



NAT OPS BULLETIN

Serial Number: **2016_001**

Effective: 4 February 2016

Subject: Re-naming of the NAT MNPSA to
NAT HLA

The purpose of North Atlantic Operations Bulletin 2016-001 is to inform about the planned re-naming of the NAT Minimum Navigation Performance Specification (MNPS) airspace as the NAT High Level Airspace (NAT HLA) from 4 February 2016 and the publication of the amended ICAO North Atlantic Operations and Airspace Manual (NAT Doc 007, v.2016- 1) that reflects the anticipated changes. Also, it provides for information the United States Federal Aviation Administration (FAA) Notice to Airmen (NOTAM) that will be published in the 4 February 2016 edition of the FAA Domestic/International NOTAM book which can be accessed at: http://www.faa.gov/air_traffic/publications/notices

This NAT OPS Bulletin serial number **2016_001** is promulgated by the ICAO EUR/NAT Office.

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Transition from Minimum Navigation Performance Specification (MNPS) operations to Performance-Based Navigation (PBN) operations in the ICAO NAT Region

Re-naming of the MNPS airspace as the NAT High Level Airspace (NAT HLA) as of 4 February 2016

1. At its 48th Meeting in 2012, the NAT Systems Planning Group (NAT SPG) decided to transition from Minimum Navigation Performance Specification (MNPS) operations to Performance-based Navigation (PBN) operations in the ICAO NAT Region, in due observance of global requirements (NAT SPG Conclusion 48/05 refers).
2. At its 51st meeting (June 2015), the NAT SPG agreed that the NAT MNPS airspace shall be re-designated as the NAT High Level Airspace (NAT HLA). NAT SPG/51 agreed and documented in its report (paragraphs 7.6.2 through 7.6.6 refer) that:
 - a) the NAT MNPS airspace should be renamed as the NAT HLA as of 4 February 2016;
 - b) current NAT MNPS approvals should expire as of 30 January 2020; and
 - c) an approval to operate in the NAT HLA would be required, and be essentially the same as was required to operate in the NAT MNPS airspace.
3. The 47th Meeting of the NAT IMG (NAT IMG Decision 47/11 refers) that was held on 2-5 November 2015 reviewed and approved an amendment proposal to NAT Regional Supplementary Procedures (NAT SUPPs, Doc 7030) that was developed by the NAT MNPS to PBN transition task force. This proposal for amendment (**Attachment A refers**) has been endorsed by the NAT SPG members by correspondence and is currently being coordinated through appropriate ICAO mechanisms.
4. In addition to re-naming the airspace and clarifying the requirements to operate in the NAT HLA, the above-mentioned amendment also:
 - a) includes the Bodo Oceanic Flight Information Region (FIR) in the NAT HLA and excludes the Brest Oceanic Transition Area (BOTA) and the Shannon Oceanic Transition Area (SOTA);
 - b) specifies that Item 10a of the ICAO flight plan will continue to be annotated with the letter “X” to indicate that the aircraft meets the requirements for HLA operations;
 - c) re-locates text associated with safety monitoring for the application of certain separation minima in the New York Oceanic West FIR to Chapter 7 - Safety Monitoring;
 - d) clarifies the text associated with the carriage and operation of FANS 1/A Automatic Dependent Surveillance-Contract (ADS-C) and Controller-pilot Data Link Communications (CPDLC) equipment by describing how airspace will be specified rather than specifying the airspace where services will be provided;
 - e) consolidates the navigational performance requirements for operating the NAT HLA (formerly NAT MNPS airspace) for regulators’ ease of reference when monitoring NAT MNPS approvals and granting NAT HLA MNPS approvals;
5. In view of the above and planned re-naming of the NAT MNPS airspace to NAT HLA as of 4 February 2016, the ICAO North Atlantic Operations and Airspace Manual (NAT Doc 007) that provides guidance material on the NAT HLA airspace and operations has been amended and made available at www.icao.int/EURNAT/ EUR & NAT Documents, NAT Documents.

6. In addition, please find attached for your perusal the United States FAA Notice – Re-designation of North Atlantic Minimum Performance Airspace (**Attachment B** refers). It is to be published in the 4 February 2016 edition of the United States FAA Domestic/International NOTAM book which can be accessed at: http://www.faa.gov/air_traffic/publications/notices.

Note: in paragraph 4a of the notice, for the United States operators, the United States FAA elected to use 31 December 2019 as the expiration date for FAA MNPS Airspace approvals. This is in lieu of the NAT SPG endorsed expiration date for NAT MNPS approvals of 30 January 2020.



ATTACHMENT A

PROPOSAL FOR AMENDMENT OF THE REGIONAL SUPPLEMENTARY PROCEDURES, NAT REGION (Doc 7030/5)

(Serial No.: EUR/NAT-S 16/02 – NAT 2-1)

a) **Regional Supplementary Procedures:**

Doc 7030/5 – NAT Region.

b) **Proposed by:**

North Atlantic Systems Planning Group

c) **Proposed amendment:**

Editorial Note: Amendments are arranged to show deleted text using ~~text to be deleted~~, and added text with grey shading (text to be inserted).

1. *Insert* the following in **NAT SUPPs, Chapter 2 – Flight Plans Section 2.1:**

2.1.4 Minimum navigation performance specifications (MNPS)

2.1.4.1 All NAT MNPS-approved and NAT HLA MNPS-approved aircraft intending to operate in the NAT Region shall insert the letter X in Item 10a of the flight plan.

Note 1.— Aircraft that have been NAT MNPS-approved by the State of Registry or the State of the Operator prior to 1 January 2015 shall be permitted to operate in the NAT HLA until 30 January 2020.

Note 2.— RNAV 10 (RNP 10) and RNP 4 approved aircraft require a NAT HLA MNPS approval to demonstrate compliance with the MNPS established for the NAT HLA; refer to 4.1.1.5.

Note 3.— Except for the navigational portion, the requirements for a NAT HLA MNPS approval are equivalent to the requirements that were associated with granting NAT MNPS approvals.

2. *Modify* the following in **NAT SUPPs, Chapter 3 – Communications:**

3.3 CONTROLLER-PILOT DATA LINK COMMUNICATIONS (CPDLC)

Area of applicability

3.3.1 All aircraft intending to conduct flights in the airspace defined below shall be fitted with and shall operate controller-pilot data link communications (CPDLC) equipment:

- a) from 7 February 2013, on specified tracks and flight levels within the NAT organized track system (OTS); and

- b) from 5 February 2015, in specified portions of **the NAT minimum navigation specifications (MNPS) airspace.**

Note 1.— The specified tracks and flight level band within the NAT OTS will be published by the States concerned in national AIPs and identified daily in the NAT track message.

Note 2.— The specified portions of NAT MNPS airspace and aircraft equipment performance requirements where applicable will be published by the States concerned in national AIPs.

Means of compliance

3.3.2 Operators intending to conduct flights within the airspace specified in **accordance with 3.3.1** shall obtain CPDLC operational authorization, where applicable, either from the State of Registry or the State of the Operator. The State of Registry or the State of the Operator shall verify that the equipment has been certified in accordance with the requirements specified in RTCA DO-258/EUROCAE ED-100 or equivalent, capable of operating outside VHF data link coverage.

3.3.3 The services provided within the airspace specified in **accordance with 3.3.1** shall comply with the Oceanic Safety and Performance Requirements as specified in RTCA DO-306/EUROCAE ED-122 or equivalent.

Note.— Additional guidance can be found in the ICAO Global Operational Data Link Document (GOLD).

3. *Modify* the following in **NAT SUPPs, Chapter 4 – Navigation, Section 4.1:**

4.1.1 Area navigation (RNAV) specifications

4.1.1.1 RNAV 10 (RNP 10)

Note.— RNAV 10 retains the RNP 10 designation, as specified in Doc 9613, 1.2.3.5.

4.1.1.1.1 The **RNAV 10 (RNP 10)** specification shall be applicable to navigation systems used to support the separation minimum specified in 6.2.1.1 c) when published in State AIPs. ~~Additionally, the navigation performance shall be measured to ensure that the following criteria are met in order for this separation minima to be utilized in the New York Oceanic East FIR:~~

- a) ~~the proportion of the total flight time spent by aircraft 46 km (25 NM) or more off the cleared track shall be less than 9.11×10^{-5} ; and~~
- b) ~~the proportion of the total flight time spent by aircraft between 74 and 111 km (40 and 60 NM) off the cleared track shall be less than 1.68×10^{-5} .~~

Note.— In addition, RNAV 10 (RNP 10) supports the application of the separation minimum specified in 6.2.1.1 b).

4.1.1.1.2 **RNAV 10 (RNP 10) approved aircraft require a NAT HLA MNPS approval to operate in the NAT HLA.**

Note.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

Means of compliance

4.1.1.1.23 The aircraft and operator must be approved RNAV 10 (RNP 10) by the State of the Operator or the State of Registry, as appropriate.

Note.— Refer to 4.1.1.5 for the means of compliance for the MNPS established for the NAT HLA.

~~4.1.1.1.3 Operator programmes shall be established to mitigate the occurrence of navigational errors due to equipment malfunction or operational error:~~

- ~~a) operator in flight operating drills shall include mandatory navigation cross-checking procedures to identify navigation errors in sufficient time to prevent aircraft from inadvertent deviation from ATC cleared route; and~~
- ~~b) the operator shall establish programmes to provide for the continued airworthiness of aircraft navigation systems necessary to navigate to the degree of accuracy required.~~

4.1.1.1.4 When granting RNAV 10 (RNP 10) approvals for operators that intend to operate in the NAT Region, States should take account of the RNAV 10 (RNP 10) time limits for aircraft equipped with dual INS or inertial reference unit (IRS) systems.

Note.— RNAV 10 (RNP 10) time limits are discussed in Doc 9613, Part B, Volume II, Chapter I.

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4.1.1.5 Pre-PBN navigation specifications

4.1.1.5.1 Minimum navigation performance specifications (MNPS)

Area of applicability

4.1.1.5.1.1 The MNPS shall be applicable in that volume of airspace between FL 285 and FL 420 within the Oceanic Control Areas of Santa Maria, Shanwick, Reykjavik, Gander Oceanic, and New York Oceanic East, Reykjavik, Santa Maria and Shanwick, excluding the area west of 60°W and south of 38°30'N Brest Oceanic Transition Area (BOTA) and the Shannon Oceanic Transition Area (SOTA).

Note.— Until 4 February 2016, this volume of airspace is referred to as the “North Atlantic Minimum Navigation Performance Specifications MNPS airspace (NAT MNPSA)”. As of 4 February 2016, this volume of airspace will be referred to as the “North Atlantic High Level Airspace (NAT HLA)”.

4.1.1.5.1.2 As of 4 February 2016, the MNPS shall be applicable between FL 285 and FL 420 within the Oceanic Control Area of Bodø Oceanic.

Note.— Bodø Oceanic is part of the NAT HLA but is not included in the NAT MNPSA.

Means of compliance

(A2 – Chapter 5; A6, Part I – Chapters 3, 4 and 7; A6, Part II – Chapters 3 and 7; A8 – Chapter 8)

4.1.1.5.1.3 As of 1 January 2015, new NAT MNPS approvals shall not be granted. Only aircraft approved for RNP 4 or RNAV 10 (RNP 10) are eligible for a NAT HLA MNPS approval.

4.1.1.5.1.24 ~~Except for those flights specified in 4.1.1.5.1.8, aircraft operating within the volume of airspace specified in 4.1.1.5.1.1 shall have~~When monitoring NAT MNPS approvals, the State of

Registry or the State of the Operator, as appropriate, should verify that approved aircraft have lateral navigation performance capability such that:

- a) the standard deviation of lateral track errors shall be less than 11.7 km (6.3 NM);
- b) the proportion of the total flight time spent by aircraft 56 km (30 NM) or more off the cleared track shall be less than 5.3×10^{-4} ; and
- c) the proportion of the total flight time spent by aircraft between 93 and 130 km (50 and 70 NM) off the cleared track shall be less than 1.3×10^{-4} .

~~4.1.1.5.1.3 The State of Registry or the State of the Operator, as appropriate, should verify that the lateral navigation capability of approved aircraft meets the requirements specified in 4.1.1.5.1.2.~~

Note.— Guidance material of use to those involved in the ~~initial achievement and continued maintenance of the navigation capability set forth in 4.1.1.5.1.24~~ has been issued by ICAO under the title North Atlantic Operations and Airspace Manual (NAT Doc 007) and will be supplemented and updated as required and as new material becomes available.

~~4.1.1.5.1.4 Aircraft that have been approved by the State of Registry or the State of the Operator, as appropriate, for RNP 10 (PBN application of RNAV 10) or RNP 4 are considered to meet the requirements specified in 4.1.1.5.1.2 a).~~

~~——— *Note.* The Performance based Navigation (PBN) Manual (Doc 9613) provides guidance on aircraft approval, operations and maintenance programmes for initial achievement and continued compliance with RNAV 10 (Designated and Authorized as RNP 10) and RNP 4.~~

~~4.1.1.5.1.5 From 1 January 2015 the means of compliance for demonstrating performance to 4.1.1.5.1.2 a) above shall be in accordance with the RNAV 10 or RNP 4 navigation specifications as detailed in the Performance Based Navigation Manual (Doc 9613). Aircraft that have been MNPS approved by the State of Registry or the State of the Operator based on standard deviation of lateral track error of 11.7 km (6.3 NM) before 1 January 2015 shall be permitted to operate in NAT MNPS airspace until 1 January 2020.~~

~~4.1.1.5.1.6 When granting approval for operations in MNPS airspace, States should take account of the RNP 10 time limits for aircraft equipped with dual INS or inertial reference unit (IRU) systems.~~

~~——— *Note.* RNP 10 time limits are discussed in (Doc 9613) Part B, Volume II, Chapter 1.~~

4.1.1.5.1.75 When granting NAT HLA MNPS approvals, or monitoring for operations in NAT MNPS airspace approvals, the States of Registry or the State of the Operator, as appropriate, shall ensure that:

- a) in-flight operating drills include mandatory navigation cross-checking procedures which will identify navigation errors in sufficient time to prevent the aircraft inadvertently deviating from the ATC-cleared route. Guidance on procedures is detailed in NAT Doc 007;
- b) the operator has established programmes to provide for the continued airworthiness of aircraft navigation systems necessary to navigate to the degree of accuracy required;
- c) the operator has established procedures to ensure flight crews have adequate knowledge of the current provisions regarding:
 - i) the position reporting procedures detailed in 3.1.3;
 - ii) mandatory carriage of the NAT OTS message as detailed in 6.4.2.1; and
 - iii) the NAT special procedures detailed in Chapter 9.

Note 1.— The requirements listed above are equivalent to the requirements that were associated with granting NAT MNPS approvals.

Note 2.— Guidance material of use to those who intend to operate aircraft in the ICAO NAT Region is provided in the North Atlantic Operations and Airspace Manual (NAT Doc 007).

Note 3.— Doc 9613 provides guidance on aircraft, operations and maintenance programmes for the initial achievement and continued compliance with the authorized navigation specification, including programmes for avoiding navigational errors.

Note 4.— Aircraft approved for RNAV 10 (RNP 10) and RNP 4 require a NAT HLA MNPS approval to operate in the NAT HLA. NAT MNPS approved aircraft are permitted to operate in the NAT HLA until 30 January 2020.

~~4.1.1.5.1.8 Flights not subject to an Oceanic Clearance, which flight plan to route through Brest Oceanic Transition Area (BOTA) and/or Shannon Oceanic Transition Area (SOTA), are not subject to MNPS approval.~~

~~—— *Note 1.— SOTA is defined as that airspace from DINIM (510000N 0150000W) — LESLU (510000N 0080000W) — 483000N 0080000W — BEDRA (490000N 0150000W) to DINIM (510000N 0150000W).*~~

~~—— *Note 2.— BOTA is defined as that airspace from 483400N 0084500W — 483000N 0080000W — 450000N 0080000W — 450000N 0084500W to 483400N 0084500W.*~~

4.1.2 Required navigation performance (RNP) specifications

4.1.2.1 RNP 4

4.1.2.1.1 The RNP 4 specification shall be applicable to navigation systems used to support the separation minima specified in 6.2.1.1 b) and 6.2.1.1 c) when published in State AIPs. ~~Additionally, the navigation performance shall be measured to ensure that the following criteria are met in order for this separation minima to be utilized in the New York Oceanic East FIR:~~

- ~~1) — the proportion of the total flight time spent by aircraft 28 km (15 NM) or more off the cleared track shall be less than 5.44×10^{-5} ; and~~
- ~~2) — the proportion of the total flight time spent by aircraft between 44 and 67 km (24 and 36 NM) off the cleared track shall be less than 1.01×10^{-5} .~~

Note.— RNP 4 is required for the application of the separation minimum specified in 6.2.1.1 a).

4.1.2.1.2 RNP 4 approved aircraft require a NAT HLA MNPS approval to operate in the NAT HLA.

Note.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

Means of compliance

4.1.2.1.23 The aircraft and operator shall be approved RNP 4 by the State of the Operator or the State of Registry, as appropriate.

Note.— Refer to 4.1.1.5.1.5 for the means of compliance for the MNPS established for the NAT HLA.

~~4.1.2.1.3 — Operator programmes shall be established to mitigate the occurrence of navigational errors due to equipment malfunction or operational error:~~

- a) ~~operator in flight operating drills shall include mandatory navigation cross-checking procedures to identify navigation errors in sufficient time to prevent aircraft from inadvertent deviation from ATC-cleared route; and~~
- b) ~~the operator shall establish programmes to provide for the continued airworthiness of aircraft navigation systems necessary to navigate to the degree of accuracy required.~~

4. *Modify* the following in **NAT SUPPs, Chapter 5 – Surveillance, Section 5.4 ADS-C:**

Area of applicability

5.4.1 All aircraft intending to conduct flights in the airspace defined below shall be fitted with and shall operate automatic dependent surveillance – contract (ADS-C) equipment:

- a) from 7 February 2013, on specified tracks and on specified flight levels within the NAT organized track system (OTS); and
- b) from 5 February 2015, in specified portions of **the** NAT ~~minimum navigation specifications (MNPS)~~ airspace.

Note 1.— The specified tracks and flight level band within the NAT OTS will be published by the States concerned in national AIPs and identified daily in the NAT track message.

*Note 2.— The specified portions of **the** NAT ~~MNPS~~ airspace and aircraft equipment performance requirements, where applicable, will be published by the States concerned in national AIPs.*

Means of compliance

5.4.2 Operators intending to conduct flights within the airspace specified in **accordance with** 5.4.1 shall obtain an ADS-C operational authorization, where applicable, either from the State of Registry or the State of the Operator. The State of Registry or the State of the Operator shall verify that the equipment has been certified in accordance with the requirements specified in RTCA DO-258/EUROCAE ED-100 or equivalent, capable of operating outside VHF data link coverage.

5.4.3 The data link services provided within the ~~NAT~~ airspace **specified in accordance with 5.4.1** shall comply with the Oceanic Safety and Performance Requirements as specified in RTCA DO-306/EUROCAE ED-122 or equivalent. Conformance monitoring shall provide alerts to the controller when reports do not match the current flight plan, and the following ADS contracts shall be used:

- a) ADS periodic contracts at an interval consistent with safety requirements and published by the States concerned in national AIPs; and
- b) ADS event contracts that include the following event types:
 - 1) lateral deviation event (LDE) with a lateral deviation threshold of 9.3 km (5 NM) or less;
 - 2) level range deviation event (LRDE) with a vertical deviation threshold of 90 m (300 ft) or less; and
 - 3) waypoint change event (WCE) at compulsory reporting points.

Note.— Additional guidance can be found in the ICAO Global Operational Data Link Document (GOLD).

5. *Modify* the following in **NAT SUPPs, Chapter 6 – Air Traffic Services:**

6.1 AIR TRAFFIC CONTROL (ATC) CLEARANCES

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6.1.2 Adherence
 (A2 – Chapter 3)

6.1.2.1 If an aircraft has inadvertently deviated from the route specified in its ATC clearance, it shall forthwith take action to regain such route within 185 km (100 NM) from the position at which the deviation was observed.

6.1.2.2 Operator programmes should be established to mitigate the occurrence of navigational errors due to equipment malfunction or operational error and should include in-flight navigation cross-checking procedures to identify navigation errors in sufficient time to prevent aircraft from inadvertent deviation from the ATC-cleared route.

Note 1.— Doc 9613 provides guidance on aircraft, operations and maintenance programmes for the initial achievement and continued compliance with the authorized navigation specification, including programmes for avoiding navigational errors.

Note 2.— NAT Doc 007 provides guidance on best practices for avoiding navigational errors while operating the NAT Region.

6.1.2.23 Unable to obtain oceanic clearance using HF voice
 (P-ATM – Chapter 15)

6.1.2.23.1 Aircraft operating outside VHF coverage that are unable to contact ATC on HF to obtain an Oceanic clearance shall continue to operate at the last assigned flight level and along the cleared route of flight until communications are re-established.

Note.— Failure of HF communications often stems from poor signal propagation, frequently because of sun spot activity, and is likely to simultaneously affect multiple aircraft operating in a particular region. ATM systems dependent on HF are designed around the assumption that communication may be temporarily interrupted and that aircraft affected will continue to operate in accordance with the last received and acknowledged clearance, until communication is restored.

6.2 SEPARATION

6.2.1 Lateral
 (A11 – Attachment B; P-ATM – Chapter 5)

Note 1.— the NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

Note 2. — the requirements to operate in the NAT HLA are defined in 4.1.1.5.1.4 and 4.1.1.5.1.5.

6.2.1.1 Minimum lateral separation shall be:

- a) 55.5 km (30 NM) between aircraft operating within the control area of the New York

Oceanic East FIR provided that the following conditions are met:

- 1) navigation – RNP 4 specification in accordance with the provisions of 4.1.2.1;
- 2) communication – CPDLC shall be monitored against RCP 240; and
- 3) surveillance – ADS-C shall be monitored against RSP 180.

Note – Guidance concerning RCP and RSP specifications, application and performance requirements can be found in the Global Operational Data Link Document (GOLD).

- b) 93 km (50 NM) between aircraft operating in the New York Oceanic East FIR meeting RNP 10 or RNP 4 specification in accordance with the provisions of 4.1.1.1 or 4.1.2.1, respectively.
- c) 110 km (60 NM) between aircraft which meet the ~~minimum navigation performance specifications (MNPS)~~ requirements to operate in the NAT HLA provided that a portion of the route of the aircraft is within, above, or below ~~MNPS airspace~~ the NAT HLA;

Note. – NAT MNPS airspace is defined in 4.1.1.5.1.1.

- d) 167 km (90 NM) between aircraft operating outside the ~~MNPS airspace~~ NAT HLA and at least one aircraft does not meet the ~~MNPS~~ requirements to operate in the NAT HLA:
 - 1) between the Iberian Peninsula and the Azores Islands; and
 - 2) between Iceland and points in Scandinavia and in the United Kingdom;
- e) 167 km (90 NM) between aircraft not approved RNP 10 or RNP 4 operating outside ~~MNPS airspace~~ the NAT HLA where no portion of the route of the aircraft is within, above, or below ~~MNPS airspace~~ the NAT HLA:
 - 1) between the United States/Canada and Bermuda; and
 - 2) west of 55°W between the United States, Canada or Bermuda and points in the CAR Region;

Note. – MNPS airspace is defined in 4.1.1.5.1.1

- f) 223 km (120 NM) between other aircraft;

except that lower minima in 5.4.1.1.2 of the PANS-ATM may be applied, or further reduced in accordance with 5.11 when the conditions specified in the relevant PANS-ATM provisions are met (see 5.4).

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6.2.2 Longitudinal (P-ATM – Chapter 5)

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6.2.2.3 Minimum longitudinal separation based on time between non-turbo-jet aircraft shall be:

- a) 30 minutes; and
- b) ~~20 minutes in the West Atlantic route system (WATRS) area.~~

~~*Note. – The WATRS area is defined as beginning at a point 27°00'N/77°00'W direct to 20°00'N/67°00'W direct to 18°00'N/62°00'W direct to 18°00'N/60°00'W direct to 38°30'N/60°00'W direct to 38°30'N/69°15'W, thence counterclockwise along the New York Oceanic control area/FIR boundary to the Miami Oceanic control area/FIR boundary, thence southbound along the Miami Oceanic control area/FIR boundary to the point of beginning.*~~

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6.2.7 Airspace reservations

6.2.7.1 Separation minima between moving temporary airspace reservations

Note 1.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

Note 2.— the requirements to operate in the NAT HLA are defined in 4.1.1.5.1.4 and 4.1.1.5.1.5.

6.2.7.1.1 Lateral separation shall be:

- a) 110 km (60 NM) between the closest tracks of any aircraft for which the airspace is reserved, provided all aircraft or formation flights meet the MNPS requirements to operate in the NAT HLA; or
- b) 223 km (120 NM) between the closest tracks of any aircraft for which the airspace is reserved, except that in the New York oceanic control area (OCA) west of 60°W, 167 km (90 NM) may be applied.

Note.— A formation flight with at least one of the aircraft in the formation meeting MNPS the requirements to operate in the NAT HLA is deemed to meet the requirement for the application of 110 km (60 NM) in a).

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6.2.7.3 Separation minima between moving temporary airspace reservations and other aircraft

Note 1.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

Note 2.— the requirements to operate in the NAT HLA are defined in 4.1.1.5.1.4 and 4.1.1.5.1.5.

6.2.7.3.1 Lateral separation shall be:

- a) 110 km (60 NM) between the track of an aircraft operating under the control of the ATC unit concerned and the closest track of any of the aircraft for which the airspace is reserved, provided all aircraft meet the MNPS requirements to operate in the NAT HLA and a portion of the route of the aircraft is within, above or below MNPS airspace the NAT HLA; or
- b) 110 km (60 NM) between the track of an aircraft operating under the control of the ATC unit concerned and the track of a formation flight for which the airspace has been reserved, provided at least one aircraft in the formation and the aircraft operating under the control of the ATC unit meet the MNPS requirements to operate in the NAT HLA and a portion of the route of the aircraft is within, above or below MNPS airspace the NAT HLA; or
- c) 223 km (120 NM) between the track of an aircraft operating under the control of the ATC unit concerned and the closest track of any of the aircraft for which the airspace is reserved, except that in the New York OCA west of 60°W, 167 km (90 NM) may be applied.

6.2.7.4 Separation minima between stationary temporary airspace reservations and other aircraft

Note 1.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

Note 2.— The requirements to operate in the NAT HLA are defined in 4.1.1.5.1.4 and 4.1.1.5.1.5.

6.2.7.4.1 Lateral separation shall be:

- a) 56 km (30 NM) between the track of an aircraft operating under the control of the ATC unit concerned or as part of a moving airspace reservation and the nearest limit of the reserved airspace, provided the aircraft meets the ~~MNPS~~ requirements to operate in the NAT HLA and a portion of the route of the aircraft is within, above or below ~~MNPS airspace~~ the NAT HLA and the requesting agency has guaranteed to confine its activities to the requested airspace; or
- b) 110 km (60 NM) between the track of an aircraft operating under the control of the ATC unit concerned or as part of a moving airspace reservation and the nearest limit of the reserved airspace, provided the aircraft meets the ~~MNPS~~ requirements to operate in the NAT HLA and a portion of the route of the aircraft is within, above or below ~~MNPS airspace~~ the NAT HLA and the requesting agency has **not** guaranteed to confine its activities to the requested airspace; or
- c) 110 km (60 NM) between the track of an aircraft operating under the control of the ATC unit concerned or as part of a moving airspace reservation and the nearest limit of the reserved airspace, when the aircraft does **not** meet the ~~MNPS~~ requirements to operate in the NAT HLA and the requesting agency has guaranteed to confine its activities to the requested airspace, except that in the New York OCA west of 60°W, 84 km (45 NM) may be applied; or
- d) 223 km (120 NM) between the track of an aircraft operating under the control of the ATC unit concerned or as part of a moving airspace reservation and the nearest limit of the reserved airspace, when the aircraft does **not** meet the ~~MNPS~~ requirements to operate in the NAT HLA and the requesting agency has **not** guaranteed to confine its activities to the requested airspace, except that in the New York OCA west of 60°W, 167 km (90 NM) may be applied.

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6.4 ATS ROUTES

6.4.1 Track systems

6.4.1.2 Mandatory carriage of the OTS message

6.4.1.2.1 All aircraft operating in or above ~~MNPS airspace~~ the NAT HLA shall carry a copy of the current OTS message.

Note.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

...

6.9 MNPS PROCEDURES

6.9.1 Aircraft not meeting the requirements of 4.1.1.5.1 to operate in the NAT HLA shall not be allowed to operate in MNPS airspace the NAT HLA unless the following conditions are satisfied:

- a) the aircraft is being provided with ATS surveillance service, and
- b) direct controller-pilot VHF voice communication is maintained, and
- c) the aircraft has a certified installation of equipment providing it the ability to navigate along the cleared track.

Note 1.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

Note 2.— The requirements to operate in the NAT HLA are defined in 4.1.1.5.1.4 and 4.1.1.5.1.5.

6.9.2 An operator who experiences reduced navigation performance shall inform air traffic control (ATC) as soon as practicable.

Note.— The procedures to be followed for an emergency descent through the NAT HLA are detailed in 9.1.1.1.3.

6. *Modify* the following in NAT SUPPs, Chapter 7 – Safety Monitoring Section 7.2 Airspace Monitoring:

...

7.2.1 General

Nil.

7.2.1.1 Adequate monitoring of flight operations shall be conducted to provide data to assist in the assessment of the achieved lateral navigation performance of the aircraft population in relation to the lateral separation minimum. A safety assessment shall be carried out periodically, based on the data collected, to confirm that the safety level continues to be met. Data shall include operational errors due to all causes.

Note.— Monitoring will be conducted in accordance with the appropriate material issued by ICAO. Detailed guidance is contained in the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689) and the Safety Management Manual (SMM) (Doc 9859).

7.2.2 RNAV

7.2.2.1 RNAV 10 (RNP 10)

7.2.2.1.1 A target level of safety (TLS) of 5×10^{-9} fatal accidents per flight hour per dimension shall be established for route systems operating a 93 km (50 NM) lateral separation minimum. The safety level of such airspace shall be determined by an appropriate safety assessment.

Note.— Detailed guidance material on conducting safety assessments is contained in the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689) and the Safety Management Manual (SMM) (Doc 9859).

7.2.2.1.2 ~~Adequate monitoring of flight operations shall be conducted to provide data to assist in the assessment of the achieved lateral navigation performance of the aircraft population in relation to the lateral separation minimum. A safety assessment shall be carried out periodically, based on the~~

~~data collected, to confirm that the safety level continues to be met. Data shall include operational errors due to all causes. Navigation performance shall be measured to ensure that the following criteria are met in order for separation minima specified in 6.2.1.1 b) to be utilized in the New York Oceanic East FIR:~~

- a) ~~the proportion of the total flight time spent by aircraft 46 km (25 NM) or more off the cleared track shall be less than 9.11×10^{-5} ; and~~
- b) ~~the proportion of the total flight time spent by aircraft between 74 and 111 km (40 and 60 NM) off the cleared track shall be less than 1.68×10^{-5} .~~

~~——— *Note.* *Monitoring will be conducted in accordance with the appropriate material issued by ICAO. Detailed guidance is contained in the Manual on Airspace Planning Methodology for the Determination of Separation Minima (Doc 9689) and the Safety Management Manual (SMM) (Doc 9859).*~~

7.2.2.2 MNPS

7.2.2.2.1 Adequate monitoring of flight operations in the NAT Region shall be conducted to assist in the assessment of continuing compliance of aircraft with the lateral navigation capabilities specified in 4.1.1.5.1.24.

Note.— Monitoring will be conducted in accordance with the appropriate guidance material issued by ICAO.

7.2.3 RNP

~~Nil.~~

7.2.3.1 RNP 4

7.2.3.1.1 Navigation performance shall be measured to ensure that the following criteria are met in order for the separation minima specified in 6.2.1.1 a) to be utilized in the New York Oceanic East FIR:

- a) ~~the proportion of the total flight time spent by aircraft 28 km (15 NM) or more off the cleared track shall be less than 5.44×10^{-5} ; and~~
- b) ~~the proportion of the total flight time spent by aircraft between 44 and 67 km (24 and 36 NM) off the cleared track shall be less than 1.01×10^{-5} .~~

7. *Modify* the following in **NAT SUPPs, Chapter 9 – Special Procedures:**

9.1 EMERGENCY DESCENT PROCEDURES (P-ATM – Chapter 15)

9.1.1 Action by the pilot-in-command

9.1.1.1 Descent through the ~~MNPS~~NAT HLA and/or RVSM airspace

9.1.1.1.1 An aircraft that is not ~~MNPS~~/RVSM-approved and is unable to maintain a flight level above ~~MNPS~~/RVSM airspace should descend to a flight level below ~~MNPS~~/RVSM airspace.

9.1.1.1.2 An aircraft that does not meet the requirements to operate in the NAT HLA and is unable to maintain a flight level above the NAT HLA should descend to a flight level that is below the airspace.

Note 1.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

Note 2.— The requirements to operate in the NAT HLA are defined in 4.1.1.5.1.4 and 4.1.1.5.1.5.

9.1.1.1.23 An aircraft compelled to make a descent through ~~MNPS airspace~~ the NAT HLA, whether continuing to destination or turning back, should, if its descent will conflict with an organized track:

- a) plan to descend to a level below FL 280;
- b) prior to passing FL 410, proceed to a point midway between a convenient pair of organized tracks prior to entering that track system from above;
- c) while descending between FL 410 and FL 280, maintain a track that is midway between and parallel with the organized tracks; and
- d) contact ATC as soon as practicable and request a revised ATC clearance.

Note.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

...

9.8 MANNED BALLOON FLIGHTS

9.8.1 Manned balloon flights authorized to operate in the NAT Region shall operate outside the ~~MNPS airspace~~ NAT HLA.

Note.— The NAT HLA is defined in 4.1.1.5.1.1 and 4.1.1.5.1.2.

d) **Date when proposal received:**

26 June 2015

e) **Proposer's reason for amendment:**

1. At its 48th Meeting in 2012, the NAT Systems Planning Group (NAT SPG) has decided to transition from Minimum Navigation Performance Specification (MNPS) operations to Performance-based Navigation (PBN) operations in the ICAO NAT Region, in due observance of global requirements (NAT SPG Conclusion 48/05 refers) .
2. A previous amendment proposal for amendment (EUR/NAT- S 13/33-NAT 4, approved on 7 March 2013) to the NAT SUPPs allowed aircraft already approved for RNP 4 or RNAV 10 (RNP 10) to be deemed as meeting the navigational component of the requirements to operate in the NAT MNPS Airspace (NAT MNPSA). In the same amendment, it was specified that NAT MNPS approvals based on the navigational specifications detailed in the NAT SUPPs would be valid until 1 January 2020 and that no new NAT MNPS approvals based on those specifications should be granted as of 1 January 2015.
3. Another amendment proposal (EUR/NAT-S 15/18-NAT 6.9) has been submitted on 29 June 2015 (Inter-Office Memorandum EUR/NAT 15-0363.TEC (SAL/HOI) refers) for further processing for approval by the President of the Council. This amendment permits non-MNPS approved aircraft to operate in the NAT MNPS airspace under specific conditions.

4. At its 51st meeting (June 2015), the NAT SPG agreed that the NAT MNPS airspace shall be re-designated as the NAT High Level Airspace (NAT HLA) as of 4 February 2016. The NAT SPG confirmed that the NAT HLA operations authorisation needed to be maintained to ensure State oversight and standardization of operator training and operations manuals, equivalent to the existing ICAO Annex 6 supported requirements for operating in designated airspace.

f) **Proposed implementation date of the amendment:**

Upon approval by Council.

g) **Action by the Secretary General:**

The proposal has been circulated to the following States and international organizations.

Afghanistan	Czech Republic	Kuwait
Albania	Democratic People's Rep. of	Kyrgyzstan
Algeria	Korea	Latvia
Andorra	Democratic Republic of the	Lebanon
Angola	Congo	Libya
Argentina	Denmark	Lithuania
Armenia	Djibouti	Luxembourg
Australia	Dominican Republic	Madagascar
Austria	Ecuador	Malaysia
Azerbaijan	Egypt	Maldives
Bahamas	El Salvador	Mali
Bahrain	Eritrea	Malta
Bangladesh	Estonia	Mauritania
Belarus	Ethiopia	Mauritius
Belgium	Finland	Mexico
Benin	France	Monaco
Bhutan	Gabon	Mongolia
Bolivia (Plurinational State of)	Gambia	Montenegro
Bosnia and Herzegovina	Georgia	Morocco
Botswana	Germany	Mozambique
Brazil	Ghana	Namibia
Brunei Darussalam	Greece	Nepal
Bulgaria	Guinea-Bissau	Netherlands
Burkina Faso	Haiti	New Zealand
Burkina Faso	Hungary	Niger
Cameroon	Iceland	Nigeria
Canada	India	Norway
Cape Verde	Indonesia	Oman
Central African Republic	Iran (Islamic Republic of)	Pakistan
Chad	Iraq	Paraguay
Chile	Ireland	Peru
China	Israel	Philippines
Colombia	Italy	Poland
Congo	Jamaica	Portugal
Côte d'Ivoire	Japan	Qatar
Croatia	Jordan	Republic of Korea
Cuba	Kazakhstan	Republic of Moldova
Cyprus	Kenya	Romania

Russian Federation	Sweden	United States
San Marino	Switzerland	Uruguay
Saudi Arabia	Syrian Arab Republic	Uzbekistan
Senegal	Tajikistan	Venezuela
Serbia	Thailand	Viet Nam
Seychelles	The Former Yugoslav	Yemen
Sierra Leone	Republic of Macedonia	Zambia
Singapore	Togo	Zimbabwe
Slovakia	Trinidad and Tobago	
Slovenia	Tunisia	EUROCONTROL
Somalia	Turkey	CANSO
South Africa	Turkmenistan	IACA
Spain	Uganda	IAOPA
Sri Lanka	Ukraine	IATA
Sudan	United Arab Emirates	IBAC
Suriname	United Kingdom	IFALPA
Swaziland	United Republic of Tanzania	IFATCA

h) Secretariat's comments:

1. This amendment proposal was developed by the NAT MNPS to PBN transition task force and approved by the 47th Meeting of the NAT IMG (NAT IMG Decision 47/11 refers) that was held on 2-5 November 2015
2. In addition to re-naming the airspace and clarifying the requirements to operate in the NAT HLA, this proposed amendment does also:
 - a) include the Bodo Oceanic FIR in the NAT HLA;
 - b) re-locate text associated with safety monitoring for the application of certain separation minima in the New York Oceanic West FIR to Chapter 7 - Safety Monitoring;
 - c) clarify that the text associated with the carriage and operation of FANS 1/A (or equivalent) ADS-C and CPDLC equipment describes how airspace will be specified rather than specifying the airspace where services will be provided;
 - d) consolidate the navigational performance requirements for operating the NAT HLA (formerly NAT MNSPA) for regulators' ease of reference when monitoring NAT MNPS approvals and granting NAT HLA MNPS approvals;
 - e) clarify the separation minima supported by RNAV 10 (RNP 10) and those supported by RNP 4; and
 - f) remove provisions that are only applicable in the New York Oceanic West FIR, which is no longer included in the ICAO NAT Region.

7 Jan 2016

**Re-designation of North Atlantic Minimum Navigation Performance Airspace
(NAT MNPSA) As NAT High Level Airspace (NAT HLA)**

1. Purpose of this Notice. It is the purpose of this Notice to inform the United States (U.S.) aviation community of the ICAO North Atlantic Systems Planning Group (NAT SPG) plan to re-designate North Atlantic Minimum Navigation Performance Specifications Airspace (NAT MNPSA) as NAT High Level Airspace (HLA) on 4 February 2016. This re-designation supports the NAT MNPS to PBN (performance based navigation) transition plan.

This action is taken in accordance with ICAO NAT Implementation Management Group (NAT IMG) Decision 45/2 (Re-naming of the NAT MNPSA). NAT IMG Decision 45/2 was announced in a 5 January 2015 letter to States and industry organizations from the ICAO European and North Atlantic Office.

2. Boundaries of NAT HLA as of 4 February 2016. The boundaries of NAT HLA are planned to remain the same as those for NAT MNPSA with the exception that Bodo Oceanic is planned to be included in NAT HLA. NAT HLA boundaries are planned to include the volume of airspace between Flight Levels (FL) 285 to 420 in the following Oceanic Control Areas (OCA):

- Gander Oceanic
- New York Oceanic East
- Reykjavik
- Santa Maria
- Shanwick with the exception of the Brest Oceanic Transition Area (BOTA) and the Shannon Oceanic Transition Area (SOTA)
- Bodo Oceanic is not currently included in NAT MNPSA, however, it is proposed to be included in NAT HLA as of 4 February 2016.

3. Letter X for ICAO flight plan. Item 10a of the ICAO flight plan will continue to be annotated with the letter “X” to indicate that the aircraft meets the requirements for HLA operations.

4. Effect on FAA Operations Specifications (OpSpec), Management Specifications (MSpec) and Letters of Authorization (LOA) B039. (B039 is “Operations in North Atlantic Minimum Navigation Performance (NAT MNPS) Airspace”). The following guidance applies:

a. OpSpec/MSpec paragraph B039 and LOA B039 approvals issued to authorize MNPSA operation will remain valid for NAT HLA operations until 31 December 2019, however, new B039 OpSpecs, MSPECs and LOAs for NAT HLA are being developed. (See below). This provision allows OpSpec/MSpec paragraph B039 and LOA B039 approvals based on the NAT MNPS navigation specification to be “grandfathered” (i.e., aircraft not yet approved for Required Navigation Performance 10 (RNP 10) or RNP 4 may continue to operate in NAT HLA).

b. A new OpSpec/MSpec/LOA B039 tentatively entitled “Operations in North Atlantic High Level Airspace (NAT HLA)” is under development. The FAA will keep U.S. operators informed on plans to introduce the new B039 HLA authorizations.

5. RNP 10 or RNP 4 requirements for new applicants. Starting in January 2015, operators applying for authorization to operate in NAT MNPSA have been required to be approved for RNP 10 or RNP 4. This will remain the policy for NAT HLA approval.

RNP 2 Note: in the future, RNP 2 may be introduced into NAT HLA operations. It is currently listed in the ICAO Performance Based Navigation Manual (ICAO Doc 9613) as a navigation specification that can be applied in oceanic operations, however, it has not yet been addressed for NAT HLA operations.

6. Status of NAT Operations and Airspace Manual (NAT Doc 007). NAT Doc 007 is planned to be updated to reflect the re-designation of NAT MNPS Airspace as NAT High Level Airspace.

7. FAA NAT Resource Guide For U.S. Operators. The NAT Resource Guide will be updated as the program to transition to NAT HLA progresses.

http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/media/NAT.pdf

8. Questions. If you have questions, please contact one of the following:

Name	Organization	Phone	Email
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(Performance Based Flight Systems Branch, AFS-470, 1/07/16)

— END —