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

Office of the Chief Counsel

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

APR 2 8 2017

Jeff Schnaubelt
185 Kimberly Rd.
Barrington, IL 60010

Re: Clarification of fitness for duty standards under 14 C.F.R. § 117.5

Dear Mr. Schnaubelt:

This letter is in response to your January 6, 2016 letter requesting clarification on the fitness for duty requirements in 14 C.F.R. § 117.5. You ask two follow-up questions involving the fitness-for-duty requirements of a flightcrew member who has been awake for 18 continuous hours, and a question concerning different fitness-for-duty standards for daytime versus nighttime flight duty periods ("FDP").

You had previously written to the FAA asking, among other things, whether a flightcrew member who has been awake for 16 continuous hours may certify that he or she is fit for duty. We issued a legal interpretation to you on April 4, 2016, stating in relevant part the following:

> Section 117.5 does not quantify the amount of fatigue that would render a flightcrew member unfit for duty. Instead, it employs a functional test: whether the individual flightcrew member is capable of performing the assigned duties at the highest level of safety. This individualized determination is based on a multitude of factors, such as the length and difficulty of the assignment and the flightcrew member's self-knowledge of how he or she reacts to different levels of fatigue. …
>
> … While there is a significantly higher likelihood that a person who has been awake for an extended period of time will not be fit for duty, the regulatory text of part 117 does not categorically prohibit a person from being awake for 16 hours. Rather, part 117 requires each flightcrew member to make an individual determination as to whether he or she is fit for duty. The FAA expects that each flightcrew member's fitness-for-duty consideration will include, as one factor, the amount of time that the flightcrew member has been continuously awake.

This analysis applies equally to a flightcrew member who has been awake for 16 continuous hours, 18 continuous hours, or 24 continuous hours. As the FAA explained in the preamble to the final rule for part 117, the FAA cannot "impose an objective requirement on self-reporting fatigue because, as the other commenters pointed out, there is no objective science-based standard that could be used to measure fatigue levels." *See* 77 FR 330, 349 (addressing § 117.5(b) specifically).

Section 117.5, therefore, requires an individual determination based on a multitude of factors, including but not limited to the amount of time that the flightcrew member has been awake and the member's self-knowledge (or lack of self-knowledge) of how he or she reacts to different levels of fatigue. This subjective nature of flightcrew member self-assessment and self-reporting is mitigated by the fact that flightcrew members will undergo fatigue education and awareness training, which will increase each flightcrew member's ability to self-assess his or her fatigue levels. *See* 77 FR at 349 – 351.

This individual determination also applies to nighttime flights. As you indicate in your letter, nighttime FDPs may have a greater impact on flightcrew member fatigue. In developing part 117, the FAA recognized that the time of day of flight operations is a major factor affecting fatigue. *See* 77 FR at 333 ("All other factors being equal, fatigue is most likely, and, when present, most severe, between the hours of 2 a.m. and 6 a.m."). As a result, the FAA built into part 117 certain restrictions for nighttime operations, such as reduced maximum FDP limits and requirements for nighttime sleep opportunities for consecutive nighttime operations. *See* 14 C.F.R. §§ 117.13 and 117.14 (referencing Tables B and C to part 117); *see* § 117.27. The FAA, however, did not establish different standards under the § 117.5 fitness-for-duty requirements for daytime versus nighttime FDPs. The FAA believes that individuals respond to fatigue factors, including time of day, differently and may become fatigued at different times, and to different degrees of severity, under the same circumstances. *See* 77 FR at 333. Therefore, an individual determination that takes into account the time of operations and the flightcrew member's fitness to fly during that time period, among a multitude of other factors, is the appropriate standard under § 117.5.

We appreciate your patience and trust that the above responds to your concerns. If you need further assistance, please contact my staff at (202) 267-3073. This response was prepared by Richard Doan, an attorney in the Regulations Division of the Office of the Chief Counsel, and coordinated with the Air Transportation Division of Flight Standards Service.

Sincerely,



Lorelei Peter
Assistant Chief Counsel for Regulations, AGC-200

January 06, 2017

Jeff Schnaubelt
185 Kimberly Rd
Barrington, IL 60010
847-220-8844

Alex Zektser
Regulations Division, Office of the Chief Counsel
Federal Aviation Administration
800 Independence Avenue SW.
Washington, DC 20591
202-267-3073

Dear Mr. Zektser,

In the spirit of the Small Business Regulatory Enforcement Fairness Act, I am requesting the following legal interpretations as they relate to FAR 117.5; Fitness for Duty.

There is an April 2016 legal interpretation (see attached) which states that a slight amount of fatigue during a flight duty period may not always render a flightcrew member unfit for duty under section 117.5. The legal interpretation states on page 1, *"Section 117.5 does not quantify the amount of fatigue that would render a flightcrew member unfit for duty. Instead it employs a functional test: whether the individual flightcrew member is capable of performing the assigned duties at the highest level of safety. This individual determination is based on a multitude of factors, such as the length and difficulty of the assignment and the flightcrew member's self-knowledge of how he or she reacts to different levels of fatigue."*

The following questions are intended to help clarify how this "functional test" works in regards to individual flightcrew members ascertaining their capabilities of performing their duties at the highest level of safety as it relates to fitness for duty requirement under FAR 117.5.

Question #1:

A flightcrew member has a flight segment that is scheduled to terminate at a time when the flightcrew member will be continuously awake for 18-hours. If the flightcrew member has a good understanding of the level of fatigue that he/she will experience while being awake 18 continuous hours, and has the self-knowledge and confidence that he/she can perform his/her assigned duties at the highest level of safety while being awake 18 continuous hours during the Flight Duty Period (FDP), would it be OK for that flightcrew member to certify fit-for-duty under FAR 117.5?

Question #2:

A flightcrew member has a flight segment that is scheduled to terminate at a time when the flightcrew member will be continuously awake for 18-hours. The flight crewmember doesn't understand the level of fatigue that he/she will experience after being continuously awake for 18-hours but has general knowledge (or has learned from the airline's annual fatigue education and awareness training program) that being awake this long may result in an unsafe level of fatigue. The flightcrew member also lacks the self-knowledge to understand how he/she will react to the level of fatigue associated with being awake for 18 continuous hours, and is not certain he/she would be capable of performing the assigned duties at the highest level of safety. Would it be OK for this flightcrew member to certify fit-for-duty under FAR 117.5 in this circumstance?

Question #3:

Nighttime Flight Duty Periods that operate in the 11pm-5am range present a challenge for flightcrew members who have not adjusted their circadian rhythms accordingly. In lieu of a circadian change, a daytime nap can sometimes help flightcrew members prepare for a flight that takes him/her into a part of the night when he/she would normally be sleeping. However, flightcrew members who employ the napping strategy may find themselves not as alert at night as they are during their daytime flights. When flightcrew members employ the "functional test" to determine their fitness-for-duty, is it possible to have a different "level of safety" as it pertains to the 117.5 Fitness for Duty definition for nighttime flights vs. daytime flights? Is it OK for a flightcrew member to operate a nighttime flight at a level of alertness that would normally make him/her unfit for duty during the daytime hours? For the sake of operating the airline nighttime flight schedule, is it OK to have two different safety standards – one for nighttime Flight Duty Periods and one for daytime Flight Duty Periods?

Please acknowledge receipt of this letter.

Kind Regards,



Jeff Schnaubelt

Enclosure (1)