CASE STUDY

Expert Witness Services from Diverse Vector Aviation Consulting Secure Airline Accident Settlement

A United States law firm specializing in aviation accident litigation hired Diverse Vector Aviation Consulting, LLC (DVAC) to assist with a case involving a major United States airline. The firm retained Kevin Karpé, Principal at DVAC, as an expert witness for air traffic control operations and procedures.

Before retaining DVAC, the firm conducted depositions and interviews with air traffic control, airport, and airline personnel without the aid of an air traffic control expert. Karpé evaluated the depositions and other pertinent information. He then provided expertise on the standard of care and compliance with directives and regulations required by the Federal Aviation Administration (FAA) and other national and local directives.

"LIGHTS OUT" CAUSES PASSENGER INJURIES

During a night shift in 2015, the Controller-in-Charge of a Southern US airport tower turned off the centerline lights to one of the airport's taxiways and did not notice that they inadvertently shut off another portion of taxiway lights, darkening the area for incoming aircraft to the terminal ramp area. While the Controller-in-Charge acted based on previous complaints from pilots that the centerline lights were too bright, there were no complaints that evening.

A commercial aircraft landed and subsequently began the taxiing phase of the flight to the ramp area. The aircraft followed taxi instructions and the pilots turned onto what they thought was the ramp area - but instead went into a drainage ditch. Upon entering the ditch, the aircraft's nosewheel collapsed, activating a loud alarm in the cockpit, and making it impossible to communicate with flight attendants. The flight attendants assumed the pilots were incapacitated and deployed the emergency egress chutes to deplane the passengers, some of whom were hurt as they slid down to the ground.

MISCOMMUNICATIONS AND HAPHAZARD PROCEDURES

Before reviewing the depositions, Karpé completed a thorough review of the current national and local operational directives and practices. Next, he reviewed pilot and company reports and the submissions from the National Transportation Safety

Board (NTSB). Once he secured a general sense of the accident, Karpé reviewed Air Traffic Control (ATC) personnel depositions and assessed the standard of care and compliance with procedures.

The combination of a lack of standard operating procedures and multiple communication breakdowns were key contributors to the accident. At the time of the accident, the controllers on duty in the air traffic control tower did not adhere to basic requirements of equipment operation, information sharing and emergency response actions, including:

- The Controller-in-Charge made a subjective decision to turn off the centerline lights based on previous, undocumented reports of excessive brightness from pilots. He also did not advise the change to other tower personnel.
- When the Controller-in-Charge made the entry on the lighting panel to turn off the lights, a confirmation request appeared on the panel screen. The Controller-in-Charge pushed the affirmative response without reading the message that indicated both taxiway lighting circuits, taxiway, and ramp entrance were turned off.
- The Air Traffic Facility Standard Operating Procedures (SOP) did not assign responsibility for operating the lighting system, creating a structure so that anyone working in the tower could operate the lighting panel.
- The Controller-in-Charge did not include the lighting outage on the Automatic Terminal Information Service (ATIS) – a critical and continual broadcast that arriving and departing aircraft receive before departure or arrival.
- A Local Control position relief took place before the accident. After the briefing concluded on the recorded line, the relieving controller asked the relieved controller why the taxiway lights were off. The controller stated that the lights were off due to previous pilot complaints. Neither of these controllers notified anyone in the air traffic control tower of the outage.
- Once the aircraft entered the drainage ditch, the pilot transmitted a request to Ground Control for "the trucks," a widely known industry term meaning "send emergency services." However, Ground Control did not understand or seek to clarify the pilot's request and sent non-emergency airport operations to the scene. By this time, passengers, and crew, some of which were injured, were present on the airport's movement areas, in the drainage ditch and in dimly lit, unsafe areas near the aircraft.

ANALYZING THE COMMUNICATIONS LOOP

Communication and connectivity are critical for safe and efficient air traffic movement in the air and on the ground. Air traffic controllers must notify airline pilots any time an airport condition changes. The tower team is responsible for sharing information among all personnel on duty.

However, the incohesive tower team did not pass critical information to each other, which contributed to this accident. Karpé concluded that multiple team members contributed to the accident:

- Three controllers in the tower noticed the centerline taxiway lights were off: the relieving Local Controller, the relieved Local Controller, and the Flight Data controller. Each controller should have questioned the situation and notified the Controller-in-Charge of the outage. Doing so would have alerted the Controller-in-Charge to evaluate his previous decisions and all personnel to assess the outage to take corrective safety measures. If this action was announced to tower personnel, it may have triggered a response for all positions to scan the airfield and hopefully notice the lights that were off.
- The Controller-in-Charge should have directed that the ATIS include the centerline taxiway outage on its broadcast.
- The tower team and Controller-in-Charge did not maintain situational awareness or understand the implications of not communicating lighting and equipment changes to the airport.

Karpé determined that the air traffic control team's actions and inactions did not ensure a safe airport environment for taxiing aircraft and contributed to the accident. The lack of standard of care and non-compliance of directives from ATC did not meet requirements and therefore deemed the ATC, and thus the FAA, as a responsible party.

EXPERT WITNESS SERVICES SECURE SETTLEMENT

The airline and the FAA were deemed jointly liable for the passenger injuries. Diverse Vector Aviation Consulting provided the assessment, report, and deposition necessary for the firm to proceed to settlement agreements out of court, saving time and resources from having to go to trial.

Diverse Vector Aviation Consulting LLC provides support, guidance and focus to companies and organizations with ties to the aerospace and aviation communities.
DVAC is founded on extensive experience and is ready to help you achieve your goals.

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