

## Air Traffic Organization Policy

Cancellation Date:  
April 29, 2008**SUBJ:** Operational Error Reporting, Investigation, and Severity Policies

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**1. PURPOSE.** This Notice implements the separation conformance method of classifying operational error severity and creates a new category of operational error (OE) to identify and track the most minor of airborne OEs. This Notice implements other process changes approved by the Air Traffic Organization (ATO) Executive Council, Safety Services, and the Air Traffic Safety Oversight Service (AOV) as approved changes to ATO's policy regarding operational errors. This change separates the measured loss of required separation minima from the evaluation of performance deficiencies. The change is the result of a search for an improved way to measure safety, organizational performance and for a means to improve safety efficiency and productivity. It establishes requirements for consistent data collection; and, it implements an operational error analysis protocol to identify causal and contributing factors that supports meaningful reporting and decision-making to improve safety in the ATO. The changes described in this Notice are essential to transitioning to an outcome based severity classification and provide standard processes that will give greater transparency and ultimately increased understanding by our customers, owners and employees. As the ATO transitions to a formal Safety Management System, this Notice describes a consistent incident investigative process that commits to and supports accountability, understanding, root-cause analysis, decision-making, and continuous improvement. The ATO's Safety Services office provides policy interpretations concerning administration of this Notice.

**2. DISTRIBUTION.** This Notice is distributed to all Washington headquarters, William J. Hughes Technical Center, Mike Monroney Aeronautical Center, and Air Traffic Organization offices including all air traffic field facilities.

**3. EFFECTIVE DATE.** This Notice is effective April 30, 2007.

**4. CANCELLATION.** This Notice cancels N JO 7210.645, Change to FAA Order 7210.56C, Air Traffic Quality Assurance, dated 02/26/07, regarding the Operational Errors Severity and Proximity Events that commenced February 2007. GENOT 6/53, N 7210.638, Change to FAA Order 7210.56C, Air Traffic Quality Assurance, dated 09/29/06, remains in effect. The following portions of FAA Order 7210.56C are cancelled:

- a. Paragraphs 1-1-3 through 1-1-5.
- b. Paragraph 5-1-1, subparagraphs c, f, g, h.
- c. Paragraphs 5-1-2, 5-1-3 and 5-1-4.

- d. Paragraph 5-1-5, subparagraph c.
- e. Paragraph 5-1-7.
- f. Paragraph 5-1-8, subparagraphs b, c, d.
- g. Paragraph 5-1-13, subparagraphs d, f, g.
- h. Paragraphs 5-1-15 and 5-1-16.
- i. Paragraphs 6-1-1 through 6-1-5.

**5. DOCUMENT AVAILABILITY.** This notice is available on the Directives Management Information System (DMIS) at <http://dmis.faa.gov> and on the air traffic publications Web site at [http://www.faa.gov/airports\\_airtraffic/air\\_traffic/publications](http://www.faa.gov/airports_airtraffic/air_traffic/publications). Requirements and responsibilities contained in this order will be included in revisions to FAA Order 7210.56, Air Traffic Quality Assurance.

**6. BACKGROUND.** Recent analyses of operational errors indicated that the relationship between minor losses of separation and controller performance was not always clear, indicative of the causes that lead to the error, or of the need to address improvements and/or performance management. This Notice implements a new policy and provides the tools to isolate the conformance with required separation standards from contributing causes to the loss of separation, including controller performance. Additionally, as the ATO accelerates the implementation of a Safety Management System (SMS), it needs to focus resources on the basis of risk. This Notice provides a mechanism for dealing with the potential risk associated with operational errors on a severity scale. "A" and "B" errors must be investigated individually and corrective action plans developed to address the primary and contributing causes of those errors while "C" errors and "Proximity Events" are reviewed as a group and corrective action plans developed to reduce their occurrence; thus focusing our resources on the basis of measured risk. Based on what we learn from this new policy additional studies of airborne separation will be undertaken to determine whether separation minima may be reduced under certain conditions. The changes described in this Notice are effective and will be incorporated in the next revision of FAA Order 7210.56.

## **7. DEFINITIONS.**

- a. **Category A OE.** A loss of airborne separation where the composite slant range retained is less than 34 percent.
- b. **Category B OE.** A loss of airborne separation where the composite slant range retained is 34 percent or more, but less than 75 percent.
- c. **Category C OE.** A loss of airborne separation where the composite slant range retained is more than 75, but either the horizontal and vertical separation retained are less than 90 percent.
- d. **Closest Proximity.** This term is used to describe the point of minimum separation between two airborne aircraft found to have less than the required separation during a single event regardless of geometry. Closest proximity is entered into Block 7 of the Preliminary OE/OD Report (Form 7210-2) and Block 8 of the Final OE/OD Report (Form 7210-3).
- e. **Composite Slant Range.** The mathematical result when the percentage of horizontal separation retained and the percentage of vertical separation retained is combined to create a

single number that best represents the resultant airborne separation when used in conjunction with separation conformance. An electronic calculator is available (see Appendix B to this Notice) to provide rapid computation of the composite percentage of separation retained, and the overall OE category. If unable to access the calculator, multiple tables are available (see Appendix C to this Notice) to provide rapid estimates of the overall OE category.

- f. Final Report.** Refers to FAA Form 7210-3, “Final Operational Error/Deviation Report.”
- g. No Severity.** Refers to losses of the separation minima that do not qualify for a separation conformance rating; e.g., minimum vectoring altitude (MVA), oceanic, surface, non-radar, and military formation flights.
- h. Operational Deviation (OD).** Refers to FAA Order 7210.56C, section 5-1-1.
- i. Operational Error (OE).** Refers to FAA Order 7210.56C, section 5-1-1.
- j. Performance.** Human proficiency including actions (or inactions) leading to, during, and after an OE/OD.
- k. Preliminary Report.** Refers to FAA Form 7210-2, “Preliminary Operational Error/Deviation Report.”
- l. Proximity Event.** A loss of the separation minima where 90 percent or greater separation is retained in either the horizontal or vertical plane, and does not include any violation of wake turbulence separation minima.
- m. Regional Operations Center (ROC).** One of nine communications center serving the FAA’s local Regional offices and the ATO’s Service Area and Service Center offices.
- n. Residual risk.** Primary and/or contributing causes of operational errors identified as still present following an operational error investigations or analysis.
- o. Separation loss.** The amount of separation (feet or nautical miles) less than the prescribed separation minima.
- p. Separation retained.** The amount of separation remaining (feet or nautical miles) when the separation loss is subtracted from the prescribed separation minima.
- q. Separation Conformance.** The percentage of the separation maintained as a function of the separation required at the point of closest proximity. Separation conformance is not calculated for “No Severity” events.
- r. Separation Conformance Index.** Aggregate number that results from adding multiple composite slant range numbers together and dividing by the total number of (events) numbers used in the aggregate.
- s. Service Area.** Replaces regional Air Traffic Division (ATD) throughout the previous version of Order 7210.56C.
- t. Severity.** Refers to the A, B, C, and Proximity Event scale used to classify OEs; each category refers to a group of OEs with similar proximity outcomes; Category A refers to the most severe form of OE, and Proximity Event refers to the least severe form of OE.
- u. Training & Proficiency Record (FAA Form 3120-1).** The record for recording air traffic control technical training.

**v. Wake Event.** An OE where one (leading) aircraft is presumed to generate a wake turbulence threat to other (following, crossing) aircraft and the prescribed wake turbulence separation minima is violated. Wake events are categorized for severity as follows:

(1) **Category A Wake Event** - a loss of airborne separation where the lateral separation retained is less than 70 percent.

(2) **Category B Wake Event** - a loss of airborne separation where the lateral separation retained is equal to or greater than 70 or more percent, but not including 85 percent.

(3) **Category C Wake Event** - a loss of airborne separation where the lateral separation retained is equal to or greater than 85 percent, but less than 100 percent.

An electronic calculator is available (see Appendix B to this Notice) to provide rapid computation of the overall OE category. If unable to access the calculator, a table are available (see Appendix page C-5 to this Notice) to provide rapid estimates of the overall OE category.

**w. Washington Operations Center (WOC).** Communications center serving the FAA's Headquarters and key ATO offices.

**8. SUSPECTED EVENTS.** All losses of separation must be individually analyzed to determine the performance of the air traffic control system, and to determine the correct actions to take to ensure that the providing of air traffic services is both predictable and maintains the target level of safety.

**NOTE-**

**1.** *Maintaining an efficient and safe air traffic control system requires that all deficiencies (including losses of separation) in our system be identified for analysis and reporting. Losses of separation, even small losses such as Proximity Events, must be immediately reported to any available management official or controller-in-charge (CIC), even if not electronically detected. Proximity Events must be reported regardless of the probable cause.*

**2.** *To support the agency's initial determination as to whether an investigation is warranted, employees must be verbally notified they have been associated with a possible OE/OD and must provide the preliminary information of which they have knowledge, when requested by the management official or CIC. This phase is meant only to determine the need for an investigation and is not investigatory.*

**9. INITIAL INVESTIGATIONS.**

**a.** The initial investigation should be fact finding in nature. It determines what occurred in the system, ensures corrective action is initiated to maintain system integrity, and provides for appropriate reporting.

**NOTE-**

*There are occasions when higher levels of management may require further review of a suspected incident, and this further review may result in the discovery of an incident not previously identified.*

**b.** The management official, or the CIC when a management official is not available, must determine the validity of suspected OE/OD, and if valid, must ensure the following items are accomplished.

**NOTE-**

*Other facility personnel must help the management official and/or CIC gather data to conduct the initial investigation, when possible.*

(1) When information indicates that an OE/OD may have occurred in another facility, advise that facility's management official or CIC immediately, and conduct a QAR in accordance with section 4-1-3 of Order 7210.56C.

(2) When preliminary review indicates that wake turbulence separation did not apply to an airborne loss of separation and at least 90% of the required vertical or lateral separation was maintained, consider the event to be a Proximity Event. An employee may be withheld from performing operational duties while the separation maintained and/or pilot action/responses during the event are being verified.

**NOTE-**

*Minimize the operational disruptions for any investigations of Proximity Events.*

(3) Regardless of the preliminary review findings, the investigation must proceed in accordance with paragraphs 10-12 of this Notice.

**NOTE-**

**1.** *Involved employees participating in suspected OE/OD investigations may need to remain in the facility beyond their scheduled shifts to complete their statements, be interviewed, and participate in the initial investigations.*

**2.** *Removal from operational duties, pending determination that an OE/OD has occurred, does not constitute decertification and may be warranted in order for the management team to determine the proper actions to take.*

**10. INVESTIGATING AN AIRBORNE LOSS OF SEPARATION.** If at any time the investigation of a loss of separation reveals that an operational error/deviation actually occurred, process that incident in accordance with Chapter 5 of FAA Order 7210.56C and the following changes. Ensure that investigations are conducted in accordance with any negotiated agreements between the FAA and pertinent labor organizations.

**a.** If the review of radar data cannot occur immediately following a suspected OE/OD, record the incident, and report the incident using estimated separation distance, (FAA Form 7210-2, block 7) until such time a review of radar data can occur.

**NOTE-**

This review should occur in a timely manner, i.e., next business day.

**b.** Review available radar data (see Appendix 1, Radar Data Processing, FAA Order 7210.56C), flight strips, and appropriate computer data. Many new systems retain data on their individual hard drives. These data are generally deleted from the hard drives after 15 calendar days or 45 calendar days. The Manager or designee is responsible for advising Technical Operations, Field Automation Support, or the Operational Support Facility, as appropriate, in a timely manner so that they can extract these data onto a storable/retainable electronic medium.

**NOTE-**

**1.** *For Controller-Pilot Data Link Communications (CPDLC) systems, data reduction and analysis tool printouts will indicate a chronological sequence of textual CPDLC transactions. Individual CPDLC messages are stored in the Data Link Applications Processor temporary file as a binary encoded message and can be printed out in a text format for review.*

**2.** *Requests for User Request Evaluation Tool (URET) and Display System Replacement (DSR) data should be made through the DSR/URET Helpdesk at 800-377-0308.*

**c.** Terminal facilities without digital voice recording systems must compare the accuracy of the Automated Radar Terminal System (ARTS) clock with its time source and also compare the voice recorder equipment clock with the ARTS clock. These findings must be noted on FAA

Form 7230-4. Facilities using both Digital Voice Recorder System (DVRS) and Standard Terminal Automation Replacement System (STARS) do not need to make a comparison; instead, they must enter "DVRS/STARS Facility" on FAA Form 7230-4 along with the incident entry.

**d.** Review voice recordings as soon as feasible.

(1) Two certified re-recordings, one marked "Original" and the other marked "Copy," must be made from the original voice recording and must include the audible time channel. Facilities must retain both recordings in the OE file. These recordings must be certified and labeled in accordance with FAA Order 8020.16. Cassette tapes, digital file (e.g. WAV), and computer diskette are suitable media. Include all communications for a period of five minutes before initial contact to five minutes after the last contact with each position involved in the OE.

(2) If the above period exceeds 30 minutes, the Director of Operations at the Service Area may approve, with Safety Services Investigations & Evaluations concurrence, limiting the recording to that period pertinent to the specific OE incident.

**e.** Conduct an interview with the employee(s) to obtain insight they may have into the event for all category A, B, or C events. Employee interviews following a Proximity Event are at the discretion of the facility, unless the Proximity Event is a significant event. To provide the most complete report, complete interviews prior to Safety Services Investigations & Evaluations notification, if possible.

**f.** When the preliminary OE investigation indicates that another facility is involved in the occurrence, confer with the other Manager(s) as soon as feasible to determine the scope of the other facility's investigative effort and how long it will take.

**g.** The Manager of any other involved facility must provide the reporting facility with information and assistance as required. This may require an investigation on the same scale as that performed by the reporting facility, in which case the Manager must have the same responsibilities, as defined in paragraph 9 of this Notice, Initial Investigations. The Manager of any other involved facility must also retain all pertinent original data.

**h.** Notify the Air Traffic Manager of the OE.

**i.** If the event involves multiple facilities and they cannot agree on which facility has the primary responsibility, all involved facilities must complete FAA Form 7210-2 within the required notification period, and request relief from an official above them in the organization (e.g. hub, Service Area, Service Unit, and/or Safety Services).

**j.** Ensure that FAA Form 7210-2, Preliminary Operational Error/Deviation Investigation, is completed.

**NOTE-**

*Appendix 2 of Order 7210.56C contains instructions for completing FAA Form 7210-2. FAA Form 7210-2 must include pertinent actions of the pilot(s) and air traffic services leading up to the event and any subsequent action. When writing the summary, be as clear and concise as possible using who, what, when, where, and how to describe the entire event. For Proximity Events, items A, E and F in Block 13 are not required.*

**k.** Notify Safety Services Investigations & Evaluations and the Service Area through the ROC/WOC within four hours of the time the OE/OD occurrence is first reported or suspected. The management official or CIC must notify the ROC via telephone for Category A, B, and C OEs, Proximity Events, and ODs. Fax the following information and data to the ROC for transmittal to Safety Services Investigations & Evaluations:

- (1) A completed FAA Form 7210-2
- (2) (En Route only) A reduced copy of the ESAT data, NTAP plot, and LST 5 text data; (ESAT and LST 5 text data not required for ODs)
- (3) (Terminal only) A copy of the CDR plot with the associated separation data

Facilities must use the best available information when preparing FAA Form 7210-2. Lack of surveillance/voice data should not result in delay of the Preliminary OE/OD report.

**NOTE-**

**1.** *Verification that the fax transmission has been received by the ROC constitutes the required notification for Proximity Events. A call-in may be required for Proximity Events where the loss of separation constitutes a significant event, i.e., involves a member of the Congress or the media, involves Presidential Aircraft, may generate significant media interest, or is requested by Safety Services Investigations & Evaluations.*

**2.** *The time limit should not prevent the preliminary investigation from continuing. Instead, it ensures that Safety Services Investigations & Evaluations are aware of reported or suspected events within a reasonable time. If unable to meet the four-hour requirement, the management official or CIC must request an extension from Safety Services Investigations & Evaluations prior to the requested reporting time-limit.*

**l.** Suspected equipment or automation anomalies that may be causal or contributory must be immediately reported to Technical Operations, Field Automation Support, or the Operational Support Facility, as appropriate, and investigated thoroughly. If an equipment or automation anomaly from another facility is suspected, advise a management official at the other facility immediately. Document the notification on FAA Form 7230-4.

**m.** If the preliminary investigation reveals that certain employees first believed to be involved in the OE/OD were not involved, no further action is required. If these employees have knowledge of the events, obtain their views and recommendations.

**NOTE-**

*Performance areas requiring improvement or performance deficiencies must be addressed regardless of the type of error/deviation.*

**n.** Continuous Data Recording (CDR) and National Track Analysis Program (NTAP) are the most common event records used to determine proximity. Safety Services expects CDR or NTAP records as soon as feasible after every OE and Proximity Events. In addition, En Route facilities will prepare a SATORI, with voice, and capable Terminal facilities will prepare a RAPTOR and digital voice recording with the time channel, as soon as feasible after every OE.

**o.** When the initial investigation results in a determination of a non-occurrence, retain all data used in the investigation process (e.g., pilot/specialist statements, records of conversations, ESAT, and CDR/NTAP data in an approved electronic format), as well as any other pertinent data not otherwise required to be retained, for 45 calendar days after the date of the determination. Facilities that determine the event was a non-occurrence based on a printed ESAT, CDR/NTAP data and plots must retain both the original paper printout and an electronic copy.

**p.** Electronic files may be made available to Safety Services using the file transfer protocol (FTP://172.22.8.31) secured intranet site.

**11. ATO SAFETY SERVICES INVESTIGATIONS.** At the discretion of the Vice President of Safety Services, any air traffic event may be investigated. The following activities are the prime responsibility of Safety Services following any reported OE/PE/OD. Safety Services may

receive support from any Service Area and/or Service Unit offices. Safety Services will promptly decide if the ATO is forming an investigative team following any air traffic event. Safety Services will communicate their decision regarding an investigative team to the Service Unit and AOV within 24 hours (or next business day) following any category “A” event, and within 48 hours (or second business day) following any category “B” event. The following actions are expected when investigations are sponsored by Safety Services, regardless of the permanent affiliation of the individual(s) participating:

**a.** Identify any safety hazards at the affected facility immediately following commencement of the investigation. The investigator, or team, will recommend mitigations to address these hazards within 12 hours of arriving at the facility reporting the incident, following any category “A” event, and within 24 hours following any category “B” event.

**b.** Submit their initial assessment of contributing factors to Safety Services within 36 hours (or second business day) following any category “A” event, and within 72 hours (or third business day) following any category “B” event.

**c.** Submit their preliminary investigative report to ATO Safety Services and responsible Service Unit within seven calendar days following any category “A” event, and within ten calendar days following any category “B” event.

**d.** Submit their final investigative report to ATO Safety Services and responsible Service Unit within 30 calendar days following any category “A” or “B” event. Safety Services must provide the final investigative report to the Service Unit.

**e.** Safety Services will brief AOV on the initial assessment received from any investigator, or investigative team as soon as practical following receipt of the assessment, but no later 48 hours (or second business day) following any category “A” event, and 96 hours (or fourth business day) following any category “B” event. Primary focus of this briefing is to outline actions the ATO is taking to prevent the reoccurrence of similar events and to address any residual risks.

**f.** The Vice President of Safety Services may issue a memorandum of non-compliance whenever a serious and persistent safety risk remains following an investigation, analysis, and/or report.

## **12. ANALYSIS & FOLLOW-UP ACTIONS.**

**a. Facility.** The following activities are the prime responsibility of the facility reporting the OE/OD/PE. Facilities may receive support from their Service Area and/or Service Unit offices.

(1) If the reporting Manager and the other Manager(s) cannot concur in any phase of their respective investigations, the Managers must report their differences to the Service Area for a resolution within 5 business days. If 5 business days have passed since the issue was elevated to the Service Area(s) and a decision cannot be reached with the other Service Area(s), forward all investigative data to the Service Unit(s) for review and resolution. If 5 business days have passed since the incident was elevated to the Service Unit(s) and the Service Unit(s) can not reach a decision forward all data to Safety Services for resolution.

(2) Equipment or automation anomalies that are listed as contributory require Technical Operations, Field Automation Support, or Operational Support Facility analysis. For each such

anomaly, they must provide a description of the normal functionality and a description of the degraded condition/state associated with the anomaly.

(3) Based on the information gathered during the investigation and overall performance, the following actions may be taken in response to any OE/OD or Proximity Event:

(a) If technical performance areas requiring enhancement are identified, develop and implement a skill enhancement training plan in accordance with FAA Order 3120.4, and include appropriate performance information in the Technical Training Discussion (TTD).

(b) If technical performance areas indicate deficiencies, develop and implement a remedial training plan in accordance with FAA Order 3120.4, and include appropriate performance information in the Technical Training Discussion (TTD).

(4) Based on the performance information gathered during the investigation, and no performance areas are identified for enhancement/remediation, the employee may continue operational duties in response to a Proximity Event.

(5) Retain a copy of the Preliminary Investigative Report prepared in the facility OE/OD file.

(6) Attach a copy of the Final Investigative Report to the Final Operational Error/Deviation Report.

(7) Once approved by the Service Unit, facilities will enter identified risks, casual factors and corrective action plans into FSAS.

**b. Service Areas and Service Centers.** Service Areas and Service Centers must provide support to each Service Unit. Additional roles and responsibilities to be determined.

**c. Service Units.** The following activities are the prime responsibility of the Service Unit whose facility reports any OE/OD/PE. Service Units may receive support from any Service Center and/or other Service Unit offices.

(1) Service Units will report to Safety Services appropriate management actions taken to reduce the probability of serious air traffic event reoccurrence. The Service Unit will provide documentation of management action(s), contributing factors, and root causes of any serious air traffic event within 72 hours (or third business day) following any category "A" event, and within ten calendar days following any category "B" event.

(2) Service Units will provide an analysis to Safety Services of the preliminary incident findings and recommendations received from any ATO Investigative Team within 10 calendar days.

(3) Service Units will analyze all losses of separation minima for causal and coincident factors. Analysis may relate each incident to past incidents at that facility/Service Area/Service Unit, (if applicable), and permit development of recommendations, including target completion dates, to mitigate the reoccurrence of future events. Service Units will report to Safety Services management actions taken, identify primary and contributing factors, and develop corrective action plans for each "A" and "B" event to reduce the probability of reoccurrence. Service Units will report to Safety Services management actions taken, identify primary and contributing factors, and develop corrective action plans for "C" events and "Proximity Events" (PE) groupings to reduce the probability of reoccurrence. Service Unit reports on individual "A" and

“B” events are reported separately, “C” event groupings are reported monthly, and PE groupings are reported quarterly.

(4) Service Units will establish follow-up mechanisms to determine if corrective actions contained in FAA Forms 7210-3 are effective and are accomplished in a timely manner. All corrective actions must specify a completion deadline.

(5) Approve mitigation strategies identified for category “A” operational errors.

(6) Service Units will ensure their facilities have access to current technology used for automated reporting and the evaluation of operational error classifications, and that such automated tools are kept fully functional.

(7) Service Units will to the extent possible provide access to safety records for all facilities, Service Units, and other field offices to permit tracking of findings, mitigations, status, and analysis.

(8) Service Units will monitor identified risks, casual factors and mitigation action plans entered into FSAS by the responsible facilities.

### **13. RECLASSIFICATION.**

**a.** After preliminary notification procedures are completed, a review of the data may indicate a reclassification of the incident to one of the following:

- (1) A pilot deviation.
- (2) Military facility deviation.
- (3) An OD (from an OE).
- (4) An OE (from an OD).
- (5) A non-occurrence.

**b.** If a reclassification is determined to be appropriate, the Manager must:

- (1) Complete FAA Form 7210-5, Operational Error/Deviation Reclassification Report.

***NOTE-***

*If an incident is reclassified from an OE to an OD, or an OD to an OE, reclassify the original incident to a “Non-occurrence,” and indicate the new report number in the supporting documentation.*

(2) Forward FAA Form 7210-5, along with the rationale and all necessary supporting documentation, including voice tapes and radar data, to the Service Area for review no later than 45 calendar days from the date of the initial report.

**c.** The Service Area must thoroughly review all requests for reclassification for completeness of data and validity. They must forward the requests they believe have merit to the Service Unit no later than 60 calendar days from the date of the initial report.

**d.** The Service Unit must thoroughly review all forwarded requests for reclassification. They must forward the requests they believe have merit to Safety Services Investigations & Evaluations no later than 75 calendar days from the date of the initial report.

**e.** Safety Services Investigations & Evaluations must review the forwarded requests for reclassification and determine whether the requests should be granted. Safety Services

Investigations & Evaluations must advise the Service Unit via memorandum of the disposition of the FAA Form 7210-5 no later than 90 calendar days from the date of the initial report.

f. Facilities must retain all original forms and all supporting investigative data for 2 ½ years.

#### **14. MULTIPLE LOSSES OF SEPARATION OR MULTIPLE DEVIATIONS DURING A SINGLE EVENT.**

a. During a single event in which multiple OE/PE/ODs reported and/or discovered and are determined to be the result of employee actions or inaction, each OE/PE/OD must be reported individually by completing a separate FAA Form 7210-2. Each form should describe the individual OE/PE/OD, including a reference, if necessary for clarity, to the other related incidents.

b. When an OE/PE/OD occurs, and the reaction to that event creates a chain reaction of additional OEs, PEs or ODs, the multiple events will be considered as a single event only for return to operational duty purposes, performance skill checks, and training actions or plans, and entries in FAA Order 3120-1.

#### **15. FINAL REPORTS.**

a. Investigations conducted by Safety Services under paragraph 11 of this Notice do not relieve the facility of the requirement to complete the Final Operational Error/Deviation Report (FAA Form 7210-3).

b. For Proximity Events, the information contained on FAA Form 7210-2 constitutes the final report. If the investigation has revealed information that differs from that which was initially reported, an amended FAA Form 7210-2 must be prepared.

c. When an employee of another facility is involved in an OE, ensure that the employee's first level supervisor, through that facility's Manager, is given sufficient documentation to determine the appropriate corrective action.

d. Retain the original report in the facility files.

e. Establish a follow-up method to evaluate the effectiveness of the local recommendations and actions that result from the investigation.

f. Send copies of the completed FAA Form 7210-2 to Technical Operations, Field Automation Support, or the Operational Support Facility for any Proximity Event where equipment or automation is found to be contributory.

g. Service Areas must work closely with other Service Areas when an OE involves facilities in different Service Areas and the respective Managers cannot concur in any phase of their investigations. If 5 business days have passed since the incident and a decision cannot be reached with the other Service Areas, forward all investigative data to the Service Unit for review and resolution. If 5 business days have passed since the incident was elevated and the Service Units can not reach a decision forward all data to Safety Services for resolution. Retain all recordings, data, and documentation pertaining to the incident until Safety Services reaches a decision.

**16. ENTRIES IN TRAINING AND PROFICIENCY RECORD (FAA Form 3120-1).**

a. When an employees' performance has been determined to contribute to an OE/OD, the following must be entered into the employees' FAA Form 3120-1:

(1) The causal factors as determined by the ATM must be fully transcribed and endorsed by the employees' first-line supervisor on a separate page in Section VI. This page must be used for any further reference to the OE/OD and must indicate the facility's name, the OE/OD report number, and the removal date for the page. A separate Page VI is not required for a Proximity Event.

(2) Any associated training, remedial and/or skill enhancement must be logged, in accordance with FAA Order 3120.4, without reference to the OE/OD.

(3) Any associated position performance skill checks, including all follow-up performance skill checks (e.g., 30-day) must be logged in accordance with FAA Order 3120.4, without reference to the OE.

(4) Any associated recertification must be logged, in accordance with FAA Order 3120.4, without reference to the OE.

b. When an employee has been determined to be primary or contributory to a Proximity Event, Section 5-1-14 of Order 7210.56C does not apply, and the first level supervisor must enter the following onto the employee's FAA Form 3120-1:

(1) Any associated training, remediation, and/or skill enhancement, in accordance with FAA Order 3120.4, without reference to the Proximity Event.

(2) Any associated position performance skill checks, including all follow-up performance skill checks (e.g., 30-day), in accordance with FAA Order 3120.4, without reference to the Proximity Event.

(3) Any associated recertification, in accordance with FAA Order 3120.4, without reference to the Proximity Event.

**17. DOCUMENTATION RETENTION.**

The reporting facility must:

a. Retain the OE/OD investigation file for 2 ½ years from the date of the occurrence.

b. Ensure that the OE investigation file (for A, B, and C categories) is identified by a label (maximum size three × five inches) clearly marked with "OPERATIONAL ERROR," the report number, the incident local date and time, and the local date to be destroyed for all OEs that are not Proximity Events.

c. Ensure that the Proximity Event investigation file is identified by a label (maximum size three × five inches) clearly marked with "PROXIMITY EVENT," the report number, the incident local date and time, and the local date to be destroyed.

d. Ensure that the OD investigation file is identified by a label (maximum size three × five inches) clearly marked with "OPERATIONAL DEVIATION," the report number, the incident local date and time, and the local date to be destroyed.

e. Ensure that the investigation file contains, at a minimum, the original FAA Forms 7210-2; the original FAA Form 7210-3 (if appropriate); signed employee personnel statements and/or any similar supporting documents; ATO Safety Services preliminary/final investigative reports (when ATO Safety Services designates an Investigative team), the two certified re-recordings marked “Original” and “Copy” in accordance with section 5-1-4f of FAA Order 7210.56C; and all supporting documentation such as the original ESAT, NTAP, Data Analysis and Reduction Tool (DART), or CDR plot (in both printed format and an approved electronic medium).

**NOTE-**

*A facility may elect to store the supporting data on a floppy disk or other portable electronic medium.*

**18. SAFETY METRICS.**

a. Safety Services will compare the revised FY07 outcome severity classification records for operational errors to the former severity classification records (prior to FY07) for operational errors on a monthly basis for the first twelve months following implementation of this revised policy. The comparison reports will be distributed to the operating Service Units and AOV. The baseline safety performance to be used and the method to measure the ATO’s annual safety improvement will be three years (FY04-FY06) of OE data. The baseline safety performance data will be analyzed using the proposed four categories based on the separation conformance.

b. Safety Services will publish a new OE index designed to assess the overall conformance to standards when multiple errors are aggregated for comparison. This new OE index will be used to measure improvements in the mean-separation of all “A” and “B” errors.

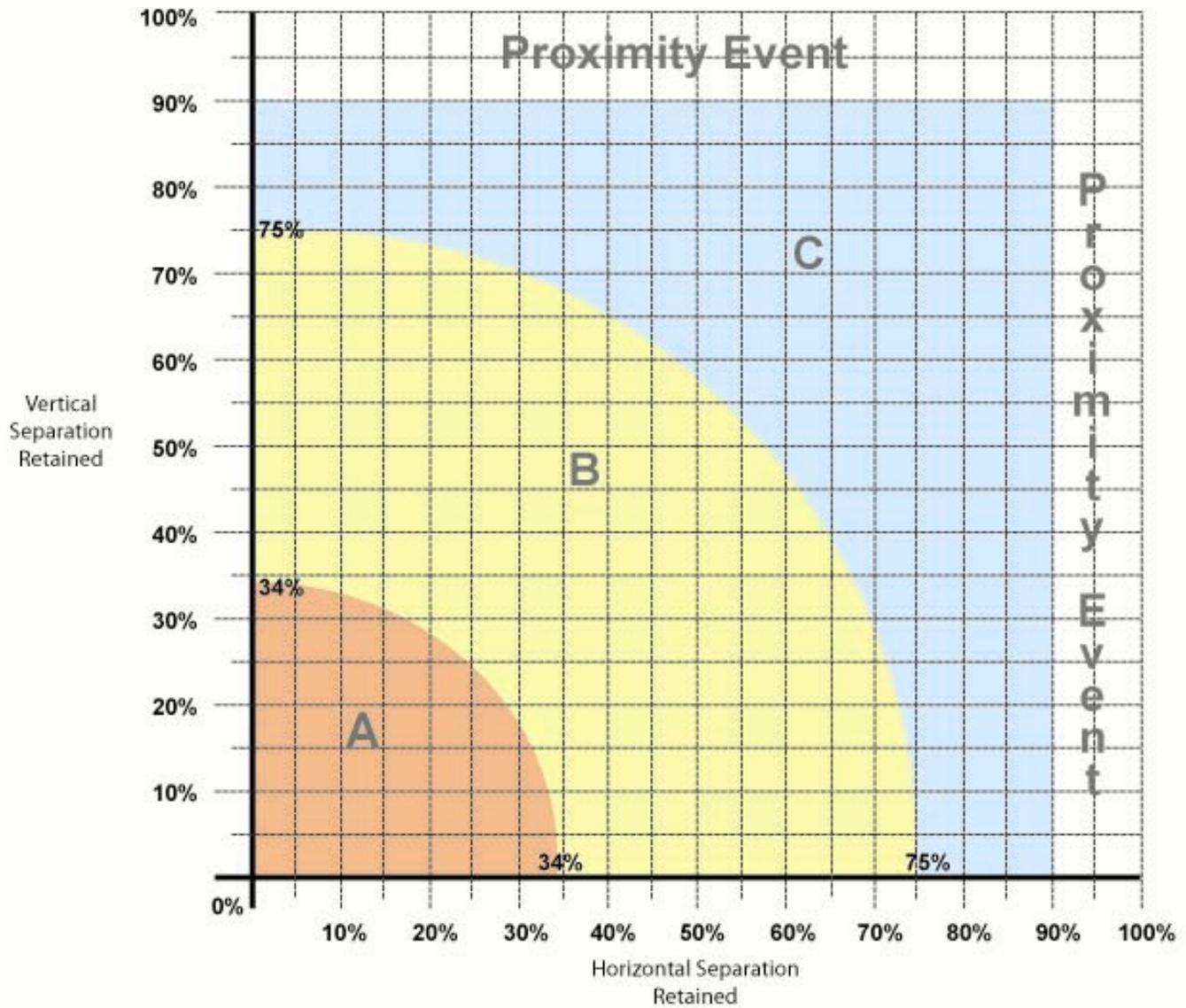
c. Safety Services will provide monthly briefings to AOV following implementation of this policy change to include actual improvements and make adjustments to the policy as necessary.

d. Safety Services will track, monitor and follow-up on all findings, recommendations, and mitigations related to operational errors (OE) and the subsequent investigations and analysis. Safety Services will audit facility records, Safety Assurance records at the Service Centers, and Service Unit records at Headquarters to ensure that controller proficiency continues to be evaluated and analyzed at regular intervals (no less than quarterly). Safety Services will ensure that mitigation actions are being reviewed for effectiveness after implementation of separation conformance.



Lyle A. Mello  
Acting Vice President, Safety Services  
Air Traffic Organization

**Figure 1: Non-Wake Separation Conformance Categorization**



**Figure 2: Non-Wake Separation Conformance Classification Tool**

<https://aapasp2.faa.gov> - Separation Conformance Calculator -

### Separation Conformance Calculator

	*Actual Separation	Required Separation
Vertical	<input type="text"/> ft	1000 <input type="button" value="v"/> ft
Horizontal	<input type="text"/> nm	3 <input type="button" value="v"/> nm
Wake Event	<input type="button" value="No"/> <input type="button" value="v"/>	

Rating:

Combined Percentage:

This tool is available at the following FAA intranet site:

<https://aapasp2.faa.gov/portal/page/portal/ATOApplicationPortal>

### Severity Categorization Tables

The Severity Category for non-wake events may be determined by reference to the measured remaining vertical and horizontal separation. The following tables provide the Severity Categories based on remaining separation for the 2.5 NM/1000 feet, 3 NM/1000 feet, 5 NM/1000 feet, and 5 NM/2000 feet (RVSM) separation requirements, respectively:

- a. 2.5 NM separation, 1000 foot minima, non-wake:

<b>Lateral</b>	<b>Vertical</b>									
	<b>0 feet</b>	<b>100 ft</b>	<b>200 ft</b>	<b>300 ft</b>	<b>400 ft</b>	<b>500 ft</b>	<b>600 ft</b>	<b>700 ft</b>	<b>800 ft</b>	<b>900 ft</b>
2.49-2.25 NM	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE
2.24-1.88 NM	C	C	C	C	C	C	C	C	C	PE
1.87-1.86 NM	B	C	C	C	C	C	C	C	C	PE
1.85-1.81 NM	B	B	C	C	C	C	C	C	C	PE
1.80-1.72 NM	B	B	B	C	C	C	C	C	C	PE
1.71-1.59 NM	B	B	B	B	C	C	C	C	C	PE
1.58-1.40 NM	B	B	B	B	B	C	C	C	C	PE
1.39-1.13 NM	B	B	B	B	B	B	C	C	C	PE
1.12-0.85 NM	B	B	B	B	B	B	B	C	C	PE
0.84-0.82 NM	A	B	B	B	B	B	B	C	C	PE
0.81-0.69 NM	A	A	B	B	B	B	B	C	C	PE
0.68 NM	A	A	A	B	B	B	B	C	C	PE
0.67-0.40 NM	A	A	A	B	B	B	B	B	C	PE
0.39-0.00 NM	A	A	A	A	B	B	B	B	C	PE

b. 3 NM separation, 1000 foot minima, non-wake:

<b>Lateral</b>	<b>Vertical</b>									
	<b>0 feet</b>	<b>100 ft</b>	<b>200 ft</b>	<b>300 ft</b>	<b>400 ft</b>	<b>500 ft</b>	<b>600 ft</b>	<b>700 ft</b>	<b>800 ft</b>	<b>900 ft</b>
2.99-2.70 NM	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE
2.69-2.25 NM	C	C	C	C	C	C	C	C	C	PE
2.24-2.23 NM	B	C	C	C	C	C	C	C	C	PE
2.22-2.17 NM	B	B	C	C	C	C	C	C	C	PE
2.16-2.07 NM	B	B	B	C	C	C	C	C	C	PE
2.06-1.91 NM	B	B	B	B	C	C	C	C	C	PE
1.90-1.68 NM	B	B	B	B	B	C	C	C	C	PE
1.67-1.35 NM	B	B	B	B	B	B	C	C	C	PE
1.34-1.02 NM	B	B	B	B	B	B	B	C	C	PE
1.01-0.98 NM	A	B	B	B	B	B	B	C	C	PE
0.97-0.83 NM	A	A	B	B	B	B	B	C	C	PE
0.82-0.81 NM	A	A	A	B	B	B	B	C	C	PE
0.80-0.48 NM	A	A	A	B	B	B	B	B	C	PE
0.47-0.00 NM	A	A	A	A	B	B	B	B	C	PE

c. 5 NM separation, 1000 foot minima, non-wake:

<b>Lateral</b>	<b>Vertical</b>									
	<b>0 feet</b>	<b>100 ft</b>	<b>200 ft</b>	<b>300 ft</b>	<b>400 ft</b>	<b>500 ft</b>	<b>600 ft</b>	<b>700 ft</b>	<b>800 ft</b>	<b>900 ft</b>
4.99-4.50 NM	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE
4.49-3.75 NM	C	C	C	C	C	C	C	C	C	PE
3.74-3.72 NM	B	C	C	C	C	C	C	C	C	PE
3.71-3.62 NM	B	B	C	C	C	C	C	C	C	PE
3.61-3.44 NM	B	B	B	C	C	C	C	C	C	PE
3.43-3.18 NM	B	B	B	B	C	C	C	C	C	PE
3.17-2.80 NM	B	B	B	B	B	C	C	C	C	PE
2.79-2.25 NM	B	B	B	B	B	B	C	C	C	PE
2.24-1.70 NM	B	B	B	B	B	B	B	C	C	PE
1.69-1.63 NM	A	B	B	B	B	B	B	C	C	PE
1.62-1.38 NM	A	A	B	B	B	B	B	C	C	PE
1.37-1.35 NM	A	A	A	B	B	B	B	C	C	PE
1.34-0.80 NM	A	A	A	B	B	B	B	B	C	PE
0.79-0.00 NM	A	A	A	A	B	B	B	B	C	PE

d. 5 NM separation, 2000 foot minima, non-wake:

	Vertical									
Lateral	0 feet	100 ft	200 ft	300 ft	400 ft	500 ft	600 ft	700 ft	800 ft	900 ft
4.99-4.50 NM	PE									
4.49-3.75 NM	C	C	C	C	C	C	C	C	C	C
3.74-3.72 NM	B	B	C	C	C	C	C	C	C	C
3.71-3.68 NM	B	B	B	C	C	C	C	C	C	C
3.67-3.62 NM	B	B	B	B	C	C	C	C	C	C
3.61-3.54 NM	B	B	B	B	B	C	C	C	C	C
3.53-3.44 NM	B	B	B	B	B	B	C	C	C	C
3.43-3.32 NM	B	B	B	B	B	B	B	C	C	C
3.31-3.18 NM	B	B	B	B	B	B	B	B	C	C
3.17-3.00 NM	B	B	B	B	B	B	B	B	B	C
2.99-1.70 NM	B	B	B	B	B	B	B	B	B	B
1.69 NM	A	B	B	B	B	B	B	B	B	B
1.68-1.63 NM	A	A	B	B	B	B	B	B	B	B
1.62-1.53 NM	A	A	A	B	B	B	B	B	B	B
1.52-1.38 NM	A	A	A	A	B	B	B	B	B	B
1.37-1.16 NM	A	A	A	A	A	B	B	B	B	B
1.15-0.80 NM	A	A	A	A	A	A	B	B	B	B
0.79-0.00 NM	A	A	A	A	A	A	A	B	B	B
	Vertical									
Lateral	1000 feet	1100 Feet	1200 feet	1300 feet	1400 feet	1500 feet	1600 feet	1700 feet	1800 feet	1900 feet
4.99-4.50 NM	PE									
4.49-2.80 NM	C	C	C	C	C	C	C	C	PE	PE
2.79-2.55 NM	B	C	C	C	C	C	C	C	PE	PE
2.54-2.25 NM	B	B	C	C	C	C	C	C	PE	PE
2.24-1.88 NM	B	B	B	C	C	C	C	C	PE	PE
1.87-1.35 NM	B	B	B	B	C	C	C	C	PE	PE
1.34-0.00 NM	B	B	B	B	B	C	C	C	PE	PE

The Severity Category for wake turbulence events may be determined by reference to the measured horizontal separation only:

**4 NM Horizontal**

<b>C equals</b>	<b>3.99 - 3.40 NM</b>
<b>B equals</b>	<b>3.39 - 2.80 NM</b>
<b>A equals</b>	<b>≤ 2.79 NM</b>

**5 NM Horizontal**

<b>C equals</b>	<b>4.99 - 4.25 NM</b>
<b>B equals</b>	<b>4.24 - 3.50 NM</b>
<b>A equals</b>	<b>≤ 3.49 NM</b>

**6 NM Horizontal**

<b>C equals</b>	<b>5.99 - 5.10 NM</b>
<b>B equals</b>	<b>5.09 - 4.20 NM</b>
<b>A equals</b>	<b>≤ 4.19 NM</b>