

**March 26, 2003**

**BEFORE THE  
U. S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

**Enhanced Flight Vision Systems**

**Docket No. FAA-2003-14449  
Notice No. 03-03**

**COMMENT OF THE  
NATIONAL BUSINESS AVIATION ASSOCIATION, INC.**

The National Business Aviation Association, Inc. (NBAA) represents the aviation interests of over 7,300 Member companies that own or operate over 9,300 general aviation aircraft. NBAA members are leaders in bringing technological advances to civil aviation, and we are encouraged by the efforts of the FAA to acknowledge and explore emerging technologies. This proposed rule, if properly written, will continue to encourage the business aviation community to invest and develop leading edge technologies. While the NBAA is in support of the general concepts presented in this NPRM, we wish to make the following comments.

**COMMENT**

Specifying a limit of 100 feet above the touchdown zone elevation of the runway of intended use as the height below which a descent cannot continue unless certain visual cues are obtained creates an unintended impact on the safety of the operation by requiring a decision during the most critical phase of the approach. The visual cues should not be restricted to the two listed for the final descent, but broadened to include any of those listed in 91.175(c)(3). The following language is proposed as a change to 14 CFR Part 91.175(1)(3):

*(3) At least one of the visual references listed in 91.175(c)(3) for the intended runway are distinctly visible and identifiable to the pilot using the enhanced flight vision system.*

Additionally, the altitude criterion is not based on the capability of the equipment. Specifying an absolute altitude as a minimum altitude for EFVS usage during approach and landing inhibits the incentive to advance optics technology to a level at which weather obscurations will be transparent to the EFVS. Providing latitude for EFVS minimum altitude usage precludes additional changes to the regulation in the future or imposing special conditions on equipment certification. NBAA's recommendation is that the minimum altitude for operation with an EFVS should be predicated on the specific equipment installed and certified by the FAA (or approved by the FAA for foreign registered aircraft). The following language is proposed as a change to 14 CFR Part 91.175(1)(4):

*(4) At and below the minimum altitude at which the EFVS was certified or approved by the FAA, the . . .*

The NPRM only addresses EFVS as a Head Up Display. Currently, approaches to less than Category I minimums (Cat II & III) are being conducted under present regulations utilizing traditional flight instruments on the instrument panel. Requiring the EFVS to be on a HUD only excludes the evolution of a FAA-certified Head Down Display (HDD) with EFVS. The rule language should be re-written to allow the EFVS to be displayed on a certified HDD. Proposed language for 91.175(m)(2) is as follows:

*(2) . . . are presented on a certified display so that they  
are clearly visible to the pilot . . .*

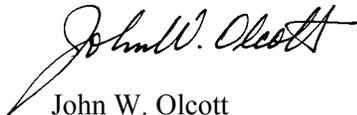
As written, the “Category II and Category III ILS approach procedures” paragraph in the preamble prohibits the use of an EFVS while conducting Category II or Category III ILS approaches. Prohibition of the use of an EFVS, which is a safety enhancement, does not seem plausible. NBAA recommends that the usage of the EFVS be clarified and that the EFVS be allowed to operate during Category II and III ILS approaches.

The final comment deals with the restriction placed on Part 135 operators from commencing the final approach segment of an instrument approach procedure unless the latest weather reported indicates conditions are at or above the authorized IFR landing minimums for that procedure. Since the benefits of the EFVS are acknowledged in the NPRM, Part 135 operators should be allowed to take advantage of the EFVS benefits, without compromising safety, by initiating an approach with weather reported less than landing weather minimums. At the currently proposed minimum altitude of 100 feet AGL, a realistic visibility requirement for Part 135 operators using an EFVS would be 1200 feet RVR. NBAA requests that this criterion be considered. If this delays the rulemaking, 14 CFR Part 135.225(b) should remain, but NBAA requests that this new criteria be considered in the future.

## SUMMARY

The FAA is to be commended for their action dealing with an emerging technology that will enhance the safety of instrument approaches. However, the NPRM does not allow for continued development without additional rule making and has the potential for stifling such development. NBAA recommends the FAA adopt the above comments as a way not only to enhance safety, but also to enable further development.

Respectfully submitted,



John W. Olcott  
President