

9/29/05

**Operational Policy/Procedures For Operational Trial of Thirty Nautical Mile (nm)**

**Lateral and 30nm Longitudinal Separation in Oakland Oceanic Sector 3**

**Explanation/Effective Date.** The operational policy and procedures for 30 nautical mile (nm) lateral and 30nm longitudinal separation (30/30) contained in this notice will be effective on December 22, 2005 at 0901 UTC. See paragraph 1.

**FAA Domestic/International NOTAM Book.** This notice will be posted in the October 27, 2005 edition of the FAA Domestic/International NOTAM book. It will be located in: Part 3 (International), Section 2 (International Oceanic Airspace Notices), Pacific notices. (<http://www.faa.gov/NTAP/index.htm>). It will also be posted on the Oceanic/International Standards/Procedures Office Webpage (<http://www.faa.gov/ats/ato/130.htm>).

**Table of Contents (9/29/05).** The following is a list of the major paragraphs in this notice:

1. Effective Date/Time and Airspace
2. Enabling Technology: Advanced Technologies and Oceanic Procedures (ATOP), Ocean21 and FANS-1/A Aircraft Systems
3. Use of 30nm Lateral and 30nm Longitudinal Separation
4. Aircraft and Operator Requirements
5. Flight Planning Requirements
6. In-flight Contingency Actions/Procedures (e.g., Aircraft or Air Traffic System Malfunction)
7. Monitoring Aircraft Navigation
8. Contacts

Attachment (Oakland Oceanic Sector Chart)

## **1. EFFECTIVE DATE/TIME AND AIRSPACE**

a. **Effective Date/Time and Airspace.** Effective on December 22, 2005 at 0901 UTC, the FAA will introduce an operational trial of 30nm lateral and 30nm longitudinal (30/30) separation standards in Oceanic Sector 3 (OC3) of the Oakland Oceanic Flight Information Region (FIR). (See the attached Oakland Oceanic sector chart). The policies, guidance and direction in this notice will apply to 30/30 operations in OC3 airspace. During the trial, the Oakland Air Route Traffic Control Center (ARTCC) may apply 30/30 in OC3 between aircraft/operators meeting the aircraft equipage and authorization requirements stated in paragraph 4 of this notice. The trial will affect eligible aircraft operating between airports in the U.S. and those in Australia, Fiji, New Zealand and Tahiti.

b. **Other Pacific FIRs.** 30/30 is already being applied between eligible aircraft operating in the following South Pacific (SoPac) oceanic airspace: the Australian Eastern Oceanic Area and the Auckland Oceanic, Nadi, Honiara and Nauru FIRs. To harmonize 30/30 operational policy/procedures in the Pacific, this Notice has been coordinated with those ATS providers as well as the ATS providers for the Tahiti and Tokyo FIRs.

c. **Expansion of 30/30 Into Other Oakland Oceanic Sectors.** After safety and operational concerns are addressed successfully in the OC3 operational trial, the FAA plans to expand the use of 30/30 separation into additional Oakland Oceanic sectors.

## **2. ENABLING TECHNOLOGY: ADVANCED TECHNOLOGIES AND OCEANIC PROCEDURES (ATOP)/Ocean21**

a. The ATOP program uses the Ocean21 system for integrated communication, surveillance and air traffic management. The successful full deployment of Ocean21 is a prerequisite for the start of 30/30 operational trials. Ocean21 provides the air traffic controller with a set of automated tools to assist in aircraft separation assurance, coordination, flight data management and controller-pilot communication. The system provides enhanced ATS automation capabilities by integrating Automatic Dependant Surveillance-Contract (ADS-C) and conventional position reports, system-maintained electronic flight data, controller-pilot datalink communication (CPDLC), flight data message processing, automated interfacility and intrafacility coordination, automated conflict prediction and reporting (CPAR), graphic dynamic situation display to the controller and interactive electronic flight strips, aircraft labels and aircraft position symbols.

b. In order to interface with Ocean21, FANS-1/A communications, navigation and surveillance (CNS) capabilities are required of aircraft to which 30/30 is applied. See paragraph 4.

## **3. USE OF 30/30 SEPARATION**

a. Oakland ARTCC will use 30/30 separation as a tool to manage air traffic and maintain separation between 30/30 eligible aircraft in OC3.

b. During the trial, operators will continue to flight plan and file as they have previously. The introduction of 30/30 separation will not affect operators' planning processes or procedures for filing flight plans. Operators flight planning between North American departure airports and

destinations in the South Pacific such as Auckland and Sydney will continue to file User Preferred Routes (UPR).

c. For the 30/30 trial in OC3, Oakland ARTCC does not plan to generate parallel flexible or fixed tracks that are separated by 30nm laterally.

d. 30/30 separation standards will only be applied between 30/30 eligible aircraft. Minimum ADS-based lateral and longitudinal separation between 30/30 aircraft and Required Navigation Performance 10 (RNP-10) aircraft will be 50 nm. Lateral and longitudinal separation standards applied to RNP-10 and to non-RNP aircraft will remain unchanged.

e. Operational Benefits. 30/30 separation will provide ATC with greater flexibility to manage air traffic and maintain aircraft separation in oceanic airspace and will enhance its capability to accommodate aircraft on user preferred routes and flight levels.

f. Safety Benefits. 30/30 separation requires enhanced CNS capabilities in air traffic systems and on board the aircraft. Enhanced air traffic surveillance systems will provide controllers with automated tools such as conflict prediction and reporting to assist in separation assurance and with tools to better monitor flight plan conformance. (See paragraph 2). Enhanced communication and surveillance systems also enable controllers and pilots to better communicate and manage contingency situations such as aircraft turn-backs, diversions and weather deviations.

#### **4. AIRCRAFT AND OPERATOR REQUIREMENTS.**

a. For aircraft/operators to be eligible for application of 30/30 separation, the following requirements must be met:

(1) The aircraft and operator must be authorized by the State of the Operator or the State of Registry, as appropriate, for RNP-4 operations.

(2) The aircraft must be equipped with a minimum of two approved long range navigation systems that will enable the aircraft to maintain RNP-4 for the duration of flight in the applicable airspace.

(3) The aircraft must be equipped with a FANS-1/A package (or equivalent) that includes satellite CPDLC and ADS-C that meet the standards of RTCA Document 258 (*Interoperability Requirements for ATS Applications Using ARINC 622 Data Communications*).

(4) Satellite CPDLC communications and ADS-C surveillance must be conducted in accordance with the FANS-1/A Operations Manual (FOM), as amended, and maintained for the duration of the flight in the applicable SoPac FIRs. (See para 4.b. below for webpage access to the FOM.)

(5) Pilots and, if applicable, dispatchers must be trained on policies and procedures applicable to 30/30 in the SoPac FIRs including the use of Satellite CPDLC and ADS-C in South Pacific oceanic airspace.

b. References for Operational Policy and Procedures. Operational policy/procedures documents related to this trial can be found on the Oceanic/International Standards and Procedures Webpage ([www.faa.gov/ats/ato/130.htm](http://www.faa.gov/ats/ato/130.htm)). The basic reference documents for RNP-4, CPDLC and ADS-C are discussed below.

(1) Operators should use one of the following documents to develop policy and procedures for RNP-4 operations:

(a) FAA Order 8400.33 (Procedures For Obtaining Authorization For Required Navigation Performance 4 (RNP-4) Oceanic and Remote Area Operations)

(b) Australian Civil Aviation Safety Authority (CASA) Advisory Circular 91U-3(0)).

(c) ICAO Document 9613 (*Manual On Required Navigation Performance (RNP)*), Appendix F (*Guidance For An Operational Approval Process For Initial Application In Oceanic Or Remote Airspace*).

(2) Operators must use the “*FANS-1/A Operations Manual (FOM)*” to develop policy and procedures for CPDLC and ADS-C operations.

**5. FLIGHT PLANNING REQUIREMENTS.** To inform ATC and to key Ocean21 automation that they have the appropriate authorizations and are eligible for 30/30 separation, operators must annotate the ICAO Flight Plan as follows:

a. Item 10 (Communication, Navigation and Approach Equipment) must be annotated with letters “J” (Data Link), “R” (Required Navigation Performance) and “Z” (additional information in Item 18).

b. Item 10 (Surveillance Equipment) must be annotated with “D” (ADS Capability);

c. Item 18 (Other Information) must be annotated with “NAV/RNP4”.

Note: RNP-10 aircraft are not required to annotate Item 18.

## **6. IN-FLIGHT CONTINGENCY ACTIONS/PROCEDURES (e.g., AIRCRAFT OR AIR TRAFFIC SYSTEM MALFUNCTION)**

a. Emphasis On Situational Awareness In a 30/30 Environment. Pilots should be aware that during the OC3 30/30 trial, 30nm separation can and will be applied to their aircraft. They should use all available tools to maintain an awareness of other aircraft in their proximity in case an in-flight contingency occurs.

b. Aircraft Navigation or Datalink System Malfunction. Pilots must advise ATC of a loss of CPDLC and/or ADS-C capability or an inability to continue to meet RNP-4. ATC will then apply the separation standard appropriate to the situation.

c. Air Traffic System Malfunction. If there is a malfunction of the CPDLC or ADS-C system at Oakland ARTCC, aircraft will be contacted and aircraft separation appropriate to the situation will be applied.

d. In-flight Contingencies: Rapid Descent, Turn-backs, Deviations, Weather Encounters, Wake Turbulence. **With the exception noted in paragraph 6e below**, pilots will continue to use the guidance for “In-flight Contingencies” published in the FAA Pacific Chart Supplement and posted on the RVSM Documentation Webpage. On the webpage, in-flight contingency procedures are located in paragraphs e, f, g and h of the document entitled “Operational Policy/Procedures: Pacific Ocean and Offshore Airspace”. The document can be accessed directly using the address below:  
([http://www.faa.gov/ats/ato/150\\_docs/Pacific\\_RVSM-Ops\\_Proc\\_NOTAM\\_24Nov.doc](http://www.faa.gov/ats/ato/150_docs/Pacific_RVSM-Ops_Proc_NOTAM_24Nov.doc))

e. Revised Guidance For Track Offsets When Executing In-flight Contingency Maneuvers. The minimum lateral separation for eligible aircraft during the operational trial in OC3 will be reduced to 30nm. Due to this factor, a change is recommended for track offset when **30/30 eligible aircraft** are unable to obtain ATC clearance prior to performing in-flight contingency maneuvers involving rapid descent, turn-back or diversion. **For the 30/30 operational trial in OC3, pilots of 30/30 eligible aircraft performing in-flight contingency maneuvers in those situations should execute a turn to establish a track laterally separated by 15nm from the cleared track. (The 15nm track offset can be used by 30/30 eligible aircraft regardless of the lateral separation standard being applied).**

Note: Work has begun to promulgate the 15nm track offset for in-flight contingencies for general use in Pacific oceanic airspace. The provision for the 15nm track offset is currently only published in an amendment to ICAO Document 4444 (*Procedures for Air Navigation Services – Air Traffic Management*).

f. Use of All In-flight Contingency Measures. Pilots are reminded that they should use **all** of the published in-flight contingency measures to mitigate the potential for conflict with other aircraft. (See the documents in paragraph 6d above for the full text of the in-flight contingency procedures). The published guidance calls for the pilot to:

- Once established on the offset track and able to maintain level flight, maintain a flight level (FL) 500 feet above or below the FL’s normally used (i.e., the cardinal FL’s)
- Watch for other aircraft visually or, if equipped, with ACAS
- Broadcast appropriate information on 121.5 MHz or the back-up frequency 123.45 MHz
- Turn on exterior lights (commensurate with operating limitations)
- Obtain an ATC clearance at the earliest possible time

**7. MONITORING AIRCRAFT NAVIGATION.** Oakland ARTCC will monitor and document aircraft navigation errors and aircraft system malfunctions. Operators are requested to cooperate in the follow up investigation of these events.

**8. CONTACTS.**

a. ATC questions can be directed to:

Ann Moore (Oceanic/International Standards and Procedures Office).  
Ph 202-267-9375; Email: Ann.Moore@faa.gov

David Maynard (Support Manager for International Airspace and Procedures, Oakland Center). Ph 510-745-3543; Email: David.Maynard@faa.gov

b. Aircraft operations and airworthiness questions can be directed to:

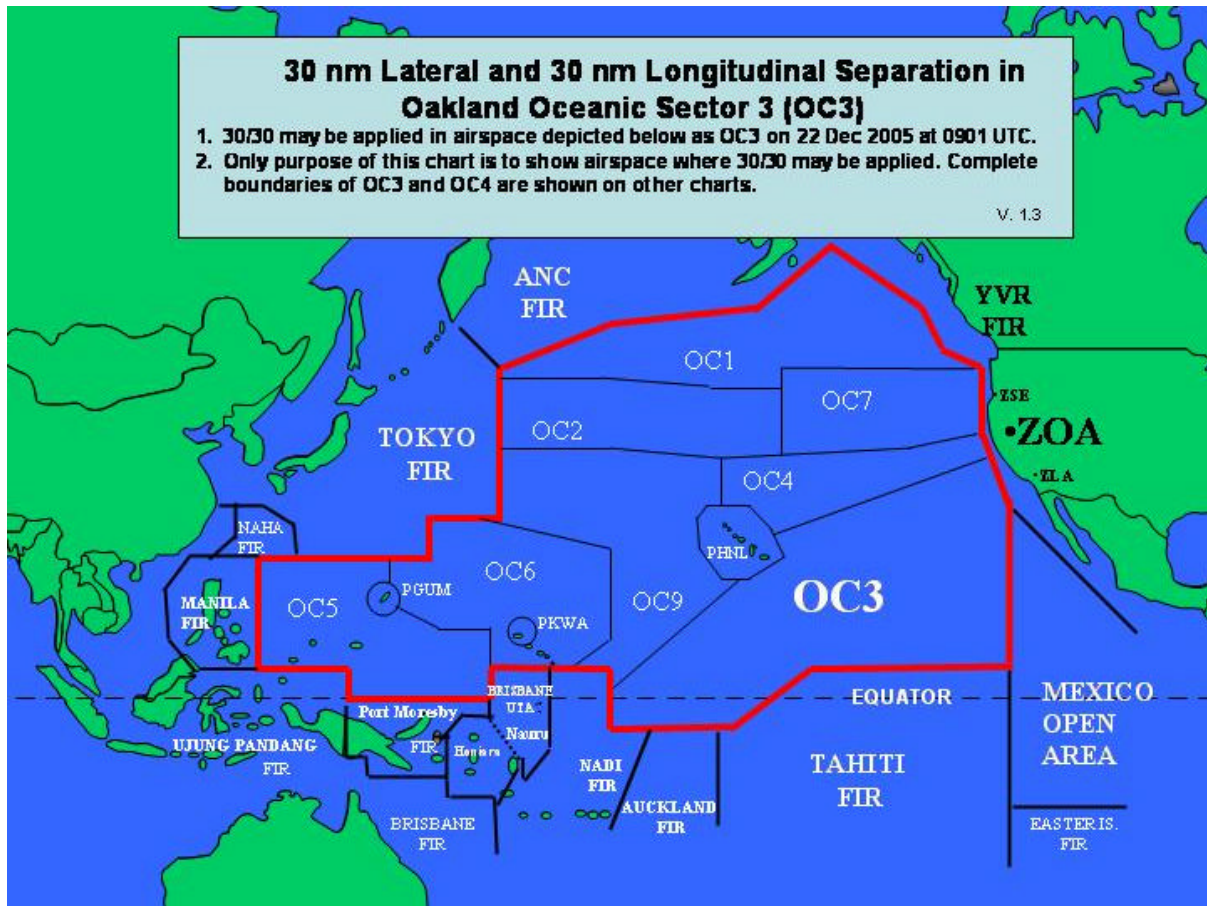
Robert M. Tegeder (Flight Technologies and Procedures Division, AFS-400)  
Ph 202-385-4581; Email: Robert.M.Tegeder@faa.gov

Robert Swain (Flight Technologies and Procedures Division, AFS-400)  
Ph 202-385-4576; Email: Robert.Swain @faa.gov

Roy Grimes (FAA Separation Standards Program Support, CSSI, Inc.)  
Ph 202-863-3692; Email: RGrimes@cssiinc.com

(Oceanic/International Standards/Procedures Office, 9/29/05)

### Oakland Oceanic Sector 3



**World Air Ops** provides Airlines, Aircraft Operators, and Pilots around the World with Operational Support, Flight Planning, Ferry Flights, and Aircraft Deliveries.

You may be interested to view **other documents** in our Free Resource Library - organised by region:

North Atlantic	<a href="#">NAT</a>
Africa	<a href="#">AFI</a>
Europe	<a href="#">EUR</a>
Pacific	<a href="#">PAC</a>
South America	<a href="#">SAM</a>
North America	<a href="#">NAM</a>
Asia	<a href="#">ASI</a>

Our Operations Room has live Airspace, Fuel, and Navigation information updates.  
[www.worldairops.com/opsroom.html](http://www.worldairops.com/opsroom.html)

We provide:

- Route planning and analysis
- Computerised Flight Planning for Business Aviation, Airlines, Charter, Cargo and Military.
- Co-ordination of 3rd party Airport handling, Ground Support, Contract Fuel, Customs Delivery, Ferry, and Positioning Flights
- Charter Flights, Overflight permits, 'First Visit' kits and aerodrome reviews.
- Oceanic Flights, Organised Track Systems, International Procedures.

Visit our website for more: [www.worldairops.com](http://www.worldairops.com)

Or email us your question - we're here to help : [air.support@worldairops.com](mailto:air.support@worldairops.com)  
**15 minute response time.**

