

ORDER

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

7110.82C

4/11/00

**SUBJ: MONITORING OF NAVIGATION, LONGITUDINAL SEPARATION, AND
ALTITUDE KEEPING PERFORMANCE IN OCEANIC AIRSPACE**

1. PURPOSE. This order establishes procedures for processing Oceanic Navigational Error Reports (ONER), Oceanic Altitude Deviation Reports (OADR), Erosion of Longitudinal Separation Reports (EOLS), Letter of Authorization Verification Reports (LOAV), and for collecting system data for analysis.

2. DISTRIBUTION. This order is distributed in Washington headquarters to the branch level in the Air Traffic and Flight Standards Services, to the branch level in the Office of International Aviation and the Office of the Chief Counsel; to the regional administrator level in the regions with a branch level distribution to the Regional Counsel and the Air Traffic and Flight Standards Divisions; to the division level in the FAA Academy at the Aeronautical Center; to the division level at the William J. Hughes Technical Center; to all Flight Standards District and Certificate Management Offices; to all International Field Offices; and to all Air Route Traffic Control Centers.

3. CANCELLATION. Order 7110.82B, Monitoring of Navigational Performance in Oceanic Areas, dated July 20, 1988, is canceled.

4. BACKGROUND. Demonstrated navigation accuracy is a significant variable in determining the minimum lateral spacing between non-intersecting oceanic routes and the separation applied between aircraft in special use airspace. It is also a primary component in assessing the safety of operations. An important contributing factor in the overall navigational performance is larger errors. These exert a disproportional influence on safety. A record of performance is compiled based on information provided by this order that is used by airspace planners, safety authorities, and international organizations to ensure safe operations. To mitigate the risk of collisions, lateral navigational errors and erosion of longitudinal separation are investigated to determine cause and to prevent their recurrence. It is similarly important to evaluate adherence to altitude assignments. To date, the best available measurements of such adherence is obtained by radar observations of each aircraft's proximity to the centerline and assigned altitude prior to coming into coverage of short-range navigation aids at the end of an oceanic route segment. If an observation indicates that an aircraft was not within an established limit, the reason(s) for the apparent deviation from centerline or altitude must be determined so that steps may be taken to prevent a recurrence and to improve overall navigation and/or altitude keeping performance. Additionally, aircraft flying in areas of reduced separation must be able to maintain precise navigation and altitude keeping standards that will allow for the reduction in separation. Only operators that have proven capabilities are approved in the areas in which separation has been reduced. The manner in which operators are approved is through the issuance of Operation Specifications (OpSpecs) or a Letter of Authorization (LOA). For the

purposes of this document, LOAV means that the operator is approved by the appropriate OpSpecs or has an LOA.

5. EXPLANATION OF CHANGES. This order was changed to meet domestic and international obligations and require updated reporting procedures for ONERs as well as providing additional information in the reports. Procedures for reporting and processing OADR, EOLS, and LOAV were added.

6. PROCEDURES.

a. Air Traffic Control Facility Involved. The air route traffic control facility controlling traffic entering, within, or exiting oceanic airspace shall:

(1) Radar monitor (if within radar coverage) the progress of all aircraft entering or leaving oceanic airspace.

(2) If an aircraft is observed 25 nautical miles (NM) or more from the centerline of the route on which it was cleared, notify the pilot of the observed position and distance off route and advise that an ONER will be filed. If an aircraft's Mode C or Mode S readout is observed 300 feet or more from the assigned altitude just before entering or upon exiting oceanic airspace, notify the pilot of the observed altitude deviation and that an OADR will be filed. If an operator reports an altitude at a position report in a non radar oceanic environment that is different from an air traffic control (ATC) clearance, notify the pilot of an altitude deviation and that a deviation report will be filed. If an aircraft's Estimated Time of Arrival (ETA) for an oceanic reporting point differs by 3 minutes or more from the aircraft's Actual Time of Arrival (ATA), notify the pilot of the EOLS and that a deviation report will be filed. If circumstances indicate to a controller that an aircraft may not be authorized to fly in special use airspace, the controller may, as time permits, query the pilot to determine if the crew has an authorization. If the controller suspects that the aircraft does not have authorization, the pilot should be notified that a LOAV will be filed.

(a) Record data required for the ONER, OADR, EOLS, or LOAV notification report according to Appendix 1.

(b) Request the appropriate facility or Aeronautical Radio, Inc. (ARINC) ground station save and secure the tapes of the deviation. The tapes should be held until requested by the investigating regulatory authority (i.e., Flight Standards District Office (FSDO), Certificate Management Office (CMO), or International Field Office (IFO)).

(c) Within 24 hours of the observation, transmit the completed initial ONER, OADR, EOLS, or LOAV notification by routine telegraphic or fax message in accordance with the format described in Appendix 1 to the offices indicated in the Notification List in Appendix 2.

(d) Within 48 hours of the observation, send a copy of the International Civil Aviation Organization (ICAO) flight plan (if available) to the Flight Technologies and Procedures Division,

AFS-400, (fax: 202-267-5086) to ensure proper identification of the aircraft's home base and pilot-in-command (PIC). (Identification of the PIC for military aircraft is not required.)

(e) If the error was committed by an aircraft in North Atlantic (NAT) Minimum Navigation Performance Specifications (MNPS) airspace, send a copy of the report to ICAO's NAT Central Monitoring Agency (CMA) (telex: 883092 or fax +44-171-832-5562) within 48 hours of the observation.

(f) Send a copy of the error report to NAS and International Airspace Analysis Branch, ACT-520, FAA William J. Hughes Technical Center (fax: 609-485-5117) within 48 hours of the observation.

NOTE: The FAA William J. Hughes Technical Center functions as a Central Monitoring Agency for Pacific oceanic airspace under the acronym APARMO (Asian/Pacific Approvals Registry and Monitoring Organization).

b. Flight Technologies and Procedures Division, AFS-400. AFS-400 shall record all deviations into a data base and shall distribute the error reports as follows:

(1) Directly to the certificate-holding district office for air carriers (14 CFR parts 121, 125, and 135);

(2) Reports on general aviation aircraft to the FSDO nearest the owner's address of record for investigation;

(3) NAT / CMA requests for confirmation of LOA's to operate in MNPS airspace to the FSDO nearest the aircraft owner's address of record;

(4) Reports attributed to military aircraft to:

Hq FAA/AAT-4
800 Independence Avenue, SW
Washington, DC 20591
Voice # (202) 267-9427
Fax # (202) 267-5868

(5) Reports attributed to foreign aircraft (CFAR 129) to the appropriate IFO or FSDO for resolution with the operator's civil aviation authority (CAA) as required by ICAO North Atlantic Document 001 (includes reporting results of investigation to the CMA);

(6) A copy of the AFS-400 data base of all deviations will be distributed monthly to the General Aviation and Commercial Division, AFS-800, and the Air Transportation Division, AFS-200.

c. Flight Standards Service Field Offices. Flight Standards Service (AFS) field offices shall investigate all Air Traffic and monitoring agency reported oceanic deviations to determine the cause, by completing the report contained in Appendix 2, and initiate enforcement action if merited. Various kinds of events, such as waypoint insertion errors, equipment failures, and ATC operational errors can lead to a navigation error or altitude deviation. Representatives of the Air Traffic Service, Flight Standards Service, and the Office of Chief Counsel have determined that it is *inappropriate* to investigate these events according to the guidelines contained in Order 8000.49, Flight Standards Geographic Program. However, it is important to forward the information related to such events to appropriate authorities.

(1) If the investigating office determines that an Enforcement Investigation Report (EIR) is warranted, that office is responsible for initiating and completing the report according to Order 2150.3, Compliance and Enforcement Program. Flight Standards field offices shall be responsible for the investigation and resolution of these errors, through appropriate enforcement and other remedial tools.

(2) AFS-400 has developed handbook guidance procedures for investigating, processing, and reporting of civil aircraft ONERs and OADRs. Upon receipt of an error report, field inspectors shall open a Program Tracking and Reporting Subsystem (PTRS) record in accordance with the handbook guidance. AFS Regional Focal Points shall ensure that investigations are completed within 30 days of receipt. The Regulatory Support Division, AFS-600, is assigned as the Flight Standards clearinghouse for aggregating, analyzing, and reporting these errors.

d. Regulatory Support Division, AFS-600. On a monthly basis, AFS-600 shall perform a data base search for all PTRS records that are coded 1712 and that have either ONER, OADR, EOLS or LOAV listed under Miscellaneous in Section 1. AFS-600 shall then forward a summary of these reports, to include their open or closed status, to ACT-520 and send all reports to AFS-400.

e. FAA's William J. Hughes Technical Center, NAS and International Airspace Analysis Branch (ACT-520). ACT-520 shall:

- (1) Maintain a record of all oceanic deviation reports.
- (2) Perform analyses of deviations and determine if the data indicates any significant changes in the navigation environment that may require corrective action.
- (3) Provide periodic data summaries and analyses to AFS-400.
- (4) Recommend corrective action when indicated or required.

7. DIRECTIVE FEEDBACK. Any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this order should be noted on FAA Form 1320-19, Directive Feedback Information. For your convenience, this form is included at the end of this order. Your comments should be forwarded to the originating office (Attn: Directives Management Officer) for consideration. If an interpretation is needed immediately, you may call the originating office for guidance. However, you should also use the FAA Form 1320-19 as a follow-up to verbal conversation.

/s/

L. Nicholas Lacey
Director, Flight Standards Service

APPENDIX 1. AIR TRAFFIC REPORT FORMAT

TO: _____ FAX _____ PHONE _____

FROM: _____ FAX _____ PHONE _____

<p>OCEANIC NAVIGATION ERROR REPORT (ONER)/ OCEANIC ALTITUDE DEVIATION REPORT (OADR)/ EROSION OF LONGITUDINAL SEPARATION REPORTS (EOLS)/ LETTER OF AUTHORIZATION VERIFICATION REPORTS (LOAV) (TO BE COMPLETED BY AIR TRAFFIC)</p>		
<p>ÿ Gross navigation error; ÿ Altitude deviation; ÿ Erosion of Longitudinal Separation; ÿ LOA Verification <i>(Check one)</i> NOTE: For LOA Verification - Only complete sections 1-11 and sections 15-16</p>		
<p>2. Reporting agency and local reporting number, if used</p>		
<p>3. Date of occurrence</p>		
<p>4. Time of occurrence (UTC)</p>		
<p>5. Aircraft identification and operator (If military, provide call sign and home base)</p>	<p>Aircraft Registration</p>	
<p>6. Aircraft type</p>	<p>Departure</p>	<p>Destination</p>
<p>7a. ATC cleared route or track</p>		
<p>7b. Actual route or track</p>		
<p>8. If ONER radar observed position (in latitude and longitude) and distance left or right of assigned route or track. If OADR observed or reported flight level or altitude. (Use observed if Mode C; reported if pilot reported), and duration at incorrect flight level. If EOLS, the difference between ETA and ATA.</p>		
<p>9. Assigned flight level or altitude</p>		
<p>10. Crew comments when notified</p>		
<p>11. Location where flight plan filed. (For general aviation aircraft insert the 4-letter ICAO location identifier. For air carrier aircraft insert the company or agency that filed the flight plan.)</p>		
<p>12. Type of long-range navigation equipment in use</p>		
<p>13. Did ATC advise operator of occurrence?</p>		
<p>14. Remarks. (Anything which may assist in the investigation or analysis. For example, in the case of turbulence, state extent and duration of deviation from cleared flight level. In the event of contingency action, indicate whether a clearance was given and if contingency procedures were followed.)</p>		
<p>15. Flight plan data. (Forward flight plan if available. If the flight plan is not available, enter any available information that would help locate the operator, such as identification of departure and arrival points.)</p>		
<p>16. Addressee -- please acknowledge receipt. Call _____ at _____. (Provide your name, voice and fax telephone numbers for call back.)</p>		

APPENDIX 2. FLIGHT STANDARDS REPORT FORMAT

TO BE COMPLETED BY FLIGHT STANDARDS *											
<p>1. Attachments -- Please indicate what additional information is attached to this report by circling "yes" or "no" as appropriate. (This supplemental information should be submitted as part of the completed investigation package.)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">ONER/OADR, EOLS Supplemental Information*</td> <td style="text-align: right;">Required</td> </tr> <tr> <td>Flight log</td> <td style="text-align: right;">Yes No</td> </tr> <tr> <td>Waypoint notebook</td> <td style="text-align: right;">Yes No</td> </tr> <tr> <td>ATC / ICAO Flight Plan</td> <td style="text-align: right;">Yes No</td> </tr> <tr> <td>Other (please identify)</td> <td></td> </tr> </table>		ONER/OADR, EOLS Supplemental Information*	Required	Flight log	Yes No	Waypoint notebook	Yes No	ATC / ICAO Flight Plan	Yes No	Other (please identify)	
ONER/OADR, EOLS Supplemental Information*	Required										
Flight log	Yes No										
Waypoint notebook	Yes No										
ATC / ICAO Flight Plan	Yes No										
Other (please identify)											
<p>* Copies of an ONER / OADR, EOLS Supplemental Information Record are contained in Order 8700.1, chapter 223 and in Order 8400.10, volume 7, chapter 1.</p>											
<p>2. Operator / crew identification and remarks: (For military aircraft, provide call sign only)</p>											
<p>3. If the error occurred in Required Navigation Performance (RNP) airspace, MNPS airspace, or any other restricted airspace, was the aircraft authorized to be in that airspace when the error occurred?</p>											
<p>4. Cause of deviation:</p>											
<p>5. Investigator's comments:</p>											
<p>6. Corrective action recommended or initiated:</p>											
<p>7. Flight Standards assigned report number:</p>											

APPENDIX 2 - (continued)

NOTIFICATION LIST	U.S. AIRCRAFT			FOREIGN AIRCRAFT		
	AC	GA	MIL	AC	GA	MIL
AFS-400 Voice #: (202) 267-8452 (Attn: Dave Maloy) (202) 267-3739 (Attn: Bob Hanson) Fax #: (202) 267-5086	X	X	X	X	X	X
ACT-520 (FAA William J. Hughes Technical Center) Voice #: (609) 485-4163 Fax #: (609) 485-5117 TTY-KACYYAYX	X	X	X	X	X	X
North Atlantic Central Monitoring Agency NAT (CMA) Telex: 883092 Fax: 44-171-832-5562	X NAT ONLY	X NAT ONLY	X NAT ONLY	X NAT ONLY	X NAT ONLY	X NAT ONLY
All military or government aircraft: Send to AFS-400 for distribution through Hq FAA/AAT-4 Voice #: (202) 267-7954 or (202) 267-3739 Fax #: (202) 267-5086						

APPENDIX 3. FLOWCHART OF DISTRIBUTIONS

