(ii) The combustion airflow or the ventilating airflow becomes inadequate for safe operation.

(2) The means of complying with subparagraph (1) of this paragraph for any individual heater must—

(i) Be independent of components serving any other heater whose heat output is essential for safe operation; and

(ii) Keep the heater off until restarted by the crew.

(3) There must be means to warn the crew when any heater whose heat output is essential for safe operation has been shut off by the automatic means prescribed in subparagraph (1) of this paragraph.

(f) *Air intakes.* Each combustion and ventilating air intake must be where no flammable fluids or vapors can enter the heater system under any operating condition—

(1) During normal operation; or

(2) As a result of the malfunction of any other component.

(g) *Heater exhaust.* Each heater exhaust system must meet the requirements of §§ 29.1121 and 29.1123. In addition—

(1) Each exhaust shroud must be sealed so that no flammable fluids or hazardous quantities of vapors can reach the exhaust systems through joints; and

(2) No exhaust system may restrict the prompt relief of any backfire that, if so restricted, could cause heater failure.

(h) *Heater fuel systems.* Each heater fuel system must meet the powerplant fuel system requirements affecting safe heater operation. Each heater fuel system component in the ventilating airstream must be protected by shrouds so that no leakage from those components can enter the ventilating airstream.

(i) *Drains.* There must be means for safe drainage of any fuel that might ac-

cumulate in the combustion chamber or the heat exchanger. In addition—

(1) Each part of any drain that operates at high temperatures must be protected in the same manner as heater exhausts; and

(2) Each drain must be protected against hazardous ice accumulation under any operating condition.

§ 29.861 Fire protection of structure, controls, and other parts.

Each part of the structure, controls, and the rotor mechanism, and other parts essential to controlled landing and (for category A) flight that would be affected by powerplant fires must be isolated under § 29.1191, or must be—

(a) For category A rotorcraft, fireproof; and

(b) For category B rotorcraft, protected so that they can perform their essential functions for at least five minutes under any foreseeable powerplant fire condition.

§ 29.863 Flammable fluid fire protection.

If flammable fluids or vapors might escape by the leakage of fluid systems, there must be means to—

(a) Prevent the ignition of those fluids or vapors by any other equipment; or

(b) Control any fire resulting from that ignition.

MISCELLANEOUS

§ 29.871 Leveling marks.

There must be reference marks for leveling the rotorcraft on the ground.

§ 29.873 Ballast provisions.

Ballast provisions must be designed and constructed to prevent inadvertent shifting of ballast in flight.

§ 29.877 Ice protection.

The rotorcraft must be able to operate safely throughout the range of icing conditions for which certification is requested.

Subpart E—Powerplant

GENERAL

§ 29.901 Installation.

(a) For the purpose of this part, the powerplant installation includes each part of the rotorcraft (other than the main and auxiliary rotor structures) that—

(1) Is necessary for propulsion;

(2) Affects the control of the major propulsive units; or

(3) Affects the safety of the major propulsive units between normal inspections or overhauls.

(b) For each powerplant installation—

(1) The installation must meet the applicable provisions of this subpart and, for turbine powerplant installations, any other requirements necessary for safety;

(2) Each component of the installation must be constructed, arranged, and installed to ensure its continued safe operation between normal inspections or overhauls;

(3) Accessibility must be provided to allow any inspection and maintenance necessary for continued airworthiness; and

(4) Electrical interconnections must be provided to prevent differences of potential between major components of the installation and the rest of the rotorcraft.

§ 29.903 Engines.

(a) *Engine type certification.* Each engine must be type certificated under Part 33 [New].

(b) *Category A; engine isolation.* For each category A rotorcraft, the powerplants must be arranged and isolated from each other to allow operation, in at least one configuration, so that the failure or malfunction of any engine, or the failure of any system that can affect any engine, will not—

(1) Prevent the continued safe operation of the remaining engines; or

(2) Require immediate action by any crew member for continued safe operation.

(c) *Category A; control of engine rotation.* For each category A rotorcraft, there must be means for stopping and restarting any engine individually in flight. In addition—

(1) Each component for controlling engine rotation in flight that is on the engine side of any firewall and that might be exposed to fire must be at least fire-resistant; or

(2) Duplicate means must be available for this purpose and their controls must be where all are not likely to be damaged at the same time in case of fire.

(d) *Category A; engine cooling fan blade protection.* If an engine cooling fan is installed in a category A rotorcraft, there must be means to ensure that a fan blade failure will not affect the operation of the remaining engines or prevent continued safe operation.

(e) *Category B; engine cooling fan blade protection.* If an engine cooling fan is installed, there must be means to protect the rotorcraft and allow a safe landing if a fan blade fails. This must be shown by showing that—

(1) The fan blades are contained in case of failure;

(2) Each fan is located so that a failure will not jeopardize safety; or

(3) Each fan blade can withstand an ultimate load of 1.5 times the centrifugal force resulting from engine r.p.m. limited by either—

(i) The terminal engine r.p.m. under uncontrolled conditions; or

(ii) An overspeed limiting device.

§ 29.907 Engine vibration.

(a) Each engine must be installed to prevent the harmful vibration of any part of the engine or rotorcraft.

(b) The addition of the rotor and the rotor drive system to the engine may not subject the principal rotating parts of the engine to excessive vibration stresses. This must be shown by a vibration investigation.

ROTOR DRIVE SYSTEM

§ 29.917 Design.

(a) *General.* The rotor drive system includes any part necessary to transmit power from the engines to the rotor hubs. This includes gear boxes, shafting universal joints, couplings, rotor brake assemblies, clutches, supporting bearings for shafting, any attendant accessory pads or drives, and any cooling fans not included in the type certification of the engine.

(b) *Arrangement.* Rotor drive systems must be arranged as follows:

(1) Each rotor drive system of multiengine rotorcraft must be arranged so that each rotor necessary for operation

and control will continue to be driven by the remaining engines if any engine fails.

(2) For single-engine rotorcraft, each rotor drive system must be so arranged that each rotor necessary for control in autorotation will continue to be driven by the main rotors after disengagement of the engine from the main and auxiliary rotors.

(3) Each rotor drive system must incorporate a unit for each engine to automatically disengage that engine from the main and auxiliary rotors if that engine fails.

(4) If a torque limiting device is used in the rotor drive system, it must be located so as to allow continued control of the rotorcraft when the device is operating.

(5) If the rotors must be phased for intermeshing, each system must provide constant and positive phase relationship under any operating condition.

(6) If a rotor dephasing device is incorporated, there must be means to keep the rotors locked in proper phase before operation.

§ 29.921 Rotor brake.

If there is a means to control the rotation of the rotor drive system independently of the engine, any limitations on the use of that means must be specified, and the control for that means must be guarded to prevent inadvertent operation.

§ 29.923 Rotor drive system and control mechanism tests.

(a) *Endurance tests; general.* Each rotor drive system and rotor control mechanism must be tested for not less than 200 hours. These tests must be conducted—

(1) On the rotorcraft, with the power being absorbed by the actual rotors to be installed; and

(2) As prescribed in paragraphs (b) through (j) of this section in 10-hour test cycles.

(b) *Endurance tests; takeoff power run.* The takeoff power endurance test run must consist of one hour of alternate runs of five minutes at takeoff power and speed, and five minutes at as low an engine idle speed as practicable. The engine must be declutched from the rotor drive system, and the rotor brake, if furnished and so intended, must be applied during the first minute of the idle run. During the remaining four minutes of the idle run, the clutch must be engaged so that the engine drives the rotors at the minimum practical r.p.m. Acceleration of the engine and the rotor drive system must be accomplished at the maximum rate. When declutching the engine, it must be decelerated at a rate rapid enough to allow the operation of the overrunning clutch. If there is no takeoff rating, maximum continuous power and speed must be substituted for takeoff power and speed.

(c) *Endurance tests; maximum continuous run.* Three hours of continuous operation at maximum continuous power and speed must be conducted as follows:

(1) The main rotor controls must be operated at a minimum of 15 times each hour through the main rotor pitch positions of maximum vertical thrust, maximum forward thrust component, maximum aft thrust component, maximum left thrust component, and maximum right thrust component, except that the control movements need not produce loads or blade flapping motion exceeding the maximum loads or motions encountered in flight.

(2) The directional controls must be operated at a minimum of 15 times each hour through the control extremes of maximum right turning torque, neutral torque as required by the power applied to the main rotor, and maximum left turning torque.

(3) Each maximum control position must be held for at least 10 seconds, and the rate of change of control position must be at least as rapid as that for normal operation.

(d) *Endurance tests; 90 percent of maximum continuous run.* One hour of continuous operation at 90 percent of maximum continuous power must be conducted at maximum continuous speed.

(e) *Endurance tests; 80 percent of maximum continuous run.* One hour of continuous operation must be conducted at 80 percent of maximum continuous power and speed.

(f) *Endurance tests; 60 percent of maximum continuous run.* Two hours of continuous operation at 60 percent of maximum continuous power must be conducted at minimum desired cruising speed or at 90 percent of maximum continuous speed, whichever is less.

(g) *Endurance tests; engine malfunctioning run.* It must be determined whether malfunctioning of components such as the engine fuel or ignition systems, or whether unequal engine power can cause dynamic conditions detrimental to the drive system. If so, a suitable number of hours of operation must be accomplished under those conditions, one hour of which must be included in each cycle, and the remaining hours of which must be accomplished at the end of the 20 cycles. If no detrimental condition results, an additional hour of operation in compliance with paragraph (b) of this section must be conducted.

(h) *Endurance tests; overspeed run.* One hour of continuous operation at 110 percent of maximum continuous speed must be conducted at maximum continuous power. If the engines are limited by the manufacturer to an overspeed of less than 110 percent of maximum continuous speed for the periods required, the speed used must be the highest speed allowable for those engines.

(i) *Endurance tests; rotor control positions.* When the rotor controls are not being cycled during the tie-down tests, the rotor must be operated, using the procedures prescribed in paragraph (c) of this section, to produce each of the maximum thrust positions for the following percentages of test time (except that the control positions need not produce loads or blade flapping motion exceeding the maximum loads or motions encountered in flight):

(1) For full vertical thrust, 20 percent.

(2) For the forward thrust component, 50 percent.

(3) For the right thrust component, 10 percent.

(4) For the left thrust component, 10 percent.

(5) For the aft thrust component, 10 percent.

(j) *Endurance tests; clutch and brake engagements.* A total of at least 400 clutch and brake engagements, including the engagements of paragraph (b) of this section, must be made during the takeoff power runs and, if necessary, at each change of power and speed throughout the test. In each clutch engagement, the shaft on the driven side of the clutch must be accelerated from rest. The clutch engagements must be accomplished at the speed and by the method prescribed by the applicant. During deceleration after each clutch engagement, the engines must be stopped rapidly enough to allow the engines to be automatically disengaged from the rotors and rotor drives. If a rotor brake is installed for stopping the rotor, the clutch, during brake engagements, must be disengaged above 40 percent of maximum continuous rotor speed and the rotors allowed to decelerate to 40 percent of maximum continuous rotor speed, at which time the rotor brake must be applied. If the clutch design does not allow stopping the rotors with the engine running, or if no clutch is provided, the engine must be stopped before each application of the rotor brake, and then immediately be started after the rotors stop.

(k) *Overspeed test.* After completion of the 200-hour tie-down test, and without intervening major disassembly, the rotor drive system must be subjected to 50 overspeed runs, each 30±3 seconds in duration at 120 percent of maximum continuous speed. These runs must be conducted as follows:

(1) Overspeed runs must be alternated with stabilizing runs of from one to five minutes duration each at 60 to 80 percent of maximum continuous speed.

(2) Acceleration and deceleration must be accomplished in a period not longer than 10 seconds, and the time for changing speeds may not be deducted from the specified time for the overspeed runs.

(3) Overspeed runs must be made with the rotors in the flattest pitch for smooth operation.

(4) If the engines are limited by the engine manufacturer to an overspeed of less than 120 percent of maximum continuous speed for the periods required, the speed used must be the highest speed allowable for the engines involved.

(l) Any components that are affected by maneuvering and gust loads must be investigated for the same flight conditions as are the main rotors, and their service lives must be determined by fatigue tests or by other acceptable methods. In addition, a level of safety equal to that of the main rotors must be provided for—

(1) Each component in the rotor drive system whose failure would cause an uncontrolled landing;

(2) Each component essential to the phasing of rotors on multirotor rotorcraft, or that furnishes a driving link for the essential control of rotors in autorotation; and

(3) Each component common to two or more engines on multiengine rotorcraft.

(m) *Special tests.* Each rotor drive system designed to operate at two or more gear ratios must be subjected to special testing for durations necessary to substantiate the safety of the rotor drive system.

§ 29.927 Additional tests.

Any additional dynamic, endurance, and operational tests, and vibratory investigations necessary to determine that the rotor drive mechanism is safe, must be performed.

§ 29.931 Shafting critical speed.

(a) It must be determined whether the critical speeds of any shafting lie outside the range of allowable engine speeds under idling, power on, and autorotative conditions.

(b) Any critical vibration existing from (and including) clutch engagement to maximum overspeed, during acceleration or deceleration, must be shown to be within safe limits.

(c) If the demonstration required by paragraph (b) of this section is made during the endurance testing, the test schedule may substitute the critical vibratory conditions for equivalent time in appropriate parts of the endurance test procedure.

§ 29.935 Shafting joints.

Each universal joint, slip joint, and other shafting joints whose lubrication is necessary for operation must have provision for lubrication.

FUEL SYSTEM

§ 29.951 General.

(a) Each fuel system must be constructed and arranged to ensure a flow of fuel at a rate and pressure established for proper engine functioning under any likely operating conditions, including the maneuvers for which certification is requested.

(b) Each fuel system must be arranged so that—

(1) No engine or fuel pump can draw fuel from more than one tank at a time; or

(2) There are means to prevent introducing air into the system.

§ 29.953 Fuel system independence.

(a) For category A rotorcraft—

(1) The fuel system must meet the requirements of § 29.903(b); and

(2) Unless other provisions are made to meet subparagraph (1) of this paragraph, the fuel system must allow fuel to be supplied to each engine through a system independent of those parts of each system supplying fuel to other engines.

(b) Each fuel system for a multiengine category B rotorcraft must meet the requirements of paragraph (a)(2) of this section. However, separate fuel tanks need not be provided for each engine.

§ 29.955 Fuel flow.

(a) Each fuel system must provide at least 100 percent of the fuel flow required under the intended operating conditions and maneuvers. This must be shown as follows:

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

(2) The quantity of fuel in the tank may not exceed the sum of the amount established as the unusable fuel supply for that tank under §29.959 plus that necessary to show compliance with this section.

(3) Each main pump must be used that is necessary for each operating condition and attitude for which compliance with this section is shown, and the appropriate emergency pump must be substituted for each main pump so used.

(4) If there is a fuel flowmeter, it must be blocked and the fuel must flow through the meter or its bypass.

(b) If an engine can feed from more than one fuel tank, the fuel system must feed promptly when fuel becomes low in one tank and another tank is selected.

§ 29.957 Flow between interconnected tanks.

(a) Where tank outlets are interconnected and allow fuel to flow between them due to gravity or flight accelerations, it must be impossible for fuel to flow between tanks in quantities great enough to cause overflow from the tank vent in any sustained flight condition.

(b) If fuel can be pumped from one tank to another in flight—

(1) The design of the vents and the fuel transfer system must prevent structural damage to tanks from overfilling; and

(2) There must be means to warn the crew before overflow through the vents occurs.

§ 29.959 Unusable fuel supply.

The unusable fuel supply for each tank must be established as not less than the quantity at which the first evidence of malfunction occurs under the most adverse fuel feed condition occurring under any intended operations and flight maneuvers involving that tank.

§ 29.961 Fuel system hot weather operation.

(a) For each rotorcraft—

(1) The fuel system must be arranged to minimize the probability of vapor formation in the system under normal operating conditions; and

(2) Each suction lift fuel system and other fuel systems conducive to vapor formation must be free from vapor lock when using fuel at a temperature of at least 110 degrees F. under critical operating conditions.

(b) For each category A rotorcraft, satisfactory hot weather operation must be shown by showing that there is no evidence of vapor lock or other malfunction when the rotorcraft is climbed from the elevation of the airport selected by the applicant to an altitude of 5,000 feet above the airport elevation, or to the maximum altitude expected in operation, whichever is greater.

(c) Compliance with paragraph (b) of this section must be shown in flight, or on the ground under conditions closely simulating flight conditions, and with—

(1) The engines at takeoff power at the beginning of the test and for the maximum time approved for takeoff power, and at maximum continuous power thereafter;

(2) The weight including full fuel tanks, minimum crew, and only that ballast necessary to maintain the center of gravity within allowable limits;

(3) The speed for best rate of climb under the test conditions; and

(4) Fuel at a temperature of at least 110 degrees F. at the beginning of the demonstration.

(d) If compliance with paragraph (b) of this section is shown in weather cold enough to interfere with the proper conduct of the test, each fuel tank surface, fuel line, and other fuel system parts subject to cold air must be insulated to simulate, insofar as practicable, flight in hot weather.

§ 29.963 Fuel tanks: general.

(a) Each fuel tank must be able to withstand, without failure, the vibration, inertia, fluid, and structural loads to which it may be subjected in operation.

(b) Each fuel tank and its installation must be designed or protected to retain fuel without leakage under the emergency landing conditions in § 29.561.

(c) Each flexible fuel tank liner must be approved or shown to be suitable for the particular application.

(d) Each integral fuel tank must have facilities for inspection and repair of its interior.

§ 29.965 Fuel tank tests.

(a) Each fuel tank must be able to withstand the applicable pressure tests in this section without failure or leakage. If practicable, test pressures may be applied in a manner simulating the pressure distribution in service.

(b) Each conventional metal tank, each nonmetallic tank with walls that are not supported by the rotorcraft structure, and each integral tank must be subjected to a pressure of 3.5 p.s.i. unless the pressure developed during maximum limit acceleration or emergency deceleration with a full tank exceeds this value, in which case a hydrostatic head, or equivalent test, must be applied to duplicate the acceleration loads as far as possible. However, the pressure need not exceed 3.5 p.s.i. on surfaces not exposed to the acceleration loading.

(c) Each nonmetallic tank with walls supported by the rotorcraft structure must be subjected to the following tests:

(1) A pressure test of at least 2.0 p.s.i. This test may be conducted on the tank alone in conjunction with the test specified in subparagraph (2) of this paragraph.

(2) A pressure test, with the tank mounted in the rotorcraft structure,

equal to the load developed by the reaction of the contents, with the tank full, during maximum limit acceleration or emergency deceleration. However, the pressure need not exceed 2.0 p.s.i. on surfaces not exposed to the acceleration loading.

(d) Each tank with large unsupported or unstiffened flat areas, or with other features whose failure or deformation could cause leakage, must be subjected to the following test or its equivalent:

(1) Each complete tank assembly and its supports must be vibration tested while mounted to simulate the actual installation.

(2) The tank assembly must be vibrated for 25 hours while two-thirds full of any suitable fluid. The amplitude of vibration may not be less than one thirty-second of an inch, unless otherwise substantiated.

(3) The test frequency of vibration must be as follows:

(i) If no frequency of vibration resulting from any r.p.m. within the normal operating range of engine or rotor system speeds is critical, the test frequency of vibration, in number of cycles per minute, must be the number obtained by multiplying the maximum continuous engine speed (r.p.m.) by 0.9.

(ii) If only one frequency of vibration resulting from any r.p.m. within the normal operating range of engine or rotor system speeds is critical, that frequency of vibration must be the test frequency.

(iii) If more than one frequency of vibration resulting from any r.p.m. within the normal operating range of engine or rotor system speeds is critical, the most critical of these frequencies must be the test frequency.

(4) Under subparagraph (3)(ii) and (iii), the time of test must be adjusted to accomplish the same number of vibration cycles as would be accomplished in 25 hours at the frequency specified in subparagraph (3)(i).

(5) During the test, the tank assembly must be rocked at the rate of 16 to 20 complete cycles per minute through an angle of 15 degrees on both sides of the horizontal (30 degrees total), about the most critical axis, for 25 hours. If motion about more than one axis is likely to be critical, the tank must be rocked about each critical axis for 12½ hours.

§ 29.967 Fuel tank installation.

(a) Each fuel tank must be supported so that tank loads are not concentrated on unsupported tank surfaces. In addition—

(1) There must be pads, if necessary, to prevent chafing between each tank and its supports;

(2) The padding must be nonabsorbent or treated to prevent the absorption of fuel;

(3) If flexible tank liners are used, they must be supported so that they are not required to withstand fluid loads; and

(4) Each interior surface of tank compartments must be smooth and free of projections that could cause wear of the liner, unless—

(i) There are means for protection of the liner at those points; or

(ii) The construction of the liner itself provides such protection.

(b) Any spaces adjacent to tank surfaces must be adequately ventilated to avoid accumulation of fuel or fumes in those spaces due to minor leakage. If the tank is in a sealed compartment, ventilation may be limited to drain holes that prevent clogging and that prevent excessive pressure resulting from altitude changes. If flexible tank liners are installed, the venting arrangement for the spaces between the liner and its container must maintain the proper relationship to tank vent pressures for any expected flight condition.

(c) The location of each tank must meet the requirements of § 29.1185 (b) and (c).

(d) No rotorcraft skin immediately adjacent to a major air outlet from the engine compartment may act as the wall of an integral tank.

(e) Each fuel tank must be isolated from personnel compartments by a fumeproof and fuelproof enclosure.

(f) Each fuel tank close to personnel compartments, engines, or combustion heaters must be designed, or protected and installed, to retain its contents under the loads specified in § 29.561.

§ 29.969 Fuel tank expansion space.

Each fuel tank must have an expansion space of not less than two percent of the tank capacity. It must be impossible to fill the expansion space inadvertently with the rotorcraft in the normal ground attitude.

§ 29.971 Fuel tank sump.

(a) Each fuel tank must have a sump with a capacity of not less than the greater of—

(1) 0.10 per cent of the tank capacity; or

(2) 1/16 gallon.

(b) The capacity prescribed in paragraph (a) of this section must be effective with the rotorcraft in any normal attitude, and must be located so that the sump contents cannot escape through the tank outlet opening.

(c) Each fuel tank must allow drainage of hazardous quantities of water from each part of the tank to its sump with the rotorcraft in the ground attitude.

(d) Each fuel tank sump must have an accessible and easily operable drain that—

(1) Allows complete drainage of the sump on the ground;

(2) Discharges clear of the entire rotorcraft; and

(3) Has manual or automatic means for positive locking in the closed position.

§ 29.973 Fuel tank filler connection.

(a) Each fuel tank filler connection must prevent the entrance of fuel into any part of the rotorcraft other than the tank itself. In addition—

(1) Each filler must be marked as prescribed in § 29.1557(c)(1);

(2) Each recessed filler connection that can retain any appreciable quantity of fuel must have a drain that discharges clear of the entire rotorcraft; and

(3) Each filler cap must provide a fuel-tight seal under the pressure expected in normal operation.

(b) For category A rotorcraft, each filler cap or filler cap cover must warn when the cap is not fully locked or seated on the filler connection.

§ 29.975 Fuel tank vents and carburetor vapor vents.

(a) *Fuel tank vents.* Each fuel tank must be vented from the top part of the expansion space so that venting is effective under normal flight conditions. In addition—

(1) The vents must be arranged to avoid stoppage by dirt or ice formation;

(2) The vent arrangement must prevent siphoning of fuel during normal operation;

(3) The venting capacity and vent pressure levels must maintain acceptable differences of pressure between the interior and exterior of the tank, during—

(i) Normal flight operation;

(ii) Maximum rate of ascent and descent; and

(iii) Refueling and defueling (where applicable);

(4) Airspaces of tanks with interconnected outlets must be interconnected;

(5) There may be no point in any vent line where moisture can accumulate with the rotorcraft in the ground attitude or the level flight attitude, unless drainage is provided; and

(6) No vent or drainage provision may end at any point—

(i) Where the discharge of fuel from the vent outlet would constitute a fire hazard; or

(ii) From which fumes could enter personnel compartments.

(b) *Carburetor vapor vents.* Each carburetor with vapor elimination connections must have a vent line to lead vapors back to one of the fuel tanks. In addition—

(1) Each vent system must have means to avoid stoppage by ice; and

(2) If there is more than one fuel tank, and it is necessary to use the tanks in a definite sequence, each vapor vent return line must lead back to the fuel tank used for takeoff and landing.

§ 29.977 Fuel tank outlet.

There must be a fuel strainer with 8 to 16 meshes per inch for the fuel tank outlet or for the booster pump. In addition—

(a) The clear area of each fuel tank outlet strainer must be at least five times the area of the outlet line;

(b) The diameter of each strainer must be at least equal to that of the fuel tank outlet; and

(c) Each finger strainer must be accessible for inspection and cleaning.

§ 29.979 Pressure refueling and fueling provisions below fuel level.

(a) Each fueling connection below the fuel level in each tank must have means to prevent the escape of hazardous quan-

tities of fuel from that tank in case of malfunction of the fuel entry valve.

(b) For systems intended for pressure refueling, a means in addition to the normal means for limiting the tank content must be installed to prevent damage to the tank in case of failure of the normal means.

FUEL SYSTEM COMPONENTS

§ 29.991 Fuel pumps.

(a) *Main pumps.* Each fuel pump required for proper engine operation, or required to meet the fuel system requirements of this subpart (other than those in paragraph (b) of this section), is a main pump. For each main pump, provision must be made to allow the bypass of positive displacement fuel pumps other than a fuel injection pump (a pump that supplies the proper flow and pressure for fuel injection when that injection is not accomplished in a carburetor) approved as part of an engine.

(b) *Emergency pumps.* There must be emergency pumps to feed the engines immediately after the failure of any main pump (other than a fuel injection pump approved as part of the engine).

(c) *Installation.* There must be means to maintain the fuel pressure, at the inlet to the carburetor, within the range of limits established for proper engine operation. In addition—

(1) When necessary for the maintenance of the proper fuel pressure—

(i) A connection must be provided to transmit the carburetor air intake static pressure to the proper fuel pump relief valve connection; and

(ii) The gauge balance lines must be independently connected to the carburetor inlet pressure to avoid incorrect fuel pressure readings;

(2) The installation of fuel pumps having seals or diaphragms that may leak must have means for draining leaking fuel; and

(3) Each drain line must discharge where it will not create a fire hazard.

§ 29.993 Fuel system lines and fittings.

(a) Each fuel line must be installed and supported to prevent excessive vibration and to withstand loads due to fuel pressure, valve actuation, and accelerated flight conditions.

(b) Each fuel line connected to components of the rotorcraft between which relative motion could exist must have provisions for flexibility.

(c) Each flexible connection in fuel lines that may be under pressure or subjected to axial loading must use flexible hose assemblies.

(d) Flexible hose must be approved.

(e) No flexible hose that might be adversely affected by high temperatures may be used where excessive temperatures will exist during operation or after engine shutdown.

§ 29.995 Fuel valves.

In addition to meeting the requirements of § 29.1189, each fuel valve must—

(a) Have positive stops or suitable index provisions in the "on" and "off" positions; and

(b) Be supported so that no loads resulting from their operation or from accelerated flight conditions are transmitted to the lines attached to the valve.

§ 29.997 Fuel strainer or filter.

(a) There must be a fuel strainer or filter incorporating a sediment trap and drain in the fuel system between the fuel tanks and the engine. This strainer must be installed in an accessible location.

(b) Each strainer or filter must protect the fuel pumps, fuel controls, and the engine against any foreign matter that might be in the fuel.

(c) Each screening or straining element must be easily cleanable.

(d) Each strainer or filter must be mounted so that its weight is not supported by any connecting line or by the inlet or outlet connections of the strainer or filter itself.

§ 29.999 Fuel system drains.

(a) Drainage of the fuel system must be accomplished by fuel strainer drains and by the drains prescribed in § 29.971.

(b) Each drain must discharge clear of the entire rotorcraft and must have manual or automatic means for positive locking in the closed position.

OIL SYSTEM

§ 29.1011 General.

(a) Each engine must have an independent oil system that can supply it with an appropriate quantity of oil at a temperature not above that safe for continuous operation.

(b) The oil system for components of the rotor drive system that require continuous lubrication must be sufficiently independent of the lubrication systems of the engines to ensure—

(1) Operation with any engine inoperative; and

(2) Safe autorotation.

(c) The usable oil capacity of each system may not be less than the product of the endurance of the rotorcraft under critical operating conditions and the maximum allowable oil consumption of the engine under the same conditions, plus a suitable margin to ensure adequate circulation and cooling. Instead of a rational analysis of endurance and consumption, a usable oil capacity of one gallon for each 40 gallons of usable fuel may be used for reciprocating engine installations.

(d) Oil-fuel ratios lower than those prescribed in paragraph (c) of this section may be used if they are substantiated by data on the oil consumption of the engine.

(e) The ability of the engine and rotor drive system oil cooling provisions to maintain the oil temperature at or below the maximum established value must be shown under the applicable requirements of §§ 29.1041 through 29.1049.

§ 29.1013 Oil tanks.

(a) *Installation.* Each oil tank installation must meet the requirements of § 29.967. However, an engine oil tank may be in a designated fire zone if the tank and its supports are fireproof to the extent that damage by fire to any non-fireproof part will not cause leakage or spillage of oil.

(b) *Expansion space.* Oil tank expansion space must be provided so that—

(1) Each oil tank has an expansion space of not less than the greater of—

(i) 10 percent of the tank capacity; or

(ii) 0.5 gallon;

(2) Each reserve oil tank not directly connected to any engine has an expansion space space of not less than two percent of the tank capacity; and

(3) It is impossible to fill the expansion space inadvertently with the rotorcraft in the normal ground attitude.

(c) *Filler connection.* Each recessed oil tank filler connection that can retain any appreciable quantity of oil must have a drain that discharges clear of the entire rotorcraft. In addition—

(1) Each oil tank filler cap must provide an oil-tight seal under the pressure expected in operation;

(2) For category A rotorcraft, each oil tank filler cap or filler cap cover must incorporate features that provide a warning when caps are not fully locked or seated on the filler connection; and

(3) Each oil filler must be marked under § 29.1557(c)(2).

(d) *Vent.* Oil tanks must be vented as follows:

(1) Each oil tank must be vented from the top part of the expansion space so that venting is effective under all normal flight conditions.

(2) Oil tank vents must be arranged so that condensed water vapor that might freeze and obstruct the line cannot accumulate at any point.

(e) *Outlet.* There must be means to prevent entrance into the tank itself, or into the tank outlet, of any object that might obstruct the flow of oil through the system. No oil tank outlet may be enclosed by a screen or guard that would reduce the flow of oil below a safe value at any operating temperature.

(f) *Flexible liners.* Each flexible oil tank liner must be approved or shown to be suitable for the particular installation.

§ 29.1015 Oil tank tests.

Each oil tank must be designed and installed so that—

(a) It can withstand, without failure, any vibration, inertia, and fluid loads to which it may be subjected in operation; and

(b) It meets the requirements of § 29.965, except that the test pressure specified in § 29.965(b) must be five p.s.i.

§ 29.1017 Oil lines and fittings.

(a) Each oil line must meet the requirements of § 29.993.

(b) Breather lines must be arranged so that—

(1) Condensed water vapor that might freeze and obstruct the line cannot accumulate at any point;

(2) The breather discharge will not constitute a fire hazard if foaming occurs, or cause emitted oil to strike the pilot's windshield; and

(3) The breather does not discharge into the engine air induction system.

§ 29.1019 Oil strainer or filter.

Each oil strainer or filter in the powerplant installation must be constructed and installed so that oil will flow at the normal rate through the rest of the system with the strainer or filter element completely blocked.

§ 29.1021 Oil system drains.

There must be at least one accessible drain that—

(a) Allows safe drainage of the entire oil system; and

(b) Has manual or automatic means for positive locking in the closed position.

§ 29.1023 Oil radiators.

(a) Each oil radiator must be able to withstand any vibration, inertia, and oil pressure loads to which it would be subjected in operation.

(b) Each oil radiator air duct must be located, or equipped, so that, in case of fire, and with the airflow as it would be with and without the engine operating, flames cannot directly strike the radiator.

§ 29.1025 Oil valves.

(a) Each oil shutoff must meet the requirements of § 29.1189.

(b) The closing of oil shutoffs may not prevent autorotation.

(c) Each oil valve must have positive stops or suitable index provisions in the "on" and "off" positions and must be supported so that no loads resulting from its operation or from accelerated flight conditions are transmitted to the lines attached to the valve.

COOLING

§ 29.1041 General.

(a) The powerplant cooling provisions must be able to maintain the temperatures of powerplant components, engine fluids, and the carburetor intake air within safe values under any critical surface (ground or water) and flight operating conditions.

(b) There must be cooling provisions to maintain the fluid temperatures in any power transmission within safe values under any critical surface (ground or water) and flight operating conditions.

(c) Compliance with paragraphs (a) and (b) of this section must be shown by flight tests in which the temperatures of selected powerplant component, engine, and transmission fluids are obtained under the conditions prescribed in those paragraphs.

§ 29.1043 Cooling tests.

(a) *General.* For the tests prescribed in § 29.1041(c), the following apply:

(1) If the tests are conducted under conditions deviating from the maximum anticipated air temperature specified in paragraph (b) of this section, the recorded powerplant temperatures must be corrected under paragraphs (c) and (d) of this section, unless a more rational correction method is applicable.

(2) No corrected temperature determined under subparagraph (1) of this paragraph may exceed established limits.

(3) The fuel used during the cooling tests must be of the minimum grade approved for the engines, and the mixture settings must be those used in normal operation.

(4) The test procedures must be as prescribed in §§ 29.1045 through 29.1049.

(b) *Maximum anticipated air temperature.* For cooling tests, the maximum anticipated temperature (hot-day condition) is 100 degrees F. at sea level, decreasing from this value at the rate of 3.6 degrees F. per thousand feet of altitude above sea level up to the altitude at which a temperature of −69.7 degrees F. is reached, above which altitude the temperature is constant at −69.7 degrees F.

(c) *Correction factor for cylinder head, oil inlet, carburetor air, and engine and transmission coolant outlet temperatures.* The cylinder head, oil inlet, carburetor air, and engine coolant outlet temperatures must be corrected by adding to them the difference between the maximum anticipated air temperature and the temperature of the ambient air at the time of the first occurrence of the maximum head, oil, air, or coolant temperatures recorded during the cooling test.

(d) *Correction factor for cylinder barrel temperatures.* Cylinder barrel temperatures must be corrected by adding to them 0.7 times the difference between the maximum anticipated air temperatures and the temperature of the ambient air at the time of the first occurrence of the maximum cylinder barrel temperature recorded during the cooling test.

§ 29.1045 Climb cooling test procedures.

(a) Climb cooling tests must be conducted under this section for—

(1) Category A rotorcraft; and

(2) Multiengine category B rotorcraft for which certification is requested under the category A powerplant installation requirements, and under the requirements of § 29.861(a) at the steady rate of climb or descent established under § 29.67(b).

(b) The climb or descent cooling tests must be conducted with the engine inoperative that produces the most adverse cooling conditions for the remaining engines and powerplant components.

(c) Each operating engine must be at maximum continuous power or at full throttle when above the critical altitude.

(d) After temperatures have stabilized in flight, the climb must be—

(1) Begun from an altitude not greater than the lower of—

(i) 1,000 feet below the engine critical altitude; and

(ii) 1,000 feet below the maximum altitude at which the rate of climb is 150 f.p.m.; and

(2) Continued for at least five minutes after the occurrence of the highest temperature recorded, or until the rotorcraft reaches the maximum altitude for which certification is requested.

(e) For category B rotorcraft without a positive rate of climb, the descent must begin at the all-engine-critical altitude and end at the higher of—

(1) The maximum altitude at which level flight can be maintained with one engine operative; and

(2) Sea level.

(f) The climb or descent must be conducted at an airspeed representing a normal operational practice for the configuration being tested. However, if the cooling provisions are sensitive to rotorcraft speed, the most critical airspeed must be used, but need not exceed the speeds established under § 29.67(a)(2) or § 29.67(b). The climb cooling test may be conducted in conjunction with the takeoff cooling test of § 29.1047.

§ 29.1047 Takeoff cooling test procedures.

(a) *Category A.* For each category A rotorcraft, cooling must be shown during takeoff and subsequent climb as follows:

(1) Each temperature must be stabilized while hovering in ground effect with—

(i) The power necessary for hovering;

(ii) The appropriate cowl flap and shutter settings; and

(iii) The maximum weight.

(2) After the temperatures have stabilized, a climb must be started at the lowest practicable altitude and must be conducted with one engine inoperative.

(3) The operating engines must be at takeoff r.p.m. and power (or at full throttle when above the takeoff critical altitude) for the same time interval as takeoff power is used in determining the takeoff flight path under § 29.59.

(4) At the end of the time interval prescribed in subparagraph (3) of this paragraph, the power must be reduced to maximum continuous power and the climb must be continued for at least five minutes after the occurrence of the highest temperature recorded.

(5) The speeds must be those used in determining the takeoff flight path under § 29.59.

(b) *Category B.* For each category B rotorcraft, cooling must be shown during takeoff and subsequent climb as follows:

(1) Each temperature must be stabilized while hovering in ground effect with—

(i) The power necessary for hovering;

(ii) The appropriate cowl flap and shutter settings; and

(iii) The maximum weight.

(2) After the temperatures have stabilized, a climb must be started at the lowest practicable altitude with takeoff power.

(3) Takeoff power must be used for the same time interval as takeoff power is used in determining the takeoff flight path under § 29.63.

(4) At the end of the time interval prescribed in subparagraph (3) of this paragraph, the power must be reduced to maximum continuous power and the climb must be continued for at least five minutes after the occurrence of the highest temperature recorded.

(5) The cooling test must be conducted at an airspeed corresponding to normal operating practice for the configuration being tested. However, if the cooling provisions are sensitive to rotorcraft speed, the most critical airspeed must be used, but need not exceed the speed for best rate of climb with maximum continuous power.

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§ 29.1049 Hovering cooling test procedures.

The hovering cooling provisions must be shown—

(a) At maximum weight or at the greatest weight at which the rotorcraft can hover (if less), at sea level, with the power required to hover but not more than maximum continuous power, in the ground effect in still air, until at least five minutes after the occurrence of the highest temperature recorded; and

(b) With maximum continuous power, maximum weight, and at the altitude resulting in zero rate of climb for this configuration, until at least five minutes after the occurrence of the highest temperature recorded.

INDUCTION SYSTEM

§ 29.1091 Air induction.

(a) The air induction system for each engine must supply the air required by that engine under the operating conditions for which certification is requested.

(b) Each engine air induction system must provide air for proper fuel metering and mixture distribution with the induction system valves in any position.

(c) No air intake may open within the engine accessory section or within other areas of any powerplant compartment where emergence of backfire flame would constitute a fire hazard.

(d) Each engine must have an alternate air source.

(e) Each alternate air intake must be located to prevent the entrance of rain, ice, or other foreign matter.

§ 29.1093 Induction system icing protection.

Each engine air induction system must have means to prevent and eliminate icing. Unless this is done by other means, it must be shown that, in air free of visible moisture at a temperature of 30 degrees F., and with the engines at 60 percent of maximum continuous power—

(a) Each rotorcraft with sea level engines using conventional venturi carburetors has a preheater that can provide a heat rise of 90 degrees F.;

(b) Each rotorcraft with sea level engines using carburetors tending to prevent icing has a preheater that can provide a heat rise of 70 degrees F.;

(c) Each rotorcraft with altitude engines using conventional venturi carburetors has a preheater that can provide a heat rise of 120 degrees F.; and

(d) Each rotorcraft with altitude engines using carburetors tending to prevent icing has a preheater that can provide a heat rise of 100 degrees F.

§ 29.1101 Carburetor air preheater design.

Each carburetor air preheater must be designed and constructed to—

(a) Ensure ventilation of the preheater when the engine is operated in cold air;

(b) Allow inspection of the exhaust manifold parts that it surrounds; and

(c) Allow inspection of critical parts of the preheater itself.

§ 29.1103 Induction system ducts.

(a) Each induction system duct upstream of the first stage of the supercharger must have a drain to prevent the hazardous accumulation of fuel and moisture in the ground attitude. No drain may discharge where it might cause a fire hazard.

(b) Each duct must be strong enough to prevent induction system failure from normal backfire conditions.

(c) Each duct connected to components between which relative motion could exist must have means for flexibility.

(d) Each duct within any fire zone for which a fire-extinguishing system is required must be at least—

(1) Fireproof, if it passes through any firewall; or

(2) Fire resistant, for other ducts.

§ 29.1105 Induction system screens.

If induction system screens are used—

(a) Each screen must be upstream of the carburetor;

(b) No screen may be in any part of the induction system that is the only passage through which air can reach the engine, unless it can be deiced by heated air;

(c) No screen may be deiced by alcohol alone; and

(d) It must be impossible for fuel to strike any screen.

§ 29.1107 Inter-coolers and after-coolers.

Each inter-cooler and after-cooler must be able to withstand the vibration, inertia, and air pressure loads to which it would be subjected in operation.

§ 29.1109 Carburetor air cooling.

It must be shown under § 29.1043 that each installation using two-stage superchargers has means to maintain the air temperature, at the carburetor inlet, at or below the maximum established value.

EXHAUST SYSTEM

§ 29.1121 General.

(a) Each exhaust system must ensure safe disposal of exhaust gases without fire hazard or carbon monoxide contamination in any personnel compartment.

(b) Unless suitable precautions are taken, no exhaust system part may be dangerously close to any system carrying flammable fluids or vapors, or under any such system that may leak.

(c) Each component upon which hot exhaust gases could impinge, or that could be subjected to high temperatures from exhaust system parts, must be fireproof. Each exhaust system component must be separated by a fireproof shield from adjacent parts of the rotorcraft that are outside the engine compartment.

(d) No exhaust gases may discharge so as to cause a fire hazard with respect to any flammable fluid vent or drain.

(e) No exhaust gases may discharge where they will cause a glare seriously affecting pilot vision at night.

(f) Each exhaust system component must be ventilated to prevent points of excessively high temperature.

(g) Each exhaust shroud must be ventilated or insulated to avoid, during normal operation, a temperature high enough to ignite any flammable fluids or vapors outside the shroud.

§ 29.1123 Exhaust piping.

(a) Exhaust piping must be heat and corrosion resistant, and must have provisions to prevent failure due to expansion by operating temperatures.

(b) Exhaust piping must be supported to withstand any vibration and inertia loads to which it would be subjected in operation.

(c) Exhaust piping connected to components between which relative motion could exist must have provisions for flexibility.

§ 29.1125 Exhaust heat exchangers.

(a) Each exhaust heat exchanger must be constructed and installed to withstand the vibration, inertia, and other loads to which it would be subjected in operation. In addition—

(1) Each exchanger must be suitable for continued operation at high temperatures and resistant to corrosion from exhaust gases;

(2) There must be means for inspecting of the critical parts of each exchanger;

(3) Each exchanger must have cooling provisions wherever it is subject to contact with exhaust gases; and

(4) No exhaust heat exchanger or muff may have stagnant areas or liquid traps that would increase the probability of ignition of flammable fluids or vapors that might be present in case of the failure or malfunction of components carrying flammable fluids.

(b) If an exhaust heat exchanger is used for heating ventilating air used by personnel—

(1) There must be a secondary heat exchanger between the primary exhaust gas heat exchanger and the ventilating air system; or

(2) Other means must be used to prevent harmful contamination of the ventilating air.

POWERPLANT CONTROLS AND ACCESSORIES

§ 29.1141 Powerplant controls: general.

(a) Powerplant controls must be located and arranged under § 29.777 and marked under § 29.1555.

(b) Each control must be located so that it cannot be inadvertently operated by persons entering, leaving, or moving normally in, the cockpit.

(c) Each flexible powerplant control must be approved.

(d) Each control must be able to maintain any set position without—

(1) Constant attention; or

(2) Tendency to creep due to control loads or vibration.

(e) Each control must be able to withstand operating loads without excessive deflection.

§ 29.1143 Throttle and antidetonant injection system controls.

(a) There must be a separate throttle control for each engine.

(b) Throttle controls must be arranged to allow ready synchronization of all engines by—

(1) Separate control of each engine; and

(2) Simultaneous control of all engines.

(c) Each throttle control must provide a positive and immediately responsive means of controlling its engine.

(d) Each antidetonant injection system control must be in the throttle controls. However, the antidetonant injection pump may have a separate control.

§ 29.1145 Ignition switches.

(a) Ignition switches must control each ignition circuit on each engine.

(b) There must be means to quickly shut off all ignition by the grouping of switches or by a master ignition control.

(c) Each master ignition control must have a guard to prevent its inadvertent operation.

§ 29.1147 Mixture controls.

(a) If there are mixture controls, each engine must have a separate control, and the controls must be arranged to allow—

(1) Separate control of each engine; and

(2) Simultaneous control of all engines.

(b) Each intermediate position of the mixture controls that corresponds to a normal operating setting must be identifiable by feel and sight.

§ 29.1151 Rotor brake controls.

(a) It must be impossible to apply the rotor brake inadvertently in flight.

(b) There must be means to warn the crew if the rotor brake has not been completely released before takeoff.

§ 29.1157 Carburetor air temperature controls.

There must be a separate carburetor air temperature control for each engine.

§ 29.1159 Supercharger controls.

Each supercharger control must be accessible to—

(a) The pilots; or

(b) (If there is a separate flight engineer station with a control panel) the flight engineer.

§ 29.1163 Powerplant accessories.

(a) Each engine-mounted accessory must—

(1) Be approved for mounting on the engine involved; and

(2) Use the provisions on the engine for mounting.

(b) Electrical equipment subject to arcing or sparking must be installed to minimize the probability of igniting flammable fluids or vapors.

(c) If, continued rotation of an engine-driven cabin supercharger or any remote accessory driven by the engine will be a hazard if they malfunction, there must be means to prevent their hazardous rotation without interfering with the continued operation of the engine.

§ 29.1165 Engine ignition systems.

(a) Each battery ignition system must be supplemented with a generator that is automatically available as an alternate source of electrical energy to allow continued engine operation if any battery becomes depleted.

(b) The capacity of batteries and generators must be large enough to meet the simultaneous demands of the engine ignition system and the greatest demands of any electrical system components that draw from the same source.

(c) The design of the engine ignition system must account for—

(1) The condition of an inoperative generator;

(2) The condition of a completely depleted battery with the generator running at its normal operating speed; and

(3) The condition of a completely depleted battery with the generator operating at idling speed, if there is only one battery.

(d) Magneto ground wiring (for separate ignition circuits) that lies on the engine side of any firewall must be installed, located, or protected, to minimize the probability of the simultaneous failure of two or more wires as a result of mechanical damage, electrical fault, or other cause.

(e) No ground wire for any engine may be routed through a fire zone of another engine unless each part of that wire within that zone is fireproof.

(f) Each ignition system must be independent of any electrical circuit not used for analyzing the operation of that system.

(g) There must be means to warn appropriate crewmembers if the malfunctioning of any part of the electrical system is causing the continuous discharge of any battery necessary for engine ignition.

POWERPLANT FIRE PROTECTION

§ 29.1181 Designated fire zones: regions included.

(a) Designated fire zones are—

(1) The engine power section;

(2) The engine accessory section;

(3) Any complete powerplant compartment in which there is no isolation between the engine power section and the engine accessory section;

(4) Any auxiliary power unit compartment; and

(5) Any fuel-burning heater and other combustion equipment installation described in § 29.859.

(b) Each designated fire zone must meet the requirements of §§ 29.1183 through 29.1203.

§ 29.1183 Lines and fittings.

(a) Except as provided in paragraph (b) of this section, each line and fitting carrying flammable fluids in any area subject to engine fire conditions, and each oil line or fitting in a designated fire zone, must meet the following requirements:

(1) The line and fitting must be at least fire resistant.

(2) Flexible hose assemblies (hose and end fittings) must be approved.

(b) Paragraph (a) of this section does not apply to—

(1) Lines and fittings forming an integral part of an engine; and

(2) Vent and drain lines, and their fittings, whose failure will not result in or add to, a fire hazard.

§ 29.1185 Flammable fluids.

(a) No tank or reservoir that is part of a system containing flammable fluids or gases may be in a designated fire zone unless the fluid contained, the design of the system, the materials used in the tank and its supports, the shutoff means, and the connections, lines, and controls provide a degree of safety equal to that which would exist if the tank or reservoir were outside such a zone.

(b) Each fuel tank must be isolated from the engines by a firewall or shroud.

(c) There must be at least one-half inch of clear airspace between each tank or reservoir and each firewall or shroud isolating a designated fire zone, unless equivalent means are used to prevent heat transfer from the fire zone to the flammable fluid.

(d) Absorbent material close to flammable fluid system components that might leak must be covered or treated to prevent the absorption of hazardous quantities of fluids.

§ 29.1187 Drainage and ventilation of fire zones.

(a) There must be complete drainage of each part of each designated fire zone to minimize the hazards resulting from failure or malfunction of any component containing flammable fluids. The drainage means must be—

(1) Effective under conditions expected to prevail when drainage is needed; and

(2) Arranged so that no discharged fluid will cause an additional fire hazard.

(b) Each designated fire zone must be ventilated to prevent the accumulation of flammable vapors.

(c) No ventilation opening may be where it would allow the entry of flammable fluids, vapors, or flame from other zones.

(d) Ventilation means must be arranged so that no discharged vapors will cause an additional fire hazard.

(e) For category A rotorcraft, there must be means to allow the crew to shut off the sources of forced ventilation in any fire zone (other than the engine power section of the powerplant compartment) unless the amount of extinguishing agent and the rate of discharge are based on the maximum airflow through that zone.

§ 29.1189 Shutoff means.

(a) Except for lines forming an integral part of an engine, and except for engine oil systems in category B rotorcraft using engines of less than 500 cubic inches displacement, there must be means to shut off or otherwise prevent hazardous quantities of fuel, oil, deicing fluid, and other flammable fluids from flowing into, within, or through any designated fire zone.

(b) The closing of any fuel shutoff valve for any engine may not make fuel unavailable to the remaining engines.

(c) For category A rotorcraft, no hazardous quantity of flammable fluid may drain into any designated fire zone after shutoff has been accomplished, nor may the closing of any fuel shutoff valve for an engine make fuel unavailable to the remaining engines.

(d) The operation of any shutoff may not interfere with the later emergency operation of any other equipment, such as the means for declutching the engine from the rotor drive.

(e) Each shutoff must be outside of designated fire zones, unless an equal degree of safety is otherwise provided.

(f) There must be means to prevent inadvertent operation of each shutoff and to make it possible for the crew to reopen it in flight after it has been closed.

§ 29.1191 Firewalls.

(a) Each engine must be isolated by a firewall, shroud, or equivalent means, from personnel compartments, structures, controls, rotor mechanisms, and other parts that are—

(1) Essential to controlled flight and landing; and

(2) Not protected under § 29.861.

(b) Each auxiliary power unit, combustion heater, and other combustion equipment to be used in flight, must be isolated from the rest of the rotorcraft by firewalls, shrouds, or equivalent means.

(c) Each firewall or shroud must be constructed so that no hazardous quantity of air, fluid, or flame can pass from any engine compartment to other parts of the rotorcraft.

(d) Each opening in the firewall or shroud must be sealed with close-fitting fireproof grommets, bushings, or firewall fittings.

(e) Each firewall and shroud must be fireproof and protected against corrosion.

(f) In meeting this section, account must be taken of the probable path of a fire as affected by the airflow in normal flight and in autorotation.

§ 29.1193 Cowling and engine compartment covering.

(a) Each cowling and engine compartment covering must be constructed and supported so that it can resist the vibration, inertia, and air loads to which it may be subjected in operation.

(b) Cowling must meet the drainage and ventilation requirements of § 29.1187.

(c) On rotorcraft with a diaphragm isolating the engine power section from the engine accessory section, each part of the accessory section cowling subject to flame in case of fire in the engine power section of the powerplant must—

(1) Be fireproof; and

(2) Meet the requirements of § 29.1191.

(d) Each part of the cowling or engine compartment covering subject to high temperatures due to its nearness to exhaust system parts or exhaust gas impingement must be fireproof.

(e) Each category A rotorcraft must—

(1) Be designed and constructed so that no fire originating in any fire zone can enter, either through openings or by burning through external skin, any other zone or region where it would create additional hazards;

(2) Meet the requirements of subparagraph (1) of this paragraph with the landing gear retracted (if applicable); and

(3) Have fireproof skin in areas subject to flame if a fire starts in the engine power or accessory sections.

§ 29.1195 Fire extinguishing systems.

(a) Each rotorcraft, other than category B rotorcraft with engines of 1,500 cubic inches displacement or less, must have a fire extinguishing system for the designated fire zones. The fire extinguishing system must be able to simultaneously protect each zone of each powerplant compartment for which protection is provided.

(b) For multiengine rotorcraft—

(1) The fire extinguishing system, the quantity of extinguishing agent, and the rate of discharge must provide at least two adequate discharges, or, in the case of auxiliary power units and combustion equipment, at least one adequate discharge; and

(2) It must be possible to direct both discharges of the fire extinguishing system to any main engine installation.

(c) For single engine rotorcraft, the quantity of extinguishing agent and the rate of discharge must provide at least one adequate discharge for the engine compartment.

§ 29.1197 Fire extinguishing agents.

(a) Extinguishing agents must be methyl bromide, carbon dioxide, or any agent with equal extinguishing action.

(b) If methyl bromide, carbon dioxide, or any other toxic extinguishing agent is used, it must be shown by test that entry of harmful concentrations of fluid or fluid vapors into any personnel compartment (due to leakage during normal operation of the rotorcraft, or discharge on the ground or in flight) is prevented, even though a defect may exist in the extinguishing system.

(c) Each methyl bromide container must be charged with a dry agent and sealed. This must be done by—

(1) The fire extinguisher manufacturer; or

(2) Any person using appropriate recharging equipment.

§ 29.1199 Extinguishing agent containers.

(a) Each extinguishing agent container must have a pressure relief to prevent bursting of the container by excessive internal pressures.

(b) Each discharge line from a relief connection must end outside the rotorcraft in a location convenient for inspection on the ground.

(c) There must be a visual discharge indicator at the discharge end of each discharge line.

(d) The temperature of each container must be maintained, under intended operating conditions, to prevent the pressure in the container from—

(1) Falling below that necessary to provide an adequate rate of discharge; or

(2) Rising high enough to cause premature discharge.

§ 29.1201 Fire extinguishing system materials.

(a) No materials in any fire extinguishing system may react chemically with any extinguishing agent so as to create a hazard.

(b) Each system component in an engine compartment must be fireproof.

§ 29.1203 Fire detector systems.

(a) For rotorcraft other than category B rotorcraft with engines of 900 cubic inches displacement or less, there must be approved, quick-acting fire detectors in designated fire zones in numbers and locations ensuring prompt detection of fire in those zones.

(b) Each fire detector must be constructed and installed to withstand any vibration, inertia, and other loads to which it would be subjected in operation.

(c) No fire detector may be affected by any oil, water, other fluids, or fumes that might be present.

(d) There must be means to allow crewmembers to check, in flight, the functioning of each fire detector system electrical circuit.

(e) The wiring and other components of each fire detector system in an engine compartment must be at least fire resistant.

(f) No fire detector system component for any fire zone may pass through another fire zone, unless—

(1) It is protected against the possibility of false warnings resulting from fires in zones through which it passes; or

(2) The zones involved are simultaneously protected by the same detector and extinguishing systems.

Subpart F—Equipment

General

§ 29.1301 Function and installation.

Each item of installed equipment must—

(a) Be of a kind and design appropriate to its intended function;

(b) Be labeled as to its identification, function, or operating limitations, or any applicable combination of these factors;

(c) Be installed according to limitations specified for that equipment; and

(d) Function properly when installed.

§ 29.1303 Flight and navigation instruments.

The following are required flight and navigational instruments:

(a) An airspeed indicating system.

(b) A sensitive altimeter.

(c) A magnetic direction indicator.

(d) A clock (sweep-second).

(e) A free-air temperature indicator.

(f) A non-tumbling gyroscopic bank and pitch indicator.

(g) A gyroscopic rate-of-turn indicator with bank indicator.

(h) A gyroscopic direction indicator.

(i) A rate-of-climb (vertical speed) indicator.

§ 29.1305 Powerplant instruments.

The following are required powerplant instruments:

(a) For each rotorcraft—

(1) A carburetor air temperature indicator for each engine;

(2) A cylinder head temperature indicator for each air-cooled engine, and a coolant temperature indicator for each liquid-cooled engine;

(3) A fuel quantity indicator for each fuel tank;

(4) If an engine can be supplied with fuel from more than one tank, a warning device to indicate, for each tank, when a five-minute usable fuel supply remains when the rotorcraft is in the most adverse fuel feed condition for that tank, regardless of whether that condition can be sustained for the five minutes;

(5) A manifold pressure indicator, for each altitude engine;

(6) An oil pressure warning device for each pressure-lubricated gearbox to indicate when the oil pressure falls below a safe value;

(7) An oil quantity indicator for each oil tank and each rotor drive gearbox, if lubricant is self contained;

(8) An oil temperature indicator for each engine;

(9) An oil temperature warning device to indicate when the oil temperature exceeds a safe value in each main rotor drive gearbox (including all gearboxes essential to rotor phasing) having an oil system independent of the engine oil system;

(10) At least one tachometer to indicate as applicable—

(i) The r.p.m. of the single main rotor;

(ii) The common r.p.m. of any main rotors whose speeds cannot vary appreciably with respect to each other; and

(iii) The r.p.m. of each main rotor whose speed can vary appreciably with respect to that of another main rotor; and

(11) A tachometer for each engine that, if combined with the applicable instrument required by subparagraph (10) of this paragraph, indicates rotor r.p.m. during autorotation.

(b) For category A rotorcraft—

(1) An individual oil pressure indicator for each engine, and either an independent warning device for each engine or a master warning device for the engines with means for isolating the individual warning circuit from the master warning device;

(2) An individual fuel pressure indicator for each engine, and either an independent warning device for each engine or a master warning device for the engines with means for isolating the individual warning circuit from the master warning device; and

(3) Fire warning indicators.

(c) For category B rotorcraft—

(1) An individual oil pressure indicator for each engine;

(2) An individual fuel pressure indicator for each engine; and

(3) Fire warning indicators, when fire detection is required.

§ 29.1307 Miscellaneous equipment.

The following is required miscellaneous equipment:

(a) An approved seat for each occupant.

(b) An approved safety belt for each occupant.

(c) A master switch arrangement for electrical circuits other than ignition.

(d) An adequate source of electrical energy.

(e) Electrical protective devices.

(f) Hand fire extinguishers.

(g) A windshield wiper or equivalent device for each pilot station.

(h) A two-way radio communication system.

(i) An ignition switch for each, and for all, engines, as prescribed in § 29.1145.

§ 29.1309 Equipment, systems, and installations.

(a) *Functioning and reliability.* The equipment, systems, and installations whose functioning is required by this subchapter must be designed and installed to ensure that they perform their intended functions under any foreseeable operating condition.

(b) *Hazards.* The equipment, systems, and installations must be designed to prevent hazards to the rotorcraft if they malfunction or fail.

(c) *Electrical systems.* For electrical systems, equipment, and installations, critical environmental conditions must be considered in meeting the requirements of paragraphs (a) and (b) of this section.

(d) *Category A; power supply.* Each installation whose functioning is required by this subchapter and that requires a power supply is an "essential load" on the power supply. The power sources and the system must be able to supply the following power loads in probable operating combinations and for probable durations:

(1) Loads connected to the system with the system functioning normally.

(2) Essential loads, after failure of any one prime mover, power converter, or energy storage device.

(3) Essential loads, after failure of—

(i) Any one engine, on rotorcraft with two or three engines; and

(ii) Any two engines, on rotorcraft with four or more engines.

(e) *Category A; assumptions.* In determining compliance with paragraph (d) (2) and (3), the power loads may be assumed to be reduced under a monitoring procedure consistent with safety in the kinds of operation authorized. Loads not required for controlled flight need not be considered for the two-engine-inoperative condition on rotorcraft with four or more engines.

Instruments Installation

§ 29.1321 Arrangement and visibility.

(a) Each flight, navigation, and powerplant instrument for use by any pilot must be easily visible to him from his station with the minimum practicable deviation from his normal position and line of vision when he is looking forward along the flight path.

(b) Each instrument necessary for safe operation, including the airspeed indicator, gyroscopic direction indicator, gyroscopic bank and pitch indicator, gyroscopic turn and bank indicator, altimeter, rate-of-climb indicator, rotor tachometers, and manifold pressure indicator, must be grouped and centered as nearly as practicable about the vertical plane of the pilot's forward vision.

(c) Other required powerplant instruments must be closely grouped on the instrument panel.

(d) Identical powerplant instruments for the engines must be located so as to prevent any confusion as to which engine each instrument relates.

(e) Each powerplant instrument vital to safe operation must be plainly visible to appropriate crewmembers.

(f) Instrument panel vibration may not damage, or impair the readability or accuracy of, any instrument.

§ 29.1323 Airspeed indicating system.

For each airspeed indicating system, the following apply:

(a) Each airspeed indicating instrument must be calibrated to indicate true airspeed (at sea level with a standard atmosphere) with a minimum practicable instrument calibration error when the corresponding pitot and static pressures are applied.

(b) Each system must be calibrated to determine the system error, that is, the relation between IAS and CAS. This calibration must be determined, over an appropriate range of speeds—

(1) In flight, for the flight conditions of climb, level flight, and autorotation; and

(2) In ground effect, during the accelerated takeoff run.

(c) For multiengine rotorcraft, the airspeed error of the installation, including the airspeed indicator instrument

calibration error, may not exceed three percent, or five m.p.h., whichever is greater—

(1) Throughout the speed range in level flight at forward speeds of 10 m.p.h. or over; and

(2) Throughout the speed range in climb from 10 m.p.h. below the takeoff climbout safety speed to 10 m.p.h above the best rate-of-climb speed.

(d) For single engine rotorcraft, calibration of the airspeed indicator must be made in flight at forward speeds of 10 m.p.h. or over. The airspeed error of the installation, including the airspeed indicator instrument calibration error, may not exceed three percent, or five m.p.h., whichever is greater, at any forward speed above 80 percent of the climbout speed.

(e) Each system must be arranged, so far as practicable, to prevent malfunction or serious error due to the entry of moisture, dirt, or other substances.

(f) Each system must have a heated pitot tube or an equivalent means of preventing malfunction due to icing.

§ 29.1325 Static air vent and pressure altimeter systems.

(a) Each instrument with static air case connections must be vented to the outside atmosphere through an appropriate piping system.

(b) Each vent must be located where its orifices are least affected by airflow variation, moisture, or other foreign matter.

(c) Except for the vent into the atmosphere, each system must be airtight.

(d) Each pressure altimeter must be approved and calibrated to indicate pressure altitude in a standard atmosphere with a minimum practicable calibration error when the corresponding static pressures are applied.

(e) Each system must be designed and installed so that the error in indicated pressure altitude at sea level with a standard atmosphere, excluding instrument calibration error, does not result in an error of more than ±30 feet in the level flight speed range from 0 m.p.h. to 0.9 V_H.

§ 29.1327 Magnetic direction indicator.

(a) Each magnetic direction indicator must be installed so that its accuracy is not excessively affected by the rotorcraft's vibration or magnetic fields.

(b) The compensated installation may not have a deviation, in level flight, greater than 10 degrees on any heading.

§ 29.1329 Automatic pilot system.

(a) Each automatic pilot system must be approved, and must be designed so that the automatic pilot can—

(1) Be quickly and positively disengaged by the pilots to prevent it from interfering with their control of the rotorcraft; or

(2) Be sufficiently overpowered by one pilot to let him control the rotorcraft.

(b) Unless there is automatic synchronization, each system must have a means to readily indicate to the pilot the alignment of the actuating device in relation to the control system it operates.

(c) Each manually operated control for the system's operation must be readily accessible to the pilots.

(d) The system must be designed and adjusted so that, within the range of adjustment available to the pilot, it cannot produce hazardous loads on the rotorcraft, or create hazardous deviations in the flight path, under any flight condition appropriate to its use, either during normal operation or in the event of a malfunction, assuming that corrective action begins within a reasonable period of time.

§ 29.1331 Instruments using a power supply.

For category A rotorcraft—

(a) Each required flight instrument using a power supply must have—

(1) Two independent sources of power;

(2) A means of selecting either power source; and

(3) A means to indicate the adequacy of the power being supplied; and

(b) The installation and power supply system must be such that failure of any flight instrument connected to one source, or of the energy supply from one source, or a fault in any part of the power distribution system does not interfere with the proper supply of energy from any other source.

§ 29.1333 Duplicate instrument systems.

If duplicate flight instruments are required by any operating rule in this chapter—

(a) Each operating system for flight instruments for the first pilot and that is required to be duplicated at other flight crew stations must be independent of the operating system for other flight crew stations;

(b) Only the required flight instruments, and duplicates of required instruments, provided for the first pilot, may be connected to the operating system provided for him; and

(c) If instruments other than required instruments and their duplicates are connected to systems other than the first pilot's operating system, there must be means to disconnect or isolate those instruments in flight.

§ 29.1337 Powerplant instruments.

(a) *Instrument lines.* Each powerplant instrument line must meet the requirements of §§ 29.993 and 29.1183. Each line carrying flammable fluids or gases under pressure must have restricting orifices or equivalent safety devices at the source of pressure to prevent the escape of excessive fluid or gas if the line fails.

(b) *Fuel quantity indicator.* There must be means to indicate to the flight crew members the quantity, in gallons or equivalent units, of usable fuel in each tank during flight. In addition—

(1) Each fuel quantity indicator must be calibrated to read "zero" during level flight when the quantity of fuel remaining in the tank is equal to the unusable fuel supply determined under § 29.959;

(2) When two or more tanks are closely interconnected by a gravity feed system and vented, and when it is impossible to feed from each tank separately, at least one fuel quantity indicator must be installed;

(3) Tanks with interconnected outlets and airspaces may be treated as one tank and need not have separate indicators; and

(4) Each exposed sight gauge used as a fuel quantity indicator must be protected against damage.

(c) *Fuel flowmeter system.* If a fuel flowmeter system is installed, each metering component must have a means for bypassing the fuel supply if malfunction of that component severely restricts fuel flow.

(d) *Oil quantity indicator.* There must be a stick gauge or equivalent means to indicate the quantity of oil—

(1) In each tank, and

(2) In each transmission gearbox.

ELECTRICAL SYSTEMS AND EQUIPMENT

§ 29.1351 General.

(a) *Electrical system capacity.* The required generating capacity and the number and kind of power sources must—

(1) Be determined by an electrical load analysis; and

(2) Meet the requirements of § 29.1309.

(b) *Generating system.* The generating system includes electrical power sources, main power busses, transmission cables, and associated control, regulation, and protective devices. It must be designed so that—

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

(2) No failure or malfunction of any power source can create a hazard or impair the ability of remaining sources to supply essential loads;

(3) The system voltage and frequency (as applicable) at the terminals of essential load equipment can be maintained within the limits for which the equipment is designed, during any probable operating condition;

(4) System transients due to switching, fault clearing, or other causes do not make essential loads inoperative, and do not cause a smoke or fire hazard;

(5) There are means accessible in flight to appropriate crewmembers for the individual and collective disconnection of the electrical power sources from the main bus; and

(6) There are means to indicate to appropriate crewmembers the generating system quantities essential for the safe operation of the system, such as the voltage and current supplied by each generator.

§ 29.1353 Electrical equipment and installations.

(a) Electrical equipment, controls, and wiring must be installed so that operation of any one unit or system of units will not adversely affect the simultaneous operation of any other electrical unit or system essential to safe operation.

(b) Cables must be grouped, routed, and spaced so that damage to essential circuits will be minimized if there are faults in heavy current-carrying cables.

(c) Storage batteries must be designed and installed as follows:

(1) Safe cell temperatures and pressures must be maintained during any probable charging and discharging condition. No uncontrolled increase in cell temperature may result when the battery is recharged (after previous complete discharge)—

(i) At maximum regulated voltage;

(ii) During a flight of maximum duration; and

(iii) Under the most adverse cooling condition likely in service.

(2) Compliance with subparagraph (1) of this paragraph must be shown by test unless experience with similar batteries and installations has shown that maintaining safe cell temperatures and pressures presents no problem.

(3) No explosive or toxic gases emitted by any battery in normal operation, or as the result of any probable malfunction in the charging system or battery installation, may accumulate in hazardous quantities within the rotorcraft.

(4) No corrosive fluids or gases that may escape from the battery may damage surrounding structures or adjacent essential equipment.

§ 29.1355 Distribution system.

(a) The distribution system includes the distribution busses, their associated feeders, and each control and protective device.

(b) Each system must be designed so that—

(1) For category A rotorcraft, individual distribution systems ensure that essential load circuits can be supplied in the event of reasonably probable faults or open circuits; and

(2) If two independent sources of electrical power for particular equipment or systems are required by this chapter, their energy supply is ensured.

§ 29.1357 Circuit protective devices.

(a) Automatic protective devices must be used to minimize distress to the electrical system and hazard to the rotorcraft in the event of wiring faults or serious malfunction of the system or connected equipment.

(b) For category A rotorcraft, there must be means in the generating system to automatically de-energize and disconnect from the main bus any power source developing hazardous overvoltage.

(c) Each resettable circuit protective device must be designed so that, when an overload or circuit fault exists, it will open the circuit regardless of the position of the operating control.

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

(e) Each circuit for essential loads must have individual circuit protection.

(f) If fuses are used, there must be spare fuses for use in flight equal to at least 50 percent of the number of fuses of each rating required for complete circuit protection.

§ 29.1359 Electrical system fire and smoke protection.

(a) Components of the electrical system must meet the applicable fire and smoke protection provisions of §§ 29.831 and 29.863.

(b) Electrical cables, terminals, and equipment, in designated fire zones, and that are used in emergency procedures, must be at least fire resistant.

§ 29.1363 Electrical system tests.

(a) When laboratory tests of the electrical system are conducted—

(1) The tests must be performed on a mock-up using the same generating equipment used in the rotorcraft;

(2) The equipment must simulate the electrical characteristics of the distribution wiring and connected loads to the extent necessary for valid test results; and

(3) Laboratory generator drives must simulate the prime movers on the rotorcraft with respect to their reaction to generator loading, including loading due to faults.

(b) For each flight condition that cannot be simulated adequately in the laboratory or by ground tests on the rotorcraft, flight tests must be made.

LIGHTS

§ 29.1381 Instrument lights.

The instrument lights must—

(a) Make each instrument, switch, and other device for which they are provided easily readable; and

(b) Be installed so that—

(1) Their direct rays are shielded from the pilot's eyes; and

(2) No objectionable reflections are visible to the pilot.

§ 29.1383 Landing lights.

(a) Each required landing or hovering light must be approved.

(b) Each landing light must be installed so that—

(1) No objectionable glare is visible to the pilot;

(2) The pilot is not adversely affected by halation; and

(3) It provides enough light for night operation, including hovering and landing.

(c) At least one separate switch must be provided, as applicable—

(1) For each separately installed landing light; and

(2) For each group of landing lights installed at a common location.

§ 29.1385 Position light system installation.

(a) *General.* Each part of each position light system must meet the applicable requirements of this section and each system as a whole must meet the requirements of §§ 29.1387 through 29.1397.

(b) *Forward position lights.* Forward position lights must consist of a red and a green light spaced laterally as far apart as practicable and installed forward on the rotorcraft so that, with the rotorcraft in the normal flying position, the red light is on the left side, and the green light is on the right side. Each light must be approved.

(c) *Rear position light.* The rear position light must be a white light mounted as far aft as practicable, and must be approved.

(d) *Circuit.* The two forward position lights and the rear position light must make a single circuit.

(e) *Light covers and color filters.* Each light cover or color filter must be at least flame resistant and may not change color or shape or lose any appreciable light transmission during normal use.

§ 29.1387 Position light system dihedral angles.

(a) Each forward and rear position light must, as installed, show unbroken light within the dihedral angles described in this section.

(b) Dihedral angle *L* (left) is formed by two intersecting vertical planes, the first parallel to the longitudinal axis of the rotorcraft, and the other at 110 degrees to the left of the first, as viewed when looking forward along the longitudinal axis.

(c) Dihedral angle *R* (right) is formed by two intersecting vertical planes, the first parallel to the longitudinal axis of the rotorcraft, and the other at 110 degrees to the right of the first, as viewed when looking forward along the longitudinal axis.

(d) Dihedral angle *A* (aft) is formed by two intersecting vertical planes making angles of 70 degrees to the right and to the left, respectively, to a vertical plane passing through the longitudinal axis, as viewed when looking aft along the longitudinal axis.

§ 29.1389 Position light distribution and intensities.

(a) *General.* The intensities prescribed in this section must be provided by new equipment with light covers and color filters in place. Intensities must be determined with the light source operating at a steady value equal to the average luminous output of the source at the normal operating voltage of the rotorcraft. The light distribution and intensity of each position light must meet the requirements of paragraph (b) of this section.

(b) *Forward and rear position lights.* The light distribution and intensities of forward and rear position lights must be expressed in terms of minimum intensities in the horizontal plane, minimum intensities in any vertical plane, and maximum intensities in overlapping beams, within dihedral angles, *L*, *R*, and *A*, and must meet the following requirements:

(1) *Intensities in the horizontal plane.* Each intensity in the horizontal plane (the plane containing the longitudinal axis of the rotorcraft and perpendicular to the plane of symmetry of the rotorcraft), must equal or exceed the values in § 29.1391.

(2) *Intensities in any vertical plane.* Each intensity in any vertical plane (the plane perpendicular to the horizontal plane) must equal or exceed the appro-

priate value in § 29.1393 where I is the minimum intensity prescribed in § 29.1391 for the corresponding angles in the horizontal plane.

(3) *Intensities in overlaps between adjacent signals.* No intensity in any overlap between adjacent signals may exceed the values in § 29.1395, except that higher intensities in overlaps may be used with the use of main beam intensities substantially greater than the minima specified in §§ 29.1391 and 29.1393 if the overlap intensities in relation to the main beam intensities do not adversely affect signal clarity.

§ 29.1391 Minimum intensities in the horizontal plane of forward and rear position lights.

Each position light intensity must equal or exceed the applicable values in the following table:

Dihedral angle (light included)	Angle from right or left of longitudinal axis, measured from dead ahead	Intensity (candles)
L and *R* (forward red and green).	0° to 10°	40
	10° to 20°	30
	20° to 110°	5
A (rear white)	110° to 180°	20

§ 29.1393 Minimum intensities in any vertical plane of forward and rear position lights.

Each position light intensity must equal or exceed the applicable values in the following table.

Angle above or below the horizontal plane:	*Intensity*
0°	1.00 *I.*
0° to 5°	0.90 *I.*
5° to 10°	0.80 *I.*
10° to 15°	0.70 *I.*
15° to 20°	0.50 *I.*
20° to 30°	0.30 *I.*
30° to 40°	0.10 *I.*
40° to 90°	0.05 *I.*

§ 29.1395 Maximum intensities in overlapping beams of forward and rear position lights.

No position light intensity may exceed the applicable values in the following table, except as provided in § 29.1389 (b)(3).

Overlaps	Maximum intensity	
	Area A (candles)	Area B (candles)
Green in dihedral angle *L*	10	1
Red in dihedral angle *R*	10	1
Green in dihedral angle *A*	5	1
Red in dihedral angle *A*	5	1
Rear white in dihedral angle *L*	5	1
Rear white in dihedral angle *R*	5	1

Where—

(a) Area A includes all directions in the adjacent dihedral angle that pass through the light source and intersect the common boundary plane at more than 10 degrees but less than 20 degrees; and

(b) Area B includes all directions in the adjacent dihedral angle that pass through the light source and intersect the common boundary plane at more than 20 degrees.

§ 29.1397 Color specifications.

Each position light color must have the applicable International Commission on Illumination chromaticity coordinates as follows:

(a) *Aviation red*—

"y" is not greater than 0.335; and
"z" is not greater than 0.002.

(b) *Aviation green*—

"x" is not greater than $0.440-0.320y$;
"x" is not greater than $y-0.170$; and
"y" is not less than $0.390-0.170x$.

(c) *Aviation white*—

"x" is not less than 0.350;
"x" is not greater than 0.540; and
"$y-y_0$" is not numerically greater than 0.01, "y_0" being the y coordinate of the Planckian radiator for which $x_0=x$.

§ 29.1399 Riding light.

(a) Each riding light required for water operation must be installed so that it can—

(1) Show a white light for at least two miles at night under clear atmospheric conditions; and

(2) Show a maximum practicable unbroken light with the rotorcraft on the water.

(b) Externally hung lights may be used.

§ 29.1401 Anticollision light system.

(a) *General.* If certification for night operation is requested, the rotorcraft must have an anticollision light system that—

(1) Consists of one or more approved anticollision lights located so that their emitted light will not impair the crew's vision or detract from the conspicuity of the position lights; and

(2) Meets the requirements of paragraphs (b) through (f) of this section.

(b) *Field of coverage.* The system must consist of enough lights to illuminate the vital areas around the rotorcraft, considering the physical configuration and flight characteristics of the rotorcraft. The field of coverage must extend in each direction within at least 30 degrees above and 30 degrees below the horizontal plane of the rotorcraft, except that there may be solid angles of obstructed visibility totaling not more than 0.5 steradians.

(c) *Flashing characteristics.* The arrangement of the system, that is, the number of light sources, beam width, speed of rotation, and other characteristics, must give an effective flash frequency of not less than 40, nor more than 100, cycles per minute. The effective flash frequency is the frequency at which the rotorcraft's complete anticollision light system is observed from a distance, and applies to each sector of light including any overlaps that exist when the system consists of more than one light source. In overlaps, flash frequencies may exceed 100, but not 180, cycles per minute.

(d) *Color.* Each anticollision light must be aviation red and must meet the requirements of § 29.1397(a).

(e) *Light intensity.* The minimum light intensities in any vertical plane, measured with the red filter and expressed in terms of "effective" intensities, must meet the requirements of paragraph (f) of this section. The following relation must be assumed:

$$Ie=\frac{\int_{t_1}^{t_2} I(t)\,dt}{0.2+(t_2-t_1)}$$

where:

I_e=effective intensity (candles).
$I(t)$=instantaneous intensity as a function of time.
t_2-t_1=flash time interval (seconds).

Normally, the maximum value of effective intensity is obtained when t_2 and t_1 are chosen so that the effective intensity is equal to the instantaneous intensity at t_2 and t_1.

(f) *Minimum effective intensities for anticollision lights.* Each anticollision light effective intensity must equal or exceed the applicable values in the following table.

Angle above or below the horizontal plane:	*Effective intensity (candles)*
0° to 5°	100
5° to 10°	60
10° to 20°	20
20° to 30°	10

SAFETY EQUIPMENT

§ 29.1411 General.

(a) *Accessibility.* Required safety equipment to be used by the crew in an emergency, such as automatic liferaft releases, must be readily accessible.

(b) *Stowage provisions.* Stowage provisions for required emergency equipment must be furnished and must—

(1) Be arranged so that the equipment is directly accessible and its location is obvious; and

(2) Protect the safety equipment from inadvertent damage.

(c) *Emergency exit descent device.* The stowage provisions for the emergency exit descent device required by § 29.809(f) must be at the exits for which they are intended.

(d) *Liferafts.* Liferafts must be stowed near exits through which the rafts can be launched during an unplanned ditching. Rafts automatically or remotely released outside the rotorcraft must be attached to the rotorcraft by the static line prescribed in § 29.1415.

(e) *Long-range signaling device.* The stowage provisions for the long-range signaling device required by § 29.1415 must be near an exit available during an unplanned ditching.

(f) *Life preservers.* Each life preserver must be within easy reach of each occupant while seated.

§ 29.1413 Safety belts: passenger warning device.

If there are means to indicate to the passengers when safety belts should be fastened, they must be installed to be operated from either pilot seat.

§ 29.1415 Ditching equipment.

(a) Emergency flotation and signaling equipment required by any operating rule of this chapter must meet the requirements of this section.

(b) Each liferaft and each life preserver must be approved. In addition—

(1) Unless excess rafts of enough capacity are provided, the buoyancy and seating capacity beyond the rated capacity of the rafts must accommodate all occupants of the rotorcraft in the event of a loss of one raft of the largest rated capacity; and

(2) Each raft must have a trailing line, and must have a static line designed to hold the raft near the rotorcraft but to release it if the rotorcraft becomes totally submerged.

(c) Approved survival equipment must be attached to each liferaft.

(d) There must be an approved long-range signaling device for use in one liferaft.

MISCELLANEOUS EQUIPMENT

§ 29.1431 Electronic equipment.

(a) Radio communication and navigation equipment installations must be free from hazards in themselves, in their method of operation, and in their effects on other components, under any critical environmental conditions.

(b) Radio communication and navigation equipment, controls, and wiring must be installed so that operation of any one unit or system of units will not adversely affect the simultaneous operation of any other radio or electronic unit, or system of units, required by this chapter.

§ 29.1433 Vacuum systems.

(a) There must be means, in addition to the normal pressure relief, to automatically relieve the pressure in the discharge lines from the vacuum air pump when the delivery temperature of the air becomes unsafe.

(b) Each vacuum air system line and fitting on the discharge side of the pump that might contain flammable vapors or fluids must meet the requirements of § 29.1183 if they are in a designated fire zone.

(c) Other vacuum air system components in designated fire zones must be at least fire resistant.

§ 29.1435 Hydraulic systems.

(a) *Design.* Each hydraulic system must be designed as follows:

(1) Each element of the hydraulic system must be designed to withstand, without detrimental, permanent deformation, any structural loads that may be imposed simultaneously with the maximum operating hydraulic loads.

(2) Each element of the hydraulic system must be designed to withstand pressures sufficiently greater than those prescribed in paragraph (b) of this section to show that the system will not rupture under service conditions.

(3) There must be means to indicate the pressure in each main hydraulic power system.

(4) There must be means to ensure that no pressure in any part of the system will exceed a safe limit above the maximum operating pressure of the system, and to prevent excessive pressures resulting from any fluid volumetric change in lines likely to remain closed long enough for such a change to take place. The possibility of detrimental transient (surge) pressures during operation must be considered.

(5) Each hydraulic line, fitting, and component must be installed and supported to prevent excessive vibration and to withstand inertia loads. Each element of the installation must be protected from abrasion, corrosion, and mechanical damage.

(6) Means for providing flexibility must be used to connect points, in a hydraulic fluid line, between which relative motion or differential vibration exists.

(b) *Tests.* Each element of the system must be tested to a proof pressure of 1.5 times the maximum pressure to which that element will be subjected in normal operation, without failure, malfunction, or detrimental deformation of any part of the system.

(c) *Fire protection.* Each hydraulic system using flammable hydraulic fluid must meet the applicable requirements of §§ 29.861, 29.1183, 29.1185, and 29.1189.

§ 29.1439 Protective breathing equipment.

(a) If one or more cargo or baggage compartments are to be accessible in flight, protective breathing equipment must be available for an appropriate crewmember.

(b) For protective breathing equipment required by paragraph (a) of this section or by any operating rule of this chapter—

(1) That equipment must be designed to protect the crew from smoke, carbon dioxide, and other harmful gases while on flight deck duty;

(2) That equipment must include—

(i) Masks covering the eyes, nose, and mouth; or

(ii) Masks covering the nose and mouth, plus accessory equipment to protect the eyes; and

(3) That equipment must supply protective oxygen of 10 minutes duration per crewmember at a pressure altitude of 8,000 feet with a respiratory minute volume of 30 liters per minute BTPD.

Subpart G—Operating Limitations and Information

§ 29.1501 General.

Each operating limitation specified in §§ 29.1503 through 29.1525, and other information necessary for safe operation, must be—

(a) Included in the Rotorcraft Flight Manual;

(b) Expressed in markings and placards; and

(c) Made available by any other means that will convey the information to the crewmembers.

OPERATING LIMITATIONS

§ 29.1503 Airspeed limitations: general.

(a) An operating speed range must be established.

(b) When airspeed limitations are a function of weight, weight distribution, altitude, rotor speed, power, or other factors, airspeed limitations corresponding with the critical combinations of these factors must be established.

§ 29.1505 Never-exceed speed.

(a) The never-exceed speed V_{NE} must be established so that it is—

(1) Not less than V_Y with the engines at maximum continuous power; and

(2) Not more than the lesser of—

(i) 0.9V established under § 29.309; and

(ii) 0.9 times the maximum speed shown under §§ 29.251 and 29.629.

(b) V_{NE} may vary with altitude and rotor r.p.m., if the ranges of these variables are large enough to allow an operationally practical and safe variation of V_{NE}.

§ 29.1509 Rotor speed.

(a) *Maximum power-off (autorotation).* The maximum power-off rotor speed must be established so that it does not exceed 95 percent of the lesser of—

(1) The maximum design r.p.m. determined under § 29.309(b); and

(2) The maximum r.p.m. shown during the type tests.

(b) *Minimum power-off.* The minimum power-off rotor speed must be established so that it is not less than 105 percent of the greater of—

(1) The minimum shown during the type tests; and

(2) The minimum determined by design substantiation.

(c) *Minimum power-on.* The minimum power-on rotor speed must be established so that it is—

(1) Not less than the greater of—

(i) The minimum shown during the type tests; and

(ii) The minimum determined by design substantiation; and

(2) Not more than a value determined under § 29.33 (a)(1) and (c)(1).

§ 29.1517 Limiting height-speed envelope.

If a range of heights exists at any speed, including zero, within which it is not possible to make a safe landing following power failure, the range of heights and its variation with forward speed must be established, together with any other pertinent information, such as the kind of landing surface.

§ 29.1519 Weight and center of gravity.

The weight and center of gravity limitations determined under §§ 29.25 and 29.27, respectively, must be established as operating limitations.

§ 29.1521 Powerplant limitations.

(a) *General.* The powerplant limitations prescribed in this section must be established so that they do not exceed the corresponding limits for which the engines are type certificated.

(b) *Takeoff operation.* The powerplant takeoff operation must be limited by—

(1) The maximum rotational speed, which may not be greater than—

(i) The maximum value determined by the rotor design; or

(ii) The maximum value shown during the type tests;

(2) The maximum allowable manifold pressure (for reciprocating engines);

(3) The time limit for the use of the power corresponding to the limitations established in subparagraphs (1) and (2) of this paragraph; and

(4) If the time limit in subparagraph (3) of this paragraph exceeds two minutes, the maximum allowable cylinder head, coolant outlet, and oil temperatures.

(c) *Continuous operation.* The continuous operation must be limited by—

(1) The maximum rotational speed, which may not be greater than—

(i) The maximum value determined by the rotor design; or

(ii) The maximum value shown during the type tests;

(2) The maximum allowable manifold pressure;

(3) The maximum allowable cylinder head or coolant outlet and oil temperatures; and

(4) The minimum rotational speed shown under the rotor speed requirements in § 29.1509(c).

(d) *Fuel grade or designation.* The minimum fuel grade (for reciprocating engines) or fuel designation (for turbine engines) must be established so that it is not less than that required for the operation of the engines within the limitations in paragraphs (b) and (c) of this section.

(e) *Cooling limitations.* The maximum sea level temperature established for satisfactory cooling must be shown.

§ 29.1523 Minimum flight crew.

The minimum flight crew must be established so that it is sufficient for safe operation, considering—

(a) The workload on individual crewmembers;

(b) The accessibility and ease of operation of necessary controls by the appropriate crewmember; and

(c) The kinds of operation authorized under § 29.1525.

§ 29.1525 Kinds of operation.

The kinds of operation to which the rotorcraft is limited are established by the flight characteristics and installed equipment.

§ 27.1529 Maintenance manual.

Each rotorcraft must have a maintenance manual containing the information that the applicant considers essential for proper maintenance, including recommended limits on service life or retirement periods for major components. These components must be identified by serial number or equivalent means.

MARKINGS AND PLACARDS

§ 29.1541 General.

(a) The rotorcraft must contain—

(1) The markings and placards specified in §§ 29.1545 through 29.1565; and

(2) Any additional information, instrument markings, and placards required for the safe operation of the rotorcraft if it has unusual design, operating or handling characteristics.

(b) Each marking and placard prescribed in paragraph (a) of this section—

(1) Must be displayed in a conspicuous place; and

(2) May not be easily erased, disfigured, or obscured.

§ 29.1543 Instrument markings: general.

For each instrument—

(a) When markings are on the cover glass of the instrument there must be means to maintain the correct alignment of the glass cover with the face of the dial; and

(b) Each arc and line must be wide enough, and located to be clearly visible to the pilot.

§ 29.1545 Airspeed indicator.

(a) Each airspeed indicator must be marked to show indicated airspeed.

(b) The following markings must be made:

(1) For the limit beyond which operation is dangerous, a red radial line.

(2) For the caution range, a yellow arc.

(3) For the safe operating range, a green arc.

§ 29.1547 Magnetic direction indicator.

(a) A placard meeting the requirements of this section must be installed on or near the magnetic direction indicator.

(b) The placard must show the calibration of the instrument in level flight with the engines operating.

(c) The placard must state whether the calibration was made with radio receivers on or off.

(d) Each calibration reading must be in terms of magnetic heading in not more than 45 degree increments.

§ 29.1549 Powerplant instruments.

For each required powerplant instrument—

(a) Each maximum and, if applicable, minimum safe operating limit must be marked with a red radial line;

(b) Each normal operating range must be marked with a green arc not extending beyond the maximum and minimum safe operating limits;

(c) Each takeoff and caution range must be marked with a yellow arc; and

(d) Each engine and rotor speed range that is restricted because of excessive vibration stresses must be marked with a red arc.

§ 29.1551 Oil quantity indicator.

Each oil quantity indicator must be marked with enough increments to indicate readily and accurately the quantity of oil.

§ 29.1553 Fuel quantity indicator.

If the unusable fuel supply for any tank exceeds one gallon, or five percent of the tank capacity, whichever is greater, a red arc must be marked on its indicator extending from the calibrated zero reading to the lowest reading obtainable in level flight.

§ 29.1555 Control markings.

(a) Each cockpit control must be plainly marked as to its function and method of operation.

(b) For powerplant fuel controls—

(1) Each fuel tank selector valve control must be marked to indicate the position corresponding to each tank and to each existing cross feed position;

(2) If safe operation requires the use of any tanks in a specific sequence, that sequence must be marked on, or adjacent to, the selector for those tanks; and

(3) Each valve control for any engine of a multiengine rotorcraft must be marked to indicate the position corresponding to each engine controlled.

(c) The capacity of each tank must be marked on or near each selector controlling that tank.

(d) For accessory, auxiliary, and emergency controls—

(1) Each essential visual position indicator, such as those showing rotor pitch or landing gear position, must be marked so that each crewmember can determine at any time the position of the unit to which it relates; and

(2) Each emergency control must be red and must be marked as to method of operation.

§ 29.1557 Miscellaneous markings and placards.

(a) *Baggage and cargo compartments, and ballast location.* Each baggage and cargo compartment, and each ballast location must have a placard stating any limitations on contents, including weight, that are necessary under the loading requirements.

(b) *Seats.* If the maximum allowable weight to be carried in a seat is less than 170 pounds, a placard stating the lesser weight must be permanently attached to the seat structure.

(c) *Fuel and oil filler openings.* The following must be marked on or near each appropriate filler cover:

(1) The word "fuel", the minimum fuel grade or designation for the engines, and the usable fuel tank capacity.

(2) The word "oil" and the oil tank capacity.

(d) *Emergency exit placards.* Each placard and operating control for each emergency exit must be red. A placard must be near each emergency exit control and must clearly indicate the location of that exit and its method of operation.

§ 29.1559 Operating limitations placard.

There must be a placard in clear view of the pilot stating: "This (helicopter, gyrodyne, etc.) must be operated in compliance with the operating limitations specified in the FAA approved Rotorcraft Flight Manual."

§ 29.1561 Safety equipment.

(a) Each safety equipment control to be operated by the crew in emergency, such as controls for automatic liferaft releases, must be plainly marked as to its method of operation.

(b) Each location, such as a locker or compartment, that carries any fire extinguishing, signaling, or other life saving equipment, must be so marked.

(c) Stowage provisions for required emergency equipment must be conspicuously marked to identify the contents and facilitate removal of the equipment.

(d) Each liferaft must have obviously marked operating instructions.

(e) Approved survival equipment must be marked for identification and method of operation.

§ 29.1565 Tail rotor.

Each tail rotor must be marked so that its disc is conspicuous under normal ground conditions.

ROTORCRAFT FLIGHT MANUAL

§ 29.1581 General.

(a) A Rotorcraft Flight Manual must be furnished with each rotorcraft.

(b) Each part of the manual listed in §§ 29.1583 through 29.1589 must be verified and approved, and must be segregated, identified, and clearly distinguished from each unapproved part of that manual.

(c) Any information not specified in §§ 29.1583 through 29.1589 that is required for safe operation because of unusual design, operating, or handling characteristics, must be furnished.

§ 29.1583 Operating limitations.

(a) *Airspeed and rotor limitations.* Information necessary for the marking of airspeed and rotor limitations on or near their respective indicators must be furnished. The significance of each limitation and of the color coding must be explained.

(b) *Powerplant limitations.* Information must be furnished to explain the powerplant limitations, and to allow marking the instruments under §§ 29.1549 through 29.1553.

(c) *Weight and loading distribution.* The weight and center of gravity limits required by §§ 29.25 and 29.27, respectively, must be furnished, together with the items included in the empty weight in § 29.29(a). If the variety of possible loading conditions warrants, instructions must be included to allow ready observance of the limitations.

(d) *Flight crew.* When a flight crew of more than one is required, the number and functions of the minimum flight crew determined under § 29.1523 must be furnished.

(e) *Kinds of operation.* Each kind of operation for which the rotorcraft and its equipment installations are approved must be listed.

(f) *Limiting heights.* Enough information must be furnished to allow compliance with § 29.1517.

(g) *Unusable fuel.* If the unusable fuel in any tank exceeds one gallon, or five percent of tank capacity, whichever is greater, there must be means to warn the flight personnel that the fuel remaining in that tank when the quantity indicator reads "zero" cannot be safely used in flight.

§ 29.1585 Operating procedures.

The parts of the manual containing operating procedures must have information concerning any normal and emergency procedures, and other information necessary for safe operation, including the applicable procedures, such as those involving minimum speeds, to be followed if an engine fails.

§ 29.1587 Performance information.

(a) *Category A.* For each category A rotorcraft, the Rotorcraft Flight Manual must contain a summary of the performance data, including data necessary for the application of any operating rule of this chapter, together with descriptions of the conditions, such as airspeeds, under which this data was determined, and must contain—

(1) The indicated airspeeds corresponding with those determined for takeoff, and the procedures to be followed if the critical engine fails during takeoff;

(2) The airspeed calibrations;

(3) The techniques, associated airspeeds, and rates of descent for autorotative landings; and

(4) The maximum allowable wind for safe operation near the ground.

(b) *Category B.* For each category B rotorcraft, the Rotorcraft Flight Manual must contain—

(1) The takeoff distance and the takeoff safety airspeed together with the pertinent information defining the flight path with respect to autorotative landing if an engine fails, including the calculated effects of altitude and temperature;

(2) The steady rates of climb and hovering ceiling, together with the corresponding airspeeds and other pertinent information, including the calculated effects of altitude and temperature;

(3) The landing distance, appropriate glide airspeed, and kind of landing surface, together with any pertinent information that might affect this distance,

including the calculated effects of altitude and temperature;

(4) The maximum safe wind for operation near the ground;

(5) The airspeed calibrations; and

(6) Any additional performance data necessary for the application of any operating rule in this chapter.

§ 29.1589 Loading information.

There must be loading instructions for each possible loading condition between the maximum and minimum weights determined under § 29.25 that can result in a center of gravity beyond any extreme prescribed in § 29.27, assuming any probable occupant weights.

DISTRIBUTION TABLE

Former section	*Revised section*
7.0 (1st sentence)	29.1.
7.0 (less 1st sentence)	Surplusage.
7.1(a)(1)	Part 1 [New].
7.1(a)(2)	Surplusage.
7.1(a) (less (1) and (2)).	Part 1 [New].
7.1(b)	Part 1 [New].
7.1(c)(1)	Part 1 [New].
7.1(c)(2)	Surplusage.
7.1(c)(3)	Part 1 [New].
7.1(c)(4)	Part 1 [New].
7.1(c) (less (1)-(4))	Surplusage.
7.1(d)(1)-(d)(2)	Executed.
7.1(d)(3)	Surplusage.
7.1(d)(4)-(5)	Executed.
7.1(d) (less (1)-(5))	Surplusage.
7.1(e)(1) (less symbol "IAS").	Part 1 [New].
Symbol "IAS"	To be transferred to Part 1 [New].
7.1(e)(2)	Part 1 [New].
7.1(e)(3) (less symbol "EAS").	Part 1 [New].
Symbol "EAS"	To be transferred to Part 1 [New].
7.1(e)(4) (less symbol "TAS").	Part 1 [New].
Symbol "TAS"	To be transferred to Part 1 [New].
7.1(e)(5)-(7)	To be transferred to Part 1 [New].
7.1(e) (less (1)-(7))	To be transferred to Part 1 [New].
7.1(f)(1) and (2)	Executed.
7.1(f)(3)	Surplusage.
7.1(f)(4)	To be transferred to Part 1 [New].
7.1(f)(5) and (6)	Surplusage.
7.1(f) (less (1)-(6))	Executed.
7.1(g)(1)-(3)	Part 1 [New].
7.1(g)(4)	Surplusage.
7.1(g)(5)	Part 1 [New].
7.1(g) (less (1)-(5))	To be transferred to Part 1 [New].
7.1(h)(1)	Surplusage.
7.1(h)(2) and (3)	Part 1 [New].
7.1(h)(4) and (5)	Surplusage.
7.1(h) (less (1)-(5))	29.339.
7.1(i)	Part 1 [New].
7.1 (less (a)-(i))	Surplusage.
7.10-7.19	To be transferred to Part 21 [New].
7.20 (a) and (b) (1st sentence).	29.1.
7.20(b) (less 1st sentence).	Surplusage.
7.100(a)-(c)	29.21.
7.100 (less (a)-(c))	Transferred to Part 21 [New].
7.101	29.25.
7.102(a)	29.27.
7.102 (less (a))	29.1589.
7.103	29.33.

DISTRIBUTION TABLE—Continued

Former section	*Revised section*
7.104	29.29.
7.105	29.31.
7.110 (less note following).	29.45.
Note following § 7.110	Not a rule.
7.111	29.79.
7.112(a)	29.53.
7.112 (less (a))	29.51.
7.113	29.53.
7.114(a)	29.59.
7.114 (less (a))	29.63.
7.115 (less (b))	29.67.
7.115 (b)(1)	29.65.
7.115(b)(2)	29.67.
7.115(b) (less (1) and (2))	29.71.
7.116	29.73.
7.117	29.75.
7.118 (less (a)(2))	29.75.
7.118(a)(2)	29.77.
7.120	29.141.
7.121	29.143.
7.122	29.161.
7.123 (less (b))	29.171.
7.123(b) (less (1)-(4))	29.173.
7.123(b)(1)-(4)	29.175.
7.130	29.231.
7.131	29.241.
7.132	29.239.
7.140 (vibration aspect).	29.251.
7.140 (less vibration aspect).	29.629.
7.200(b)	29.303.
7.200 (less (b))	29.301.
7.201	29.305.
7.202 (less (c))	29.307.
7.202(c)	Surplusage.
7.203	29.307.
7.204	29.309.
7.210	29.321.
7.211	29.321.
7.212 (last sentence)	29.339.
7.212 (less last sentence).	29.337.
7.213	29.341.
7.214	29.351.
7.220	29.391.
7.221	29.401.
7.222	29.403.
7.223	29.411.
7.224	29.413.
7.225(a) (1), (2), and (3).	29.397.
7.225 (less (a) (1), (2), and (3)).	29.395.
7.226	29.399.
7.230 (a) and (b)	29.471.
7.230 (c) and (d)	29.473.
7.230(e)	29.475.
7.230 (less (a)-(e))	29.477.
7.231	29.479.
7.232	29.481.

DISTRIBUTION TABLE—Continued

Former section	Revised section
7.233	29.483.
7.234	29.485.
7.235	29.493.
7.236	29.235.
7.240	29.505.
7.245	29.521.
7.246	29.497.
7.250	29.547.
7.251 (2d–4th sentences).	29.361.
7.251 (less 2d–4th sentences).	29.549.
7.252	29.551.
7.260	29.561.
7.261 (less note following).	29.561.
Note following § 7.261	Not a rule.
7.300	29.601.
7.301	29.603.
7.302	29.605.
7.303	29.607.
7.304	29.609.
7.305	29.611.
7.306	29.613.
7.307(a)	29.619.
7.307(b)	29.621.
7.307(c)	29.623.
7.307 (less (a)–(c))	29.625.
7.310	29.653.
7.311	29.675.
7.312	29.659.
7.313	29.661.
7.320	29.671.
7.321	29.675.
7.322	29.679.
7.323	29.681.
7.324	29.683.
7.325	29.685.
7.326	29.687.
7.327	29.691.
7.328	29.695.
7.330	Executed.
7.331	Surplusage.
7.332 (introductory paragraph).	29.723.
7.332(a)	29.725.
7.332 (less introductory paragraph and (a).	29.727.
7.333	29.725.
7.334	29.729.
7.335	29.731.
7.336	29.735.
7.337	29.733.
7.338	29.737.
7.340 (a) and (b)	29.751.
7.340 (less (a) and (b)).	29.755.
7.341	29.753.
7.350	29.771.
7.351	29.773.
7.352	29.775.
7.353	29.777.

DISTRIBUTION TABLE—Continued

Former section	Revised section
7.354	29.783.
7.355	29.785.
7.356	29.787.
7.357 (introductory paragraph).	29.803.
7.357(a)	29.805.
7.357 (b) and (c)	29.807.
7.357 (d) (less (7))	29.809.
7.357(d)(7)	29.807.
7.357(e)	29.811.
7.357(f)	29.813.
7.357 (less (a)–(f))	29.815.
7.358 (less note following (c)).	29.831.
Note following § 7.358(c).	Not a rule.
7.359 (1st 8 words)	29.833.
7.359 (less 1st 8 words)	Surplusage.
7.380	29.851.
7.381	29.853.
7.382 (less note following (a), and (c)).	29.855.
Note following § 7.382(a).	Not a rule.
7.382(c)	29.1439.
7.383	29.859.
7.384	29.861.
7.385	29.863.
7.390	29.871.
7.391	29.873.
7.392	29.877.
7.400	29.901.
7.401	29.903.
7.402	29.907.
7.403	29.917.
7.404	29.921.
7.405 (less sentences (4) and (5) of (a)(1)).	29.923.
7.405(a)(1) (sentence (4)).	Transferred to Part 33 [New].
7.405(a)(1) (sentence (5)).	Surplusage.
7.406	29.927.
7.407	29.931.
7.408	29.935.
7.410	29.951.
7.411	29.953.
7.413	29.955.
7.416	29.959.
7.417	29.961.
7.418	29.957.
7.420	29.963.
7.421	29.965.
7.422	29.967.
7.423	29.969.
7.424	29.971.
7.425	29.973.
7.426	29.975.
7.427	29.977.
7.428	29.979.

DISTRIBUTION TABLE—Continued

Former section	Revised section
7.430 (less 2d and 3d sentences of note following (a)).	29.991.
(2d and 3d sentences of note following § 7.430(a)).	Not a rule.
7.431	29.991.
7.432	29.993.
7.433	Surplusage.
7.434	29.995.
7.435	29.997.
7.436	29.999.
7.437	29.1337.
7.440	29.1011.
7.441	29.1013.
7.442	29.1015.
7.443	29.1013.
7.444 (less (b))	29.1017.
7.444(b)	29.1183.
7.445	29.1025.
7.446	29.1023.
7.447	29.1019.
7.448	29.1021.
7.450	29.1041.
7.451 (1st sentence)	29.1041.
7.451 (less 1st sentence).	29.1043.
7.452	29.1045.
7.453	29.1047.
7.454	29.1047.
7.455	29.1049.
7.460	29.1091.
7.461	29.1093.
7.462	29.1101.
7.463	29.1103.
7.464	29.1105.
7.465	29.1109.
7.466	29.1107.
7.467(a)	29.1121.
7.467(b)	29.1123.
7.467 (less (a) and (b)).	29.1125.
7.470	29.1141.
7.471	29.1143.
7.472	29.1145.
7.473	29.1147.
7.474	29.1157.
7.475	29.1159.
7.476	29.1151.
7.477 (less note following).	29.1163.
Note following § 7.477	Not a rule.
7.478	29.1165.
7.480 (less note following).	29.1181.
Note following § 7.480	Not a rule.
7.481	29.1185.
7.482	29.1189.
7.483	29.1183.
7.484(a)	29.1195.
7.484(b)	29.1197.
7.484 (c) and (d)	29.1199.
7.484 (less (a)–(d))	29.1201.
7.485	29.1203.

DISTRIBUTION TABLE—Continued

Former section	Revised section
7.486	29.1191.
7.487	29.1193.
7.489	29.1187.
7.600	Surplusage.
7.601	29.1301.
7.602	Surplusage.
7.603	29.1303.
7.604	29.1305.
7.605	29.1307.
7.606	29.1309.
7.610	Surplusage.
7.611	29.1321.
7.612(a)	29.1323.
7.612(b)	29.1325.
7.612(c) (less (3))	29.1327.
7.612(c)(3)	Surplusage.
7.612(d)	29.1329.
7.612(e)	29.1331.
7.612 (less (a)–(e))	29.1333.
7.613	29.1337.
7.620	Surplusage.
7.621	29.1351.
7.622	29.1351.
7.623 (less note following).	29.1355.
Note following § 7.623	Not a rule.
7.624 (less note following (e)).	29.1357.
Note following § 7.624(e).	Not a rule.
7.625(a)	29.1309.
7.625 (less (a))	29.1353.
7.626	29.1359.
7.627	29.1363.
7.630	29.1381.
7.631	29.1383.
7.632	29.1385.
7.633	29.1387.
7.634	29.1389.
Figure 7–1	29.1391.
Figure 7–2	29.1393.
Figure 7–3 and note following.	29.1395.
7.635	29.1397.
7.636	29.1399.
7.637	29.1401.
Figure 7–4	29.1401.
7.640	29.1411.
7.643	29.1413.
7.644 (less note following (b), and marking aspect).	29.1415.
Note following § 7.644(b).	Not a rule.
Marking aspect of § 7.644.	29.1561.
7.645 (less 3d sentence of introductory paragraph).	29.1411.
3d sentence of introductory paragraph of 7.645.	29.1561.
7.646 (less note following).	29.1439.

DISTRIBUTION TABLE—Continued

Former section	Revised section
Note following § 7.646	Not a rule.
7.650 (less note following).	29.1435.
Note following § 7.650	Not a rule.
7.651	29.1435.
7.652	29.1435.
7.653 (less note following (a)).	29.1431.
Note following § 7.653(a).	Not a rule.
7.654	29.1433.
7.700(a)	Surplusage.
7.700 (less (a))	29.1501.
7.710	29.1503.
7.711	29.1505.
7.712	29.1503.
7.713 (less introductory paragraph).	29.1509.
7.713 (introductory paragraph).	Surplusage.
7.714	29.1521.
7.715	29.1517.
7.716	29.1519.
7.717	29.1523.
7.718	29.1525.
7.719	29.1529.
7.730	29.1541.

DISTRIBUTION TABLE—Continued

Former section	Revised section
7.731	29.1543.
7.732	29.1545.
7.733	29.1545.
7.734	29.1549.
7.735	29.1551.
7.736 (less last sentence).	29.1553.
Last sentence of § 7.736.	Surplusage.
7.737	29.1555.
7.738(a)–(c)	29.1557.
7.738(d)	29.1559.
7.738(e)	29.1561.
7.738 (less (a)–(e))	29.1565.
7.740	29.1581.
7.741	29.1583.
7.742	29.1585.
7.743	29.1587.
7.744	Surplusage.
Appendix A:	
SR 392C	Expired.
SR 392D	Expired.
SR 425C	Transferred to Part 21 [New].

[F.R. Doc. 64-12415; Filed, Dec. 2, 1964; 8:50 a.m.]

[Airspace Docket No. 64-CE-89]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS [NEW]

Alteration of Control Zone

The purpose of this amendment to Part 71 [New] of the Federal Aviation Regulations is to revoke an extension of the Fargo, N. Dak., control zone.

The Fargo, N. Dak., radio beacon is scheduled to be relocated. Approach procedures requiring a control zone extension designated with reference to the radio beacon, have been cancelled. This will make the controlled airspace based on the beacon unnecessary.

Since the action contemplated by this amendment is less restrictive in nature and imposes no additional burden on any person, notice and public procedure hereon are unnecessary and the amendment may become effective without regard to the 30 day statutory period.

In consideration of the foregoing, Part 71 of the Federal Aviation Regulations is amended, effective upon publication in the FEDERAL REGISTER, as hereinafter set forth.

In § 71.171 (29 F.R. 1101) the Fargo, N. Dak., control zone is amended by deleting "within 2 miles either side of the 089° bearing from the Fargo RBN extending from the 5-mile radius zone to 12 miles E. of the RBN" from the text.

(Sec. 307(a), Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued in Kansas City, Mo., on November 23, 1964.

EDWARD C. MARSH,
Director, Central Region.

[F.R. Doc. 64-12301; Filed, Dec. 2, 1964; 8:45 a.m.]

[Airspace Docket No. 64-CE-12]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS [NEW]

Designation of Transition Area

On September 22, 1964, a notice of proposed rule making was published in the FEDERAL REGISTER (29 F.R. 13144) stating that the Federal Aviation Agency proposed to designate a transition area at Harrisburg, Ill.

Interested persons were afforded an opportunity to participate in the rule making through submission of comments. All comments received were favorable.

In consideration of the foregoing, Part 71 [New] of the Federal Aviation Regulations is amended, effective 0001 e.s.t., February 4, 1965, as hereinafter set forth.

In § 71.181 (29 F.R. 1160) the following is added:

HARRISBURG, ILLINOIS

That airspace extending upward from 700 feet above the surface within a 5-mile radius of the Harrisburg-Raleigh Airport (latitude 37°48'50'' N., longitude 88°32'56'' W.), and within 2 miles each side of the 064° bearing extending from the RBN to a point 8 miles northeast; and that airspace extending upward from 1,200 feet above the surface within 10 miles northwest and 5 miles southeast of the 064° and 244° bearing from the RBN, extending from a point 6 miles southwest to 15 miles northeast of the RBN.

(Sec. 307(a), Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued at Kansas City, Mo., on November 23, 1964.

EDWARD C. MARSH,
Director, Central Region.

[F.R. Doc. 64-12302; Filed, Dec. 2, 1964; 8:45 a.m.]

[Airspace Docket No. 64-CE-44]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS [NEW]

Alteration of Transition Area

On September 23, 1964, a notice of proposed rule making was published in the FEDERAL REGISTER (29 F.R. 13209) stating that the Federal Aviation Agency proposed to alter a transition area at Detroit, Mich.

Interested persons were afforded an opportunity to participate in the rule making through submission of comments. All comments received were favorable.

In consideration of the foregoing, Part 71 [New] of the Federal Aviation Regulations is amended, effective 0001 e.s.t., February 4, 1965, as hereinafter set forth.

In § 71.181 (29 F.R. 1160) the Detroit, Mich., transition area is amended to read:

DETROIT, MICHIGAN

That airspace extending upward from 700 feet above the surface within an 8-mile radius of Detroit Metropolitan Wayne County Airport (latitude 42°13'05'' N., longitude 83°-21'00'' W.), and within an 8-mile radius of Willow Run Airport (latitude 42°14'05'' N., longitude 83°31'45'' W.), and within 2 miles each side of the Metropolitan Wayne County Airport ILS localizer SW course, extending from the 8-mile radius area to 8 miles SW of the OH, and within 2 miles each side of Willow Run VOR 047° radial, extending from the 8-mile radius area to 10 miles NE of the Ford RBN, and within 2 miles each side of the Windsor, Ontario, ILS localizer SW course extending from the Detroit Metropolitan Wayne County Airport 8-mile radius to the United States/Canadian Border, excluding the portion within the Grosse Ile, Mich., control zone; and that airspace extending upward from 1200 feet above the surface bounded on the W by longitude 84°-05'00'' W., on the N by latitude 42°46'00'' N., on the E by the E boundary of V-42 E alternate and the United States/Canadian border, and on the S by a line from latitude 41°45'05'' N., longitude 84°05'00'' W., to latitude 41°45'30'' N., longitude 83°19'45'' W., to latitude 41°50'39'' N., longitude 83°-08'47'' W., to latitude 41°45'30'' N., longitude 83°03'30'' W., to the United States/Canadian border at latitude 41°45'30'' N., longitude 82°51'00'' W.

(Sec. 307(a), Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued in Kansas City, Mo., on November 24, 1964.

EDWARD C. MARSH,
Director, Central Region.

[F.R. Doc. 64-12303; Filed, Dec. 2, 1964; 8:45 a.m.]

[Airspace Docket No. 64-CE-55]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS [NEW]

Designation of Transition Area

On September 26, 1964, a notice of proposed rule making was published in the FEDERAL REGISTER (29 F.R. 13403) stating that the Federal Aviation Agency proposed to designate a transition area at Parsons, Kans.

Interested persons were afforded an opportunity to participate in the rule making through submission of comments. All comments received were favorable.

In consideration of the foregoing, Part 71 [New] of the Federal Aviation Regulations is amended, effective 0001 e.s.t., February 4, 1965, as hereinafter set forth.

In § 71.181 (29 F.R. 1160) the following is added:

PARSONS, KANSAS

That airspace extending upward from 700 feet above the surface within a 6-mile radius of the Tri-City Airport (latitude 37°20'00'' N., longitude 95°30'30'' W.), and within 5 miles E and 8 miles W of a 359° bearing from the Tri-City Airport, extending from the Airport to a point 12 miles N; and that airspace extending upward from 1,200 feet above the surface within 5 miles NE and 5 miles SW of the Oswego VOR 306° radial extending from the Oswego VOR to the Tri-City Airport, and within 5 miles E and 5 miles W of the Chanute VOR 166° radial extending from the Chanute VOR to the Tri-City Airport excluding the Oswego and Chanute transition areas.

(Sec. 307(a), Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued at Kansas City, Mo., on November 23, 1964.

EDWARD C. MARSH,
Director, Central Region.

[F.R. Doc. 64-12304; Filed, Dec. 2, 1964; 8:45 a.m.]

[Airspace Docket No. 64-EA-21]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, CONTROLLED AIRSPACE, AND REPORTING POINTS [NEW]

PART 73—SPECIAL USE AIRSPACE [NEW]

Alteration of Restricted Area

On August 21, 1964, a notice of proposed rule making was published in the FEDERAL REGISTER (29 F.R. 11979) stating that the Federal Aviation Agency proposed to modify the Westhampton Beach, N.Y. (Suffolk AFB), Restricted Area/Military Climb Corridor, R-5205.

Interested persons were afforded an opportunity to participate in the rule making through submission of comments. All comments received were favorable.

In consideration of the foregoing, Parts 71 and 73 [New] of the Federal Aviation Regulations are amended, effective 0001 e.s.t., February 4, 1965, as hereinafter set forth.

1. In § 73.52 (29 F.R. 1267), R-5205 Westhampton Beach, N.Y. (Suffolk AFB), Restricted Area/Military Climb Corridor, delete the boundaries and designated altitudes in their entirety and substitute therefor,

Boundaries. From a point of beginning at latitude 40°52'19'' N., longitude 72°35'45'' W., the area centered on the Suffolk Air Force Base TACAN 040° True radial, extending to a point 30 nmi northeast, having a width of 1 nmi at the beginning and expanding uniformly to a width of 6 nmi at the outer extremity.

Designated altitudes:

Surface to flight level 240 from the point of beginning to 3 nmi northeast.

2,000 feet MSL to flight level 240 from 3 to 6 nmi northeast of the point of beginning.

5,000 feet MSL to flight level 240 from 6 to 11 nmi northeast of the point of beginning.

10,000 feet MSL to flight level 240 from 11 to 15 nmi northeast of the point of beginning.

14,000 feet MSL to flight level 240 from 15 to 19 nmi northeast of the point of beginning.

16,000 feet MSL to flight level 240 from 19 to 25 nmi northeast of the point of beginning.

20,000 feet MSL to flight level 240 from 25 to 30 nmi northeast of the point of beginning.

Time of designation. Continuous.

Using Agency. Suffolk AFB Approach Control.

2. In § 71.163 (29 F.R. 1068), Control 1169, delete, "excluding the airspace below 2,000 feet MSL outside the United States." and substitute therefor, "excluding the portion within the Westhampton Beach, N.Y., Restricted Area/Military Climb Corridor R-5205, and the airspace below 2,000 feet MSL outside the United States."

(Sec. 307(a), Federal Aviation Act of 1958; 49 U.S.C. 1348)

Issued in Washington, D.C., on November 25, 1964.

CLIFFORD P. BURTON,
Acting Director,
Air Traffic Service.

[F.R. Doc. 64-12305; Field, Dec. 2, 1964; 8:45 a.m.]

[Airspace Docket No. 64-EA-52]

PART 73—SPECIAL USE AIRSPACE [NEW]

Alteration of Restricted Area

The purpose of this amendment to Part 73 [New] is to modify the designated ceiling altitudes of the Bangor, Maine (Dow AFB), Restricted Area/Military Climb Corridor R-3903.

The modification is to change the ceiling altitudes of the corridor from FL 270 to FL 240. The Air Force has determined that the airspace above FL 240 is not needed for operations in the climb corridor and the modification also will be less restrictive to IFR operations on Jet Routes Nos. 29 and 49 in the vicinity of the Bangor, Maine, VORTAC.

Since the airspace within the climb corridor is restrictive only when in use by the military, releasing of such airspace above FL 240 therein will be less restrictive to the public. For this reason, notice and public procedure hereon are unnecessary and the amendment is effective upon publication of this rule in the FEDERAL REGISTER.

In consideration of the foregoing, Part 73 [New] is amended as hereinafter set forth.

1. In § 73.39 (29 F.R. 1254), the Bangor, Maine (Dow AFB), Restricted Area/Military Climb Corridor R-3903 is amended by deleting from the description of the designated altitudes in the text "flight level 270" wherever it appears and substituting "flight level 240" therefor.

(Sec. 307(a), Federal Aviation Act of 1958; (49 U.S.C. 1348))

Issued in Washington, D.C., on November 25, 1964.

CLIFFORD P. BURTON,
Acting Director,
Air Traffic Service.

[F.R. Doc. 64-12306; Filed, Dec. 2, 1964; 8:45 a.m.]

Title 7—AGRICULTURE

Chapter VII—Agricultural Stabilization and Conservation Service (Agricultural Adjustment), Department of Agriculture

SUBCHAPTER B—FARM MARKETING QUOTAS AND ACREAGE ALLOTMENTS

[Amdt. 1]

PART 717—HOLDING OF REFERENDA ON MARKETING QUOTAS

Subpart—Regulations Governing the Holding of Referenda on Marketing Quotas

1. *Basis and purpose.* (a) This amendment is issued pursuant to the provisions

of the Agricultural Adjustment Act of 1938, as amended (7 U.S.C. 1281 et seq.), and relates to the holding of referenda on marketing quotas. This amendment removes the limitation of six on the number of regular members permitted on a community referendum committee. Two regular members must be provided at each polling place and some referendum communities should have more than three polling places. This amendment would make such action possible.

(b) Referenda will be held for upland and extra long staple cotton on December 15, 1964. Therefore, it is necessary that this amendment be made effective as soon as possible in order that county committees may have time to set up an adequate number of polling places and name community referendum committeemen to man such polling places. Accordingly, it is hereby determined and found that compliance with the public notice, procedure, and effective date requirements of section 4 of the Administrative Procedure Act (5 U.S.C. 1003) is impracticable and contrary to the public interest and this amendment shall become effective upon filing this document with the Director, Office of the Federal Register.

2. Section 717.2(b) of the Regulations Governing the Holding of Referenda on Marketing Quotas (28 F.R. 13249) is amended by deleting the third sentence thereof which reads: "In no event shall the regular membership exceed six members".

(Secs. 312, 336, 343, 354, 358, 375, 52 Stat. 46, 55, 56, 61, 66, as amended, 55 Stat. 88; 70 Stat. 206, as amended; secs. 106, 112, 70 Stat. 191, 195; 7 U.S.C. 1312, 1336, 1343, 1354, 1358, 1375, 1377, 1824, 1836)

Effective date: Date of filing document with the Director, Office of the Federal Register.

Signed at Washington, D.C., on November 27, 1964.

H. D. GODFREY,
Administrator, Agricultural Stabilization and Conservation Service.

[F.R. Doc. 64-12360; Filed, Dec. 2, 1964; 8:48 a.m.]

[Amdt. 1]

PART 719—RECONSTITUTION OF FARMS, ALLOTMENTS, AND BASES

Location of Farm for Administrative Purposes

(a) This amendment is issued pursuant to section 375(b) of the Agricultural Adjustment Act of 1938, as amended (7 U.S.C. 1375(b)), section 124 of the Soil Bank Act (7 U.S.C. 1812), and the Soil Conservation and Domestic Allotment Act (16 U.S.C. 590 g-p). This amendment provides that a farm on an Indian reservation operated by a grazing association may be administratively located in the county in which the headquarters of such grazing association is located.

(b) Since there are farms now operated by such grazing associations, it is desirable that the county ASCS office records be relocated as soon as possible for any farms affected by this amendment. Accordingly, it is essential that this amendment be made effective as soon as possible. It is hereby determined and found that compliance with the notice and public procedure requirements and the thirty-day effective date requirement of section 4 of the Administrative Procedure Act (60 Stat. 238; 5 U.S.C. 1003) is impracticable and contrary to the public interest and this amendment shall be effective upon filing this document with the Director, Office of the Federal Register.

Section 719.3(c) of the regulations for Reconstitution of Farms, Allotments, and Bases (29 F.R. 13370) is amended by adding a new subparagraph as follows:

§ 719.3 Farm constitution.

* * * * *

(c) *Location of farm for administrative purposes.* * * *

(3) Notwithstanding the provisions of subparagraphs (1) and (2) of this paragraph, if the land in the farm is part of an Indian reservation and is operated by a grazing association, the farm may be administratively located in the county where such grazing association has its headquarters if the county committees involved and the farm operator agree to such location, provided the persons using the land do not reside thereon and the geographic features are such that administrative access would be more practical.

(Sec. 375, 52 Stat. 66, as amended, 7 U.S.C. 1375; sec. 124, 70 Stat. 198, 7 U.S.C. 1812; secs. 16(b), 74 Stat. 1030, 16(c), 75 Stat. 5, 16(d), 75 Stat. 302, 105(c), 75 Stat. 301, 16(h), 77 Stat. 45, 16 U.S.C. 590 p).

Effective date: Date of filing this document with the Director, Office of the Federal Register.

Signed at Washington, D.C., on November 27, 1964.

H. D. GODFREY,
Administrator, Agricultural Stabilization and Conservation Service.

[F.R. Doc. 64-12361; Filed, Dec. 2, 1964; 8:48 a.m.]

[Amdt. 4]

PART 729—PEANUTS

Subpart—Allotment and Marketing Quota Regulations for Peanuts of the 1963 and Subsequent Crops

1. *Basis and purpose.* (a) The amendment contained herein is issued pursuant to the Agricultural Adjustment Act of 1938, as amended (7 U.S.C. 1281 et seq.), to revise the Allotment and Marketing Quota Regulations for Peanuts of the 1963 and Subsequent Crops (27 F.R. 11920, 28 F.R. 11811, 29 F.R. 7801, 7983, 13027). The amendment (1) provides that the current farm peanut allotment shall be preserved as history acreage for a farm, (a) if for the current year or either of the two preceding years an acreage equal to 75 per centum or more of the farm peanut acreage allotment, after reduction for violation and temporary release of acreage, but before reapportionment of released acreage or increase for a type in short supply, was actually planted or regarded as planted to peanuts under the Conservation Reserve, Cropland Conversion or Great Plains Programs as determined in accordance with Part 719 of this chapter, (b) the farm allotment is or was in an allotment pool, or (c) the farm is Federally-owned and there is in effect a restrictive lease prohibiting the production of peanuts, (2) changes from November 1 to December 1 the date by which the farm operator must file a written request for adjustment in the history acreage for abnormal conditions affecting the farm peanut acreage.

(b) The provisions of this amendment with respect to the preservation of allotments for history acreage purposes are required by law and the change of the date by which a written request for adjustment for abnormal conditions must be made effective as soon as possible as farm peanut history acreages for 1964 are currently being determined for the purpose of establishing farm peanut acreage allotments for 1965. Accordingly, it is hereby determined and found that compliance with the notice, public procedure and effective date requirements of the Administrative Procedure Act (5 U.S.C. 1001-1011) is impractical and contrary to the public interest and this amendment shall become effective upon the date of filing with the Director, Office of the Federal Register.

2. The Allotment and Marketing Quota Regulations for Peanuts of the 1963 and Subsequent Crops (27 F.R. 11920, 28 F.R. 11811, 29 F.R. 7801, 7983, 13027) are hereby amended as follows:

a. Paragraph (b) and paragraph (c) (1), as amended, of § 729.1424 are amended to read as follows:

§ 729.1424 Determination of farm peanut history acreage.

* * * * *

(b) *Full allotment preserved as history acreage.* For any year the entire farm peanut allotment shall be preserved as peanut history acreage if:

(1) For the current year or either of the two preceding years:

(i) The sum of the final acreage and the acreage regarded as planted to peanuts under the Conservation Reserve, Cropland Conversion and Great Plains Programs, as determined pursuant to Part 719 of this chapter, was as much as 75 per centum of the farm allotment after reduction for violation pursuant to § 729.1434, temporary release of acreage but before reapportionment of released acreage pursuant to § 729.1435, or increase for a type in short supply pursuant to § 729.1437.

(ii) The farm allotment is or was in an eminent domain allotment pool pursuant to Part 719 of this chapter.

(2) The farm is Federally-owned and there is in effect a restrictive lease prohibiting the production of peanuts.

(c) * * *

(1) The final acreage, adjusted to compensate for abnormal conditions affecting acreage, if the county committee determine that such action is necessary to maintain equitable allotments: *Provided,* That the farm operator files a written request for such an adjustment