Concept of Operations (CONOPS)

Removal of Oceanic Clearances in the ICAO North Atlantic Region

Version 1.0 (September 2021)

(endorsed at NAT IMG/59: NAT IMG Decision 59/4 – NAT OCR CONOPS and Implementation Task List refers)

Contents

Αl	bbrevia	ations	3
D	efinitio	ns	4
1.	Exe	cutive Summary	5
2.	Pur	pose and Scope	5
3.	Curi	rent Operational Environment	6
	3.1.	Radio Communication Failure Procedures	6
4.	Proj	posed Operational Environment	7
	4.1.	Radio Communication Failure Procedures	8
	4.2.	Changes Introduced by this CONOPS	9
	4.2.1.	Changes for ATC	9
	4.2.2.	Changes for Operators / Flight Crews	10
5.	Safe	ety Impact and Mitigations	10

Abbreviations

ACC Area Control Centre

ANSP Air Navigation Service Providers

ATC Air Traffic Control

FDP Flight Data Processor

FPL Flight Plan

NAT North Atlantic

OCL Oceanic Clearance

OCM Oceanic Clearance Message (ATC interfacility coordination message)

OEP Oceanic Entry Point

OXP Oceanic Exit Point

RCF Radio Communication Failure

RCL Voice or ACARS Data Link Request for Clearance

OCR PT Oceanic Clearance Removal Project Team

RTEU / UM CPDLC loadable route clearance uplink message (from ATC "up" to flight crew).

Definitions

Current Flight Plan The flight plan, including changes, if any, brought about by

subsequent clearances.

Oceanic Entry Point (OEP)

The Oceanic Entry point is generally a "named" waypoint, on or

close to the FIR boundary where the aircraft enters an oceanic

control area.

Note 1: Routes involving more than one OCA may result in multiple

Oceanic Entry and Exit Points.

Note 2: For aircraft entering the Reykjavik CTA from Edmonton, at

or north of 82N, the Oceanic Entry Point can be a Lat/Long position

on the boundary.

Oceanic Exit Point (OXP)

The Oceanic Exit point is generally a "named" waypoint, on or

close to the FIR boundary where the aircraft leaves the last oceanic

control area.

Oceanic Clearance (OCL) A clearance issued by an oceanic ANSP for a flight to operate

within oceanic airspace from Oceanic Entry Point (OEP) to Oceanic Exit Point (OXP). An oceanic clearance is composed of three elements; route, level and speed (when required), and normally

issued within a specified period prior to crossing OEP.

Oceanic Clearance Message (OCM) An ATC interfacility coordination message used to transmit oceanic

details from oceanic ANSPs to domestic interface ANSPs, controlled

by interfacility agreements and letters of agreements.

Oceanic Route The lateral and longitudinal components of an Oceanic Trajectory.

Oceanic Trajectory Oceanic route, flight level and speed.

Request for Clearance (RCL) – Voice via VHF or HF, or Downlink message via Oceanic Clearance

Link (OCL) used to update time at OEP, requested flight level and speed. Refer NAT OPS Bulletin 2020_001 (this bulletin will be

updated as each state implements).

1. Executive Summary

Following the introduction of significant safety enhancements through improved conformance monitoring capabilities, IATA, IFALPA and IBAC have requested that the NAT Region discontinue issuing OCLs to flight crews, in order to harmonise with global procedures and simplify operations for flight crews and ATC. These safety enhancements are, but not limited to:

- Domestic ACC FDP interface safety barriers,
- ADS-C [pre-boundary DEMAND contracts],
- CPDLC [CONFIRM ASSIGNED ROUTE] uplinks / [ASSIGNED ROUTE] downlinks, and
- expanded use of ADS-B route and level conformance monitoring.

The fifty-third meeting of the North Atlantic Implementation Management Group (NATIMG/53) endorsed the recommendation developed by the NAT Procedures and Operations Group (POG) to establish a project team "to facilitate coordinated discontinuation of the Oceanic Clearance in NAT airspace, thus aligning with global procedures".

"Discontinuation of Oceanic Clearances" was subsequently identified as a priority improvement area within the NAT 2030 Vision through SPG Conclusion 55/24, which tasked the IMG to implement the identified list by their practical implementation and feasibility by 2030.

2. Purpose and Scope

This document contains the CONOPS for the removal of the oceanic clearance in the NAT Region. The purpose of this document is to support the development of harmonized procedures for the coordinated removal of the oceanic clearance within the NAT Region.

It is understood that implementation of this concept by ISAVIA, NATS, Avinor, NAV Portugal and NAVCANADA all at the same time is preferable to NAT Region operators, as this simplifies crew training and procedures..

Implementing ANSPs have agreed to continue to coordinate and align where at all possible, noting that NATS and NAVCANADA who utilise a common Flight Data Processor platform have agreed to an aligned their transition date.

Details of implementation (including planned dates) will be published in a common NAT Ops Bulletin and within State AICs/AIPs.

It is recognised that the changes to NAT Region operations proposed by this CONOPS represent a relatively simple procedural change for ATC and flight crews, as demonstrated by New York Oceanic when they removed oceanic clearances. While a simple procedural amendment, it represents a significant human-factors change requiring substantial stakeholder engagement, document modification, safety assurances and software updates.

This CONOPS will apply to all flights regardless of communication medium or data link equipage. Training will be required due to updated flight crew procedures. However, there will be no changes

required for operator flight planning systems or aircraft avionics to support the removal of oceanic clearances in the NAT Region. Significant software changes will be required for ATC systems in addition to associated revised procedures and training for both oceanic and adjacent domestic units.

3. Current Operational Environment

Currently, oceanic clearances are required for all flights within NAT controlled airspace (at or above FL60). An oceanic clearance has three elements: Route, Level, and Speed (if required) which serves to provide for the three basic elements of separation: lateral, vertical, and longitudinal. Oceanic clearances are issued by ATC following a receipt of a Request for Clearance (RCL) from a flight crew that plans to enter the NAT. A flight crew requests an oceanic clearance from the ATC responsible for the first OCA within which they wish to operate, following the procedures and the timeframe laid down in appropriate AIPs and NAT OPS Bulletins. Such clearances are applicable only from that entry point. Specific information on how to obtain oceanic clearance from each NAT OACC is published in State AIPs and NAT OPS Bulletins.

3.1.Radio Communication Failure Procedures

The NAT Region has established specific radio communication failure (RCF) procedures that differ from the global provisions published in the PANS-ATM. These procedures, as published in the NAT section of Doc 7030 (see 3.5.2.3, 6.1.2.2, 9.3.2-5) and NAT Doc 007, describe different actions by flight crews depending on the communication medium (HF/VHF), the status of receipt of the oceanic clearance and whether or not the route clearance was via filed flight plan route or not.

The NAT RCF procedures are as follows:

Flight crew unable to obtain oceanic clearance using HF communications:

 Maintain current flight level, route and speed to the oceanic exit point. Thereafter, the pilot will follow the radio communication failure procedure applicable for that airspace.

• Communications failure prior to entering NAT Region:

- If an oceanic clearance has been received and acknowledged, the pilot will enter oceanic airspace at the cleared oceanic entry point, level and speed and proceed in accordance with the received and acknowledged oceanic clearance. Any level or speed changes required to comply with the oceanic clearance need to be completed within the vicinity of the oceanic entry point.
- If an oceanic clearance has not been received and acknowledged, the pilot will enter oceanic airspace at the first oceanic entry point, level and speed, as contained in the filed flight plan, and proceed via the filed flight plan route to landfall. That first oceanic level and speed is to be maintained to landfall.

• Communications failure prior to exiting NAT Region:

Cleared on filed flight plan route:

- The pilot will proceed in accordance with the last received and acknowledged oceanic clearance, including level and speed, to the last specified oceanic route point, normally landfall, and then continue on the filed flight plan route. The pilot will maintain the last assigned oceanic level and speed to landfall and, after passing the last specified oceanic route point, conform with the relevant State procedures/regulations.
- Cleared on other than filed flight plan route:
 - The pilot will proceed in accordance with the last received and acknowledged oceanic clearance, including level and speed, to the last specified oceanic route point, normally landfall. After passing this point, the pilot will conform with the relevant State procedures/regulations and rejoin the filed flight plan route by proceeding, via the published ATS route structure where possible, to the next significant point ahead as contained in the filed flight plan.

4. Proposed Operational Environment

Oceanic clearances to operate within oceanic airspace will no longer be issued to flight crews prior to reaching OEP.

Reception of an RCL from a flight crew will result in a common response message that will be published within State AIPs, AICs and OCR NAT Ops Bulletin.

RCL RECEIVED BY [ANSP]*. FLY CURRENT FLIGHT PLAN OR AS AMENDED BY ATC

*ANSPs should use their 4-letter log on address

Procedures or requirements associated with the submission of an RCL message are contained within State AIPs, AICs and NAT OPS Bulletin 2020_001 (this bulletin will be updated to reflect each state's changes).

Voice will continue to be available to flight crews, either directly to oceanic ATC or via domestic ATC, to submit an RCL in circumstances where submission via ACARS is not possible.

When the available oceanic profile route is different from that requested in the RCL and FPL, or when oceanic ATC considers it appropriate to ensure the most efficient route and altitude, flight crews may be instructed to contact oceanic ATC via voice prior to reaching OEP.

Otherwise, oceanic route changes will be issued via CPDLC loadable Route Clearance Uplink, or via domestic centre at an agreed time prior to reaching OEP.

Note: Details of how oceanic route changes are managed by each ANSP prior to OEP, will be contained within State AIPs, AICs and OCR NAT Ops Bulletin.

CONFIRM ASSIGNED ROUTE will continue to be uplinked after crossing OEP. CPDLC loadable route clearance uplinks (UM74(RTEU-2)/79 (RTEU-6)/80 (RTEU-9) will be used to update active flight plan where necessary.

Flight crews will not be informed if the RCL FL is not available. They will receive clearance to the oceanic level prior to the OEP. ATC will retain the requested FL and advise of future availability.

Flight crews will be reminded within the OCR NAT Ops Bulletin, that any change in FL can be requested after the OEP as the traffic constraints change.

Unless instructed by ATC as part of a restriction, flights are expected to operate on normal speed, based on the speed provided within the RCL or in accordance with the current flight plan when no RCL is required.

4.1. Radio Communication Failure Procedures

The current NAT specific RCF procedures will be updated in Doc 7030 and Doc 007 to simplify, as below:

Communications failure while operating IFR in the NAT region:

- The pilot shall maintain the currently cleared route, flight level and speed until reaching the Oceanic Exit Point.
- No route, flight level or speed change shall be made before the Oceanic Exit Point unless a change is deemed necessary by the pilot in command to ensure the safety of the aircraft.
- When being vectored or having been directed by ATC to proceed offset using RNAV without a specified limit, proceed in the most direct manner possible to rejoin the current flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude;
- For aircraft landing at airports within the NAT Region, the provisions of PANS-ATM section 15.3.3 b) 4) 7) shall apply **once the top of descent point is reached** as follows:
 - 1) proceed according to the current flight plan route to the appropriate designated navigation aid or fix serving the destination aerodrome and, when required to ensure compliance with 2), hold over this aid or fix until commencement of descent;
 - 2) commence descent from the navigation aid or fix specified in 1) at, or as close as possible to, the expected approach time last received and acknowledged; or, if no expected approach time has been received and acknowledged, at, or as close as possible to, the estimated time of arrival resulting from the current flight plan;
 - 3) complete a normal instrument approach procedure as specified for the designated navigation aid or fix; and

4) land, if possible, within 30 minutes after the estimated time of arrival specified in or the last acknowledged expected approach time, whichever is later.

4.2. Changes Introduced by this CONOPS

The success of the transition relies on all stakeholders having a thorough understanding of the changes being introduced to discontinue the issuing of oceanic clearances which will require a period of adjustment.

The following methods of communication and engagement will be utilised to ensure a common understanding of the changes introduced by this CONOPS and to mitigate against misconceptions and misapplications;

- Publication of common working NAT Ops Bulletin (for State AIPs / AICs, Operators and Flight Crews);
- NAT engagement forums (i.e. NAT Ops Forum, NAMEUR, NATNAM RCG);
- Possible NAT Region training material (i.e. NAT Region video);
- State / ANSP Operator stakeholder management meetings;
- Support from IATA / IFALPA / IBAC and other operator organisations;
- Customer account meetings;
- Identified points of contact within NAT and domestic ANSPs.

4.2.1. Changes for ATC

This CONOPS identifies, but is not limited to, the following areas that may impact ATC systems, procedures and method of operations;

- Changes in procedures / documentation:
 - ATC Procedures (normal and contingency)
 - State AIPs / AICs
 - Letters of Agreement
 - Interfacility Coordination Documents (ICDs)
- Changes to systems:
 - o Flight Data Processor
 - Oceanic Clearance Link (OCL)
 - Interfacility Coordination Links
- ATC Training (transition and future):
 - Domestic controller training
 - Oceanic controller training
 - Oceanic radio operator training
- ATC Safety Assurance (transition and final concept):
 - Assurance that existing safety barriers remain in place

o That workload on ATC remains manageable

4.2.2. Changes for Operators / Flight Crews

Flight crews will continue to use an ACARS RCL to request a FL and Mach for the crossing along with an estimated OEP time. The RCL will be acknowledged by ATC, but there will not be any clearance information.

Note: RCL requirements will be published within State AICs, AIPs and OCR NAT Ops Bulletin.

Flight crews will fly their ATC assigned altitude and flight plan route unless modified by voice or a CPDLC loadable route clearance uplink.

5. Safety Impact and Mitigations

Oceanic Clearance Removal NAT Region Safety Case as endorsed by the NAT ICAO SOG contains detailed safety assessment and assurance information. (See also Oceanic Clearance Removal Task List.)