



EFVS QUARTERLY

December 2021

Happy Holidays! We are happy to announce that Santa Claus has successfully certified the Rudolph Flight Vision System to help him with the winter weather and keep his deliveries on track. Here are some thoughts that might help keep your own flight operations on track this winter.

Know Your EFVS

The EFVS is a tool used to enhance a pilot's vision during an EFVS operation. EFVS technology has its limits, so it is important for a pilot to be familiar with the system and the technology they are using. Here are a few items to keep in mind before you conduct an EFVS operation:

- Know the sensor. The technology of the sensor will determine what objects you may see. Many sensors are Infra-red and cannot image LED lighting
- Know the weather. The type of weather may affect your sensor performance. Infra-red sensors perform better in dry particulate such as smoke but may not provide any advantage in a heavy marine fog.
- Know the field of view. EFVS enhances visibility in a limited field of view. Maneuvering on final, large offsets, or heavy crosswinds may cause you to lose sight of your references.
- Know image anomalies. Some sensor or systems have image anomalies such as blooming or "jellyfishing" that may occur for a number of reasons.
- Know the AFM limitations. Some AFM(s) may limit the types of approaches. Many EFVS cannot be used on approaches with steep vertical paths.

No Man's Land

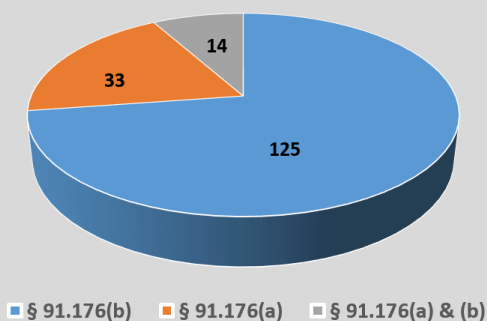
If you lose your enhanced sensor image during an EFVS operation you may find yourself in "No Man's Land". What do we mean by this? If you lose your EVS image you no longer have the enhanced flight visibility required to continue the approach. In addition, you most likely do not have the natural visibility required to safely continue the approach either. This is why we always recommend executing a go around anytime you experience a failure of an EFVS prior to touchdown during an EFVS operation. Of course, in extenuating circumstances, the pilot in command always has the authority to continue if a continuing to a landing in degraded visibility is deemed to be safer than executing a go around.

LEDs

FAA will begin installing LED bulbs in approach lighting systems in the near future. This may have a significant impact on operators using EFVS since many of the current sensors are not designed to detect the energy emitted by an LED bulb. This could potentially result in a missed approach due to the inability to identify a visual reference during an EFVS Operation. Thorough flight planning and approach briefings are essential to avoid any disruptions in your operation.

Initially the installation of LEDs in approach lighting systems will be communicated through the NOTAM system. The FAA is considering the best way in which to annotate LEDs on approach charts.

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