U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of the Chief Counsel

**800 Independence Ave., S.W.
Washington, D.C. 20591**

MAY - 9 2011

Mr. Henry J. Fasthoff, IV
1177 West Loop South, Suite 1300
Houston, TX 77027

CC: Night Flight Concepts, Inc.
Attn: Mr. Adam Aldous
[redacted]

Dear Mr. Fasthoff:

This is in response to the three letters we received dated December 17, 2010. In your letters you request the following information: (1) whether there is a requirement to have aviation night vision goggles ("NVGs") inspected for continued airworthiness every 180 days within the national airspace system ("NAS") for part 135 and part 91 operators; (2) whether the internal and external lighting of an aircraft needs to be modified via a supplemental type certificate ("STC") to be considered approved by the FAA per 91.205(h) for Night Vision Imaging System ("NVIS") operations; and (3) whether the NVGs you identify are approved for use within the NAS for part 91 and part 135 operations in accordance with 14 CFR 91.205(h).

First, you ask whether there is a requirement to have NVGs inspected for continued airworthiness every 180 days within the NAS for part 135 and part 91 operators. The answer is yes. Maintenance of the NVG appliance should be performed in accordance with the manufacturer's maintenance manual or other instructions acceptable to the Administrator as required by the STC. See 14 CFR §§ 43.13, 43.16. The NVIS operations under 14 CFR part 135 must be approved by operation specifications ("OpSpecs") A050 (operation) and D093 (maintenance) issued by the FAA. OpSpec D093 adopts the requirements set forth in *Minimum Operational Performance Standards for Integrated Night Vision Imaging System Equipment* ("RTCA/DO-275"), which contains the complete description and minimum performance standards of the NVG and cockpit lighting modifications appropriate to civil aviation. See FAA Order 8900.1, Vol. 4, Ch. 7, § 4, para. 4-1126(B). The RTCA/DO-275 states: "As a minimum the schedule shall include a 180 day inspection of the NVG appliance and a 24 month NVIS validation test." RTCA/DO-275, 5.5.2.2.2 (2001).

Second, you ask if the internal and external lighting of an aircraft needs to be modified via an STC to be considered approved by the FAA per 91.205(h) for NVIS operations. The answer is yes. Section 91.205(h) states: "For night vision goggle operations, the following instruments and equipment must be installed in the aircraft, functioning in a normal manner, and approved for use by the FAA: . . . Interior and exterior aircraft lighting system required for night vision goggle operations. . . ." 14 CFR 91.205(h)(3). FAA Order 8900.1 states

that "flight deck lighting changes to support night vision goggle use, or any approvals related to night vision goggles" require an STC, and are not eligible for field approval. FAA Order 8900.1, Vol. 4, Ch. 9, § 1, Figure 4-68. In addition, any person who alters a product by introducing a major change in type design, not significant enough to require a new application for a type certificate under 14 CFR 21.19, shall apply to the Administrator for a supplemental type certificate, except that the holder of a type certificate for the product may apply for amendment of the original type certificate. Based on 14 CFR 21.93(a), the Rotorcraft Directorate considers modification of aircraft lighting for the purpose of performing NVG operations a major change because it changes the operational characteristics, or other characteristics affecting the airworthiness of the aircraft, and thus an STC is required.

Third, you ask whether the NVGs you identified in your letter are approved for use within the NAS for part 91 and part 135 operations in accordance with 14 CFR 91.205(h). There is no blanket approval of NVGs authorized for use in the NAS. In order for NVGs to be used on an aircraft, the NVGs must be shown to be compatible with the FAA approved NVIS lighting system with which they are intended to be used. Nivisys has authorization to produce their NVAG-6 under TSO-C164; however, TSO authorization does not constitute approval for use. Approval for use is obtained after each aircraft NVIS lighting system is evaluated for NVIS compatibility with the NVGs. Therefore, we are unable to list NVG models themselves as approved for use without an evaluation.

I hope this information has been helpful. This response to your questions has been coordinated with the Aircraft Certification Service, Rotorcraft Directorate and Flight Standards Service, Aircraft Maintenance Division. If you have further questions concerning this interpretation, please contact Sabrina Jawed on my staff at 202-267-3073.

Sincerely,

Michael Chase

for Rebecca MacPherson
Assistant Chief Counsel for Regulations, AGC-200