which are to be implemented can be found and downloaded from the Internet at the Federal eRulemaking Portal. Go to http://www.regulations.gov and search for the documents using the Federal docket number FAA–2008–1208.

Discussion of Comments Received

The FAA received 25 comments from industry, including HEMS operators (Omnilight Helicopters, Inc., Intermountain Life Flight, Air Evac Lifeteam, EMS Executive Forum of HEMS Common Carriers), North Memorial Medical Center North Air Care, Reach Air Ambulance, and Hospital Wing), trade associations (Helicopter Association International, the Association of Air Medical Services, and the National EMS Pilots Association), an equipment manufacturer (Max-Viz Inc.), and a designer of helicopter GPS approaches (STI, Inc.). The FAA also received comments from pilots, HEMS medical personnel, and other individuals. A summary of the comments received and the FAA response to the comments follows.

A. General Support

The FAA received numerous comments supporting proposed Operations Specifications A021 and A050. Commenters supporting the revisions included the EMS Executive Forum of HEMS Common Carriers, Helicopter Association International (supported by Life Flight of Maine, TriState Careflight, LLC, EMS Air Services of New York, Inc., Sanford USD Medical Center Trauma 1, Bell Helicopter, and other organizations that also submitted comments independently), the National EMS Pilots Association, the Association of Air Medical Services, Omnilight Helicopters, Inc., and several individual commenters.

B. Instrument Flight Rules (IFR) Point in Space (PinS) Special Instrument Approach Procedures

Several commenters recommended changes to proposed Operations Specification A021 paragraph “h,” regarding IFR PinS Special Instrument Approach Procedures, with a proceed Visual Flight Rules (VFR) transition to a heliport or landing area, and standard or special instrument approach procedures. The comments identified that the language proposed in the operation specification could lead to misunderstandings with respect to “proceed VFR” transitions and the conduct of visual operations in accordance with visual minimums as noted in A021 Table 1. Commenters also noted that if an approved “proceed visually” segment exists as part of an approved Instrument Approach Procedure (IAP) or special IAP, the associated approach minimums would apply.

The FAA acknowledges that proposed Operations Specification A021 made no distinction between the weather minimums associated with an instrument approach which ends in a “proceed visually” versus a “proceed VFR” instruction. The FAA agrees with the commenters that the language in proposed A021 could lead to confusion for operators making visual transitions from instrument approaches and therefore intends to change A021 paragraph “h,” to clarify the procedures to be followed when making VFR or visual transitions from instrument approaches.

C. Weather Minimums

Three commenters recommended different weather minimums from those in the proposed Operations Specification A021. Two generally supported higher weather minimums than the ones proposed by the FAA. The third stated that the 5 mile visibility standard in mountainous terrain would be too restrictive.

Proposed Operations Specification A021 increases the weather minimums for part 135 VFR flight by raising ceilings and increasing visibility requirements. The FAA believes that the proposed weather minimums will enhance safety for HEMS operations by lessening the probability of encountering situations that could lead to inadvertent operation into instrument meteorological conditions (IMC), pilot spatial disorientation, or lack of situational awareness, all causes of HEMS accidents.

The first commenter who suggested higher weather minimums did not provide supporting information for why minimums higher than the ones proposed are warranted. The FAA agrees that as a general principle the likelihood of controlled flight into terrain, loss of control, and obstacle collisions decreases as weather minimums increase. However, the FAA understands that HEMS operators provide an invaluable service to the nation by providing crucial, safe, and efficient transportation of critically ill and injured patients. The FAA believes that the new weather minimums will help to prevent accidents by providing operators a greater margin of safety without unnecessarily impinging upon otherwise safe HEMS operations.
The second commenter suggested higher weather minimums in conjunction with the additional suggestion that pilots should have to maintain a minimum of 300 feet AGL day, or 500 feet AGL night. The commenter believes that the VFR flight planning requirement in proposed A021, that requires vertical clearance of terrain and obstacles by 300 feet during the day and 500 feet at night, would place HEMS aircraft in controlled airspace in high density traffic areas and in the flow of fixed wing and IFR traffic. The commenter further states that in controlled airspace the weather would have to be 500 feet above the aircraft’s altitude prohibiting flights although conditions are well above VFR.

In response to the commenter’s suggested weather minimums which are higher than the proposed A021’s minimums for all but daytime local flight, the FAA refers to its response to the first commenter in this section. With respect to the concern about the proposed preflight planning requirement, paragraph “i” of proposed A021 does not require pilots to maintain the highest vertical clearance for the entire flight. Rather, pilots may vary altitudes over portions of the flight. Further, operators may plan flights so that major obstacles are not along the planned route. Finally, paragraph “i” notes that pilots may deviate from the planned flight path as required by conditions or operational considerations.

The third commenter expressed concern that the 5 mile visibility requirement would unnecessarily restrict safe cross-country mountainous terrain operations because night visibility of 3 to 5 miles under clear skies due to haze is common in the Southeast United States during the summer months. The FAA notes that operators have several options that would allow them to operate under different minimums. These options include IFR flight, adopting NVIS (Night Vision Imaging System) or Terrain Awareness and Warning Systems (TAWS) technology, or establishing local flying areas.

D. Technology on Board HEMS Aircraft

One comment stated that the FAA has treated NVGs as a safety appliance not for use “to extend the ‘mission capabilities’ of HEMS aircraft” nor to “justify the reduction of Night VFR weather minimums.” The commenter asked for an explanation for why, in light of the previous statement, the proposed A021 operations specification allows decreased visibility and ceiling minimums when using NVIS.

The FAA acknowledges the discrepancy with FAA Order 8900.1 which states FAA policy that NVGs are to be approved only for the purpose of enhancing operational safety. However, providing separate weather minimums for night operations with NVIS is justified by several factors. The Operations Specification A021 currently in effect, and which has been in effect since January 2006, provides that HEMS operators approved for NVG use may use high-lighting weather minimums in low-lighting conditions if using NVG. The current operations specification therefore permits NVG users to operate in weather conditions not available to non-NVG users. The proposed operation specification is essentially a continuation of current FAA practice as it relates to HEMS operators. Further, NVIS technology has become more sophisticated since the initial approval for operational use. Additionally, the FAA is pursuing changes to Order 8900.1, which provides instructions to FAA field inspectors, that would approve agency grants of operational credit for NVG operations on a case-by-case basis.

Another commenter supported adopting Helicopter Terrain Awareness and Warning Systems (HTAWS) rather than TAWS units which are not helicopter specific because TAWS may add additional risk factors such as distractions associated with nuisance warnings. The FAA disagrees that use of TAWS in helicopters creates additional risk greater than the benefit provided and intends to permit use of TAWS as initially proposed for Operations Specification A021. The commenter is correct that use of certain TAWS units in helicopters could potentially generate false alerts and “nuisance warnings.” However, the FAA supports voluntary implementation of TAWS in helicopters. Although not helicopter specific, TAWS does provide helicopter pilots with useful information pertaining to ground proximity, helping to avoid controlled flight into terrain, and improve obstacle avoidance. In addition, the FAA has moved forward on establishing production standards for helicopter-specific TAWS systems. For example, the FAA published Technical Standards Order C194 to inform manufacturers of the minimum performance standards required for HTAWS for approval. HTAWS units developed to this standard will correct the unique issues created by use of TAWS in rotorcraft. Additionally, HEMS operators that wish to install HTAWS systems may do so; the terms of the proposed Operations Specification A021 are not limited to TAWS systems.

One commenter objected to the use of the term “NVIS” in A021 Table 1, and stated that NVIS technology should be considered an advisory technology no different than TAWS rather than included as an associated technology with Night Vision Goggles (NVG). This commenter further stated that the only technology associated with the proposed operations specification that should require supplemental training or currency is NVG technology.

The use of the term “NVIS” to include NVG is consistent with FAA usage. For example FAA Order 8900.1, Section 4.1126, states “NVG is the common term used for [NVIS] operations.” Additionally, Radio Technical Commission for Aeronautics, Inc. (RTCA), an FAA Advisory Committee, states in Document 275, Minimal Operational Performance Standards for Integrated Night Vision Imaging System Equipment, that the term NVIS relates to the broader imaging system that includes the NVG goggles as well as the cockpit windows, internal and external lighting, and crew station design.

Accordingly, the FAA intends to keep the term NVIS in A021, Table 1. Note that the FAA does not intend to extend NVIS to include systems other than NVG through this document.

Another commenter suggested that aircraft equipped with Global Positioning System (GPS) moving map displays should be excluded from the requirement to document the highest obstacles along the flight path.

A key component of the revisions to A021 is to ensure that pilots determine the minimum safe cruising altitude and required weather for the flight before takeoff rather than making such assessments during the flight. The FAA acknowledges that technologies, like GPS moving map systems, may assist operators with managing risks associated with HEMS operations. However, providing exceptions for technology to the preflight requirement would defeat the purpose of making pilots aware of the terrain and obstacles along the planned route of flight prior to departing.

Additional commenters suggested other technological enhancements including requiring NVGs for all crew, and mandating satellite tracking, autopilot, and weather radar for all operators.

The FAA encourages HEMS operators to adopt technologies that would provide additional safety measures; however, the revisions to A021 and A050 focus on safety enhancements to the operational aspects of HEMS.
operations rather than the equipment requirements for HEMS aircraft.

E. Maintaining Part 91 IFR Flight

One commenter requested the ability to continue to fly IFR under Part 91 using Part 135 weather minimums. Proposed Operations Specification A021 does not prohibit part 91 IFR operations. As noted in A021 paragraph “d,” operators equipped and approved to so may elect to fly IFR following the part 91 IFR, or more stringent, weather minimums. The weather minimums found in Table 1 apply to VFR flight segments in Class G airspace.

F. Part 135 Compliance for All HEMS Flights

One commenter suggested requiring all segments of HEMS flights to be flown under Part 135 operating requirements. This operations specification revision will increase safety for HEMS operators by requiring all VFR segments of flights that include a part 135 segment to adhere to increased weather minimums. This is an important factor in preventing controlled flight into terrain, obstacle collisions, inadvertent IMC, and spatial disorientation, or loss of situational awareness. The FAA believes that the increased weather minimums combined with the preflight planning requirements will provide an increased margin of safety for HEMS operations. Operators equipped and approved to do so may also elect to fly IFR which provides an additional measure of safety to VFR flight due to factors such as increased interaction with controllers, increased flight planning, and guaranteed obstacle clearance while in controlled airspace. IFR flight also provides the benefit of easier access to updated real-time en-route and destination weather as well as Notice to Airmen (NOTAMS).

The FAA has chosen to focus on the enhanced weather minimums and preflight planning at this time because of the enhancements to safety created by the proposed operations specifications, and the breadth of the regulatory revisions. The FAA does not intend if the FAA were to require compliance with part 135 for all HEMS operations.

G. Application to Public Aircraft

Two commenters raised the issue of application of the proposed operations specifications to public aircraft: One asked whether the proposed operations specifications would apply to public aircraft, another recommended applying A021 to all HEMS transports, whether public or civil. The FAA intends to apply these operations specifications to part 135 HEMS operators currently required by their part 135 certificate to obtain operations specifications, or to future HEMS operations that obtain a part 135 certificate. The FAA will consider the public aircraft issue separately.

H. Medical Personnel

The FAA received several comments related to medical personnel that serve on board HEMS aircraft. These comments included limiting the non-patient transport related duties assigned to air-medical crew, flight time and duty period limitations, incorporation of medical personnel into safety aspects of HEMS operations, training requirements, and recordkeeping requirements.

The FAA recognizes that the air medical personnel are an important part of a HEMS operation. However, these operations specifications revisions focus on the flight operations and planning aspects of HEMS operations; therefore requirements pertaining to medical personnel are outside the scope of the revisions.

I. Other Comments

The FAA received numerous comments on a number of other topics. Topics included: Requiring HEMS operators to be based at full-service airports; establishing regional dispatch centers for HEMS operations; Requiring Commission on Accreditation of Medical Transport Systems (CAMTS) certification for all operators; focusing on increased training rather than more stringent operations specifications; permitting landings only at preapproved landing sites; requiring two pilot crews; requiring two engine aircraft; pilot testing on local area hazards and procedures; operational credit for autopilot operations; use of common radio frequencies; prohibiting HEMS operators from selling memberships; establishment of obstacle free corridors; concern over pressure exerted on flight crew to engage in operations by for-profit operators; the FAA’s role in making medical determinations; and continuing current exemptions for operators.

These comments are outside the scope of the operations specifications revisions, relate to business decisions by HEMS operators, or are already addressed by the operations specification.