

March, 26<sup>th</sup> 2003

Docket Management System,  
U.S. Department of Transport,  
Room Plaza 401,  
400 Seventh Street SW,  
Washington,  
DC 20590-0001

Reference: Docket No. FAA-2003-14449

Dear Sirs,

Please find below BAE SYSTEMS comments and observation with regard to the Notice for Proposed Rulemaking (NPRM) for Enhanced Flight Vision Systems (EFVS), Docket No.FAA-2003-14449; Notice No.03-03 refers.

From the wording of the subject NPRM it is difficult to determine the answer to a very basic question – Can the pilot descend below basic minimums (usually 200 ft) on a Cat I beam, using runway-environment cues obtained solely from the EFVS?

We believe that there have been some very lively debates amongst knowledgeable pilots, engineers, and even FAA attorneys, trying find the answer to this question. So far, without too much success.

We consider that the rules need to be rewritten, so that there is absolutely no question as to their intent. We suggest inclusion of wording similar to the following:

*“An aircraft equipped with an approved EFVS system that displays it’s imagery on an approved Head-Up Display, may descend below the DA or DH, but not below an altitude that is 100 ft above the TDZE, providing the EFVS image includes the following cues at or above the DA or DH.*

- *Approach lights, or*
- *Runway threshold and touchdown zone.*

*A descent below DA or DH that is based on cues that are obtained solely from the EFVS image must not require noticeable changes in heading or sink-rate from the values that existed when approaching DA or DH”.*

The stated intention of the amended rules is to “enable the pilot to determine enhanced flight visibility at the DA, DH or MDA, in lieu of flight visibility”. As written in the NPRM, the new rules would only provide this capability for Part 91 operators. That is because the current rules do not allow commercial operators (Part 135 and Part 121) to initiate an instrument approach unless the visibility is reported to be at or above minimums. It is requested that the rules be revised to allow commercial operators equipped with an approved HUD and EFVS be allowed to initiate an instrument approach as long as the reported visibility is at or above 1200 ft. Without this amendment, the modified rules only result in benefit to non-commercial (Part 91) operators. It is unlikely that commercial operators would expend funds to obtain EFVS if the system is not allowed to perform its intended function (e.g., to descend below 200 ft on a Cat I ILS based on EFVS derived cues).

The NPRM includes a requirement to obtain Operations Specification Authorization for air carriers [proposed revised CFR 91.175e(6)]. Operations Specification Authorization is always required for decreased minimums, but EFVS does not change the minimums. The EFVS allows the pilot to visually acquire the cues specified in 91.175 to descend below DH, but does not affect the minimums given on the approach procedure. EFVS will provide a dramatic enhancement in cockpit situational awareness, effectively improving a pilots visibility and thereby safety, without affecting minimums. We therefore consider that the Operations Specification Authorization should not be required.

We additionally consider that the requirement for Operations Specification Authorization adds an undue financial burden on the operator. This will also likely take a very long time to achieve, because most POI's do not have the background knowledge to make this evaluation. This seems especially unnecessary given that FAA certification pilots and engineers will have already accomplished extensive testing to validate the EFVS, under the STC process. We therefore consider that there is no reason to require any additional Operations Specification Authorization, beyond the approvals achieved by STC.

We hope our comments above meet with your approval and can be incorporated into the final version of the new EFVS rules.

Yours faithfully,

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