

# NOTICE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
Air Traffic Organization Policy

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**Effective Date:**  
February 26, 2010

**Cancellation Date:**  
February 25, 2011

**SUBJ:** Minimum Vectoring Altitude Charts (MVAC) Procedures for FUSION Displays

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- 1. Purpose of This Notice.** This notice establishes the procedures, requirements, responsibilities, and usage of MVAC associated with FUSION displays. These procedures are currently being tested at Philadelphia (PHL) Terminal Radar Approach Control (TRACON).
- 2. Audience.** This notice applies to the Air Traffic Organization (ATO) Terminal Service Unit at PHL airport traffic control tower (ATCT).
- 3. Where Can I Find This Notice?** This notice is available on the MYFAA employee Web site at [https://employees.faa.gov/tools\\_resources/orders\\_notices/](https://employees.faa.gov/tools_resources/orders_notices/) and on the air traffic publications Web site at [http://www.faa.gov/air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/).
- 4. Procedures.** The following procedures must be used:

### **3-9-1. MINIMUM VECTORING ALTITUDE CHARTS (MVAC) FOR FACILITIES PROVIDING TERMINAL APPROACH CONTROL FACILITIES**

Air traffic managers must determine the location and the method for displaying vectoring altitude charts to provide controllers with the minimum vectoring altitudes as follows:

- a.** Where the system is adapted to display single radar sensors, provide:
  - (1) An MVAC that accommodates the largest separation minima of all available sensors; or
  - (2) Unique MVACs that accommodate the appropriate separation minima of each available sensor.
- b.** Where the system is adapted to simultaneously display multiple radar sensors, provide an MVAC that accommodates the largest separation minima of adapted sensors
- c.** Where the system is adapted to display multiple radar sensors in a priority sequence (for example, sort boxes), provide an MVAC that accommodates the largest separation minima of adapted sensors.

#### **NOTE-**

*Technical Operations Aviation System Standards, National Flight Procedures Group should be contacted if assistance is required. (See FAA Order 8260.19, Flight Procedures and Airspace, Chapter 3, En Route Procedures.)*

#### **REFERENCE-**

*FAAO JO 7110.65, Para 5-5-4, Minima*

- d.** Where the system is utilizing System Track Display Mode (STDM)/FUSION surveillance sensors:
  - (1) The MVAC must be developed for the lateral limits of the associated approach control airspace, plus an appropriate buffer outside the lateral approach control airspace boundaries. As a minimum, this may

be accomplished by using an existing single-sensor MVAC for the predominant radar sensor, but may be increased if determined by the facility air traffic manager.

(2) 3NM lateral separation up to 60NM and 5NM lateral separation 60NM and beyond.

(3) The MVAC must provide 5-mile separation minima, for use whenever the STDM/FUSION system cannot provide 3-mile separation due to degraded status, system limitations, or reductions in available sensors.

### **3-9-4. EMERGENCY OBSTRUCTION VIDEO MAP (EOVM)**

**a.** An EOVM must be established at all terminal radar facilities that have radar coverage in designated mountainous areas and an available channel in the video mappers. This map is intended to facilitate advisory service to an aircraft in an emergency situation wherein an appropriate terrain/obstacle clearance minimum altitude cannot be maintained. (See FIG 3-9-1.)

#### **NOTE-**

*1. Designated mountainous areas are identified in 14 CFR Part 95, Subpart B.*

*2. Appropriate terrain/obstacle clearance minimum altitudes may be defined as MIA, MEA, minimum obstruction clearance altitude (MOCA), or MVA.*

*3. The requirements of paragraph 3-9-4 are for a facility to be able to provide advisory service to an aircraft in an emergency situation in areas of mountainous terrain. SDF does not provide advisory service to aircraft in areas of mountainous terrain and is not subject to the requirements of paragraph 3-9-4.*

No further changes to paragraph.

**5. Distribution.** This notice is distributed to the following Air Traffic Organization service units: Terminal, Safety, En Route and Systems Operations Services; the Air Traffic Safety Oversight Service; and the William J. Hughes Technical Center.

**6. Background.** FUSION is the combination of all available surveillance sources (airport surveillance radar [ASR], air route surveillance radar [ARSR], automatic dependent surveillance – broadcast [ADS-B], etc.) into the display of a single tracked target for air traffic control separation services. FUSION is the equivalent of the current single-sensor radar display. FUSION performance is characteristic of a single-sensor radar display system. Terminal areas use mono-pulse secondary surveillance radar (ASR-9, Mode S). The performance of this system will be used as the baseline radar system to ensure minimal degradation of current separation operations within the NAS.

ADS-B is a key enabling technology supporting the implementation of the Next Generation Air Transportation System. The incorporation of ADS-B as a surveillance source requires the incorporation of multiple surveillance sources such as ARSR, ASR, ADS-B, and multilateration into existing and future air traffic control automation systems. It has been determined that FUSION is the best method to accomplish this. The Surveillance and Broadcast Services Air Traffic CHI Workgroup was established to ensure functional standardization and usability of multiple surveillance sources integration in both the terminal and en route domains.

**7. Action.** The PHL TRACON air traffic manager must ensure that the provisions of this notice are briefed to all front-line managers, controllers-in-charge, and operational air traffic controllers before the initial operational use of FUSION.

**8. Safety Management System.** The provisions of this notice are based on the FUSION System Safety Risk Management Document (SRMD), Sub-System Hazard/System Hazard Analysis for SDF ATCT and PHL ATCT, prepared by the FAA Surveillance and Broadcast Services Program. This SRMD supports the procedural guidance contained in this notice and has been accepted and approved as required by FAA Order 1100.161, Air Traffic Safety Oversight, and the ATO Safety Management System Manual.



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