

## SUBCHAPTER F—AIR TRAFFIC AND GENERAL OPERATING RULES

### PART 91—GENERAL OPERATING AND FLIGHT RULES

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AUTHORITY: 49 U.S.C. 106(g), 1155, 40103, 40113, 40120, 44101, 44111, 44701, 44704, 44709, 44711, 44712, 44715, 44716, 44717, 44722, 46306, 46315, 46316, 46504, 46506-46507, 47122, 47508, 47528-47531, articles 12 and 29 of the Convention on International Civil Aviation (61 Stat. 1180).

**SPECIAL FEDERAL AVIATION REGULATION NO. SFAR NO. 50-2—SPECIAL FLIGHT RULES IN THE VICINITY OF THE GRAND CANYON NATIONAL PARK, AZ**

*Section 1. Applicability.* This rule prescribes special operating rules for all persons operating aircraft in the following airspace, designated as the Grand Canyon National Park Special Flight Rules Area:

That airspace extending upward from the surface up to but not including 14,500 feet MSL within an area bounded by a line beginning at lat. 36°09'30" N., long. 114°03'00" W.; northeast to lat. 36°14'00" N., long. 113°09'50" W.; thence northeast along the boundary of the Grand Canyon National Park to lat. 36°24'47" N., long. 112°52'00" W.; to lat. 36°30'30" N., long. 112°36'15" W. to lat. 36°21'30" N., long. 112°00'00" W. to lat. 36°35'30" N., long. 111°53'10" W., to lat. 36°53'00" N., long. 111°36'45" W. to lat. 36°53'00" N., long. 111°33'00" W.; to lat. 36°19'00" N., long. 111°50'50" W.; to lat. 36°17'00" N., long. 111°42'00" W.; to lat. 35°59'30" N., long. 111°42'00" W.; to lat. 35°57'30" N., long. 112°03'55" W.; thence counterclockwise via the

5 statute mile radius of the Grand Canyon Airport airport reference point (lat. 35°57'09" N., long. 112°08'47" W.) to lat. 35°57'30" N., long. 112°14'00" W.; to lat. 35°57'30" N., long. 113°11'00" W.; to lat. 35°42'30" N., long. 113°11'00" W.; to 35°38'30" N.; long. 113°27'30" W.; thence counterclockwise via the 5 statute mile radius of the Peach Springs VORTAC to lat. 35°41'20" N., long. 113°36'00" W.; to lat. 35°55'25" N., long. 113°49'10" W.; to lat. 35°57'45" N., 113°45'20" W.; thence northwest along the park boundary to lat. 36°02'20" N., long. 113°50'15" W.; to 36°00'10" N., long. 113°53'45" W.; thence to the point of beginning.

*Section 3. Aircraft operations: general.* Except in an emergency, no person may operate an aircraft in the Special Flight Rules, Area under VFR on or after September 22, 1988, or under IFR on or after April 6, 1989, unless the operation—(a) Is conducted in accordance with the following procedures:

NOTE: The following procedures do not relieve the pilot from see-and-avoid responsibility or compliance with FAR 91.119.

(1) Unless necessary to maintain a safe distance from other aircraft or terrain—

(i) Remain clear of the areas described in Section 4; and

(ii) Remain at or above the following altitudes in each sector of the canyon:

Eastern section from Lees Ferry to North Canyon and North Canyon to Boundary Ridge: as prescribed in Section 5.

Boundary Ridge to Supai Point (Yumtheska Point): 10,000 feet MSL.

Western section from Diamond Creek to the Grant Wash Cliffs: 8,000 feet MSL.

(2) Proceed through the four flight corridors describe in Section 4 at the following altitudes unless otherwise authorized in writing by the Flight Standards District Office:

*Northbound*

11,500 or  
13,500 feet MSL

*Southbound*

>10,500 or  
>12,500 feet MSL

(b) Is authorized in writing by the Flight Standards District Office and is conducted in compliance with the conditions contained in that authorization. Normally authorization will be granted for operation in the areas described in Section 4 or below the altitudes listed in Section 5 only for operations of aircraft necessary for law enforcement, fire-fighting, emergency medical treatment/evacuation of persons in the vicinity of the Park; for support of Park maintenance or activities; or for aerial access to and maintenance of other property located within the Special Flight Rules Area. Authorization may be issued on a continuing basis.

(c)(1) Prior to November 1, 1988, is conducted in accordance with a specific authorization to operate in that airspace incorporated in the operator's part 135 operations specifications in accordance with the provisions of SFAR 50-1, notwithstanding the provisions of Sections 4 and 5; and

(2) On or after November 1, 1988, is conducted in accordance with a specific authorization to operate in that airspace incorporated in the operator's operations specifications and approved by the Flight Standards District Office in accordance with the provisions of SFAR 50-2.

(d) Is a search and rescue mission directed by the U.S. Air Force Rescue Coordination Center.

(e) Is conducted within 3 nautical miles of Whitmore Airstrip, Pearce Ferry Airstrip, North Rim Airstrip, Cliff Dwellers Airstrip, or Marble Canyon Airstrip at an altitudes less than 3,000 feet above airport elevation, for the purpose of landing at or taking off from that facility. Or

(f) Is conducted under an IFR clearance and the pilot is acting in accordance with ATC instructions. An IFR flight plan may not be filed on a route or at an altitude that would require operation in an area described in Section 4.

*Section 4. Flight-free zones.* Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in Section 3(b), no person may operate an aircraft in the Special Flight Rules Area within the following areas:

(a) Desert View Flight-Free Zone. Within an area bounded by a line beginning at Lat. 35°59'30" N., Long. 111°46'20" W. to 35°59'30" N., Long. 111°52'45" W.; to Lat. 36°04'50" N., Long. 111°52'00" W.; to Lat. 36°06'00" N., Long. 111°46'20" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 mile of the western boundary of the zone. The area between the Desert View and Bright Angel Flight-Free Zones is designated the "Zuni Point Corridor."

(b) Bright Angel Flight-Free Zone. Within an area bounded by a line beginning at Lat. 35°59'30" N., Long. 111°55'30" W.; to Lat. 35°59'30" N., Long. 112°04'00" W.; thence counterclockwise via the 5 statute mile radius of the Grand Canyon Airport point (Lat. 35°57'09" N., Long. 112°08'47" W.) to Lat. 36°01'30" N., Long. 112°11'00" W.; to Lat. 36°06'15" N., Long. 112°12'50" W.; to Lat. 36°14'40" N., Long. 112°08'50" W.; to Lat. 36°14'40" N., Long. 111°57'30" W.; to Lat. 36°12'30" N., Long. 111°53'50" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 mile of the eastern boundary between the southern boundary and Lat. 36°04'50" N. or the airspace at and above 10,500 feet MSL within 2 miles of the northwest boundary. The area bounded by the Bright Angel and Shinumo Flight-

Free Zones is designated the "Dragon Corridor."

(c) Shinumo Flight-Free Zone. Within an area bounded by a line beginning at Lat. 36°04'00" N., Long. 112°16'40" W.; northwest along the park boundary to a point at Lat. 36°12'47" N., Long. 112°30'53" W.; to Lat. 36°21'15" N., Long. 112°20'20" W.; east along the park boundary to Lat. 36°21'15" N., Long. 112°13'55" W.; to Lat. 36°14'40" N., Long. 112°11'25" W.; to the point of origin. The area between the Thunder River/Toroweap and Shinumo Flight Free Zones is designated the "Fossil Canyon Corridor."

(d) Toroweap/Thunder River Flight-Free Zone. Within an area bounded by a line beginning at Lat. 36°22'45" N., Long. 112°20'35" W.; thence northwest along the boundary of the Grand Canyon National Park to Lat. 36°17'48" N., Long. 113°03'15" W.; to Lat. 36°15'00" N., Long. 113°07'10" W.; to Lat. 36°10'30" N., Long. 113°07'10" W.; thence east along the Colorado River to the confluence of Havasu Canyon (Lat. 36°18'40" N., Long. 112°45'45" W.) including that area within a 1.5 nautical mile radius of Toroweap Overlook (Lat. 36°12'45" N., Long. 113°03'30" W.); to the point of origin; but not including the following airspace designated as the "Tuckup Corridor": at or above 10,500 feet MSL within 2 nautical miles either side of a line extending between Lat. 36°24'47" N., Long. 112°48'50" W. and Lat. 36°17'10" N., Long. 112°48'50" W.; to the point of origin.

*Section 5. Minimum flight altitudes.* Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in Section 3(b), no person may operate an aircraft in the Special Flight Rules Area at an altitude lower than the following:

(a) Eastern section from Lees Ferry to North Canyon: 5,000 feet MSL.

(b) Eastern section from North Canyon to Boundary Ridge: 6,000 feet MSL.

(c) Boundary Ridge to Supai (Yumtheska) Point: 7,500 feet MSL.

(d) Supai Point to Diamond Creek: 6,500 feet MSL.

(e) Western section from Diamond Creek to the Grand Wash Cliffs: 5,000 feet MSL.

*Section 9. Termination date.* Section 1. Applicability, Section 4. Flight-free zones, and Section 5. Minimum flight altitudes, expire on April 19, 2001.

NOTE: An informational map of the special flight rules areas defined by SFAR 50-2 is available on the Office of Rulemaking's website at <http://www.faa.gov/avr/armhome.htm>. A paper copy is available from the Office of Rulemaking by calling Linda Williams at (202) 267-9685.

[66 FR 1003, Jan. 4, 2001, as amended at 66 FR 16584, Mar. 26, 2001]

SPECIAL FEDERAL AVIATION REGULATION  
NO. 60—AIR TRAFFIC CONTROL SYSTEM EMERGENCY OPERATION

1. Each person shall, before conducting any operation under the Federal Aviation Regulations (14 CFR chapter I), be familiar with all available information concerning that operation, including Notices to Airmen issued under §91.139 and, when activated, the provisions of the National Air Traffic Reduced Complement Operations Plan available for inspection at operating air traffic facilities and Regional air traffic division offices, and the General Aviation Reservation Program. No operator may change the designated airport of intended operation for any flight contained in the October 1, 1990, OAG.

2. Notwithstanding any provision of the Federal Aviation Regulations to the contrary, no person may operate an aircraft in the Air Traffic Control System:

a. Contrary to any restriction, prohibition, procedure or other action taken by the Director of the Office of Air Traffic Systems Management (Director) pursuant to paragraph 3 of this regulation and announced in a Notice to Airmen pursuant to §91.139 of the Federal Aviation Regulations.

b. When the National Air Traffic Reduced Complement Operations Plan is activated pursuant to paragraph 4 of this regulation, except in accordance with the pertinent provisions of the National Air Traffic Reduced Complement Operations Plan.

3. Prior to or in connection with the implementation of the RCOP, and as conditions warrant, the Director is authorized to:

a. Restrict, prohibit, or permit VFR and/or IFR operations at any airport, Class B airspace area, Class C airspace area, or other class of controlled airspace.

b. Give priority at any airport to flights that are of military necessity, or are medical emergency flights, Presidential flights, and flights transporting critical Government employees.

c. Implement, at any airport, traffic management procedures, that may include reduction of flight operations. Reduction of flight operations will be accomplished, to the extent practical, on a pro rata basis among and between air carrier, commercial operator, and general aviation operations. Flights cancelled under this SFAR at a high density traffic airport will be considered to have been operated for purposes of part 93 of the Federal Aviation Regulations.

4. The Director may activate the National Air Traffic Reduced Complement Operations Plan at any time he finds that it is necessary for the safety and efficiency of the National Airspace System. Upon activation of the RCOP and notwithstanding any provision of the FAR to the contrary, the Director is authorized to suspend or modify any airspace designation.

5. Notice of restrictions, prohibitions, procedures and other actions taken by the Director under this regulation with respect to the operation of the Air Traffic Control system will be announced in Notices to Airmen issued pursuant to §91.139 of the Federal Aviation Regulations.

6. The Director may delegate his authority under this regulation to the extent he considers necessary for the safe and efficient operation of the National Air Traffic Control System.

Authority: 49 U.S.C. app. 1301(7), 1303, 1344, 1348, 1352 through 1355, 1401, 1421 through 1431, 1471, 1472, 1502, 1510, 1522, and 2121 through 2125; articles 12, 29, 31, and 32(a) of the Convention on International Civil Aviation (61 stat. 1180); 42 U.S.C. 4321 *et seq.*; E.O. 11514, 35 FR 4247, 3 CFR, 1966-1970 Comp., p. 902; 49 U.S.C. 106(g).

[Doc. No. 26351, 55 FR 40760, Oct. 4, 1990, as amended by Amdt. 91-227, 56 FR 65652, Dec. 17, 1991]

SPECIAL FEDERAL AVIATION REGULATION  
NO. 71—SPECIAL OPERATING RULES  
FOR AIR TOUR OPERATORS IN THE  
STATE OF HAWAII

*Section 1. Applicability.* This Special Federal Aviation Regulation prescribes operating rules for airplane and helicopter visual flight rules air tour flights conducted in the State of Hawaii under 14 CFR parts 91, 121, and 135. This rule does not apply to:

(a) Operations conducted under 14 CFR part 121 in airplanes with a passenger seating configuration of more than 30 seats or a payload capacity of more than 7,500 pounds.

(b) Flights conducted in gliders or hot air balloons.

*Section 2. Definitions.* For the purposes of this SFAR:

“Air tour” means any sightseeing flight conducted under visual flight rules in an airplane or helicopter for compensation or hire.

“Air tour operator” means any person who conducts an air tour.

*Section 3. Helicopter flotation equipment.* No person may conduct an air tour in Hawaii in a single-engine helicopter beyond the shore of any island, regardless of whether the helicopter is within gliding distance of the shore, unless:

(a) The helicopter is amphibious or is equipped with floats adequate to accomplish a safe emergency ditching and approved flotation gear is easily accessible for each occupant; or

(b) Each person on board the helicopter is wearing approved flotation gear.

*Section 4. Helicopter performance plan.* Each operator must complete a performance plan before each helicopter air tour flight. The performance plan must be based on the information in the Rotorcraft Flight Manual

(RFM), considering the maximum density altitude for which the operation is planned for the flight to determine the following:

(a) Maximum gross weight and center of gravity (CG) limitations for hovering in ground effect;

(b) Maximum gross weight and CG limitations for hovering out of ground effect; and,

(c) Maximum combination of weight, altitude, and temperature for which height-velocity information in the RFM. is valid.

The pilot in command (PIC) must comply with the performance plan.

*Section 5. Helicopter operating limitations.* Except for approach to and transition from a hover, the PIC shall operate the helicopter at a combination of height and forward speed (including hover) that would permit a safe landing in event of engine power loss, in accordance with the height-speed envelope for that helicopter under current weight and aircraft altitude.

*Section 6. Minimum flight altitudes.* Except when necessary for takeoff and landing, or operating in compliance with an air traffic control clearance, or as otherwise authorized by the Administrator, no person may conduct an air tour in Hawaii:

(a) Below an altitude of 1,500 feet above the surface over all areas of the State of Hawaii, and,

(b) Closer than 1,500 feet to any person or property; or,

(c) Below any altitude prescribed by federal statute or regulation.

*Section 7. Passenger briefing.* Before takeoff, each PIC of an air tour flight of Hawaii with a flight segment beyond the ocean shore of any island shall ensure that each passenger has been briefed on the following, in addition to requirements set forth in 14 CFR 91.107, 121.571, or 135.117:

(a) Water ditching procedures;

(b) Use of required flotation equipment; and

(c) Emergency egress from the aircraft in event of a water landing.

*Section 8. Termination date.* This SFAR No. 71 shall remain in effect until further notice.

[SFAR 71, 59 FR 49145, Sept. 26, 1994, as amended at 60 FR 65913, Dec. 20, 1995; 62 FR 58859, Oct. 30, 1997; 65 FR 58612, Sept. 29, 2000; 68 FR 60839, Oct. 23, 2003]

SPECIAL FEDERAL AVIATION REGULATION  
NO. 77—PROHIBITION AGAINST CERTAIN FLIGHTS WITHIN THE TERRITORY AND AIRSPACE OF IRAQ

1. *Applicability.* This rule applies to the following persons:

(a) All U.S. air carriers or commercial operators;

(b) All persons exercising the privileges of an airman certificate issued by the FAA except such persons operating U.S.-registered aircraft for a foreign air carrier; or

(c) All operators of aircraft registered in the United States except where the operator of such aircraft is a foreign air carrier.

2. *Flight prohibition.* No person may conduct flight operations over or within the territory of Iraq except as provided in paragraphs 3 and 4 of this SFAR or except as follows:

(a) Overflights of Iraq may be conducted above flight level (FL) 200 subject to the approval of, and in accordance with the conditions established by, the appropriate authorities of Iraq.

(b) Flights departing from countries adjacent to Iraq whose climb performance will not permit operation above FL 200 prior to entering Iraqi airspace may operate at altitudes below FL 200 within Iraq to the extent necessary to permit a climb above FL 200, subject to the approval of, and in accordance with the conditions established by, the appropriate authorities of Iraq.

(c) [Reserved]

3. *Permitted operations.* This SFAR does not prohibit persons described in paragraph 1 from conducting flight operations within the territory and airspace of Iraq when such operations are authorized either by another agency of the United States Government with the approval of the FAA or by an exemption issued by the Administrator.

4. *Emergency situations.* In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this SFAR to the extent required by that emergency. Except for U.S. air carriers or commercial operators that are subject to the requirements of 14 CFR parts 119, 121, or 135, each person who deviates from this rule shall, within ten (10) days of the deviation, excluding Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations of the aircraft involved in the deviation including a description of the deviation and the reasons therefore.

5. *Expiration.* This Special Federal Aviation Regulation will remain in effect until further notice.

[Doc. No. 28691, 61 FR 54021, Oct. 16, 1996, as amended by Doc. No. FAA-2003-14766, 68 FR 17870, Apr. 11, 2003; 68 FR 65382, Nov. 19, 2003]

SPECIAL FEDERAL AVIATION REGULATION  
NO. 79—PROHIBITION AGAINST CERTAIN FLIGHTS WITHIN THE FLIGHT INFORMATION REGION (FIR) OF THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA (DPRK)

1. *Applicability.* This rule applies to the following persons:

(a) All U.S. air carriers or commercial operators.

(b) All persons exercising the privileges of an airman certificate issued by the FAA, except such persons operating U.S.-registered aircraft for a foreign air carrier.

(c) All operators of aircraft registered in the United States except where the operator of such aircraft is a foreign air carrier.

2. *Flight Prohibition.* Except as provided in paragraphs 3 and 4 of this SFAR, no person described in paragraph 1 may conduct flight operations through the Pyongyang FIR west of 132 degrees east longitude.

3. *Permitted Operations.* This SFAR does not prohibit persons described in paragraph 1 from conducting flight operations within the Pyongyang FIR west of 132 degrees east longitude where such operations are authorized either by exemption issued by the Administrator or by another agency of the United States Government with FAA approval.

4. *Emergency situations.* In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command on an aircraft may deviate from this SFAR to the extent required by that emergency. Except for U.S. air carriers and commercial operators that are subject to the requirements of 14 CFR parts 121, 125, or 135, each person who deviates from this rule shall, within ten (10) days of the deviation, excluding Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations of the aircraft involved in the deviation, including a description of the deviation and the reasons therefore.

5. *Expiration.* This Special Federal Aviation Regulation No. 79 will remain in effect until further notice.

[Doc. No. 28831, 62 FR 20078, Apr. 24, 1997, as amended at 63 FR 8017, Feb. 17, 1998; 63 FR 19286, Apr. 17, 1998]

SPECIAL FEDERAL AVIATION REGULATION  
NO. 87—PROHIBITION AGAINST CERTAIN FLIGHTS WITHIN THE TERRITORY AND AIRSPACE OF ETHIOPIA

1. *Applicability.* This Special Federal Aviation Regulation (SFAR) No. 87 applies to all U.S. air carriers or commercial operators, all persons exercising the privileges of an airman certificate issued by the FAA unless that person is engaged in the operation of a

U.S.-registered aircraft for a foreign air carrier, and all operators using aircraft registered in the United States except where the operator of such aircraft is a foreign air carrier.

2. *Flight prohibition.* Except as provided in paragraphs 3 and 4 of this SFAR, no person described in paragraph 1 may conduct flight operations within the territory and airspace of Ethiopia north of 12 degrees north latitude.

3. *Permitted operations.* This SFAR does not prohibit persons described in paragraph 1 from conducting flight operations within the territory and airspace of Ethiopia where such operations are authorized either by exemption issued by the Administrator or by an authorization issued by another agency of the United States Government with the approval of the FAA.

4. *Emergency situations.* In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft may deviate from this SFAR to the extent required by that emergency. Except for U.S. air carriers and commercial operators that are subject to the requirements of 14 CFR 121.557, 121.559, or 135.19, each person who deviates from this rule shall, within ten (10) days of the deviation, excluding Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations of the aircraft involved in the deviation, including a description of the deviation and the reasons therefor.

5. *Expiration.* This Special Federal Aviation Regulation shall remain in effect until further notice.

[Doc. No. FAA-2000-7360; 65 FR 31215, May 16, 2000]

SFAR NO. 97—SPECIAL OPERATING RULES FOR THE CONDUCT OF INSTRUMENT FLIGHT RULES (IFR) AREA NAVIGATION (RNAV) OPERATIONS USING GLOBAL POSITIONING SYSTEMS (GPS) IN ALASKA

Those persons identified in Section 1 may conduct IFR en route RNAV operations in the State of Alaska and its airspace on published air traffic routes using TSO C145a/C146a navigation systems as the only means of IFR navigation. Despite contrary provisions of parts 71, 91, 95, 121, 125, and 135 of this chapter, a person may operate aircraft in accordance with this SFAR if the following requirements are met.

Section 1. *Purpose, use, and limitations*

a. This SFAR permits TSO C145a/C146a GPS (RNAV) systems to be used for IFR en route operations in the United States airspace over and near Alaska (as set forth in

paragraph c of this section) at Special Minimum En Route Altitudes (MEA) that are outside the operational service volume of ground-based navigation aids, if the aircraft operation also meets the requirements of sections 3 and 4 of this SFAR.

b. Certificate holders and part 91 operators may operate aircraft under this SFAR provided that they comply with the requirements of this SFAR.

c. Operations conducted under this SFAR are limited to United States Airspace within and near the State of Alaska as defined in the following area description:

From 62°00'00.000"N, Long. 141°00'00.00"W.; to Lat. 59°47'54.11"N., Long. 135°28'38.34"W.; to Lat. 56°00'04.11"N., Long. 130°00'07.80"W.; to Lat. 54°43'00.00"N., Long. 130°37'00.00"W.; to Lat. 51°24'00.00"N., Long. 167°49'00.00"W.; to Lat. 50°08'00.00"N., Long. 176°34'00.00"W.; to Lat. 45°42'00.00"N., Long. -162°55'00.00"E.; to Lat. 50°05'00.00"N., Long. -159°00'00.00"E.; to Lat. 54°00'00.00"N., Long. -169°00'00.00"E.; to Lat. 60°00'00.00"N., Long. -180°00'00.00"E.; to Lat. 65°00'00.00"N., Long. 168°58'23.00"W.; to Lat. 90°00'00.00"N., Long. 00°00'00.00"W.; to Lat. 62°00'00.000"N, Long. 141°00'00.00"W.

(d) No person may operate an aircraft under IFR during the en route portion of flight below the standard MEA or at the special MEA unless the operation is conducted in accordance with sections 3 and 4 of this SFAR.

Section 2. *Definitions and abbreviations*

For the purposes of this SFAR, the following definitions and abbreviations apply.

*Area navigation (RNAV).* RNAV is a method of navigation that permits aircraft operations on any desired flight path.

*Area navigation (RNAV) route.* RNAV route is a published route based on RNAV that can be used by suitably equipped aircraft.

*Certificate holder.* A certificate holder means a person holding a certificate issued under part 119 or part 125 of this chapter or holding operations specifications issued under part 129 of this chapter.

*Global Navigation Satellite System (GNSS).* GNSS is a world-wide position and time determination system that uses satellite ranging signals to determine user location. It encompasses all satellite ranging technologies, including GPS and additional satellites. Components of the GNSS include GPS, the Global Orbiting Navigation Satellite System, and WAAS satellites.

*Global Positioning System (GPS).* GPS is a satellite-based radio navigational, positioning, and time transfer system. The system provides highly accurate position and velocity information and precise time on a continuous global basis to properly equipped users.

*Minimum crossing altitude (MCA).* The minimum crossing altitude (MCA) applies to the

operation of an aircraft proceeding to a higher minimum en route altitude when crossing specified fixes.

*Required navigation system.* Required navigation system means navigation equipment that meets the performance requirements of TSO C145a/C146a navigation systems certified for IFR en route operations.

*Route segment.* Route segment is a portion of a route bounded on each end by a fix or NAVAID.

*Special MEA.* Special MEA refers to the minimum en route altitudes, using required navigation systems, on published routes outside the operational service volume of ground-based navigation aids and are depicted on the published Low Altitude and High Altitude En Route Charts using the color blue and with the suffix "G." For example, a GPS MEA of 4000 feet MSL would be depicted using the color blue, as 4000G.

*Standard MEA.* Standard MEA refers to the minimum en route IFR altitude on published routes that uses ground-based navigation aids and are depicted on the published Low Altitude and High Altitude En Route Charts using the color black.

*Station referenced.* Station referenced refers to radio navigational aids or fixes that are referenced by ground based navigation facilities such as VOR facilities.

*Wide Area Augmentation System (WAAS).* WAAS is an augmentation to GPS that calculates GPS integrity and correction data on the ground and uses geo-stationary satellites to broadcast GPS integrity and correction data to GPS/WAAS users and to provide ranging signals. It is a safety critical system consisting of a ground network of reference and integrity monitor data processing sites to assess current GPS performance, as well as a space segment that broadcasts that assessment to GNSS users to support en route through precision approach navigation. Users of the system include all aircraft applying the WAAS data and ranging signal.

### Section 3. Operational Requirements

To operate an aircraft under this SFAR, the following requirements must be met:

a. Training and qualification for operations and maintenance personnel on required navigation equipment used under this SFAR.

b. Use authorized procedures for normal, abnormal, and emergency situations unique to these operations, including degraded navigation capabilities, and satellite system outages.

c. For certificate holders, training of flight crewmembers and other personnel authorized to exercise operational control on the use of those procedures specified in paragraph b of this section.

d. Part 129 operators must have approval from the State of the operator to conduct operations in accordance with this SFAR.

e. In order to operate under this SFAR, a certificate holder must be authorized in operations specifications.

### Section 4. Equipment Requirements

a. The certificate holder must have properly installed, certificated, and functional dual required navigation systems as defined in section 2 of this SFAR for the en route operations covered under this SFAR.

b. When the aircraft is being operated under part 91, the aircraft must be equipped with at least one properly installed, certificated, and functional required navigation system as defined in section 2 of this SFAR for the en route operations covered under this SFAR.

### Section 5. Expiration date

This Special Federal Aviation Regulation will remain in effect until rescinded.

[Doc. No. FAA-2003-14305, 68 FR 14077, Mar. 21, 2003]

## SFAR NO. 104—PROHIBITION AGAINST CERTAIN FLIGHTS BY SYRIAN AIR CARRIERS TO THE UNITED STATES

1. *Applicability.* This Special Federal Aviation Regulation (SFAR) No. 104 applies to any air carrier owned or controlled by Syria that is engaged in scheduled international air services.

2. *Special flight restrictions.* Except as provided in paragraphs 3 and 4 of this SFAR No. 104, no air carrier described in paragraph 1 may take off from or land in the territory of the United States.

3. *Permitted operations.* This SFAR does not prohibit overflights of the territory of the United States by any air carrier described in paragraph 1.

4. *Emergency situations.* In an emergency that requires immediate decision and action for the safety of the flight, the pilot in command of an aircraft of any air carrier described in paragraph 1 may deviate from this SFAR to the extent required by that emergency. Each person who deviates from this rule must, within 10 days of the deviation, excluding Saturdays, Sundays, and Federal holidays, submit to the nearest FAA Flight Standards District Office a complete report of the operations or the aircraft involved in the deviation, including a description of the deviation and the reasons therefor.

5. *Duration.* This SFAR No. 104 will remain in effect until further notice.

[Doc. No. FAA-2004-17763, 69 FR 31719, June 4, 2004]

**Subpart A—General**

SOURCE: Docket No. 18334, 54 FR 34292, Aug. 18, 1989, unless otherwise noted.

**§91.1 Applicability.**

(a) Except as provided in paragraphs (b) and (c) of this section and §§91.701 and 91.703, this part prescribes rules governing the operation of aircraft (other than moored balloons, kites, unmanned rockets, and unmanned free balloons, which are governed by part 101 of this chapter, and ultralight vehicles operated in accordance with part 103 of this chapter) within the United States, including the waters within 3 nautical miles of the U.S. coast.

(b) Each person operating an aircraft in the airspace overlying the waters between 3 and 12 nautical miles from the coast of the United States must comply with §§91.1 through 91.21; §§91.101 through 91.143; §§91.151 through 91.159; §§91.167 through 91.193; §91.203; §91.205; §§91.209 through 91.217; §91.221; §§91.303 through 91.319; §§91.323 through 91.327; §91.605; §91.609; §§91.703 through 91.715; and §91.903.

(c) This part applies to each person on board an aircraft being operated under this part, unless otherwise specified.

[Doc. No. 18334, 54 FR 34292, Aug. 18, 1989, as amended by Amdt. 91-257, 64 FR 1079, Jan. 7, 1999; Amdt. 91-282, 69 FR 44880, July 27, 2004]

**§91.3 Responsibility and authority of the pilot in command.**

(a) The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.

(b) In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule of this part to the extent required to meet that emergency.

(c) Each pilot in command who deviates from a rule under paragraph (b) of this section shall, upon the request of the Administrator, send a written report of that deviation to the Administrator.

(Approved by the Office of Management and Budget under control number 2120-0005)

**§91.5 Pilot in command of aircraft requiring more than one required pilot.**

No person may operate an aircraft that is type certificated for more than one required pilot flight crewmember unless the pilot in command meets the requirements of §61.58 of this chapter.

**§91.7 Civil aircraft airworthiness.**

(a) No person may operate a civil aircraft unless it is in an airworthy condition.

(b) The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when unairworthy mechanical, electrical, or structural conditions occur.

**§91.9 Civil aircraft flight manual, marking, and placard requirements.**

(a) Except as provided in paragraph (d) of this section, no person may operate a civil aircraft without complying with the operating limitations specified in the approved Airplane or Rotorcraft Flight Manual, markings, and placards, or as otherwise prescribed by the certificating authority of the country of registry.

(b) No person may operate a U.S.-registered civil aircraft—

(1) For which an Airplane or Rotorcraft Flight Manual is required by §21.5 of this chapter unless there is available in the aircraft a current, approved Airplane or Rotorcraft Flight Manual or the manual provided for in §121.141(b); and

(2) For which an Airplane or Rotorcraft Flight Manual is not required by §21.5 of this chapter, unless there is available in the aircraft a current approved Airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof.

(c) No person may operate a U.S.-registered civil aircraft unless that aircraft is identified in accordance with part 45 of this chapter.

(d) Any person taking off or landing a helicopter certificated under part 29 of this chapter at a heliport constructed over water may make such momentary flight as is necessary for