U.S. Department
of Transportation
Federal Aviation Administration

Office of the Chief Counsel

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

OCT 24 2018

Jeff Schnaubelt
185 Kimberly Rd
Barrington, IL 60010

Re: Request for Legal Interpretation of § 117.5(d) Fitness for Duty Affirmation for Augmented Flight Operations

Dear Mr. Schnaubelt:

This letter responds to your May 31, 2018, request for an interpretation concerning the 14 CFR § 117.5(d) requirement for fit-for-duty affirmation. In 2015, you received the Schnaubelt-Japeck Flightcrew Management Interpretation[1] which stated that "at the time the pilot makes the fit-for-duty affirmation, he or she must be fit for duty for that flight segment. That affirmation cannot be conditioned upon the pilot obtaining any rest or sleep during that flight segment." You ask whether that means that at the time the pilot makes the fit-for-duty affirmation, he or she must be fit for the *entire* duty segment. You offer the following scenario:

A pilot wakes up in Chicago (home base) at 8 AM after getting a full 8 hours of sleep. He or she has a 5 PM sign-in for a 3-pilot augmented flight. The flight is a 6 PM departure from Chicago that arrives in London at 2:05 AM Chicago time. The pilot does not get any further sleep before reporting for duty at the airport at 5 PM. At 5:30 PM, the pilot feels alert and not fatigued in any way. At 5:30 PM the pilot affirms fit-for-duty for this flight segment with the expectation of obtaining 2 hours sleep during his or her in-flight rest break. The pilot knows with certainty that if he or she sleeps for 2 hours during the in-flight rest break, he or she will continue to remain fit-for-duty for the entire flight duty period. However, he or she also knows with certainty that if he or she does not sleep for 2 hours during the in-flight rest break, he or she will have an unsafe level of fatigue at approximately 1 AM Chicago time, and will no longer be fit-for-duty with approximately one hour remaining in the flight duty period.

[1] Letter to Jeff Schnaubelt from Lorelei D. Peter, Assistant Chief Counsel for Regulations (Aug. 12, 2015).

You ask under the given scenario: (1) would it be appropriate for the pilot to affirm fit-for-duty according to § 117.5(d). In other words, you are asking whether a pilot's fit-for-duty affirmation may be conditioned on the expectation of receiving in-flight rest; and (2) whether the answer to question 1 changes if the pilot affirming fit-for-duty is a relief pilot (a 3rd pilot in the augmented crew who would not be expected to be at the controls during the last hour of the flight duty period).

Section 117.5(a) requires that each flightcrew member must report for any flight duty period rested and prepared to perform his or her assigned duties. Section 117.5(d) requires that each flightcrew member must affirmatively state he or she is fit for duty prior to commencing flight.

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 number of factors, and is personal to the flightcrew member who makes his or her own individual determination. Those factors include the length and difficulty of the assignment, the amount of time that flightcrew member has been continuously awake, and the flightcrew member's self-knowledge of how he or she reacts to different levels of fatigue.[2]

The Schnaubelt-Japeck Flightcrew Management Interpretation suggests that a pilot cannot affirm fit-for-duty when the pilot is relying on receiving future in-flight rest to maintain alertness because the pilot does not know if the anticipated in-flight rest period will occur or be effective. The interpretation states that the affirmation cannot be conditioned on the pilot obtaining rest or sleep during the flight segment. The FAA has reconsidered this position, and recognizes that the realities of the fit-for-duty affirmation for augmented operations require a more nuanced approach.

The final rule that established the requirements in § 117.5(d) was developed with the underlying philosophy that no single element of the rule mitigates the risk of fatigue to an acceptable level. Instead, carriers must provide an environment that permits sufficient sleep and recovery periods, and crewmembers bear the responsibility to take advantage of that environment.[3] Section 117.5 places a joint responsibility for fitness for duty on the certificate holder and the flightcrew member. The flightcrew member must: (1) report for an FDP rested and prepared to perform his/her duties; (2) sign a statement before beginning a flight segment affirmatively stating that he or she is fit for duty; and (3) immediately notify the certificate holder if he/she is too fatigued to perform the assigned duties. The certificate holder must: (1) provide the flightcrew member with a meaningful rest opportunity that will allow the flightcrew member to get the proper amount of sleep; (2) immediately terminate a flightcrew member's FDP if the flightcrew member does not

[2] Letter to Jeff Schnaubelt from Lorelei D. Peter, Assistant Chief Counsel for Regulations (Apr. 4, 2016).
[3] *Flightcrew Member Duty and Rest Requirements*, 77 FR 330, 330 (Jan. 4, 2012).

affirmatively state before beginning a flight segment that he/she is fit to safely perform the assigned duties; and (3) immediately terminate a flightcrew member's FDP if the flightcrew member informs the certificate holder that he/she is too tired to safely perform the assigned duties.[4]

For augmented flight crew operations, carriers must make available to pilots in-flight rest facilities and rest opportunities,[5] so that the pilots can work in shifts and replace each other at the aircraft controls. The in-flight rest is designed to mitigate against the fatigue accumulated during the FDP, particularly in the longer flight segments that occur during augmented flight operations.[6]

A pilot beginning the first flight segment of an augmented flight is aware that the FAA requires carriers to provide in-flight rest facilities for augmented flights. The pilot would also be aware that since he or she is conducting a flight operation with an augmented flightcrew, the flight duty period will be longer, and the flight segments themselves may be longer than an unaugmented flight. As a result, the pilot may reasonably expect to take advantage of the in-flight rest facilities provided by the carrier. Under these circumstances, a pilot affirming fit-for-duty may take into account his or her reasonable expectation of in-flight rest when determining his or her level of fatigue. It would be unreasonable for the FAA not to allow a pilot to anticipate that in-flight rest would relieve his or her level of fatigue during an augmented operation when that is what the rest opportunity is designed to do, and what the carriers have an obligation to provide.

Accordingly, the pilot in your scenario may affirm fit-for-duty because he or she can reasonably expect to receive the two hours of rest during the anticipated in-flight rest period. However, that reasonable expectation is unique to the individual pilot. For example, if the pilot has flown this route multiple times and on multiple occasions has been unable to take advantage of the in-flight rest, then his or her fit-for-duty affirmation cannot be conditioned on a *reasonable expectation* for in-flight rest. The same is true for the relief pilot.

The FAA has put in place safeguards to mitigate fatigue. A flightcrew member must continually reassess his or her fitness for duty as the FDP progresses. If a flightcrew member does not receive the anticipated in-flight rest and determines that he or she is too fatigued to safely land at the intended destination, and non-fatigued flightcrew members are not available to take over the fatigued flightcrew member's duties, then he or she should declare an emergency and land the aircraft at the nearest suitable location.[7]

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[4] *Clarification of Flight, Duty, and Rest Requirements*, 78 FR 14166, 14169 (Mar. 5, 2013).
[5] 14 CFR § 117.17(c).
[6] *Flightcrew Member Duty and Rest Requirements*, 77 FR 330, 364 (Jan. 4, 2012).
[7] Letter of Interpretation to Jeff Schnaubelt from Lorelei D. Peter, Assistant Chief Counsel for Regulations (Apr. 4, 2016).

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 letter has been prepared by Sarah Yousaf, Operations Law Branch, Office of the Chief Counsel and coordinated with the Air Transportation Division of Flight Standards Service.

Sincerely,

Lorelei D. Peter

Assistant Chief Counsel for Regulations, AGC-200

May 31, 2018

Jeff Schnaubelt
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847-220-8844

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

Dear Mr. Zektser,

In the spirit of the Small Business Regulatory Enforcement Fairness Act, I am requesting a legal interpretation that relates to FAR 117.5; Fitness for Duty.

The 2015 Schnaubelt-Japek Flightcrew Management Interpretation (see attachment), makes the following statement when answering question number two.

"Again, at the time the pilot makes the fit-for-duty affirmation, he or she must be fit for that duty segment."

Does this mean that at the time the pilot makes the fit-for-duty affirmation, he or she must be fit for the ENTIRE duty segment?

To help illustrate the question, please consider the following (amended) hypothetical question.

A pilot wakes up in Chicago (home base) at 8am after getting a full 8-hours of uninterrupted sleep. He has a 5pm sign-in that night for a 3-pilot augmented flight. The flight is a 6pm departure from Chicago that arrives in London at 205am Chicago time. The pilot doesn't get any further sleep before reporting for duty at the airport at 5pm. At 530pm the pilot feels good and alert, and not sleepy or fatigued in any way, and at 530pm the pilot affirms fit-for-duty for this flight segment with the expectation of obtaining 2-hours sleep during his inflight rest break. The pilot knows with certainty that if he sleeps for 2-hours during his inflight rest break, he will continue to remain fit-for-duty for the entire flight duty period. However, he also knows with certainty that if he does not sleep for 2-hours during his inflight rest break, he will have an unsafe level of fatigue at approximately 1am Chicago time, and will no longer be fit-for-duty with approximately 1-hour remaining in the flight duty period.

Is it OK for the pilot in the above scenario to affirm fit-for-duty as per FAR117.5(d)?

Would it make any difference if the pilot was the "relief pilot"? Would it be OK for the relief pilot to affirm fitness for duty in the above scenario? This relief pilot, would be the 3rd pilot in the augmented crew, and not expected to be at the controls during the last hour of the flight duty period. In other words ... the normal pilot-in-command and second-in-command are expected to be at the controls for the last hour of flight during the approach and landing, and the relief pilot, who may possibly be fatigued during the last hour of flight, would be seated in the cockpit jumpseat or possibly a seat in the cabin of the airplane.

Kind Regards,



Jeff Schnaubelt

Enclosure (1)

U.S. Department
of Transportation
Federal Aviation
Administration

Office of the Chief Counsel

800 Independence Ave., S.W.
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AUG 12 2015

Mr. Jeff Schnaubelt
Japek Flightcrew Management
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Re: Request for Legal Interpretation of 14 C.F.R. §§ 117.5, "Fitness for Duty," and 117.25(e), "Rest Period"

Dear Mr. Schnaubelt:

This responds to your January 20 and February 4 requests by electronic mail for an interpretation by the Federal Aviation Administration (FAA) of 14 C.F.R. part 117, "Flight and Duty Limitations and Rest Requirements: Flightcrew Members." You raise three questions in your communications.

I. The 8-hour sleep opportunity in 14 CFR §117.25 (e)

First, you request clarification concerning the 8-hour sleep opportunity requirement in 14 CFR §117.25, "Rest Period," in the context of a hypothetical where a flightcrew member receives a 10-consecutive-hour rest period that includes an 8-hour sleep opportunity, but factors such as homeostatic sleep drive and circadian rhythm disrupt the flightcrew member's sleep. You ask us to determine, in this situation, whether the flightcrew member had been provided with a minimum of 8 uninterrupted hours of sleep opportunity as required by §117.25(e).

The flightcrew member in your hypothetical meets the requirements of §117.25(e) because the flightcrew member was provided with 10 consecutive hours immediately before beginning the flight duty period (FDP)[1] measured from the time the flightcrew member was released from duty, and, based upon your facts, the 10-hour rest period included an 8-hour uninterrupted sleep opportunity. Section 117.25(e) states:

> No certificate holder may schedule and no flightcrew member may accept an assignment for any reserve or flight duty period unless the flightcrew member is given a rest period of at least 10 consecutive hours[2] immediately before beginning the reserve

[1] Flight duty period (FDP) means a period that begins when a flightcrew member is required to report for duty with the intention of conducting a flight, a series of flights, or positioning or ferrying flights, and ends when the aircraft is parked after the last flight and there is no intention for further aircraft movement by the same flightcrew member. 14 CFR §117.3.

[2] However, depending on the specific nature of an individual flightcrew member's schedule, the other subsections of §117.25 may require a longer rest period. For example, if a flightcrew member has not been

> or flight duty period measured from the time the flightcrew member is released from duty. The 10 hour rest period must provide the flightcrew member with a minimum of 8 uninterrupted hours of sleep opportunity.

As part of the FAA's 2013 "Clarification of Flight, Duty, and Rest Requirements," we noted that §117.25(e) and (f) "do not require that the 8-hour sleep opportunity take place during a specific time of day – they simply require that an 8-hour sleep opportunity be provided at some point during the 10-hour rest period." 78 Fed. Reg. 14166, 14168 (Mar. 5, 2013).

Please note that in accordance with §117.5(d), each flightcrew member must either make a written affirmation that he or she is "fit for duty" under §117.5(d) prior to commencing flight or terminate the assigned FDP pursuant to §117.5(c) if too fatigued to continue the assigned FDP. The requirement that each flightcrew member make a written affirmation about their continued fitness for duty applies to each flight segment of the assigned FDP. Legal Interpretation from Mark W. Bury, Assistant Chief Counsel for Regulations, FAA, to Charles J. Edwards (Feb. 12, 2014). Requiring a written fitness for duty affirmation before each flight segment helps to ensure that flightcrew members are "physiologically and mentally prepared and capable of performing assigned duties at the highest degree of safety." 14 CFR §117.3.

Under §117.5(a), the flightcrew member in your hypothetical is required to report for any FDP rested and prepared to perform his or her assigned duties. Under §117.5(b), if, for any reason, the flightcrew member reported for a FDP too fatigued to safely perform his or her assigned duties, the certificate holder could not assign an FDP to that crew member. If due to homeostatic sleep drive and circadian rhythm (or for any other reason), the flightcrew member in your hypothetical believed that he or she was not "fit for duty prior to commencing flight," then they would be required to advise the certificate holder that he or she would not be able to perform their assigned duties. The method or cause of disruption is not the determining factor, whether it happens to be a fire alarm or physiological sensitivity. The flightcrew member must make the determination and then take the necessary steps to comply with the rule.

II. Fitness for duty affirmation conditional upon sleep during an augmented crew rest break

Your second question concerns whether during augmented flightcrew operations, a pilot may report for duty under §117.5 as "fit for duty" when the pilot knows that if he is not able to obtain 2 hours of sleep during a flightcrew rest break, he will become fatigued later in the flight. You presented the following hypothetical for this question:

> A pilot wakes up in Chicago (home base) at 8am after getting a full 8-hours of uninterrupted sleep. He has a 5pm sign-in that night for a 3-pilot augmented flight. The flight is a 6pm departure from Chicago that arrives in London at 205am Chicago time. The pilot doesn't get any further sleep before reporting to the airport at 5pm. He affirms Fit for Duty, as per FAR 117.5(d), based on the assumption that he will sleep inflight in the Class-1 on-board rest facility between 7-9pm (2 hours) during the first crew rest break. He knows from past experience that when he sleeps during this break he will not become fatigued during the

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provided 30 consecutive hours of rest in the preceding 168-hour period, the "required intervening rest period" would be 30 consecutive hours pursuant to §117.25(b). 78 Fed. Reg. 14167.

flight, but if he does not sleep (due to noise, turbulence, etc.), then he will become fatigued before the end of the flight as he will be continuously awake for approximately 18 hours.

Section 117.5(a) requires that "each flightcrew member must report for any flight duty period rested and prepared to perform his or her assigned duties." There is also a requirement in §117.5(d) for a flightcrew member to affirm that he or she is fit for duty prior to commencing a flight segment. Implicit in this provision is a requirement that the flightcrew member is actually fit for duty at the time that he or she makes this statement. According to your hypothetical, the flightcrew member would not be fit for duty for the Chicago-London flight segment unless he gets two more hours of sleep subsequent to affirming fit-for-duty. Under these circumstances, the pilot would not be fit for duty at the time of the affirmation and would be in violation of §117.5 if he makes the affirmation without first obtaining the two hours of sleep necessary to render himself fit for duty. Again, at the time the pilot makes the fit-for-duty affirmation, he or she must be fit for duty for that flight segment. That affirmation cannot be conditioned upon the pilot obtaining any rest or sleep during that flight segment.

III. Fitness for duty affirmation and utilizing the 8-hour sleep opportunity

Your third question relies upon the same hypothetical above. You ask whether the flightcrew member may report "fit for duty" under §117.5(d) if he naps for a few hours during the day. You also ask whether the flightcrew member needs to utilize the 10-consecutive-hour period immediately before beginning the FDP for his 8 uninterrupted hours of sleep opportunity.

This question is related to your first two questions. In your hypothetical, the flightcrew member would be able to make the required §117.5(d) fitness-for-duty affirmation only if he believed he met the §117.3 definition of "fit for duty:" "physiologically and mentally prepared and capable of performing assigned duties at the highest degree of safety." If the flightcrew member did not feel that he was fit for duty, he would not be able to make the §117.5(d) affirmation and he would be expected to notify the certificate holder. So long as the flightcrew member is provided with a rest period of at least 10 consecutive hours immediately before beginning the FDP and that rest period includes a minimum of 8 uninterrupted hours of sleep opportunity, the burden for determining fitness for duty rests on the individual flightcrew member.

This response was prepared by Jonathan Cross, a Senior Attorney in the Regulations Division, Office of the Chief Counsel, and coordinated with the FAA's Flight Standards Service, Air Transportation Division. If you need further assistance, please contact our office at (202) 267-8013.

Sincerely,

Lorelei Peter
Acting Assistant Chief Counsel
for Regulations, AGC-200