

Advance Notice (25 July 2012). This FAA Notice will be published in the 23 August 2012 edition of FAA Notices To Airmen – Domestic/International. It will be located in Part 3, Section 2 (International Oceanic Airspace Notices). An electronic version of FAA Domestic and International Notices can be found at: http://www.faa.gov/air_traffic/publications/notices

NORTH ATLANTIC FANS 1/A DATA LINK MANDATE

1. Objective of Notice. The objective of this Notice is to inform United States (U.S.) operators that Phase 1 of the North Atlantic Data Link Mandate (NAT DLM) plan will be implemented on 7 February 2013 and to advise them of the related program plans and requirements. (For the purpose of this Notice, U.S. operators are operators conducting operations under Title 14 of the U.S. Code of Federal Regulations (14 CFR), part 91, part 91 subpart K and parts 121, 125, 125M, or 135).

2. Background. On 4 January 2012, the ICAO Council approved a Proposal for Amendment (PFA) of NAT Regional Supplementary Procedures (Regional SUPPS) to mandate, in phases, aircraft equipage with and operation of FANS 1/A (or equivalent) CPDLC (Controller-Pilot Data Link Communication) and ADS-C (Automatic Dependent Surveillance-Contract) systems. Paragraphs 3.3.1 and 5.4.1 of the approved amendment to the NAT Regional SUPPS now call for aircraft intending to conduct operations in specified NAT airspace to be fitted with and operating FANS 1/A (or equivalent) CPDLC and ADS-C:

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

It is the objective of the NAT DLM plan to enhance communications and surveillance capabilities in NAT operations and thereby, enhance operational safety in the NAT by increasing the number and percentage of NAT flights conducted by aircraft using FANS 1/A (or equivalent) CPDLC and ADS-C.

3. NAT DLM Implementation Plan – Phase 1 (7 February 2013). The ICAO NAT SPG (North Atlantic System Planning Group) has agreed that for the 7 February 2013 phase of the DLM implementation plan, **carriage and operation of FANS 1/A (or equivalent) data link systems will be mandatory:**

- a. Between flight levels 360-390 (inclusive) on no more than two NAT OTS tracks that are identified in the NAT OTS message.
- b. During the OTS validity period and will apply to those flights crossing 30 degrees west longitude during the published track times.

Note 1: NAT SPG has agreed that the two OTS tracks where the DLM will apply will be established with the provision that at an OTS Track where the requirements of the DLM will not apply will be made available one degree north and one degree south of the specified DLM tracks.

Note 2: normally the two specified DLM tracks will be adjacent to each other in the OTS.

4. Required Flight Plan Entries. Operators planning to operate in NAT airspace where the DLM is applied shall indicate FANS 1/A (or equivalent) CPDLC communications and ADS-C surveillance capabilities in the ICAO flight plan in accordance with ICAO Document 4444 (Air Traffic Management), Appendix 2 (Flight Plan). In addition, operators are reminded of the NAT SUPPS, Chapter 2 requirement that all aircraft intending to operate in the NAT Region shall insert the aircraft registration in Item 18 of the ICAO flight plan, following the “REG/” indicator.

Note: for information on the new ICAO Flight Plan entries that will be required on 15 November 2012 and on the related ICAO and FAA implementation programs, see the FAA webpage “Planned Changes to Filed Flight Plans in 2012”:

http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/flight_plan_filing/general/icao_2012/

5. Status of Planning for Phase 2 of the NAT DLM (5 February 2015). Firm plans and provisions for the implementation of the 5 February 2015 phase of the NAT DLM have not yet been developed. As noted above, however, the airspace where equipage with and operation of Data Link systems will be mandated is intended to expand in Phase 2 to “specified portions of NAT MNPS airspace”. The NAT DLM Implementation Plan currently calls for the NAT SPG groups to continue discussion of the Phase 2 NAT DLM airspace boundaries in their Fall 2012 meetings and to complete their discussions during the June 2013 NAT SPG meeting.

6. Operational Authorization To Use FANS 1/A (or equivalent) Data Link Systems.

a. U.S operators are required to obtain operational authorization prior to using FANS 1/A data link systems. U.S. FAA guidance on the process and procedures for operational authorization and aircraft data link system approval can be found in the following documents:

(1) AC 20-140 (as amended) (Guidelines for Design Approval of Aircraft Data Link Communication Systems Supporting Air Traffic Services (ATS)).

Note: in accordance with the NAT SPG agreement, data link communications may be conducted via Inmarsat Classic Aero or Iridium Short Burst Data. (See para. 7 below.)

(2) AC 120-70 (as amended) (Operational Authorization Process for Use of Data Link Communication System)

b. These documents are posted on the Data Link Webpage that can be found at the URL below: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/oceanic/data_link/

c. The U.S. FAA will grant operational authorization for operators to use FANS 1/A data link by issuing an Operational Specifications or Management Specifications paragraph A056 (Data Link Communications), as appropriate, or a part 91 Letter of Authorization A056 (Data Link Communications).

d. It is the objective of U.S. FAA documents containing guidance on operational authorization to ensure that operators and aircraft for which the U.S. FAA is responsible meet provisions called

for in the following documents cited in Chapter 3 (Communications) and Chapter 5 (Surveillance) of the NAT SUPPS:

(1) RTCA DO-258/ED-100 (Interoperability Requirements for ATS Applications Using ARINC 622 Data Communications) or equivalent, capable of operating outside VHF data link coverage.

(2) RTCA/DO-306/ED-122 (Safety and Performance Standard for Air Traffic Data Link Services in Oceanic and Remote Airspace (Oceanic SPR Standard)).

7. Iridium Short Burst Data (SBD) and Inmarsat I3 Classic Aero Eligibility for NAT FANS 1/A Data Link Services; Status of Inmarsat I4 Classic Aero Sub-network

a. The June 2012 NAT SPG meeting concluded that FANS 1/A (or equivalent) data link communications conducted over Inmarsat I3 Classic Aero, Iridium Short Burst Data and Very High Frequency (VHF) sub-networks have demonstrated acceptable performance for the use of data link services. (Reference NAT SPG/48 report Conclusion 48/10).

b. The NAT SPG/48 report noted that consistent with the “NAT Performance Based Communication and Surveillance Implementation Plan”, eligibility for data link operations conducted under current aircraft separation standards would not constitute an automatic eligibility for reduced aircraft separation standards. (Reference report paragraph 3.2.7).

c. Status of FANS 1/A Over Inmarsat I4 Classic Aero (FOICA) Sub-network. The FAA has sponsored a PARC CWG (Performance Based Operations Aviation Rulemaking Committee) project to evaluate FOICA performance against RCP 240 and RSP 180 specifications in accordance with GOLD (Global Operational Data Link Document) performance monitoring and analysis. The PARC CWG anticipates submitting a report to the FAA in August 2012. It is anticipated that the report will state that the FOICA network performed satisfactorily against GOLD RCP 240/RSP 180 specifications. The FAA representatives to NAT Communication, Navigation and Surveillance Group (CNSG) anticipate that NAT SPG action on FOICA will follow a path similar to that taken for Iridium SBD and Inmarsat I3 Classic Aero.

8. Exemption to European Aeronautical telecommunications network (ATN)/VHF Data Link Requirements For FANS 1/A Equipped Aircraft. European Regional Supplementary Procedures state in paragraph 3.3. that: Aircraft with an individual certificate of airworthiness first issued **before 1 January 2014** and fitted with data link equipment certified against requirements specified in RTCA DO-258A/EUROCAE ED-100A (or ED-100) **are exempted for the life of that particular airframe.** (See the Eurocontrol Link 2000+ Programme Website including Frequently Asked Questions (FAQ) at the URL listed below:

<http://www.eurocontrol.int/programmes/link-2000-programme>

9. Aircraft Data Link System Failure. Operators are reminded of the guidance provided in GOLD paragraph 5.8 (Emergency and non-routine procedures) that calls for the flight crew to

inform the Air Traffic Service Unit in the event of aircraft data link system failure using the following voice phraseology:

| | |
|-------------|--|
| Flight crew | DATA LINK FAILED. SELECTING ATC COMM OFF. CONTINUING ON VOICE |
| Controller | ROGER. CONTINUE ON VOICE |

In addition, the flight crew should continue to use voice until the functionality of the aircraft system can be re-established.

10. Reference Document. NAV CANADA Aeronautical Information Circular 24/12 (Notice of Mandate For Data Link Services In The North Atlantic Region) (28 June 2012) was consulted when developing this Notice).

11. Contacts. If there are questions on this Notice, please contact one of the following:

| Name | Organization | Phone | Email |
|-------------------|--|--------------|----------------------------|
| Greg Sparks | Flight Standards Service, Performance Based Flight Systems Branch (AFS-470), Program Support; EIS, Inc. | 202-385-4987 | Gregory.ctr.Sparks@faa.gov |
| Roy Grimes | AFS-470 Program Support CSSI, Inc. | 202-863-3692 | RGrimes@cssiinc.com; |
| Mark Patterson | AFS-470 | 202-385-4352 | Mark.Patterson@faa.gov; |
| Madison Walton | AFS-470 | 202-385-4596 | Madison.Walton@faa.gov; |

(Performance Based Flight Systems Branch, AFS-470, xx/xx/12)