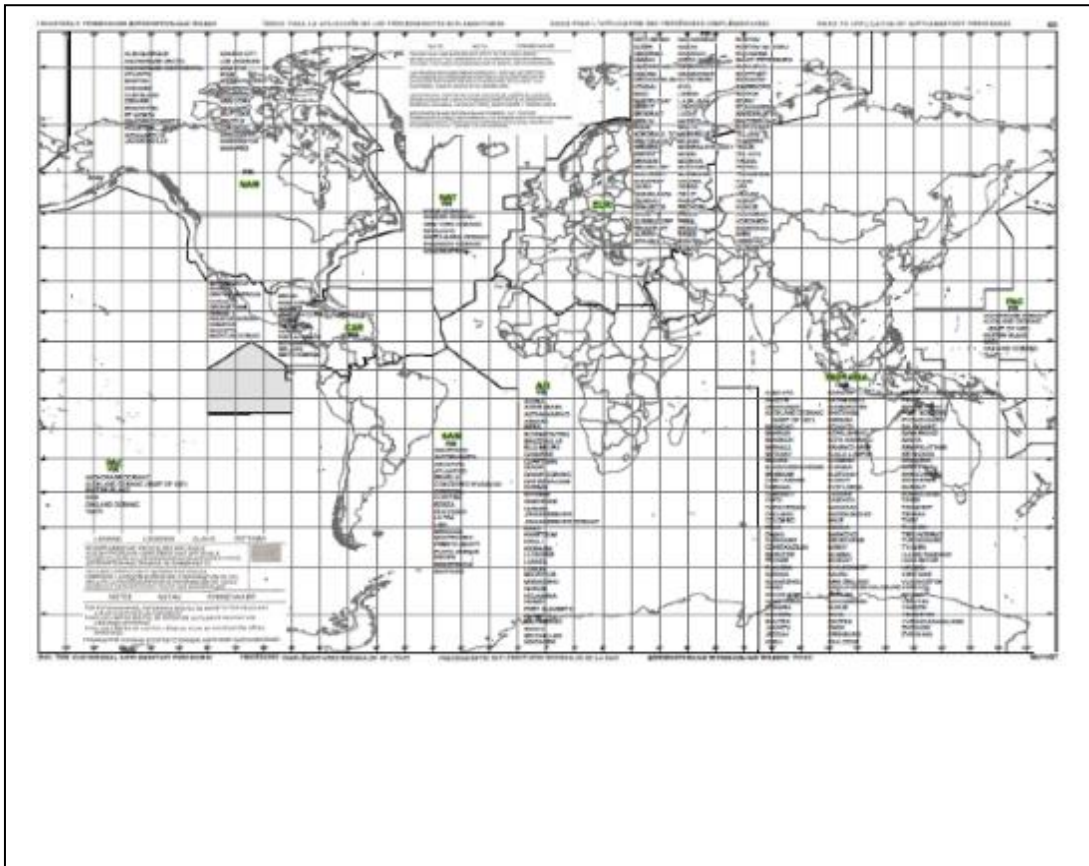


ΑΙΤΗΣΗ ΓΙΑ ΠΙΣΤΟΠΟΙΗΣΗ ΜΝΡS
Application Form for ΜΝΡS Approval
(Airworthiness & Operational Approval Conformance Document)

REFERENCES	ISSUE DATE	TITLE
Reg. (EU) No 965/2012	5 October 2012	SPA.MNPS.100 ΜΝΡS operational approval
ICAO Doc 7030	2008	Regional Supplementary Procedures
Doc. 9613-AN/937 First Edition		Manual on Required Navigation Performance (RNP)



1. Applicant / Operator			
Name			
Address			
Tel		e-mail	
Contact person			
e-paravolo (if applicable)			
2. Aircraft			
Aircraft Type			
Aircraft S/N	Aircraft Registration		
Engine Type	Engine S/N 1:	Engine S/N 3:	
	Engine S/N 2:	Engine S/N 4:	
3. Requested MNPS Area by the applicant:			
Africa-Indian Ocean (AFI):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Caribbean (CAR):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
European (EUR) Regional:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Middle East/Asia (MID/ASIA):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
North America (NAM):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
North Atlantic (NAT):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Pacific (PAC):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
South American (SAM):	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Part 1 Airworthiness			
SPA.MNPS.105 MNPS operational approval			
To obtain an MNPS operational approval from the competent authority, the operator shall provide evidence that:			
(a) the navigation equipment meets the required performance;			
4. Other approvals held by the applicant for the specific aircraft type:			
RNAV 1;	Yes <input type="checkbox"/>		
RNP 4;	Yes <input type="checkbox"/>		
RNAV 10 (RNP10)	Yes <input type="checkbox"/>		
RNP 1/RNP 2	Yes <input type="checkbox"/>		
RNP APCH — LNAV minima	Yes <input type="checkbox"/>		
RNP APCH — LNAV/VNAV minima	Yes <input type="checkbox"/>		
RNP APCH — LPV minima	Yes <input type="checkbox"/>		
RNP 2 oceanic	Yes <input type="checkbox"/>		
RVSM	Yes <input type="checkbox"/>		
5. AFM or AFM Supplement			
Aeroplane Flight Manual (or AFM Supplement) shows the following airworthiness approval for navigation system installed :			
FAA AC 20-130A	Yes <input type="checkbox"/>	No <input type="checkbox"/>	FAA TSO-C146 Yes <input type="checkbox"/> No <input type="checkbox"/>
FAA AC 20-138	Yes <input type="checkbox"/>	No <input type="checkbox"/>	FAA TSO-C129a Yes <input type="checkbox"/> No <input type="checkbox"/>
FAA AC 25-4	Yes <input type="checkbox"/>	No <input type="checkbox"/>	JAA JTSO-2C115 Yes <input type="checkbox"/> No <input type="checkbox"/>
FAA AC 90-45A	Yes <input type="checkbox"/>	No <input type="checkbox"/>	JAA JTSO-2C129a Yes <input type="checkbox"/> No <input type="checkbox"/>
FAA AC 25-15	Yes <input type="checkbox"/>	No <input type="checkbox"/>	JAA GEN TGL No. 10 Yes <input type="checkbox"/> No <input type="checkbox"/>
RNP10 (RNAV 10)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	JAA AMJ 20X2 Yes <input type="checkbox"/> No <input type="checkbox"/>
FAA Notice 8110.60	Yes <input type="checkbox"/>	No <input type="checkbox"/>	FAA AC 90-94 Yes <input type="checkbox"/> No <input type="checkbox"/>
FAA TSO-C115	Yes <input type="checkbox"/>	No <input type="checkbox"/>	FAA Order 8400.12A Yes <input type="checkbox"/> No <input type="checkbox"/>
FAA TSO-C145	Yes <input type="checkbox"/>	No <input type="checkbox"/>	MNPS Yes <input type="checkbox"/> No <input type="checkbox"/>
	Yes <input type="checkbox"/>	No <input type="checkbox"/>	RNP4 Yes <input type="checkbox"/> No <input type="checkbox"/>
Other	Yes <input type="checkbox"/>	No <input type="checkbox"/>	(If Yes refer below)
6. LATERAL CERTIFICATION - Long Range Navigation System			
Manufacturer	Model		
Type	Software status		
P/N	TSO		
Number of independent LRNS installed :	One <input type="checkbox"/>	Two <input type="checkbox"/>	Three <input type="checkbox"/>
Navigation Data Base Provider:			

7. Aircraft eligibility for MNPS shown in :		
AFM	<input type="checkbox"/>	
Type design (TCDS)	<input type="checkbox"/>	
STC	<input type="checkbox"/>	
Service Bulletin	<input type="checkbox"/>	
Major Modification	<input type="checkbox"/>	
Compliance statement from the Manufacturer	<input type="checkbox"/>	
Other	<input type="checkbox"/>	
8. LRNS configuration		
a) Is aeroplane position automatically determined from VOR/DME sensors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
b) Is aeroplane position automatically determined from DME/DME sensors?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
c) Is aeroplane position automatically determined from INS/IRS systems with automatic updating from suitable radio based navigation equipment?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
d) Is aeroplane position automatically determined from INS/IRS systems without automatic updating from suitable radio based navigation equipment?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
In case (d) is applicable refer to time limitation regarding RNP10 accuracy:	In hrs:.....	
e) Is aeroplane position automatically determined from independent (stand-alone) GPS systems?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
f) Is aeroplane position automatically determined from FMS / Multi-sensor navigation systems integrating GPS?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
g) Indication of <u>Estimate Time of Arrival (ETA)</u> provided?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
h) Aircraft Master Clock could be reset and adjusted only in pre-flight?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
9. Accuracy provided		
The LRNS provides accuracy of less than (miles)		
(The NAT MNPS <i>defines</i> a requirement for the standard deviation of lateral track errors to be less than 6.3 nm. This effectively equates to an RNP value of 12.6 nm)		
Refer to		
10. Aircraft Position relative to desired track –Auto pilot		
Each LRNS must be capable of providing to the flight crew a continuous indication of the aircraft position relative to desired track.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
It is highly desirable that the navigation system employed for the provision of steering guidance is capable of being coupled to the autopilot.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
11. LRNS based only in GPS		
a) If operations are based on stand-alone GPS navigation equipment, availability of GPS integrity should be confirmed and obtained from a Receiver Autonomous Integrity Monitoring (RAIM) prediction program that is provided in the GPS unit in the aeroplane, a prediction program run outside the aeroplane, or an alternate method considered acceptable to the HCAA.		
- RAIM prediction program provided in the aeroplane?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
- RAIM prediction program run outside the aeroplane	Yes <input type="checkbox"/>	No <input type="checkbox"/>
b) If operations are based on stand-alone GPS navigation equipment, availability of GPS integrity should be confirmed and obtained from an approved dispatch fault detection and exclusion (FDE) availability prediction program.		
- Satellite Fault Detection an Exclusion (FDE) capability?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
c) MNPS operations with stand-alone GPS navigation equipment approved i.a.w. TSO-C129, but do not provide pseudorange step detection and health word checking functions, are limited to flights where maximum RAIM outages do not exceed 5 minutes.		
- Limitation applicable?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
d) If GPS serves as only one of the two required LRNSs, then it must be approved in accordance with FAA TSO-C129 as Class A1, A2, B1, B2, C1 or C2, or with equivalent national or JAA documentation.		
	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Note : In these cases, operators conducting GPS primary means navigation in MNPS Airspace must utilise a Fault Detection and Exclusion (FDE) Availability Prediction Programme for the installed GPS equipment; one that is capable of predicting, prior to departure for flight on a specified route*, the following:		
<ul style="list-style-type: none"> the maximum outage duration of the loss of fault exclusion; 		

- the loss of fault detection; and
- the loss of navigation function.

Operator response:

12. Communication/Surveillance equipments

Extended overwater operations shall not be performed unless at least dual long-range communication (LRCS) equipment (HF Voice / Data Link, SATCOM, SELCAL etc.) is installed and operational.

	Yes	No	No inst.	Model	Type	TSO
LRCS (HF) installed	<input type="checkbox"/>	<input type="checkbox"/>	()			
VHF installed?	<input type="checkbox"/>	<input type="checkbox"/>	()			
SELCAL	<input type="checkbox"/>	<input type="checkbox"/>	()			
SATCOM	<input type="checkbox"/>	<input type="checkbox"/>	()			
CPDLC	<input type="checkbox"/>	<input type="checkbox"/>	()			
Other	<input type="checkbox"/>	<input type="checkbox"/>	()			
RCP in compliance with RCP240	<input type="checkbox"/>	<input type="checkbox"/>				

Aircraft Transponder

Aircraft is equipped with :	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Mode S (ELS):	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Mode S (EHS):	Yes <input type="checkbox"/>	No <input type="checkbox"/>
ADS-B (in):	Yes <input type="checkbox"/>	No <input type="checkbox"/>
ADS-B (in/out) :	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Surveillance RSP is compliant with RSP 180):	Yes <input type="checkbox"/>	No <input type="checkbox"/>

14. ACAS II system installed

Manufacturer		Model	
Type		P/N	
TSO			

Operator response:

Refer to

15. ELT installed

Manufacturer		P/N	
Type		TSO	
No installed		One <input type="checkbox"/>	Two <input type="checkbox"/>

Operator response:

Refer to

16. MEL

The applicant has revise relevant parts of the MEL to reflect system requirements appropriate for MNPS operations

MEL covers MNPS requirements? Yes No

(appropriate sections of MEL should be submitted)

Operator response:

Refer to

Part 2 Operations

SPA.MNPS.100 MNPS operations

Aircraft shall only be operated in designated minimum navigation performance specifications (MNPS) airspace in accordance with regional supplementary procedures, where minimum navigation performance specifications are established, if the operator has been granted an approval by the competent authority to conduct such operations.

GM1 SPA.MNPS.100 MNPS operations

MNPS and the procedures governing their application are published in the Regional Supplementary Procedures, ICAO Doc 7030, as well as in national AIPs.

17. Regional Supplementary Procedures, ICAO Doc 7030,

Applicant has to submit the latest Regional Supplementary Procedures, ICAO Doc 7030 for the requested MNPS area of operation

Yes No

18. Operations Manual

Does the Operation Manual mention the MNPS in the introduction paragraph of the Operations

Manual Part A ?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does the Operation Manual describes the required qualification/competence for flight crew members?	Yes <input type="checkbox"/> No <input type="checkbox"/>
<i>Note: Checking of practical MNPS-application during OPC shall be performed by a TRE Checking of practical MNPS-operation during initial and/or regular Line Checks shall be conducted by a Training Captain (TC) or TRE.</i>	
19. Flight Planning	
a. Instruction must be provided to flight crew to review and verify the aircraft technical status reflected in the Techlog to verify aircraft dispatch status	Yes <input type="checkbox"/> No <input type="checkbox"/>
b. Description of flight charts used	Yes <input type="checkbox"/> No <input type="checkbox"/>
20. Flight deck preparation	
Procedures for alignment of the inertial navigation systems must be described in detail, including Position Initialization Procedures and the use of a Satellite Navigation Availability Program.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Procedure to check of the functionality and accuracy of 2 Long Range Navigation Systems (2 LRNS)	Yes <input type="checkbox"/> No <input type="checkbox"/>
Procedure for way point loading (Co-ordination of two persons)	Yes <input type="checkbox"/> No <input type="checkbox"/>
Procedure for checking the Flight Plan Data in the FMS	Yes <input type="checkbox"/> No <input type="checkbox"/>
Procedure for checking the Long Range Communication Equipment (HF-Systems/SAT Comm)	Yes <input type="checkbox"/> No <input type="checkbox"/>
UTC-Check and synchronisation of the aircraft's Masterclock in order to provide accurate time reference to the system for the calculation of accurate time-estimates at specific waypoints	Yes <input type="checkbox"/> No <input type="checkbox"/>
21. In Flight Procedures before entering MNPS-Airspace	
Ground Nav-Aids should be used to verify performance of the LRNS to identify possible Map-shifts A compass heading cross-check should be made and recorded to determine the most accurate heading source	Yes <input type="checkbox"/> No <input type="checkbox"/>
<u>Oceanic Clearance:</u> Two flight crew members shall listen to and record any clearance obtained from ATC in order to verify correct reception	Yes <input type="checkbox"/> No <input type="checkbox"/>
Verification of received ATC-clearance shall be crosschecked from the recorded data to the Flight plan as inserted in the FMS	Yes <input type="checkbox"/> No <input type="checkbox"/>
Crossing of way-points within MNPS airspace	Yes <input type="checkbox"/> No <input type="checkbox"/>
Distance and track to the next waypoint shall be verified. When crossing the waypoint, it shall be verified that the new TO-Waypoint becomes active and the aircraft in turning in the correct direction.	Yes <input type="checkbox"/> No <input type="checkbox"/>
22. Post flight procedures	
Any malfunction affecting the MNPS-capability of the airplane shall be recorded in detail in the Tech-log-System For example a) Position-Drift of each IRS. b) Residual Ground Speed of each IRS c) Loss of RAIM	Yes <input type="checkbox"/> No <input type="checkbox"/>
23. Reporting	
The following must be reported	

Total Track Error of 25 NM or more <ul style="list-style-type: none"> • Deviation from assigned altitude of ± 300 ft • The loss of MNPS / RVSM-capability • The application of any contingency procedure 	Yes <input type="checkbox"/> No <input type="checkbox"/>
The report has to be filed within 72 hours after the occurrence, containing an initial analysis of causal factors and measurement taken to prevent repeat occurrence.	Yes <input type="checkbox"/> No <input type="checkbox"/>
24. Training (the following Items at least shall be covered):	
The NAT-Track-Documents shall be described, in order to explain the procedures applicable within the Organized-Track-System (OTS).	
Basic-Concept for Normal Procedures in MNPS-Airspace	
The minimum equipment requirements for MNPS- operations (MEL)	
Flight-Planning	
Pre-Flight Procedures	
Procedures established and described in the event that a Single-LRNS condition occurs before Take-off	
Methods described covering the handling of a Single-LRNS condition before the OCA Boundary is reached	
In-Flight Procedures prior to entry into MNPS- Airspace and within MNPS-Airspace	
ATC phraseology applicable for MNPS-operations	
Procedures to be followed and applied by the flight crew such as : <u>Deviation implied by Aircraft Performance problems due to:</u> a) Engine failure b) Pressurization-System failure c) Weather conditions	
Methods describing the detection of failures in Navigation Systems relevant for MNPS- operations	
Methods describing the evaluation of a faulty Navigation-Systems and actions defined if the faulty Navigation-System cannot be determined by the crew	
Post-Flight Procedures	
Entries in Technical Log Systems	
Theoretical knowledge will be checked by means of a written test or by any other suitable method where the quality of the transferred knowledge can be traced and recorded.	
Ground Training shall cover theoretical and practical parts of the subject .	
Practical Training and Pilot Assessment shall be performed in an FSTD and/or aeroplane.	
Is a sector included in the line flying under supervision module, where MNPS-Operation can be applied.	
Syllabus of the Training must be contained in the operators OM-D	
For all the above subjects	Yes <input type="checkbox"/> No <input type="checkbox"/>
25. Supporting documents to be submitted	
For all of the above Paragraphs 3-24 supporting documentation should be submitted with the current application.	
Applicant statement	
I hereby declare that all documentation and information submitted have been verified and found in compliance with Regulation (EC) No 965/2012 , its Implementing Rules and all other applicable requirements/procedures.	
Continuing Airworthiness Manager	
(name)	(Signature)
Flight Operation Manager	
(name)	(Signature)
Date	

Training Manager

(name)

(Signature)

Date