

May 11, 1993

To: Federal Aviation Administration - FSDO
Richard S. Lund
Aviation Safety Inspector
116 North 2400 West
Salt Lake City, UT 84116-2984

From: William W. Gillespie, Jr.
B-727 Captain
Federal Express Corporation

Subject: Investigation of SLC Departure

Mr. Lund:

Thank you for your concern and for giving me the opportunity to provide factual details concerning the incident at SLC on March 9, 1993. In the interest of flight safety, it is my desire to fully cooperate with the FAA in this matter.

I was Captain of Federal Express Flight #527 which operated MEM-SLC-SMF on March 9, 1993. The flight to SLC proceeded normally with an ILS 16R approach executed due to low IMC weather which was partial obscuration, three hundred overcast, one mile visibility in fog. This actual weather was slightly worse than the conditions reported on ATIS.

We parked at the air cargo ramp abeam taxiway "M1" on the southeast side of Rwy 34L. After transloading cargo and refueling, we received ATC clearance for our next leg to SMF. I pre-briefed the taxi route and departure with the crew and designated the first officer to fly the leg. The existing low IMC weather was still partial obscuration, three hundred overcast, with approximately one mile visibility in fog.

We were cleared to taxi to Rwy 34R approximately 1220 Zulu. While taxiing eastbound on "K1", we were cleared for take-off on Rwy 34R. Several maintenance vehicles were in the vicinity of the common threshold for Rwy 32 and 34R with their headlights on. I was distracted by their presence and partially blinded by their headlight glare in the fog.

One of the vehicles had headlights pointed directly into our eyes, and another had headlights pointed directly down and illuminating the only visible runway. I saw one set of runway lights running off to my left at approximately a 90 degree angle, verified all checklists complete with the flight engineer, and completed my turn onto the runway. At this time, I noted the HSI heading passing through North and approaching the orange heading bug, which I had set to 346 degrees for departure runway alignment.

I then gave the controls to the first officer for his take-off and went "Head Down" to set engine power prior to 80 KIAS, per my company policy. Approximately 80 KIAS, I heard the first officer mumble something about "32". I cross checked engine instruments and found them normal. I then looked at my HSI and noted a heading of 320 degrees. I was mentally convinced that I had a compass problem. I then looked outside the aircraft and could see the departure end of the runway closer than normal for a 9569 foot runway (Rwy 34R). I then realized that we had taken off on Rwy 32.

Since we had been monitoring tower frequency, I knew there was no other conflicting traffic at this time. I immediately decided that a combination of light gross weight, cold temperature, and max-power take-off gave us adequate performance for Rwy 32. I judged this to be a far safer action than attempting a high speed reject in low IMC weather with poor visibility in fog with rapid acceleration and airspeed rapidly approaching V1. I immediately complied with the SLC 4 departure, which is identical for Rwy 34R and 32.

SLC tower routinely gave us frequency change to SLC departure control, without comment. Within five minutes, we had reached safe altitude, and I called SLC Tower and told them, "I had a problem on departure and asked if there were any problems for them." The tower controller replied that there was "no conflict and no problem at all." We changed frequency to departure control and proceeded normally to SMF.

After lengthy discussion with my other crewmembers and a careful review of the facts, I would like to offer the following comments for your consideration:

- (1) All three crewmembers were briefed and prepared for a Rwy 34R departure. Our intention was always to depart Rwy 34R. At no time did any crewmember see lights or markings for Rwy 34R due to the entire common threshold area being poorly defined at night, restricted visibility in fog, and blinding from vehicle headlights.
- (2) Rwy 32 was the first runway we approached from taxiway "K1". It shares a common threshold with Rwy 34R for departure. There is no Rwy 32 marking at the departure end due to a displaced landing threshold. At no time did any crew member see any lights for Rwy 34R. There is very narrow divergence between the two runway headings.

- (3) No one, except the first officer noticed Rwy 32 markings until we had already accelerated past the Rwy 32 displaced threshold. The first officer was unable to communicate this information to me in time to safely accomplish a high speed rejected take-off in the very poor weather conditions.
- (4) Several maintenance vehicles were very close to the common threshold with headlights shining directly into our eyes and pointing directly down Rwy 32.

I immediately discussed this incident with Federal Express Flight Safety. In the interest of flight safety, it is my recommendation that the following corrections be considered:

- (1) Keep vehicles away from active runways in low IMC conditions. Keep headlights off and don't blind flight crews.
- (2) Don't light Rwy 32 when not in use since it has a common threshold with Rwy 34R.
- (3) Replace runway lights with blue taxi lights leading from the Rwy 32 threshold to the displaced threshold. It would then become a relocated threshold, and there would no longer be runway lights there to conflict with Rwy 34R lights.
- (4) Publish a warning on Jeppesen chart 10-9 for SLC in reference to Rwy 32 and 34R take-offs. Federal Express Flight Safety has already implemented this change for our crews, and it is my hope that Jeppesen will provide this warning to all operators. Bob Giordano from Federal Express flight safety will provide you a copy of this change, as well as a letter outlining Federal Express' concerns in this incident.

As you know through our many conversations and my responding to your letter, it has been my intention to establish absolute cooperation with your office to improve the system and enhance flight safety. After discussing with you the fact that this same incident had occurred to two air carrier crews shortly before this incident, I have aggressively pursued preventing this situation from occurring a fourth time.

I immediately called your office voluntarily to discuss the incident. Federal Express Flight Safety also had numerous conversations with SLC ATC and your office about the incident.

As Captain, I always intended to take off on Rwy 34R. In light of circumstances surrounding the incident and my absolute cooperation to enhance flight safety, I feel that a finding of violation of FAR is unwarranted.

Thank you,

William W. Gillespie, Jr.
B-727 Captain
Federal Express Corporation