Federal Aviation Administration

Memorandum

Date: July 17, 2012

To: Manager, Production Integration Team, AJV-341

From: Donna G. Warren, Manager, Environmental Policy Team, AJV-114

Subject: Interim Guidance: Using the Lateral Movement Tests (LAT Tests) for Noise Screening of Air Traffic Actions

Purpose

This memorandum provides guidance for using the Lateral Movement (LAT) Tests to screen for potential noise impacts resulting from proposed Air Traffic actions, primarily new or revised Instrument Flight Procedures (IFP). This noise screening technique applies to both jet and/or propeller traffic on the route of interest; it helps ensure compliance with FAA Order 1050.1E and by extension, the National Environmental Policy Act (NEPA) of 1969. The LAT Tests alone are not appropriate for changes over national parks, national wildlife refuges and historic sites, including traditional cultural properties. In situations where these types of resources are overflown, the user should seek additional guidance from an FAA Air Traffic Organization (ATO) Environmental Specialist (ES) in the appropriate Service Center (SC) based on the geographic area.

Introduction

FAA Order 1050.1E outlines the agency's policies and procedures for complying with Council on Environmental Quality (CEQ) regulations and NEPA. In an effort to expedite the review process for routine air traffic actions, FAA maintains a list of Categorical Exclusions (CATEXs), i.e., actions which do not result in a significant impact to the human environment. Among others, FAA Order 1050.1E identifies the following relevant actions as CATEXs provided extraordinary circumstances do not exist:

1. Establishment of new or revised air traffic control procedures at 3,000 feet or more above ground level (AGL) or

2. Modifications to currently approved instrument procedures conducted below 3,000 feet AGL, provided they do not significantly increase noise over noise sensitive areas

For routine modifications to IFPs such as the lateral movement of a route resulting from removing or changing the location of a fix, the LAT Tests can be used to screen for potential noise impacts. If the proposed action points to a "Fail" in the Tests, this is an indication that the action could lead to an extraordinary circumstance at 3,000 feet AGL or above or could lead to the potential for significant impacts below 3,000 feet AGL. If one of these is the case, the user would be required to perform additional environmental review and consult with a SC ES. Please note that this screening approach does not change the requirements of the current FAA Order 1050.1E, including categorical exclusions, extraordinary circumstances, significance thresholds, or actions normally requiring an EA or EIS.

Noise Screening Using LAT Tests

This process applies to proposed actions that move an existing route laterally, and as a result move jet and/or propeller traffic far enough to potentially exceed a screening threshold. The LAT Tests cannot be used in situations where the altitude is lowered at any point along the route; however, it is appropriate if altitudes are raised. The initial step in this kind of noise screening is an Operations Test to determine if there are enough events to generate sound levels that might cause significant noise impacts.

The Operations Test helps decide if the LAT Tests are needed. FAA Order 1050.1E, paragraph 14.6, states that no noise analysis is needed for proposals involving Design Group I and II airplanes (wingspan less than 79 feet) in Approach Categories A through D (landing speed less than 166 knots) operating at airports whose forecast operations in the period covered by the environmental review do not exceed 90,000 annual propeller operations (247 average daily operations) or 700 jet operations (2 average daily operations). Based on the above guidance, Table 1 shows combinations of propeller and jet operations that must be exceeded for the airport of interest to warrant use of the LAT Tests. For example, an airport with 700 or less annual jet operations does not require the LAT Tests. In a similar way, an airport with 662 or less annual jet operations and 5,000 or less annual propeller operations does not require the LAT Tests.

Table 1. Operations Test

Annual Propeller Operations	Annual Jet Operations
0	700
5,000	662
10,000	622
15,000	584
20,000	544
25,000	506
30,000	466
35,000	428
40,000	388
45,000	350
50,000	310
55,000	272
60,000	232
65,000	194
70,000	154
75,000	116
80,000	76
85,000	38
90,000	0

For airports exceeding the operations levels above, the LAT Tests may be used to evaluate lateral moves on portions of a given procedure provided there are no changes in the number of operations and/or traffic concentrations, and the proposed altitude is at or above the current altitude. The test is only valid for the same families of procedures; for example, a conventional procedure modified using this technique should not then be changed to an RNAV procedure without further environmental review. The LAT Tests are conducted as follows:

Step 1. Gather requisite information, including the lowest altitude specified as AGL along the changed portion of the route and the proposed lateral movement in thousands of feet relative to the original location. All altitudes should be rounded down to the closest matching values on the screening charts; conversely, all distances should be rounded up to the closest matching values on the screening chart.

Step 2. If the lowest altitude along the changed portion of the route is 3,000 feet AGL or less, then proceed to Step 3 (Chart 1). Otherwise, if the lowest altitude along the changed portion of the route is more than 3,000 feet AGL, go to Step 4 (Chart 2).

Step 3. Using Chart 1 below, enter on the row representing the altitude to be tested (3,000 feet AGL or less); move across the chart to the column that best represents the proposed lateral movement in feet. If the altitude/lateral distance combination falls in the white zone, then the noise screening test passes for the proposed action. For example, Chart 1 shows a proposal to modify a route by moving a fix laterally by 700 feet at 1,500 feet AGL. The user enters the row representing 1,500 feet AGL and moves across to the column representing 700 feet lateral distance. The combination of altitude/lateral distance falls in the white zone indicating the action passed the LAT Tests.

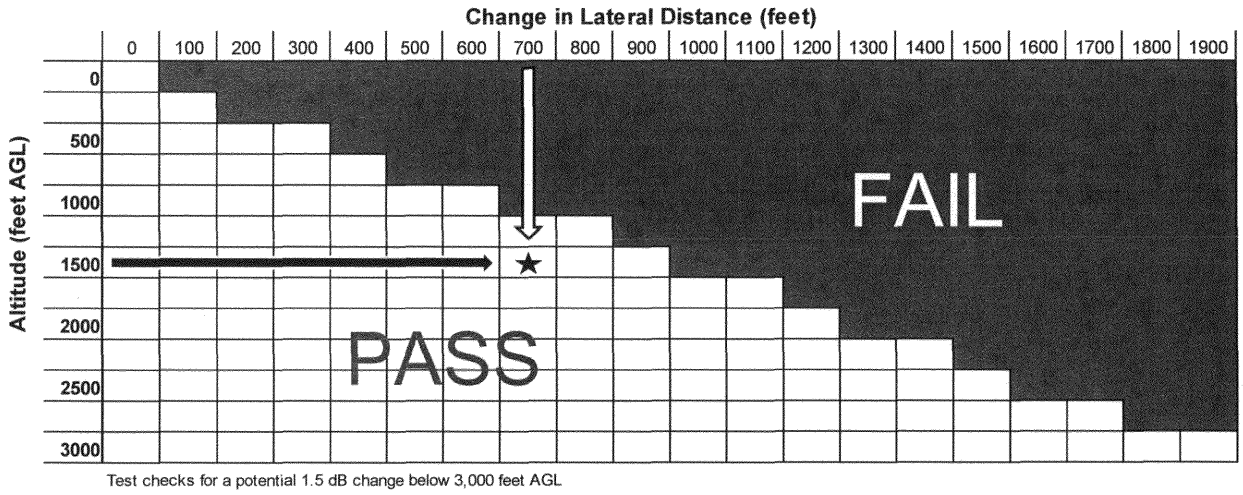

Chart 1. LAT Test At/Below 3,000 feet AGL

Step 4. Using Chart 2 below, enter on the row representing the altitude to be tested (more than 3,000 feet AGL); move across the chart to the column that best represents the proposed lateral movement at that altitude. If the altitude/lateral distance combination falls in the white zone, then the noise screening test passes for the proposed action. For example, Chart 2 shows a proposal to modify a route by moving a fix laterally by 6,000 feet at 7,000 feet AGL. The user enters the row representing 7,000 feet AGL and moves across to the column representing 6,000 feet lateral distance. The combination of altitude/lateral distance falls in the white zone indicating the action passed the LAT Tests.

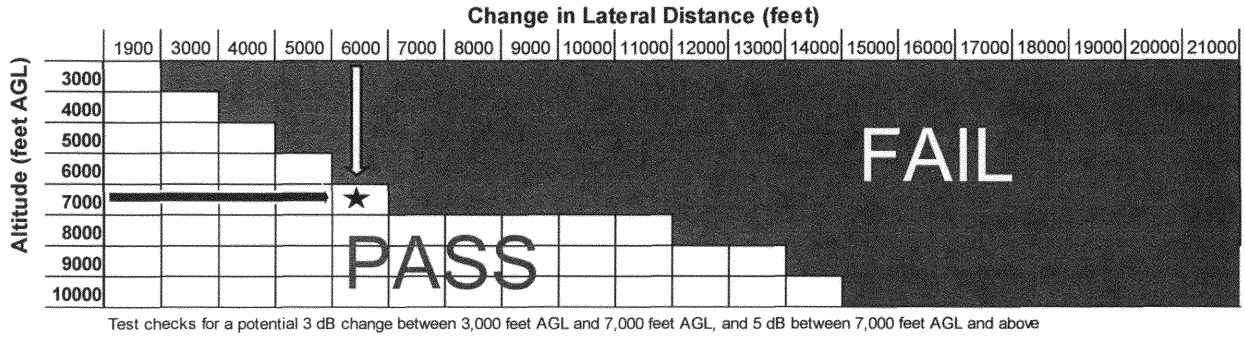

Chart 2. LAT Test Above 3,000 feet AGL

Step 5. Where the proposed action did not pass the LAT Tests, the user may either request additional guidance from a SC ES or revise the procedure design. If the proposed action passed, the user should document the LAT Tests results to include a description of the proposed action, the applicable CATEX paragraph from Order 1050.1, and the LAT Tests chart.

Limitations

The LAT Tests are only valid for lateral movements of a proposed route of flight normally resulting from creating or moving a fix, assuming all other factors remain unchanged. The SC ES can provide additional guidance in the following situations where the LAT Tests are not suitable:

1. Cases involving more than the lateral movement of a route resulting from changing a fix, for example, increases in the number of operations, changes in fleet mix, lowering of altitudes, etc.

2. Cases where a conventional procedure is changed to an RNAV procedure; additional environmental review is required for the RNAV procedure

3. Cases where the fix of interest on a route had been previously moved and the LAT Tests used to screen for impact; moving that same fix a second time based on the same test may result in a false negative. The user should request additional guidance from an SC ES

4. Other complex operational situations where the use of the LAT Tests would be excessively burdensome

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