



AIR LINE PILOTS ASSOCIATION, INTERNATIONAL

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Mr. Robert Gretz
National Transportation Safety Board
Northeast Regional Office
2001 Route 46, Suite 203
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Dear Mr. Gretz:

In accordance with the Board's rules, the Air Line Pilots Association (ALPA) submits the following comments concerning the accident involving American Eagle Flight 4925 which occurred on May 8, 1999 at JFK Airport, New York, NY. ALPA appreciates the opportunity to have participated as a party to the investigation and hopes the following comments and recommendations will be of assistance as the Board concludes its investigation.

The factors involved in the accident include the scheduled continuous duty overnight (CDO) which resulted in fatigue, the lack of ATC arrival and approach procedures planning, the lack of proper flight crew training, and improper flight crew coordination during the arrival and approach procedure. There was no post accident fire due to the Engineered Materials Arrestor System (EMAS), and the only post accident passenger injury was made during the orderly evacuation.

Summary

On May 8, 1999 at about 0701 EDT, a Saab 340B (SF-340), N232AE being operated as American Eagle Flight 4925, went off the end runway four right (4R) after landing at John F. Kennedy International Airport (JFK). The aircraft had departed Baltimore-Washington (BWI) airport.

During the final approach phase the flight crew expected that the landing would be routine. However, upon landing, they realized that they were traveling at a speed and at a point on the runway that would not allow them to stop on the runway, resulting in the runway excursion at the end. During the interview after the accident, the crew stated they were fatigued and that the fatigue may have impaired their judgment.

Flight 4925 had advised the tower that they had stopped off the end of the runway sitting in the EMAS and requested the Airport Rescue and Fire Fighting (ARFF) equipment. ARFF response was excellent, and the aircraft was rapidly surrounded by emergency equipment and personnel. No fire occurred, and the crew was notified by the ARFF that the aircraft was fire safe. All passengers were deplaned in a calm and orderly fashion, and there was only one injury which was classified as serious.

Air Traffic Control (ATC)

The approach controller did not make a prudent decision when he offered the approach to Eagle flight 4925 and therefore played a significant role in this accident.

Discussion:

The information from the ATC group and the Performance group were not received simultaneously and therefore the information provided by the controller could not be verified until after the initial interviews were completed. However, when the radar data was reviewed it indicated that each of the three aircraft being handled were on separate tracks and that none of the aircraft were issued holding clearances which resulted in them entering holding.

Therefore, the radar data plot and time sequence illustrate that it appears there was no sequence plan being executed by the controller. An opportunity to allow an aircraft to conduct the approach presented itself as weather conditions improved. It appears that the controller wanted to take advantage of these weather conditions and therefore selected the aircraft (Eagle 4925) geographically closest to the final approach segment without regard to the provisions in the Air Traffic Controller's Handbook. Chapter 5, Section 9, paragraph 1 (5-9-1), paragraph b, VECTORS TO FINAL APPROACH COURSE states, "Except as provided in para 7-4-2, VECTORS FOR VISUAL APPROACH, vector arriving aircraft to intercept the final approach course: (b) for a precision approach, at an altitude not above the glideslope/glidepath or below the minimum glideslope intercept altitude specified on the approach procedure chart."

Eagle flight 4925 (at 4000 feet MSL) did not meet the prescribed criteria for this approach, however, the controller indicated during the post accident interview that he has seen Eagle pilots, "do more than this." The controller also associated and classified Eagle 4925 as being in holding because the flight was on the inbound leg to EBBEE intersection. This is contrary to the information contained within the *Aeronautical Information Manual* (AIM) and the *Instrument Flying Handbook* (AC 61-27) as to when an aircraft is established in holding. These documents provide specific criteria for when an aircraft is holding: Entering holding begins at the initial time when the pilot reports arriving over the holding fix.

Based upon this, we conclude that the controller had expectations that were outside the parameters of normal operations and should not have offered, when he did, a clearance for the ILS instrument approach at JFK airport.

Fatigue

The Captain was released from duty on May 6th and obtained sleep during that evening in his normal sleep pattern. On May 7th, he awoke in the morning but was later unable to sleep during the day in preparation for his next scheduled flight, which was a continuous duty overnight

(CDO) beginning that evening. He tried to sleep but because of the time of day and his circadian rhythm (body clock), he was unable to sleep. The First Officer had a similar problem during the day prior to his assignment. This situation illustrates the difficulty of obtaining sleep outside of the normal pattern (backside of the clock) associated with CDO schedules. Both crew members stated they were fatigued, however, there is no specific information as to when (before or during the flight) they became fatigued.

Discussion:

The CDO disrupts the normal circadian rhythm of the crew. Since this disruption can lead to acute sleep deficits, cumulative sleep loss and decreases in performance and alertness, ALPA believes it had a detrimental affect on the crew's performance during this flight.

Two major concerns that we have in this area include the airline's continued negative approach in the handling of fatigue issues involving flight crew members. First, the company does not have a formal training program for crew members assisting them in identifying fatigue. Fatigue can greatly affect their performance and decision making processes. Second, the company has a policy of tracking fatigue and/or sick calls for attendance control. This policy instills an intimidating premise. Fatigue reporting requires corrective action, not coercion. A fatigue call causes a loss of income for the affected pilot.

Establishing a formal training program that addresses fatigue is imperative. ALPA believes the training should encompass identifying, coping and countering the effects of fatigue. This training should include the physiological effects on human factors and the consequences if symptoms are ignored.

We believe the airline's safety reporting system should be better utilized to track those schedules that incur fatigue and must not be used to penalize the crew member. This information could be used to modify the flight schedules reducing the potential for fatigue.

Flight crews are expected to perform at their optimum level all of the time. The company must recognize that crews can be tired as well as ill and therefore should not fly. The existing pay provisions for sick leave must be similarly applied to fatigue concerns. The elimination of financial penalties will relieve flight crews of their monetary anxiety and professional concerns that may coerce them into, because of fatigue, into making faulty operational safety decisions. Additionally, newly hired crew members may not be aware that they can call and indicate that they are fatigued in the same manner that they call when sick.

It should be noted that since the accident, the airline has substantially reduced the numbers of CDO's in the schedule. They have also recognized that fatigue is of serious consequence regarding crew performance and now includes this material in the flight manual.

Training

The amount of training a flight crew member receives in their respective seats pertaining to non-flying pilot (NFP) duties is not consistent. NFP duties training in the simulator did not offer formal scenarios that could enhance skill performance or CRM.

Interviews with American Eagle management, check airman and instructors made it apparent that at the time of the accident there were no formal provisions regarding fatigue training. Also, understanding the impact that fatigue can have on flight crew members was not emphasized.

According to the American Eagle Flight Manual, Part One, CREW RESOURCE MANAGEMENT (CRM) requires a combination of disciplines by the crew. During the course of Flight 4925's approach to Runway 4R, the CRM was ineffective since the First Officer was not actively assisting nor interacting with the Captain. The manner in which CRM training is taught at American Eagle Airlines is not effective for line operations.

Discussion:

CRM ground school training may not have been conducted by instructors who are or have been line qualified. There are no specific training scenarios in the simulator or aircraft that requires a crew member acting as a non-flying pilot to initiate corrective CRM action. Time limits during training restrict the instructors and check airman from fully evaluating the effectiveness of CRM.

The training available at the time of the accident, stressed flying pilot duties during the simulator periods in the seat for which the flight crew members were training. During the investigation it was learned that the First Officer had not performed NFP duties while physically occupying the right seat in the simulator. This situation needs to be corrected by providing for actual NFP duties to be performed while physically in the seat for which crew member is receiving training. The Board and other government agencies have completed extensive studies in this area and have produced excellent reports identifying the critical needs, such as the lack of monitoring skills, of junior First Officers.

As previously mentioned in the fatigue section, there was no formal fatigue recognition training. During the interview process, it became apparent there were different opinions concerning fatigue recognition and training. The American Eagle Airlines Vice President of Safety mentioned that he could not recall any written guidance as to how a pilot should identify a fatiguing situation. He did indicate that guidance on fatigue may have been conveyed anecdotally during ground, flight or initial operating experience (IOE) training.

We believe this premise is substantiated by the crews lack of interaction during the approach. Specifically, the lack of required callouts and situational awareness that should have indicated another course of action. Comments made respectively by the Captain and the First Officer indicates the breakdown of effective communications. The captain stated, in part, that the First Officer did not make the required approach callouts and other related approach deviations. The

First Officer stated, “No, I relied on the captain to know what he was doing and know where he was.” There have been modules regarding fatigue countermeasures presented by the NASA Ames group in past years and ALPA would like to see made available again to air carriers that need assistance in this area.

Conclusion

ALPA has concluded that each of the referenced areas provided a significant contribution to this accident. Fatigue, ATC handling, and Flight Crew Training concerns were found to be significant factors. We believe that if the concerns in these areas had been either properly addressed or performed correctly, the chain of events leading to this accident would have been broken, thus averting the accident.

Safety Recommendations

Based upon information gained during the investigation of this accident, the Air Line Pilots Association proposes the following safety recommendations:

To the FAA:

- Coordinate the efforts of manufacturers and the aviation industry in continuing to pursue current and new technology to provide that an Engineered Materials Arrestor System (EMAS) can be safely placed at airports.
- Encourage air carriers to enhance operational safety by removing intimidating factors from management’s policy and procedures governing flight crew members.
- Require that air carrier pilot training provide sufficient “seat appropriate” experience during the program to ensure that crew members will have performed all of the pilot flying and pilot not flying duties and responsibilities associated with the specific seat qualification.
- Develop and publish in the *Aviation Safety Inspector’s Handbook*, (8400.10) a standard that can be used by air carrier inspectors when evaluating the initial and recurrent training program adequacy of an air carrier’s “seat appropriate” training policies.
- Recommend that the guidelines concerning holding established in the Aeronautical Information Manual (AIM) and the Instrument Flying Handbook (AC 61-27) be included in the Air Traffic Controller’s Handbook (FAA Order 7110.65).

To FAA and Air Carrier Airlines:

- Eliminate management’s policy of utilizing fatigue and sick calls reported by crew members for attendance control and financial penalties.

- Establish a formal training program pertaining to fatigue and its effects on flight crew members.
- Improve Crew Resource Management training criteria to enhance simulator and aircraft training sessions. Training should require situations that include decisions by the non-flying pilot. Incorporate improved "crew concept" modules by pairing Captain and First Officer crew members during training.

Sincerely,



Erwin G. Mockler
Party Coordinator
Air Line Pilots Association

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EGM:ak

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