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InFO

Information for Operators

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An InFO contains valuable information for operators that should help them meet certain administrative, regulatory, or operational requirements with relatively low urgency or impact on safety.

Subject: Fatigue Risk Management Plans (FRMP) for Part 121 Air Carriers – Part Two

Purpose: This InFO provides the structure and elements for the development of an FRMP as required for each air carrier conducting operations under Title 14 of the Code of Federal Regulations (14 CFR), part 121.

Background: In accordance with the Airline Safety and Federal Aviation Administration (FAA) Extension Act of 2010, Section 212, each air carrier conducting operations under 14 CFR part 121 must submit a FRMP to the Administrator for review and acceptance *no later* than October 31, 2010.

Discussion: A FRMP is an air carrier's management plan outlining policies and procedures for reducing the risks of flightcrew member¹ fatigue and improving flightcrew member alertness. The FRMP policies and procedures should focus on the air carrier's specific kind of operations (*e.g.*, domestic, flag, and supplemental) and the type operations (*e.g.*, continuous duty overnights, night vs. day operations, cargo vs. passenger operations, short-haul vs. long-haul, etc.).

FRMP Structure: The FRMP's structure consists of the following nine elements. Carriers operating under part 121 must address each element in their FRMP.

1. Senior Level Management Commitment to Reducing Fatigue and Improving Flightcrew Member Alertness.
2. FRMP Scope and Fatigue Management Policies and Procedures.
3. Current Flight Time and Duty Period Limitations.
4. Rest Scheme Consistent with Limitations.
5. Fatigue Reporting Policy.
6. Education and Awareness Training Program.

¹ The Airline Safety and Federal Aviation Administration (FAA) Extension Act of 2010, Section 212, references the term "pilot" in the legislation. Since certain airplanes require a flight engineer as part of the minimum flight deck crew complement, the term "flightcrew member" is used for FRMP guidance to represent each required flight deck member.

7. Fatigue Incident Reporting Process.
8. System for Monitoring Flightcrew Fatigue.
9. FRMP Evaluation Program.

FRMP Elements: The FRMP policies and procedures should focus on the air carrier's specific kind of operations (e.g., domestic, flag, and supplemental) and the type of operations (e.g., continuous duty overnights, night versus day operations, cargo versus passenger operations, short-haul versus long-haul, etc.). The following is an expanded description of the individual elements of each part 121 air carrier's FRMP, listing subtasks associated with the individual element:

(a) Senior Level Management Commitment to Reducing Fatigue and Improving Flightcrew Alertness:

1. Incorporate a letter from the Director of Operations level management acknowledging their commitment to managing and mitigating fatigue to improving flightcrew alertness.
2. Establish and incorporate the air carrier's concept of a corporate "Just Culture" or "Safety Culture."
3. Establish and incorporate an open communications policy for reporting fatigue-related issues.
4. Establish and incorporate a fatigue reporting system.
5. The corporate policy should define how an event will be evaluated for potential fatigue involvement as well as define an overview of the methodology for conducting a detailed root cause analysis.
6. The corporate policy should provide for protection of privacy and methods to protect the employee from adverse actions that would discourage reports of fatigue. The air carrier will develop and implement a process for reviewing reports and the actions taken to reduce flightcrew fatigue exposure.

(b) FRMP Scope and the Air carrier's Fatigue Management Policy and Procedures.

1. Clearly describe each element of the FRMP.
2. Define the scope and objectives of the air carrier's FRMP.
3. Identify the kind of operations and the type of operations conducted by the air carrier.
4. Incorporate the air carrier's policies and procedures to mitigate and manage the effects of fatigue and improve flightcrew alertness.
5. Define safety objectives and expectations of the air carrier's FRMP.

(c) Current Flight Time and Duty Period Limitations. Incorporate the current flight time and duty limits that will be used by the air carrier based upon the kind of operations and type of operations. This can be the CFR limitations or the hours of service limitations observed in the flightcrew member's collective bargaining agreement.

(d) Develop a Rest Scheme Consistent with such Limitations that Enables Fatigue Mitigation.

1. Develop and incorporate the air carrier's rest scheme consistent with the kinds of operations and the type of operations conducted by the carrier to improve flightcrew member alertness.
2. The rest scheme should consider the length of rest periods required to mitigate the effects of fatigue for scheduled vs. unscheduled operations, domestic and international operations, day vs. night operations, and operations through multiple time zones.
3. A rest scheme should be developed for those flightcrew members assigned or scheduled for reserve assignments; and
4. For those air carriers that conduct augmented flightcrew member operations, develop a rest scheme to mitigate fatigue and improve flightcrew member alertness.

(e) Develop and Implement a Fatigue Reporting Policy.

1. Develop and implement a reporting system that encourages reporting of fatigue related events as part of the overall FRMP. A reporting system permits crewmembers and other employees to report subjective fatigue and, from time to time, request relief from duties because of chronic fatigue.
2. These reports contain valuable data, especially when coupled with information about the conditions that contributed to fatigue, such as the work schedule for the week prior to the report. These reports should become data sources for use by the air carrier to evaluate the effectiveness of the program and develop or amend fatigue mitigation strategies as necessary.

(f) Develop a Fatigue Education and Awareness Training Program. The education and awareness training program should be a comprehensive educational program essential for providing the foundation of managing and mitigating fatigue (See Advisory Circular 120-100, Basics of Aviation Fatigue for additional guidance). The Fatigue Education and Awareness training program must be accomplished by each flightcrew member annually and may be incorporated into the air carrier's recurrent training program. At a minimum, the education and awareness training program should include the following subject areas:

1. Review of FAA flight, duty and rest regulatory requirements.
2. Awareness of the FRMP program itself, including fatigue related policies and procedures, and the responsibilities of management and employees to mitigate or manage the effects of fatigue and improve flightcrew member flight deck alertness.
3. The basics of fatigue, including sleep fundamentals and circadian rhythms.

4. The causes and awareness of fatigue.
5. The effects of operating through multiple time zones.
6. The effects of fatigue relative to pilot performance.
7. Fatigue countermeasures, prevention, and mitigation.
8. The influence of lifestyle, including nutrition, exercise, and family life, on fatigue.
9. Familiarity with sleep disorders.
10. The effects of fatigue as a result of commuting.
11. Pilot responsibility for ensuring adequate rest and fitness for duty.
12. Operational procedures to follow when one identifies, or suspects, fatigue risk in oneself or others.
13. Incorporate lessons learned regarding the effects of fatigue and mitigation initiatives relative to the air carrier's operations, and
14. Use a methodology that continually assesses the effectiveness of the training program.

(g) Implement a Fatigue Incident Reporting Process to Mitigate Performance Errors.

1. Develop and implement a system for pilots to report performance errors attributable to fatigue, similar to crew reports, that can serve as a mechanism for obtaining all relevant data regarding fatigue contributions to the incident.
2. Procedures for review and acting upon these reports of events that may be attributable wholly or in part to fatigue.
3. Other data sources that may be used include procedural errors, pilot deviations, flight exceedances, Aviation Safety Action Program (ASAP) or Aviation Safety Reporting System (ASRS) reports and flight operational quality assurance (FOQA) data. All of these sources may help the air carrier to objectively document fatigue.

(h) Develop a System for Monitoring Flightcrew Fatigue.

1. The air carrier must develop a process to capture all relevant information, such as the schedule leading up to the fatigue report, the actions of the employee to obtain rest, subjective and objective evidence of fatigue, environmental conditions that may have exaggerated or contributed to fatigue, relevant health or medical conditions, specific actions related to the incident, and communications prior to and during the event.
2. The corporate policy should define how an event is evaluated for potential fatigue involvement as well as defining the methodology used for conducting a detailed root cause analysis.

3. Incorporate operational procedures to follow when one identifies, or suspects, fatigue risk in oneself or others.

(i) Develop and Implement the Air carrier's FRMP Evaluation Program.

1. Develop and implement a systematic process for evaluating the effectiveness of the air carrier's FRMP.
2. Develop and implement the use of a methodology that continually assesses the effectiveness of the FRMP, including the effectiveness of the FRMP to improve alertness, and to mitigate performance errors.
3. Develop and implement a process for determining the need for making changes to the FRMP, as appropriate, when it is determined that the FRMP policies and procedures are no longer effective in managing fatigue events.

Submission Process: Each part 121 air carrier will develop their draft FRMP in a manner acceptable to the FAA for review. To assist the air carrier, a checklist is provided, see [InFO 10017SUP](#), which is useful in the development of an FRMP and identifying the location of each of the FRMP policies and procedures. The air carrier should submit the completed checklist along with its draft FRMP.

Every twenty-four (24) calendar-months, each part 121 air carrier must submit an updated draft FRMP for FAA review and acceptance. When the draft FRMP package is ready for FAA review, the air carrier will electronically submit it to FAA HQ, AFS 200, via e mail at 9-AWA-AVS-AFS-200-Air-Transportation-Division@faa.gov and provide its principal operations inspector (POI) with a copy. Upon receipt of the package, AFS-200 will acknowledge to the sender receipt of the package via e-mail reply copying the respective POI and regional office.

Review Process: AFS-200 will review the content of the air carrier's draft FRMP to ensure the plan addresses each element required for the FRMP to be acceptable. The air carrier may elect to incorporate more information in its FRMP than currently outlined in the FRMP elements; however, this information must not conflict with the required FRMP elements. The draft FRMP should be developed in a manner that is easily understood, relevant to their operations, and easily updated, when appropriate. The draft FRMP should be accompanied by the completed FRMP Content Checklist, see [InFO 10017SUP](#) which provides the inspector reviewing the document with the location of the applicable policies and procedures within the air carrier's FRMP.

Upon completion of the review process, if the draft FRMP is acceptable, the FAA will complete the acceptance process, as outlined in this InFO. If, however, the FAA determines the air carrier's draft FRMP is unacceptable, the FAA will return the package to the air carrier with suggested modifications to make the FRMP acceptable.

Acceptance Process: Once the air carrier's FRMP has been reviewed and found to meet the minimum requirements, AFS-200 will authorize the POI to issue operations specification (OpSpec) A317, *Acceptance of a Fatigue Risk Management Plan (FRMP)*, to the air carrier. This will document acceptance of the FRMP.. By memo, AFS-200 will approve issuing OpSpec A317. AFS-200's approval

memo will provide the POI (and the respective regional office) with specific, nonstandard text to insert into the OpSpec, as appropriate.

The air carrier may amend, or the FAA may determine that an amendment to the air carrier's FRMP is necessary, which will require reissuance of OpSpec A317, signifying acceptance of the amended FRMP. In the event the FAA determines that an amendment to the air carrier's FRMP is required, the FAA will advise the air carrier of the recommended modification necessary. Regardless of whether the amendment is originated by the air carrier or the FAA, the air carrier must submit their amended FRMP to AFS-200 for review.

Op Spec Issuance: An OpSpec A317 shall be issued to each part 121 air carrier documenting that its FRMP has been reviewed and is determined to be acceptable. The maximum duration of the OpSpec is twenty-four (24) calendar months from the date of issuance; this will be reflected in the air carrier's OpSpec A317. Therefore, at a minimum, each part 121 air carrier must submit an amended draft FRMP for review every twenty-four (24) calendar-months.

The POI will be responsible for issuing OpSpec A317 upon receiving approval from AFS-200. The POI will incorporate the applicable nonstandard text into the OpSpec as specified in the approval memo issued by AFS-200.

Recommended Action: Each 14 CFR part 121 Director of Operations should be prepared to develop their company's draft FRMP and submit it to FAA HQ, AFS 200, via e-mail at 9-AWA-AVS-AFS-200-Air-Transportation-Division@faa.gov for review as soon as possible. The content of the draft FRMP, at a minimum, shall be consistent with the FRMP structure and elements outlined in this InFO.

Contact: Question or comments regarding this InFO should be directed to Dale E. Roberts, Part 121 Air Carrier Operations Branch, AFS-220 at (202) 267-8166 or dale.e.roberts@faa.gov.