

SAFETY Operational Errors



Federal Aviation
Administration

FY 2008 Performance Target

"Limit Category A and B (most serious) operational errors to a rate of no more than 2.15 per million activities."

Flight Plan Objective and Performance Target

Objective 5: Enhance the safety of FAA's air traffic systems.

Performance Target: Limit Category A and B (most serious) operational errors to a rate of no more than 1.95 per million activities by FY 2012.

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 ¹
Target	N/A	N/A	N/A	N/A	2.15
Actual	N/A	N/A	N/A	N/A	

¹ This measure was redefined for FY 2008 – the criteria for rating the seriousness of errors were revised. New targets were also set. No data are available for prior years.

Definition of Measure

Unit of Measure: Rate of category A & B (most serious) operational errors per million operations.

Computation: The total number of Category A & B operational errors is divided by the sum of the number of activities divided by 1,000,000.

Formula:
$$\frac{\text{Number of A \& B Errors}}{(\text{Operations Count} / 1,000,000)}$$

Scope of Measure: An operational error is a violation of separation standards that define minimum safe distances between aircraft, between aircraft and other physical structures, and between aircraft and otherwise restricted airspace.

The closest proximity is defined as the point at which the combined lateral and vertical separation results in the lowest slant range, regardless of geometry, as determined by the separation conformance calculator.

The separation conformance of an operational error is determined by the closest proximity of the aircraft at the time of the event and given a rating.

- Category A: A loss of airborne separation where the separation conformance percentage is less than 34. In events with wake turbulence where the lateral separation retained is less than 70 percent.
- Category B: A loss of airborne separation where the separation conformance percentage is 34 or more, but less than 75. In events with wake turbulence where the lateral separation retained is equal to or greater than 70 or more percent, but not including 85 percent.
- Category C: A loss of airborne separation where the separation conformance percentage is 75 or more, but the horizontal and vertical separation retained is less than 90 percent of the required separation. In events with wake turbulence where the lateral separation retained is equal to or greater than 85 percent, but less than 100 percent.

Why the FAA Chooses this Measure

Separation is one of the fundamental principles of aviation safety – the need to maintain a safe distance from other aircraft, terrain, obstructions, and certain airspace not designated for routine air travel. The Separation Conformance measure creates a reliable, rate-based measure of safety that complements the rate-based measures of capacity. Such objective measures will help us better understand the level of risk in the National Airspace System (NAS) and will allow us to critically assess the effects of changes to the NAS.

Source of the Data

The FAA's air traffic facilities have a software program called Operational Error Detection Patch (OEDP) that detects possible operational errors and sends alert messages to supervisory personnel. In addition, controllers are required to report operational errors. Facility management reviews OEDP alerts and data provided from the National Track Analysis Program (NTAP) to determine if an operational error has occurred. The information is summarized in the FAA Air Traffic Operational Error and Deviation Database.

Statistical Issues

N/A

Completeness

The data are typically not finalized for 90 days following the close of the fiscal year. The FAA's Air Traffic Order 7210.56 requires all facilities to submit operational error reports within 3 hours of the event. The FAA has implemented procedures that require facilities to conduct random audits of radar data to identify potential unreported operational errors. The FAA Headquarters also conducts random audits of selected facilities based on the identification of unreported events. Facility management and personnel are subject to punitive action for non-compliance in reporting operational errors.

Reliability

FAA uses performance data extensively for program management, personnel evaluation, and accountability in prioritizing its facility evaluations and audits. The data are also used on a daily basis to track progress of achieving performance goals. Annual operational error incident data are used to provide a statistical basis for research and analysis. The FAA verifies and validates the accuracy of the data through reviews or preliminary and final reports. Reconciliation of the databases is conducted monthly and anomalies are explored and resolved. In cases where major problems are identified, a request to re-submit is issued. The FAA conducts annual reviews of reported data and compares the data with data reported from previous years.