

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.
P129DC

National Policy

Effective Date:
XX/XX/XX

Cancellation Date:
XX/XX/XX

SUBJ: Decommissioning of 14 CFR Part 129 OpSpec B035, and Revisions to OpSpecs A002 and A003 Authorizing Instrument Flight Rules (IFR) En Route Operations in United States (U.S.) Airspace Using Area Navigation (RNAV) Systems

1. Purpose of This Notice. This notice announces the decommissioning of Title 14 of the Code of Federal Regulations (14 CFR) part 129 operations specification (OpSpec) B035, Class I Navigation En Route in United States (U.S.) Airspace Using Area or Long-Range Navigation Systems, and the mandatory revisions to OpSpec A002, Definitions and Abbreviations, and OpSpec A003, Aircraft Authorized for Operations to the United States, for foreign air carriers. It also announces revisions to Federal Aviation Administration (FAA) Order 8900.1, Flight Standards Information Management System, guidance associated with this change.

2. Audience. The primary audience for this notice is International Field Offices (IFO), Principal Operations Inspectors (POI), Principal Maintenance Inspectors (PMI), and Principal Avionics Inspectors (PAI) with oversight responsibility for operators issued OpSpecs under 14 CFR part 129. The secondary audience includes the Safety Standards and Foundational Business offices.

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee website at https://employees.faa.gov/tools_resources/orders_notices and the Dynamic Regulatory System (DRS) at <https://drs.faa.gov>. Operators and the public can find this notice on the FAA’s website at https://www.faa.gov/regulations_policies/orders_notices and DRS.

4. Guidance. Appendices to this notice show the revised templates. This notice contains the following:

Appendix	Authorizing Document	Paragraph	Applicable to 14 CFR Part
A	OpSpec	A002	129
B	OpSpec	A003	129

5. Explanation of Policy Changes. The International Program Division (AFS-50), together with the Flight Technologies and Procedures Division (AFS-400), has decommissioned the 14 CFR part 129 OpSpec B035 and revised the OpSpec A002 and OpSpec A003 templates and Order 8900.1, Volume 12, International Aviation, inspector guidance as follows:

a. Title 14 CFR Part 129 OpSpec B035. The 14 CFR part 129 template for OpSpec B035 has been decommissioned. Relevant aspects are now incorporated into OpSpec A003 subparagraph b2).

b. Title 14 CFR Part 129 OpSpec A002. This notice announces changes for consistency with the issuance of the new domestic OpSpec B033, IFR En Route Operations, which is available for U.S. operators (not 14 CFR part 129) and announced in Notice N 8900.B033, New B033 Authorization, Revision to A002 Authorization, and Decommissioning of B031, B032, B034, and B035 Authorizations.

c. Title 14 CFR Part 129 OpSpec A003. Selectable text in subparagraph b2) was revised. (See Appendix B to this notice.) This notice also announces:

(1) Changes for consistency with the issuance of the new domestic OpSpec B033, which is available for U.S. operators (not 14 CFR part 129) and announced in Notice N 8900.B033.

(2) The replacement of the term “radar” with “Air Traffic Service (ATS) surveillance.” The broader term “ATS surveillance” encompasses both radar and Automatic Dependent Surveillance-Broadcast (ADS-B).

(3) Incorporation of information from the decommissioned OpSpec B035.

d. Order 8900.1, Volume 12, Chapter 4:

(1) Section 2, Title 14 CFR Part 129 Part A Operations Specifications—General.

(a) IFR En Route Operations in U.S. Airspace Using Area Navigation (RNAV) Systems guidance and guidance from Volume 12, Chapter 4, Section 3 were added as subparagraph e) of the OpSpec A003 guidance.

(b) Additional edits to the added content include:

1. The deletion of a reference to “Q-routes” out of the criteria acceptable to the FAA, and the amendment of a note on Q-routes.

2. The replacement of “ATC radar surveillance and communication” with “ATC surveillance and communication.”

(2) Section 3, Title 14 CFR Part 129 Part B Operations Specifications—En Route Authorizations and Limitations. Due to the decommissioning of OpSpec B035, the guidance was moved to OpSpec A003 guidance in Volume 12, Chapter 4, Section 2.

6. Action. This mandatory decommissioning of the 14 CFR part 129 OpSpec B035, the mandatory revisions to OpSpecs A002 and A003 templates, and the revised Order 8900.1 guidance affect principal inspectors (PI) with responsibility for the issuance, amendment, and oversight of OpSpecs for 14 CFR part 129. (Note: OpSpec B035 does not apply to 14 CFR § 129.14.) When archiving OpSpec B035, inspectors must also issue the revised OpSpecs A002 and A003 and reissue OpSpec A004, Summary of Special Authorizations, Limitations and Restrictions. All PIs will review the guidance in this notice and take appropriate action to ensure compliance within 24 calendar months from the date of this notice.

7. Disposition. The information in this notice will be incorporated into Order 8900.1, Volume 12, Chapter 1, Section 1 and Chapter 4, Sections 2 and 3. Please direct any questions or comments concerning the information in this notice to the International Operations Branch (AFS-52) at 9-AWA-AVS-AFS-050@faa.gov.

Lawrence Fields
Executive Director, Flight Standards Service

Appendix A. Sample OpSpec A002, Definitions and Abbreviations: 14 CFR Part 129

Unless otherwise defined in these operations specifications, all words, phrases, definitions, and abbreviations have identical meanings to those used in Title 14 of the Code of Federal Regulations (14 CFR) and in Title 49 of the United States Code (49 U.S.C.) Subtitle VII, as amended. Additionally, the definitions listed below are applicable to operations conducted in accordance with these operations specifications.

Term or Terms	Definition
<u>Air Ambulance Operations</u>	(1) Air transportation of a person with a health condition that requires medical personnel as determined by a health care provider; or (2) Holding out to the public as willing to provide air transportation to a person with a health condition that requires medical personnel as determined by a health care provider including, but not limited to, advertisement, solicitation, association with a hospital or medical care provider.
<u>Agent For Service</u>	A person designated in writing by the foreign air carrier upon whom service of all notices, processes, decisions, and requirements of the Department of Transportation (DOT), FAA, and National Transportation Safety Board (NTSB) shall be made for and on behalf of the foreign air carrier.
<u>Airways Navigation Facilities</u>	Airways navigation facilities are those International Civil Aviation Authority (ICAO) standard navigation aids (very high frequency omnidirectional range (VOR), VOR/distance measuring equipment (DME), and/or Non-Directional Beacon (NDB)) which are used to establish the en route airway structure within the sovereign airspace of ICAO Member States. These facilities are also used to establish the degree of navigation accuracy required for air traffic control (ATC) and Class I navigation within that airspace.
<u>Alternate Airport</u>	An airport at which an aircraft may land if a landing at the intended airport becomes inadvisable.
<u>Auto Flight Guidance System (AFGS)</u>	Aircraft systems, such as an autopilot, autothrottles, displays, and controls, that are interconnected in such a manner to allow the crew to automatically control the aircraft's lateral and vertical flightpath and speed. A flight management system is sometimes associated with an AFGS.
<u>Automatic Dependent Surveillance (ADS)</u>	A function for use by Air Traffic Services (ATS) in which the ADS equipment in the aircraft automatically transmits data derived from onboard navigation systems via a datalink. As a minimum, the data include aircraft identification and three-dimensional position. ADS is sometimes referred to as ADS-A or ADS-Contract (e.g., a communications contract between the aircraft communications/surveillance system and an air traffic facility or service provider only).

Term or Terms	Definition
<u>Automatic Dependent Surveillance-Broadcast (ADS-B)</u>	ADS-B is a function on an aircraft or surface vehicle operating within the surface movement area that periodically broadcasts via datalink its state vector (horizontal and vertical position, horizontal and vertical velocity) and other information. ADS-B is Automatic in that it requires no external stimulus to elicit a transmission. ADS-B is Dependent because it relies on onboard navigation sources. ADS-B Surveillance information is provided, via data link, to any users (either aircraft or ground-based) within range of the Broadcast signal.
<u>Available Landing Distance (ALD)</u>	ALD is that portion of a runway available for landing and rollout for aircraft cleared for land-and-hold-short operations (LAHSO). This distance is measured from the landing threshold to the hold-short point.
<u>Category I Instrument Approach</u>	A Category I instrument approach is any authorized precision or nonprecision instrument approach which is conducted with a minimum height for instrument flight rules (IFR) flight not less than 200 feet (60 meters) above the touchdown zone and a minimum visibility/Runway Visibility Value (RVV) not less than 1/2 statute mile or Runway Visual Range (RVR) 1800 (for helicopters, 1/4 statute mile or RVR 1600).
<u>Class I Navigation</u>	Class I navigation is any en route flight operation or portion of an operation that is conducted entirely within the designated Operational Service Volumes (or ICAO equivalents) of ICAO standard airway navigation facilities (VOR, VOR/DME, NDB). Class I navigation also includes en route flight operations over routes designated with a Minimum En route Altitude (MEA) Gap (MEA is established with a gap in navigation signal coverage) or ICAO equivalent. En route flight operations conducted within these areas are defined as “Class I navigation” operations irrespective of the navigation means used. Class I navigation includes operations within these areas using pilotage or any other means of navigation which does not rely on the use of VOR, VOR/DME, or NDB.
<u>Cockpit Display of Traffic Information (CDTI)</u>	A CDTI is a generic display that provides a flightcrew with surveillance information about other aircraft including their position. Traffic information for a CDTI may be obtained from one or multiple sources (including ADS-B, Traffic Alert and Collision Avoidance System (TCAS), and Traffic Information Services (TIS)) to provide improved awareness of proximate aircraft and as an aid to visual acquisition as part of the normal see and avoid operations both in the air and on the ground.
<u>Controller-Pilot Data Link Communications (CPDLC)</u>	A means of communication between controller and pilot, using data link for ATC communications.

Term or Terms	Definition
<u>Decision Altitude (Height) (DA(H))</u>	DA(H) is a specified minimum altitude in an instrument approach procedure by which a missed approach must be initiated if the required visual reference to continue the approach has not been established. The ‘altitude’ value is typically measured by a barometric altimeter; the ‘height’ value (H) is typically a radio altitude equivalent height above the touchdown zone (HAT) used only for advisory reference and does not necessarily reflect actual height above underlying terrain. [This definition is consistent with both current U.S. operator usage and ICAO international agreements.]
<u>Dry Lease</u>	Any agreement in which a lessor such as an air carrier, bank, or leasing company leases an aircraft without any crewmembers to a foreign air carrier (the lessee) and in which the lessee maintains operational control.
<u>Dual-Certificated-Noise Compliance</u>	For purpose of noise compliance rules, dual-certificated airplanes are those that are certificated to operate in either a Stage 2 or Stage 3 configuration. The only airplanes dual certificated by the FAA were certain Boeing 747s -300 series or earlier. For noise compliance purposes, these airplanes are considered Stage 2 unless the operator gets a Supplemental Type Certificate (STC) to make the airplane Stage 3 only, or unless the operator voluntarily limits the operation to Stage 3 only.
<u>Fault Detection and Exclusion (FDE)</u>	FDE technology allows onboard GPS equipment to automatically detect a satellite failure that effects navigation and to exclude that satellite from the navigation solution.
<u>Flight Management Systems (FMS)</u>	An integrated system used by flightcrews for flight planning, navigation, performance management, aircraft guidance, and flight progress monitoring.
<u>Foreign Air Carrier</u>	For the purpose of these operations specifications, the term “foreign air carrier” in these operations specifications shall mean the holder of the operations specifications described in Part A Paragraph A001, and that the authorizations, limitations, and procedures described in the operations specifications shall apply to the foreign air carrier as well as to any of its officers, employees, or agents used in the conduct of its operation.
<u>Global Positioning System (GPS) Landing System (GLS)</u>	GLS is a differential GPS-based landing system providing both vertical and lateral position fixing capability. The term GLS may also be applied to any GNSS-based differentially corrected landing system.
<u>ILS-PRM</u>	Simultaneous close parallel instrument landing system (ILS) approaches are enabled through the implementation of special precision runway monitoring (PRM) equipment operated by ATC at certain airfields for specific runways, titled in 14 CFR Part 97 as “ILS PRM.” ILS PRM approaches are conducted between 4,299 and 3,000 feet parallel runway spacing. Runways 3,400 feet or greater apart utilize two parallel ILS courses, aligned with the runway centerlines (RCL). For runways spaced less than 3,400 feet, one ILS is offset 2.5° to 3.0°.

Term or Terms	Definition
<u>Imported Airplane-Noise Compliance</u>	For purposes of the noise compliance rules, an imported airplane is a Stage 2 airplane of 75,000 pounds or more that was purchased by a U.S. person from a non-U.S. owner on or after November 5, 1990. [Under the nonaddition rule (see 14 CFR Part 91, § 91.855), an imported airplane may not be operated to or from any airport in the contiguous United States. Such airplanes may be owned and registered by U.S. persons but are limited to operation outside the contiguous United States.]
<u>Interchange Arrangement(s)</u>	An interchange arrangement is a method of providing operational flexibility and greater utilization of aircraft. Interchange arrangements permit a foreign air carrier to take or relinquish operational control of an aircraft at an airport located either in the U.S. or in the State of the foreign air carrier.
<u>International Air Service</u>	Scheduled air service performed in airplanes for the public transport of passengers, mail, or cargo, between points in two or more countries.
<u>International Air Transportation</u>	Air transportation performed in airplanes for the public transport of passengers, mail, or cargo, between points in two or more countries.
<u>JAA JAR-OPS-1</u>	Joint Aviation Authorities (JAA) Joint Aviation Requirements (JAR) operations (OPS). The European JAA adopted common operational guidance for all Member States in order to harmonize the rules within those States. The JAR-OPS-1, is part 1 of the operational agreement and comprises the operational requirements applicable to commercial air transportation fixed wing aircraft.
<u>Land and Hold Short Operations (LAHSO)</u>	LAHSO is an acronym for “Land and Hold Short Operations.” These operations include landing and holding short of an intersecting runway, an intersecting taxiway, or some other designated point on a runway other than an intersecting runway or taxiway.
<u>Localizer-Type Directional Aid (LDA) PRM</u>	See definition of simultaneous offset instrument approach (SOIA).
<u>Large Aircraft</u>	A large aircraft for the purposes of these operations specifications means an aircraft with a seating capacity of more than 30 passengers and/or a maximum payload of more than 7,500 pounds.
<u>Minimum Descent Altitude (Height) (MDA(H))</u>	MDA(H) is the lowest altitude in an instrument approach procedure to which a descent is authorized on final approach or during circle-to-land maneuvering. The ‘altitude’ value is typically measured by a barometric altimeter; the ‘height’ value (H) is typically a radio altitude equivalent height above the touchdown zone (HAT) or height above airport (HAA) published elevation. The (H) is used only for advisory reference and does not necessarily reflect actual height above underlying terrain. [This definition is consistent with both current U.S. operator usage and ICAO international agreements.]

Term or Terms	Definition
<u>National Airspace System</u>	The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military (for definition of U.S. airspace, see "United States").
<u>One-Hour Reliable Fix (1HRF) Operations</u>	Operations over land or over water where a reliable ground-based Navigational Aid (NAVAID) fix is available at least once each hour.
<u>Operations Representative</u>	A person designated by the foreign air carrier to whom all contacts regarding these operations specifications and the foreign air carrier's operations within the United States shall be addressed for and on behalf of the foreign air carrier.
<u>Operational Service Volume</u>	<p>The Operational Service Volume is that volume of airspace surrounding a NAVAID which is available for operational use and within which a signal of usable strength exists and where that signal is not operationally limited by co-channel interference. Operational Service Volume includes all of the following:</p> <ol style="list-style-type: none"> (1) The officially designated Standard Service Volume excluding any portion of the Standard Service Volume which has been restricted. (2) The Expanded Service Volume. (3) Within the United States, any published Instrument Flight Procedure (IFP) (victor or jet airway, Standard Instrument Departure (SID), Standard Terminal Arrival (STAR), Standard Instrument Approach Procedure (SIAP), or instrument departure). (4) Outside the United States, any designated signal coverage or published IFP equivalent to U.S. standards.
<u>Provisional Airport</u>	An airport approved for use by an air carrier for the purpose of providing scheduled service to a community when the regular airport serving that community is not available. Additionally, for operations with airplanes having a seating capacity of more than 30 passengers and/or a maximum payload of more than 7,500 pounds, an airport certificated under 14 CFR Part 139 or the military equivalent.
<u>Receiver Autonomous Integrity Monitoring (RAIM)</u>	RAIM is a function that considers the availability of satisfactory signal integrity broadcasted from the particular GPS satellites used during a given flight. Onboard GPS navigators accomplish this automatically as the aircraft proceeds along its route. When insufficient signal integrity is detected, an alarm is provided to the flightcrew. Using the predictive RAIM software, flightcrews and dispatchers know in advance whether or not suitable GPS navigation will be available throughout the flight. This predictive information may also be determined during flight planning by contacting an FAA Flight Service Station (FSS).

Term or Terms	Definition
<u>Refueling Airport</u>	An airport approved as an airport to which flights may be dispatched only for refueling. Additionally, for operations with airplanes having a seating capacity of more than 30 passengers and/or a maximum payload of more than 7,500 pounds, an airport certificated under 14 CFR Part 139 or the military equivalent.
<u>Regular Airport</u>	An airport approved under scheduled service to a community as the regular stop to that community. Additionally, for operations with airplanes having a seating capacity of more than 30 passengers and/or a maximum payload of more than 7,500 pounds, an airport certificated under 14 CFR Part 139 or the military equivalent.
<u>Reliable Fix or Reliable Ground-Based NAVAID Fix</u>	A "reliable fix" or "reliable ground-based NAVAID fix" means station passage of a VOR, VOR/Tactical Air Navigation (VORTAC), or NDB. A reliable fix also includes a VOR/DME fix, an NDB/DME fix, a VOR intersection, an NDB intersection, and a VOR/NDB intersection provided course guidance is available from one of the facilities and the fix lies within the designated Operational Service Volumes of any facilities which define the fix.
<u>Required Navigation Performance (RNP)</u>	A statement of navigation performance necessary for operations within a defined airspace.
<u>Required Navigation Performance (RNP) Time Limit</u>	Applies to aircraft equipped with inertial navigation systems (INS) or Inertial Reference Units (IRU) systems where those systems provide the means of navigation to navigate to the degree of accuracy required by ATC. The FAA-approved time in hours (after the system is placed in navigation mode or is updated en route) that the specific INS or IRU make/model (M/M) can meet a specific RNP type on a 95 percent probability basis. It is used to establish the area of operations or routes on which the aircraft/navigation system is qualified to operate.
<u>Required Navigation Performance (RNP) Type</u>	A value typically expressed as a distance in nautical miles (NM) from the intended position within which an aircraft would be for at least 95 percent of the total flying time. For example, RNP 4 represents a lateral and longitudinal navigation accuracy of 4 NM on a 95 percent basis. Note: Applications of RNP to terminal area and other operations may also include a vertical component.
<u>RNAV (GPS) PRM</u>	Area Navigation (RNAV) (GPS) PRM approach that may be substituted for an ILS PRM or LDA PRM approach and is procedurally equivalent.
<u>Runway</u>	In these operations specifications, the term "runway" in the case of land airports, water airports, and heliports, shall mean that portion of the surface intended for the takeoff and landing of land airplanes, seaplanes, or rotorcraft, as appropriate.

Term or Terms	Definition
<u>Simultaneous Offset Instrument Approach (SOIA)</u>	This operation comprises one ILS and one LDA with glide slope. The ILS is aligned with its runway, but the LDA serving the second runway is offset (between 2.5° and 3°) from a parallel track. This offset permits simultaneous instrument approach operations to parallel runways spaced less than 3,000 feet apart, but no less than 750 feet. Because of the offset, this operation is also known as an SOIA.
<u>Runway Visual Range (RVR)</u>	<p>An instrumentally derived value, based on standard calibrations, that represents the horizontal distance a pilot will see down the runway from the approach end. It is based on the sighting of either High Intensity Runway Lights (HIRL) or on the visual contrast of other targets whichever yields the greater visual range. RVR, in contrast to prevailing or runway visibility, is based on what a pilot in a moving aircraft should see looking down the runway. RVR is horizontal visual range, not slant visual range. It is based on the measurement of a transmissometer made near the touchdown point of the instrument runway and is reported in hundreds of feet. RVR is used in lieu of RVV and/or prevailing visibility in determining minimums for a particular runway.</p> <p>(1) Touchdown RVR. The RVR visibility readout values obtained from RVR equipment serving the runway touchdown zone.</p> <p>(2) Mid-RVR. The RVR readout values obtained from RVR equipment located midfield of the runway.</p> <p>(3) Rollout RVR. The RVR readout values obtained from RVR equipment located nearest the rollout end of the runway.</p>
<u>Runway Visibility Value (RVV)</u>	The visibility determined for a particular runway by a transmissometer. A meter provides a continuous indication of the visibility (reported in miles or fractions of miles) for the runway. RVV is used in lieu of prevailing visibility in determining minimums for a particular runway.
<u>United States</u>	“United States,” in a geographical sense, means (1) the states, the District of Columbia, Puerto Rico, and the possessions, including the territorial waters, and (2) the airspace of those areas.
<u>U.S. Special Airports</u>	“Special Airports,” for the purposes of these operations specifications, are airports which the FAA has determined due to such items as surrounding terrain, obstructions, or complex approach procedures are special airports requiring special airport qualifications, and are listed within DRS (specifically, within DRS—Flight Standards Administrative Information—Operations Safety System Documents (OPSS)—Document Number: OPSS Guidance PIC QA, as amended).

Term or Terms	Definition
<u>Surface Movement Guidance and Control System (SMGCS)</u>	A SMGCS system consists of the provision of guidance to, and control or regulation of, all aircraft, ground vehicles and personnel on the movement area of an aerodrome. Guidance relates to facilities, information and advice necessary to enable the pilots of aircraft or the drivers of ground vehicles to find their way on the aerodrome and to keep the aircraft or vehicles on the surfaces or within the areas intended for their use. Control or regulation means the measures necessary to prevent collisions and to ensure that the traffic flows smooth and freely.
<u>VFR Station-Referenced Class I Navigation</u>	VFR station-referenced Class I navigation is any operation conducted within the Operational Service Volumes of ICAO standard navigation aids under visual flight rules (VFR) which uses nonvisual navigation aids (stations), such as VOR, VOR/DME, or NDB as the primary navigation reference. VFR station-referenced Class I navigation includes Class I navigation conducted on-airways and off-airway routings predicated on airways navigation facilities. These operations also include Class I navigation using an RNAV system, which is certificated for IFR flights over the routes being flown.
<u>Wet Lease</u>	Any leasing or other agreement, other than a code-sharing arrangement, in which a lessor such as an air carrier leases an aircraft and at least one flight crewmember to another air carrier (the lessee) where the lessor retains operational control. A wet lease requires that a written agreement between the lessor and the lessee be executed by authorized officers of the two parties. Either a copy of the lease agreement or a written memorandum of the terms of the lease agreement must be provided to the Administrator.
<u>Wide Area Augmentation System (WAAS)</u>	WAAS has been developed to improve the accuracy, integrity, availability, and reliability of GPS signals. WAAS utilizes a fixed localized ground station to calculate GPS integrity and correction data, then broadcasts this information through the GPS satellites to GPS/WAAS users along with ranging signals. It is a safety critical system consisting of a ground network of reference and integrity monitor data processing sites which assess current GPS performance, as well as a space segment that broadcasts that assessment to GNSS users to support IFR navigation.

**Appendix B. Sample OpSpec A003, Aircraft Authorized for Operations to the
United States: 14 CFR Part 129**

- a. The foreign air carrier is authorized to conduct its operations in the United States using only the following:

Table 1 – Authorized Aircraft

M/M/S	Serial Number	Registration Number

- b. Limitations. The following limitations apply:

- (1) All State of the Operator more restrictive limitations apply.

[SELECT the first option if the foreign air carrier is authorized visual flight rules (VFR) en route operations ONLY. SELECT the second option if the foreign air carrier is authorized for instrument flight rules (IFR) en route operations.]

- (2) The foreign air carrier is authorized VFR en route operations only.

- (2) IFR En Route Operations. IFR en route provisions must be met.

(a) Unless authorized by the State of the Operator to indicate oceanic capability on air traffic control (ATC) flight plans of Area Navigation (RNAV) 10, Required Navigation Performance (RNP) 10, RNP 4, or oceanic/remote continental RNP 2, flights must be One-Hour Reliable Fix (1HRF) Operations, where a reliable ground-based Navigational Aid (NAVAID) fix is available at least once each hour.

(b) When using ground-based NAVAIDs to navigate on published airways and over off-airway routings:

(i) The airways and routings used must lie within the Operational Service Volume of the NAVAIDs used, except along airways where minimum en route altitude (MEA) gaps in NAVAID reception are published.

(ii) The required aircraft NAVAID receivers and ground-based NAVAIDs must be available and operational.

(c) When using an RNAV system compliant with navigation specification(s) (NavSpec(s)) RNAV 2 and/or RNP 2 domestic/offshore, as indicated in the applicable flight manual (FM) or Flight Manual Supplement (FMS):

(i) If operating using a single RNAV system, or multiple RNAV systems that rely solely on Global Positioning System (GPS) navigation sensors, any flight operated over off-airway routing must remain within airspace which is under Air Traffic Service (ATS) surveillance and is covered by very high frequency (VHF) voice communications.

[IF the foreign air carrier is authorized for IFR en route operations in subparagraph b(2), SELECT one of the following options for subparagraph b(2)(d)—Class G airspace authorization: IF Class G airspace is NOT authorized, SELECT the FIRST option; IF Class G airspace is authorized, SELECT the second option.]

(d) The foreign air carrier is not authorized to conduct IFR en route operations in Class G airspace.

(d) For IFR en route in Class G airspace, the facilities and services necessary to safely conduct operations in Class G airspace must be available and operational during the period of operation in Class G airspace.

[IF the foreign air carrier is authorized for IFR en route operations in Class G airspace in subparagraph b(2)(d), SELECT one of the following options for subparagraph b(2)(d)(i) for whether operations must be conducted under IFR, VFR, or either. SELECT the first option for IFR ONLY. SELECT the second option for VFR. SELECT the third option for either instrument or visual.]

(i) IFR en route operations in Class G airspace must be conducted under IFR.

(i) IFR en route operations in Class G airspace may be conducted under VFR.

(i) IFR en route operations in Class G airspace may be conducted under IFR or VFR.