

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.175

National Policy

Effective Date:
11/3/11

Cancellation Date:
11/3/12

SUBJ: OpSpec/MSpec/LOA B054/MB054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS)

1. Purpose of this Notice. This notice amends and clarifies guidance for Federal Aviation Administration (FAA) inspectors to authorize and issue operations specification (OpSpec)/management specification (MSpec)/letter of authorization (LOA) B054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS), to operators conducting airplane operations under Title 14 of the Code of Federal Regulations (14 CFR) parts 91, 91 subpart K (part 91K), 121, 121/135, 125 (including the Letter of Deviation Authority (LODA) part 125 subpart M (part 125M) operators), and 135. The sample templates contained in the notice appendices enable airplanes equipped with single long-range navigation systems (S-LRNS) to qualify for Required Navigation Performance 10 (RNP 10) authorization for operation in a limited number of designated areas of operation (e.g., the Gulf of Mexico). This notice amends all B054 templates (i.e., OpSpec/MSpec B054/MB054) and provides a new LOA B054.

2. Audience. The primary audience for this notice consists of FAA certificate-holding district offices (CHDO) and principal operations inspectors (POI) assigned to operators conducting airplane operations under parts 91, 91K, 121, 125 (including the LODA 125M operators), and 135. The secondary audience includes Flight Standards Service (AFS) divisions and branches in the regions and in headquarters (HQ).

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at <http://fsims.avs.faa.gov>. Air carriers (operators) can find this notice on the FAA's Web site at <http://fsims.faa.gov>. This notice is available to the public at http://www.faa.gov/regulations_policies/orders_notices.

4. Background. Fifty-nautical mile (NM) lateral separation between airplanes authorized RNP 10 or Required Navigation Performance 4 (RNP 4) is planned to be implemented in the Gulf of Mexico oceanic control areas (CTA) on October 20, 2011. B054 authorizes the operator to conduct Class II navigation using S-LRNS with an RNP 10 authorization in a limited number of designated areas of operation. The Gulf of Mexico will be the first and (at this time) only area where this authority will be permitted.

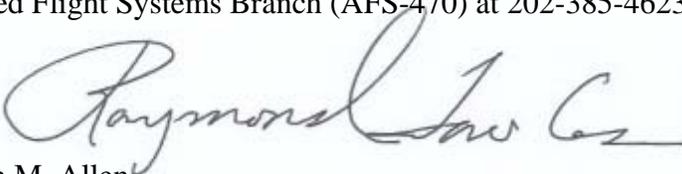
5. Guidance. The Flight Technologies and Procedures Division (AFS-400) developed this notice. This notice contains the following:

- The sample OpSpec B054 template in Appendix A applies to part 121.
- The sample OpSpec B054 template in Appendix B applies to part 121/135.
- The sample OpSpec B054 template in Appendix C applies to part 135.
- The sample OpSpec B054 template in Appendix D applies to part 125.
- The sample LOA B054 template in Appendix E applies to part 125 (LODA 125M).
- The sample LOA B054 template in Appendix F applies to part 91.
- The sample MSpec MB054 template in Appendix G applies to part 91K.

6. Action. Inspectors should review the revised guidance for issuance of B054 contained in this notice. Inspectors should provide this notice to the operators for whom they are responsible, alerting them to updated operating procedures, as well as required pilot knowledge and training.

7. Disposition. We will incorporate the information in this notice into FAA Order 8900.1 before this notice expires. Direct questions concerning the information in this notice to the Performance Based Flight Systems Branch (AFS-470) at 202-385-4623.

for



John M. Allen

Director, Flight Standards Service

Appendix A. Sample OpSpec B054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS): 14 CFR Part 121

The certificate holder shall conduct all Class II navigation operations using a single long-range navigation system (S-LRNS) in accordance with 14 CFR part 121, § 121.351 and the provisions of this operations specification paragraph.

a. Authorized Airplane and Equipment. The certificate holder is authorized to conduct Class II S-LRNS operations using the following airplane.

Table 1—S-LRNS Airplanes and Equipment

Airplane M/M/S	Single Long-Range Navigation Systems			
	Manufacturer	Model		

b. The area of operation where S-LRNS is permitted is defined by the following description and excludes all the North Atlantic (NAT)/Minimum Navigation Performance Specification (MNPS) airspace:

- Beginning at 44°47'20" N./67°00'00" W.;
- Hence to 39°00'00" N./67°00'00" W.;
- Hence to 38°30'00" N./69°20'00" W.;
- Hence to 38°00'00" N./60°00'00" W.;
- Hence to 27°00'00" N./60°00'00" W.;
- Hence to 27°00'00" N./58°00'00" W.;
- Hence to 07°46'00" N./58°00'00" W.; and
- Then northwestward along the adjacent coastline of South America, the eastern coastline of Central America, the eastern coastline of Mexico, and the southern and eastern coastlines of the United States, to the beginning point.

c. Special Limitations and Provisions. The certificate holder shall conduct all operations using an S-LRNS in accordance with the following limitations and provisions:

(1) Unless specifically authorized elsewhere in these operations specifications, the certificate holder shall **not** conduct Class II navigation operations within:

- Central East Pacific (CEP) and composite airspace,
- North Pacific (NOPAC) airspace,
- NAT/MNPS airspace, or
- Areas of magnetic unreliability (AMU). The S-LRNS shall be operational as required by B039 (NAT/MNPS) and B040 (AMU), as applicable.

(2) If the airplane is equipped with only a Single Long-Range Communication System (SLRCS), the requirements of operations specifications B045 must be met.

(3) The certificate holder shall conduct all Class II S-LRNS operations so that the airplane is continuously navigated to the degree of accuracy required for ATC. For areas where these accuracy and navigation performance standards have not been formally established, the long-range navigation system (LRNS) must be used to continuously navigate the airplane so that the crosstrack and/or the alongtrack errors will not exceed 25 NM at any point along the flight plan route specified in the ATC clearance.

(4) Prior to entering any airspace requiring the use of an LRNS, the airplane position shall be accurately fixed using airways navigation facilities or ATC radar. After exiting this airspace, the airplane position shall be accurately fixed and the LRNS error shall be determined and logged in accordance with the operator's approved procedures.

(5) An LRNS fix may be substituted for a required en route ground facility when that facility is temporarily out of service, provided the approved navigation system has sufficient accuracy to navigate the airplane to the degree of accuracy required for ATC over that portion of the route.

(6) At dispatch, at least one of the navigation systems listed below must be installed and operational:

(a) At least one independent inertial navigation system (INS).

(b) At least one flight management system (FMS)/navigation sensor combination (or equivalent) suitable for the route to be flown.

(c) At least one independent GPS navigation system approved for Class II navigation in oceanic and remote areas.

(7) Flightcrew procedures must be in place and used in the event of the loss of the S-LRNS after dispatch.

(8) Before conducting any operations authorized by these operations specifications, the flightcrew must be qualified in accordance with the certificate holder's approved training program for the system and procedures being used.

d. Airplane Equipped with S-LRNS Authorized RNP 10 in Certain Designated Areas of Operations. Class II navigation using an S-LRNS-equipped airplane authorized RNP 10 must be conducted in accordance with the following limitations or provisions:

(1) At dispatch, one of the navigation system configurations listed in subparagraph b(6) must be installed, operational, and (as listed in Table 2) approved for RNP 10.

(2) The certificate holder must ensure that the airplane navigation system will provide RNP 10 performance for the planned flight time in the airspace and, if applicable, that the airplane will be operated within the RNP 10 time limit specified in Table 2.

(3) The International Civil Aviation Organization (ICAO) flight plan filed with the Air Traffic Service Provider (ATSP) must show that the airplane and operator are approved for RNP 10.

(4) The operation must be conducted using the airplanes and navigation equipment listed in Table 2 only within the area of operations listed.

Table 2—S-LRNS Airplane and Equipment Authorized RNP 10

Airplane M/M/S	S-LRNS Manufacturer	S-LRNS Model	RNP 10 Time Limit	Area of Operations Where Permitted
				*Drop-down

*Houston Oceanic Control Area (CTA)/Flight Information Region (FIR), Gulf of Mexico Oceanic Portion of Miami Oceanic CTA/FIR, the Monterrey CTA, and Merida High CTA with in the Mexico FIR/Upper Control Area (UTA).

e. Deviations to RNP 10 Requirements. The administrator may authorize a certificate holder to deviate from RNP 10 requirements in subparagraph d for a specific individual flight in airspace where RNP 10 is required if the ATSP determines that the airplane will not interfere with, or impose a burden on, other operators. Operations conducted under such authority will be conducted in accordance with the following limitations and provisions:

- (1) If fuel planning is predicated on en route climb to flight levels where RNP is normally required, an appropriate request must be coordinated in advance of the flight with the ATSP.
- (2) The appropriate information blocks in the ICAO flight plan filed with the ATSP must show that the airplane is **not** approved for the specified RNP 10 type.
- (3) At dispatch, at least one of the navigation system configurations listed in subparagraph c(6) must be installed and operational.

Appendix B. Sample OpSpec B054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS): 14 CFR Part 121/135

The certificate holder shall conduct all Class II navigation operations using a single long-range navigation system (S-LRNS) in accordance with 14 CFR part 121, § 121.351 or 14 CFR part 135, § 135.165, as appropriate, and the provisions of this operations specification.

a. Authorized Airplane and Equipment. The certificate holder is authorized to conduct Class II S-LRNS operations using the following airplane.

Table 1—S-LRNS Airplanes and Equipment

Airplane M/M/S	Single Long-Range Navigation Systems			
	Manufacturer	Model		

b. The area of operation where S-LRNS is permitted is defined by the following description and excludes all the North Atlantic (NAT)/Minimum Navigation Performance Specification (MNPS) airspace:

- Beginning at 44°47'20" N./67°00'00" W.;
- Hence to 39°00'00" N./67°00'00" W.;
- Hence to 38°30'00" N./69°20'00" W.;
- Hence to 38°00'00" N./60°00'00" W.;
- Hence to 27°00'00" N./60°00'00" W.;
- Hence to 27°00'00" N./58°00'00" W.;
- Hence to 07°46'00" N./58°00'00" W.; and
- Then northwestward along the adjacent coastline of South America, the eastern coastline of Central America, the eastern coastline of Mexico, and the southern and eastern coastlines of the United States, to the beginning point.

c. Special Limitations and Provisions. The certificate holder shall conduct all operations using an S-LRNS in accordance with the following limitations and provisions:

(1) Unless specifically authorized elsewhere in these operations specifications, the certificate holder shall **not** conduct Class II navigation operations within:

- Central East Pacific (CEP) and composite airspace,
- North Pacific (NOPAC) airspace,
- NAT/MNPS airspace, or
- Areas of magnetic unreliability (AMU). The S-LRNS shall be operational as required by B039 (NAT/MNPS) and B040 (AMU), as applicable.

(2) If the airplane is equipped with only a Single Long-Range Communications System (SLRCS), the requirements of operations specifications B045 must be met.

(3) The certificate holder shall conduct all Class II S-LRNS operations so that the airplane is continuously navigated to the degree of accuracy required for ATC. For areas where these accuracy and navigation performance standards have not been formally established, the long-range navigation system (LRNS) must be used to continuously navigate the airplane so that the crosstrack and/or the alongtrack errors will not exceed 25 NM at any point along the flight plan route specified in the ATC clearance.

(4) Prior to entering any airspace requiring the use of an LRNS, the airplane position shall be accurately fixed using airways navigation facilities or ATC radar. After exiting this airspace, the airplane position shall be accurately fixed and the LRNS error shall be determined and logged in accordance with the operator's approved procedures.

(5) An LRNS fix may be substituted for a required en route ground facility when that facility is temporarily out of service, provided the approved navigation system has sufficient accuracy to navigate the airplane to the degree of accuracy required for ATC over that portion of the route.

(6) At dispatch, at least one of the navigation systems listed below must be installed and operational:

(a) At least one independent inertial navigation system (INS).

(b) At least one flight management system (FMS)/navigation sensor combination (or equivalent) suitable for the route to be flown.

(c) At least one independent GPS navigation system approved for Class II navigation in oceanic and remote areas.

(7) Flightcrew procedures must be in place and used in the event of the loss of the S-LRNS after dispatch.

(8) Before conducting any operations authorized by these operations specifications, the flightcrew must be qualified in accordance with the certificate holder's approved training program for the system and procedures being used.

d. Airplane Equipped with S-LRNS Authorized RNP 10 in Certain Designated Areas of Operations. Class II navigation using an S-LRNS-equipped airplane authorized RNP 10 must be conducted in accordance with the following limitations or provisions:

(1) At dispatch, one of the navigation system configurations listed in subparagraph b(6) must be installed, operational, and (as listed in Table 2) approved for RNP 10.

(2) The certificate holder must ensure that the airplane navigation system will provide RNP 10 performance for the planned flight time in the airspace and, if applicable, that the airplane will be operated within the RNP 10 time limit specified in Table 2.

(3) The International Civil Aviation Organization (ICAO) flight plan filed with the Air Traffic Service Provider (ATSP) must show that the airplane and operator are approved for RNP 10.

(4) The operation must be conducted using the airplanes and navigation equipment listed in Table 2 only within the area(s) of operations listed.

Table 2—S-LRNS Airplane and Equipment Authorized RNP 10

Airplane M/M/S	S-LRNS Manufacturer	S-LRNS Model	RNP 10 Time Limit	Area of Operations Where Permitted
				*Drop-down

*Houston Oceanic Control Area (CTA)/Flight Information Region (FIR), Gulf of Mexico Oceanic Portion of Miami Oceanic CTA/FIR, the Monterrey CTA, and Merida High CTA with in the Mexico FIR/Upper Control Area (UTA).

e. Deviations to RNP 10 Requirements. The administrator may authorize a certificate holder to deviate from RNP 10 requirements in subparagraph d for a specific individual flight in airspace where RNP 10 is required if the ATSP determines that the airplane will not interfere with, or impose a burden on, other operators. Operations conducted under such authority will be conducted in accordance with the following limitations and provisions:

- (1) If fuel planning is predicated on en route climb to flight levels where RNP is normally required, an appropriate request must be coordinated in advance of the flight with the ATSP.
- (2) The appropriate information blocks in the ICAO flight plan filed with the ATSP must show that the airplane is **not** approved for the specified RNP 10 type.
- (3) At dispatch, at least one of the navigation system configurations listed in subparagraph c(6) must be installed and operational.

Appendix C. Sample OpSpec B054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS): 14 CFR Part 135

The certificate holder shall conduct all Class II navigation operations using a single long-range navigation system (S-LRNS) in accordance with 14 CFR part 135, § 135.165, as appropriate, and the provisions of this operations specification.

a. Authorized Airplane and Equipment. The certificate holder is authorized to conduct Class II S-LRNS operations using the following airplane.

Table 1—S-LRNS Airplanes and Equipment

Airplane M/M/S	Single Long-Range Navigation Systems			
	Manufacturer	Model		

b. The area of operation where S-LRNS is permitted is defined by the following description and excludes all the North Atlantic (NAT)/Minimum Navigation Performance Specification (MNPS) airspace:

- Beginning at 44°47'20" N./67°00'00" W.;
- Hence to 39°00'00" N./67°00'00" W.;
- Hence to 38°30'00" N./69°20'00" W.;
- Hence to 38°00'00" N./60°00'00" W.;
- Hence to 27°00'00" N./60°00'00" W.;
- Hence to 27°00'00" N./58°00'00" W.;
- Hence to 07°46'00" N./58°00'00" W.; and
- Then northwestward along the adjacent coastline of South America, the eastern coastline of Central America, the eastern coastline of Mexico, and the southern and eastern coastlines of the United States, to the beginning point.

c. Special Limitations and Provisions. The certificate holder shall conduct all operations using an S-LRNS in accordance with the following limitations and provisions:

(1) Unless specifically authorized elsewhere in these operations specifications, the certificate holder shall **not** conduct Class II navigation operations within:

- Central East Pacific (CEP) and composite airspace,
- North Pacific (NOPAC) airspace,
- NAT/MNPS airspace, or
- Areas of magnetic unreliability (AMU). The S-LRNS shall be operational as required by B039 (NAT/MNPS) and B040 (AMU), as applicable

(2) If the airplane is equipped with only a Single Long-Range Communications System (SLRCS), the requirements of operations specifications B045 must be met.

(3) The certificate holder shall conduct all Class II S-LRNS operations so that the airplane is continuously navigated to the degree of accuracy required for ATC. For areas where these accuracy and navigation performance standards have not been formally established, the long-range navigation system (LRNS) must be used to continuously navigate the airplane so that the crosstrack and/or the alongtrack errors will not exceed 25 NM at any point along the flight plan route specified in the ATC clearance.

(4) Prior to entering any airspace requiring the use of an LRNS, the airplane position shall be accurately fixed using airways navigation facilities or ATC radar. After exiting this airspace, the airplane position shall be accurately fixed and the LRNS error shall be determined and logged in accordance with the operator's approved procedures.

(5) An LRNS fix may be substituted for a required en route ground facility when that facility is temporarily out of service, provided the approved navigation system has sufficient accuracy to navigate the airplane to the degree of accuracy required for ATC over that portion of the route.

(6) At dispatch, at least one of the navigation systems listed below must be installed and operational:

(a) At least one independent inertial navigation system (INS).

(b) At least one flight management system (FMS)/navigation sensor combination (or equivalent) suitable for the route to be flown.

(c) At least one independent GPS navigation system approved for Class II navigation in oceanic and remote areas.

(7) Flightcrew procedures must be in place and used in the event of loss of the S-LRNS after dispatch.

(8) Before conducting any operations authorized by these operations specifications, the flightcrew must be qualified in accordance with the certificate holder's approved training program for the system and procedures being used.

d. Airplane Equipped with S-LRNS Authorized RNP 10 in Certain Designated Areas of Operations. Class II navigation using an S-LRNS-equipped airplane authorized RNP 10 must be conducted in accordance with the following limitations or provisions:

(1) At dispatch, one of the navigation system configurations listed in subparagraph b(6) must be installed, operational, and (as listed in Table 2) approved for RNP 10.

(2) The certificate holder must ensure that the airplane navigation system will provide RNP 10 performance for the planned flight time in the airspace and, if applicable, that the airplane will be operated within the RNP 10 time limit specified in Table 2.

(3) The International Civil Aviation Organization (ICAO) flight plan filed with the Air Traffic Service Provider (ATSP) must show that the airplane and operator are approved for RNP 10.

(4) The operation must be conducted using the airplanes and navigation equipment listed in Table 2 only within the area(s) of operations listed.

Table 2—S-LRNS Airplane and Equipment Authorized RNP 10

Airplane M/M/S	S-LRNS Manufacturer	S-LRNS Model	RNP 10 Time Limit	Area of Operations Where Permitted
				*Drop-down

*Houston Oceanic Control Area (CTA)/Flight Information Region (FIR), Gulf of Mexico Oceanic Portion of Miami Oceanic CTA/FIR, the Monterrey CTA, and Merida High CTA with in the Mexico FIR/Upper Control Area (UTA).

e. Deviations to RNP 10 Requirements. The administrator may authorize a certificate holder to deviate from RNP 10 requirements in subparagraph d for a specific individual flight in airspace where RNP 10 is required if the ATSP determines that the airplane will not interfere with, or impose a burden on, other operators. Operations conducted under such authority will be conducted in accordance with the following limitations and provisions:

- (1) If fuel planning is predicated on en route climb to flight levels where RNP is normally required, an appropriate request must be coordinated in advance of the flight with the ATSP.
- (2) The appropriate information blocks in the ICAO flight plan filed with the ATSP must show that the airplane is **not** approved for the specified RNP 10 type.
- (3) At dispatch, at least one of the navigation system configurations listed in subparagraph c(6) must be installed and operational.

Appendix D. Sample OpSpec B054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS): 14 CFR Part 125

The certificate holder shall conduct all Class II navigation operations using S-LRNS in accordance with 14 CFR part 125, § 125.203 and the provisions of this operations specification.

a. Authorized Airplane and Equipment. The certificate holder is authorized to conduct Class II S-LRNS operations using the following airplane.

Table 1—S-LRNS Airplanes and Equipment

Airplane M/M/S	Single Long-Range Navigation Systems	
	Manufacturer	Model

b. The area of operation where S-LRNS is permitted is defined by the following description and excludes all the North Atlantic(NAT)/Minimum Navigation Performance Specification (MNPS) airspace:

- Beginning at 44°47'20" N./67°00'00" W.;
- Hence to 39°00'00" N./67°00'00" W.;
- Hence to 38°30'00" N./69°20'00" W.;
- Hence to 38°00'00" N./60°00'00" W.;
- Hence to 27°00'00" N./60°00'00" W.;
- Hence to 27°00'00" N./58°00'00" W.;
- Hence to 07°46'00" N./58°00'00" W.; and
- Then northwestward along the adjacent coastline of South America, the eastern coastline of Central America, the eastern coastline of Mexico, and the southern and eastern coastlines of the United States, to the beginning point.

c. Special Limitations and Provisions. The certificate holder shall conduct all operations using an S-LRNS in accordance with the following limitations and provisions:

(1) Unless specifically authorized elsewhere in these operations specifications, the certificate holder shall **not** conduct Class II navigation operations within:

- Central East Pacific (CEP) and composite airspace,
- North Pacific (NOPAC) airspace,
- NAT/MNPS airspace, or
- Areas of magnetic unreliability (AMU). The S-LRNS shall be operational as required by B039 (NAT/MNPS) and B040 (AMU), as applicable.

(2) If the airplane is equipped with only a Single Long-Range Communications System (SLRCS), the requirements of operations specifications B045 must be met.

(3) The certificate holder shall conduct all Class II S-LRNS operations so that the airplane is continuously navigated to the degree of accuracy required for ATC. For areas where these accuracy and navigation performance standards have not been formally established, the long-range navigation system (LRNS) must be used to continuously navigate the airplane so that the crosstrack and/or the alongtrack errors will not exceed 25 NM at any point along the flight plan route specified in the ATC clearance.

(4) Prior to entering any airspace requiring the use of an LRNS, the airplane position shall be accurately fixed using airways navigation facilities or ATC radar. After exiting this airspace, the airplane position shall be accurately fixed and the LRNS error shall be determined and logged in accordance with the operator’s approved procedures.

(5) An LRNS fix may be substituted for a required en route ground facility when that facility is temporarily out of service, provided the approved navigation system has sufficient accuracy to navigate the airplane to the degree of accuracy required for ATC over that portion of the route.

(6) At dispatch, at least one of the navigation systems listed below must be installed and operational:

(a) At least one independent inertial navigation system (INS).

(b) At least one flight management system (FMS)/navigation sensor combination (or equivalent) suitable for the route to be flown.

(c) At least one independent GPS navigation system approved for Class II navigation in oceanic and remote areas.

(7) Flightcrew procedures must be in place and used in the event of the loss of the S-LRNS after dispatch.

(8) Before conducting any operations authorized by these operations specifications, the flightcrew must be qualified in accordance with the certificate holder’s training manual for the system and procedures being used.

d. Airplane Equipped with S-LRNS Authorized RNP 10 in Certain Designated Areas of Operations. Class II navigation using an S-LRNS-equipped airplane authorized RNP 10 must be conducted in accordance with the following limitations or provisions:

(1) At dispatch, one of the navigation system configurations listed in subparagraph b(6) must be installed, operational, and (as listed in Table 2) approved for RNP 10.

(2) The certificate holder must ensure that the airplane navigation system will provide RNP 10 performance for the planned flight time in the airspace and, if applicable, that the airplane will be operated within the RNP 10 time limit specified in Table 2 below.

(3) The ICAO flight plan filed with the Air Traffic Service Provider (ATSP) must show that the airplane and operator are approved for RNP 10.

(4) The operation must be conducted using the airplanes and navigation equipment listed in Table 2 only within the area(s) of operations listed.

Table 2—S-LRNS Airplane and Equipment Authorized RNP 10

Airplane M/M/S	S-LRNS Manufacturer	S-LRNS Model	RNP 10 Time Limit	Area of Operations Where Permitted
				*Drop-down

*Houston Oceanic Control Area (CTA)/Flight Information Region (FIR), Gulf of Mexico Oceanic Portion of Miami Oceanic CTA/FIR, the Monterrey CTA, and Merida High CTA with in the Mexico FIR/Upper Control Area (UTA).

e. Deviations to RNP 10 Requirements. The administrator may authorize a certificate holder to deviate from RNP 10 requirements in subparagraph c for a specific individual flight in airspace where RNP 10 is required if the ATSP determines that the airplane will not interfere with, or impose a burden on, other operators. Operations conducted under such authority will be conducted in accordance with the following limitations and provisions:

- (1) If fuel planning is predicated on en route climb to flight levels where RNP is normally required, an appropriate request must be coordinated in advance of the flight with the ATSP.
- (2) The appropriate information blocks in the ICAO flight plan filed with the ATSP must show that the airplane is **not** approved for the specified RNP 10 type.
- (3) At dispatch, at least one of the navigation system configurations listed in subparagraph c(6) must be installed and operational.

Appendix E. Sample LOA B054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS): 14 CFR Part 125 (LODA 125M)

**Letter of Authorization
Class II Navigation Using Single Long-Range Navigation System (S-LRNS)**

1. The Operator/Company authorized to conduct operations in accordance with the Letter of Deviation Authority (LODA) A125 shall conduct all Class II navigation operations using S-LRNS in accordance with 14 CFR part 125, § 125.203 and the special limitations and provisions of this letter of authorization.
2. Authorized Airplane and Equipment. The Operator/Company is authorized to conduct Class II S-LRNS operations using the following airplane and S-LRNS.

Table 1—Authorized Airplane(s) and Equipment

Airplane M/M/S	Single Long-Range Navigation Systems	
	Manufacturer	Model

3. The area of operation where S-LRNS is permitted is defined by the following description and excludes all the North Atlantic (NAT)/Minimum Navigation Performance Specification (MNPS) airspace:
 - Beginning at 44°47'20" N./67°00'00" W.;
 - Hence to 39°00'00" N./67°00'00" W.;
 - Hence to 38°30'00" N./69°20'00" W.;
 - Hence to 38°00'00" N./60°00'00" W.;
 - Hence to 27°00'00" N./60°00'00" W.;
 - Hence to 27°00'00" N./58°00'00" W.;
 - Hence to 07°46'00" N./58°00'00" W.; and
 - Then northwestward along the adjacent coastline of South America, the eastern coastline of Central America, the eastern coastline of Mexico, and the southern and eastern coastlines of the United States, to the beginning point.
4. Special Limitations and Provisions. The Operator/Company shall conduct all operations using an S-LRNS in accordance with the following limitations and provisions:
 - a. Unless specifically authorized elsewhere in this letter of authorization, the Operator/Company shall **not** conduct Class II navigation operations within:
 - Central East Pacific (CEP) and composite airspace,
 - North Pacific (NOPAC) airspace,
 - NAT/MNPS airspace, or
 - Areas of magnetic unreliability (AMU). The S-LRNS shall be operational as required by B039 (NAT/MNPS) and B040 (AMU), as applicable.
 - b. If the airplane is equipped with only a Single Long-Range Communications System (SLRCS), the requirements of letter of authorization B045 must be met.
 - c. The Operator/Company shall conduct all Class II S-LRNS operations so the airplane is continuously navigated to the degree of accuracy required for ATC. For areas where these accuracy and navigation performance standards have not been formally established, the long-range navigation system (LRNS) must be used to

continuously navigate the airplane so that the crosstrack and/or the alongtrack errors will not exceed 25 NM at any point along the flight plan route specified in the ATC clearance.

d. Prior to entering any airspace requiring the use of an LRNS, the airplane position shall be accurately fixed using airways navigation facilities or ATC radar. After exiting this airspace, the airplane position shall be accurately fixed and the LRNS error shall be determined and logged in accordance with the operator’s procedures.

e. An LRNS fix may be substituted for a required en route ground facility when that facility is temporarily out of service, provided the approved navigation system has sufficient accuracy to navigate the airplane to the degree of accuracy required for ATC over that portion of the route.

f. At release, at least one of the navigation systems listed below must be installed and operational:

(1) At least one independent inertial navigation system (INS).

(2) At least one flight management system (FMS)/navigation sensor combination (or equivalent) suitable for the route to be flown.

(3) At least one independent GPS navigation system approved for Class II navigation in oceanic and remote areas.

g. Flightcrew procedures must be in place and used in the event of the loss of the S-LRNS after flight release.

h. Before conducting any operations authorized by this letter of authorization, the flightcrew must be qualified in accordance with the Operator’s/Company’s training program for the system and procedures being used.

5. Airplane Equipped with S-LRNS Authorized RNP 10 in Certain Designated Areas of Operations. Class II navigation using an S-LRNS-equipped airplane authorized RNP 10 must be conducted in accordance with the following limitations or provisions:

a. At flight release, one of the navigation system configurations listed in subparagraph 3f must be installed, operational, and (as listed in Table 2) approved for RNP 10.

b. The Operator/Company must ensure that the airplane navigation system will provide RNP 10 performance for the planned flight time in the airspace and, if applicable, that the airplane will be operated within the RNP 10 time limit specified in Table 2.

c. The International Civil Aviation Organization (ICAO) flight plan filed with the Air Traffic Service Provider (ATSP) must show that the airplane and operator are approved for RNP 10.

d. The operation must be conducted using the airplanes and navigation equipment listed in Table 2 only within the area(s) of operations listed.

Table 2—S-LRNS Airplane and Equipment Authorized RNP 10

Airplane M/M/S	S-LRNS Manufacturer	S-LRNS Model	RNP 10 Time Limit	Area of Operations Where Permitted
				*Drop-down

*Houston Oceanic Control Area (CTA)/Flight Information Region (FIR), Gulf of Mexico Oceanic Portion of Miami Oceanic CTA/FIR, the Monterrey CTA, and Merida High CTA with in the Mexico FIR/Upper Control Area (UTA).

6. Deviations to RNP Requirements. The administrator may authorize an Operator/Company to deviate from the RNP 10 requirements in subparagraph 5 for a specific individual flight in airspace where RNP 10 is required if the

ATSP determines that the airplane will not interfere with, or impose a burden on, other operators. Operations conducted under such authority will be conducted in accordance with the following limitations and provisions:

- a. If fuel planning is predicated on en route climb to flight levels where RNP is normally required, an appropriate request must be coordinated in advance of the flight with the ATSP.
- b. The appropriate information blocks in the ICAO flight plan filed with the ATSP must show that the airplane is **not** approved for the specified RNP 10 type.
- c. At flight release, at least one of the navigation system configurations listed in subparagraph 4f must be installed and operational.

Appendix F. Sample LOA B054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS): 14 CFR Part 91

Letter of Authorization

Class II Operations in Airspace Where RNP 10 Is Applied Using a Single Long-Range Navigation System (S-LRNS)

1. Authorization. The Operator listed at the bottom of this document is authorized to conduct operations within airspace where RNP 10 is applied in accordance with the limitations and provisions of this letter of authorization and is subject to the conditions that all operations conducted within the designated RNP airspace are in accordance with 14 CFR part 91, §§ 91.511 and 91.703 and the flight rules contained in International Civil Aviation Organization (ICAO) Annex 2, Rules of the Air.
2. Authorized Airplanes. The operator is authorized RNP 10 for the conduct of Class II operations using S-LRNS with the airplanes, navigation, and communication equipment listed in Table 1 only within the area of operations also listed. The required equipment must be installed, operational and maintained in accordance with the airplane or equipment manufacturer’s recommendations.

Table 1—S-LRNS Airplanes and Equipment Authorized RNP 10

Airplane Serial Number	Registration Number	Airplane M/M/S	Single Long-Range Navigation Systems M/M	Communications Equipment M/M	RNP 10 Time Limit	Area of Operations Where Permitted
						*Drop-down

*Houston Oceanic Control Area (CTA)/Flight Information Region (FIR), Gulf of Mexico Oceanic Portion of Miami Oceanic CTA/FIR, the Monterrey CTA, and Merida High CTA with in the Mexico FIR/Upper Control Area (UTA).

3. Crew Training. Crew training conducted by . In accordance with §§ 91.3 and 91.703(a)(1)(2) and ICAO Annex 2, paragraph 2.3.2, crews are responsible for policies and procedures in areas of operations where flights are conducted.
4. Responsible Person. The responsible person for crew operations may be either an agent for service (who must be a U.S. citizen) or a person who is a U.S. citizen or holds a U.S. pilot certificate and accepts responsibility for complying with the stated regulations by signing this document.
 - a. If the responsible person signing this letter of authorization relinquishes responsibility, this letter of authorization becomes invalid.
 - b. Enter the name, e-mail address, and telephone number in Table 2 of the responsible person signing this letter of authorization:

Table 2—Responsible Person

Name	E-mail Address	Telephone Number
[LOAD Operator Data]		

5. Deviations to RNP 10 Requirements. The administrator may authorize an operator to deviate from RNP requirements for a specific individual flight in airspace where RNP 10 is required if the Air Traffic Service Provider (ATSP) determined that the airplane will not interfere with, or impose a burden on, other operators.

Operations conducted under such authority will be conducted in accordance with the following limitations and provisions:

- a. If fuel planning is predicated on en route climb to flight levels where RNP 10 is normally required, an appropriate request must be coordinated in advance of the flight with the ATSP.
- b. The appropriate information blocks in the ICAO flight plan filed with the ATSP must show that the airplane is **not** approved for RNP 10.

Appendix G. Sample MSpec MB054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS): 14 CFR Part 91K

- a. The program manager shall conduct all Class II navigation operations using single long-range navigation system (S-LRNS) in accordance with 14 CFR part 91, § 91.511 and the provisions of this management specification.
- b. Authorized Airplane and Equipment. The program manager is authorized to conduct Class II S-LRNS operations using the following airplane and S-LRNS.

Table 1—Authorized Airplane(s) and Equipment

Airplane M/M/S	Single Long-Range Navigation Systems	
	Manufacturer	Model

- c. Special Limitations and Provisions. The program manager shall conduct all operations using an S-LRNS in accordance with the following limitations and provisions:

(1) The program manager shall conduct all Class II S-LRNS operations only within the areas of en route operation where this paragraph is referenced in MSpec MB050.

(2) Unless specifically authorized elsewhere in these management specifications, the program manager shall not conduct Class II navigation operations within:

- Central East Pacific (CEP) and composite airspace,
- North Pacific (NOPAC) airspace,
- North Atlantic (NAT)/Minimum Navigation Performance Specifications (MNPS) airspace, or
- Areas of magnetic unreliability (AMU). The S-LRNS shall be operational as required by B039 (NAT/MNPS) and B040 (AMU), as applicable.

(3) If the airplane is equipped with only a Single Long-Range Communications System (SLRCS), the requirements of MSpec B045 must be met.

(4) The program manager shall conduct all Class II S-LRNS operations so that the airplane is continuously navigated to the degree of accuracy required for ATC. For areas where these accuracy and navigation performance standards have not been formally established, the long-range navigation system (LRNS) must be used to continuously navigate the airplane so that the crosstrack and/or the alongtrack errors will not exceed 25 NM at any point along the flight plan route specified in the ATC clearance.

(5) Prior to entering any airspace requiring the use of an LRNS, the airplane position shall be accurately fixed using airways navigation facilities or ATC radar. After exiting this airspace, the airplane position shall be accurately fixed and the LRNS error shall be determined and logged in accordance with the program manager’s approved procedures.

(6) An LRNS fix may be substituted for a required en route ground facility when that facility is temporarily out of service, provided the approved navigation system has sufficient accuracy to navigate the airplane to the degree of accuracy required for ATC over that portion of the route.

(7) At dispatch, at least one of the navigation systems listed below must be installed and operational:

- (a) At least one independent inertial navigation system (INS).

(b) At least one flight management system (FMS)/navigation sensor combination (or equivalent) suitable for the route to be flown.

(c) At least one independent GPS navigation system approved for Class II navigation in oceanic and remote areas.

(8) Flightcrew procedures must be in place and used in the event of loss of the S-LRNS after dispatch.

(9) Before conducting any operations authorized by this management specification, the flightcrew must be qualified in accordance with the program manager’s approved training program for the system and procedures being used.

d. Airplane Equipped with S-LRNS Authorized RNP 10 in Certain Designated Areas of Operations. Class II navigation using an S-LRNS-equipped airplane authorized RNP 10 must be conducted in accordance with the following limitations or provisions:

(1) At flight release, one of the navigation system configurations listed in subparagraph c(7) must be installed, operational, and (as listed in Table 2) approved for RNP 10.

(2) The program manager must ensure that the airplane navigation system will provide RNP 10 performance for the planned flight time in the airspace and, if applicable, that the airplane will be operated within the RNP 10 time limit specified in Table 2.

(3) The International Civil Aviation Organization (ICAO) flight plan filed with the Air Traffic Service Provider (ATSP) must show that the airplane and operator are approved for RNP 10.

(4) The operation must be conducted using the airplanes and navigation equipment listed in Table 2 only within the area(s) of operations listed.

Table 2—S-LRNS Airplane and Equipment Authorized RNP 10

Airplane M/M/S	S-LRNS Manufacturer	S-LRNS Model	RNP 10 Time Limit	Area of Operations Where Permitted
				*Drop-down

*Houston Oceanic Control Area (CTA)/Flight Information Region (FIR), Gulf of Mexico Oceanic Portion of Miami Oceanic CTA/FIR, the Monterrey CTA, and Merida High CTA with in the Mexico FIR/Upper Control Area (UTA).

e. Deviations to RNP Requirements. The administrator may authorize a program manager to deviate from RNP 10 requirements in subparagraph d for a specific individual flight in airspace where RNP 10 is required if the ATSP determines that the airplane will not interfere with, or impose a burden on, other operators. Operations conducted under such authority will be conducted in accordance with the following limitations and provisions:

(1) If fuel planning is predicated on en route climb to flight levels where RNP is normally required, an appropriate request must be coordinated in advance of the flight with the ATSP.

(2) The appropriate information blocks in the ICAO flight plan filed with the ATSP must show that the airplane is **not** approved for the specified RNP 10 type.

(3) At flight release, at least one of the navigation system configurations listed in subparagraph c(7) must be installed and operational.