

**NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

**Attachment 34 – Federal Express Conference Call**

**OPERATIONS/HUMAN PERFORMANCE SUPPORT TO  
THE U.S. ACCREDITED REPRESENTATIVE**

**DCA10RA092**

Call date: October 21, 2010  
Time: 1100 EST  
Location: Conference Call

Participants: Captain David Lawrence, Dr. Katherine Wilson - National Transportation Safety Board (NTSB); Ed Lyons, Joel Murdock, Joe Pearson, Shem Malquist, Ryan Swah – Federal Express (Fedex).

## CONFERENCE CALL NOTES

- Regarding any differences between a manufacturer's AFM and the operator's FCOM or NNC, they were not aware of any differences. If there were, they would send a communications to the manufacturer seeking clarification.
- For the Boeing 757, they use the Boeing manuals for their non-normals.
- Joel Murdock explained the pallet bag fire suppression system. It covered two systems, a containerized fire and a palletized fire. It involves a fire resistant material tightly fit around a pallet similar to a net. You cannot place the bag over contents within a container. There would be large areas of air within the container to fuel a fire. The bag is heavy and weighs about 100 pounds, and the net is incorporated within the bag for stability of the cargo. It allows about 4 hours of fire suppression. There is no certification requirement for their use, and they have been working with Dave Blake at the FAA to define limitations on the suppression of lithium battery fires. They are exploring the use of specific containers just for lithium battery cargo.
- They have about 30 of their 59 MD-11's with the main deck cargo fire suppression system installed, and should have the rest of that fleet complete by September of next year. They are currently installing the system on their other fleets.
- They have pushed the system with ATA and CAA, but no one has come to Fedex for a demonstration.
- They have had one inadvertent discharge on the ground, but none inflight.
- The FSS is all automatic based upon temperature, and independent of the smoke alarm system.
- The crew action for a discharge of FSS to assume smoke to follow and to go to the smoke evacuation procedure. At Fedex, there is currently no guidance for the crew to go to a checklist if the FSS "fires" other than land at the nearest suitable. That information is in a flight operations bulletin. They are going to look further into checklist guidance for the crew in the event the FSS activates.
- Fedex has no guidance to operate the O2 masks in the normal position. All of their aircraft have utilized full-face masks since about 2000.
- They carry enough O2 to fly for quite some time while depressurized at FL250, and then make an approach and land.
- They went to the Full Face Mask (FFM) in early 2000.
- They tell their crews if they get a Fire or Smoke warning to get on the ground safely, and "we'll discuss it from there."
- They have FSS in 35 of 59 MD11s and are doing 2-3 month. They will also install on 777.

- They are about to test 100 or so Pallet Bags but “have a ways to go on making it viable.”
- They are also are modifying our 15,000 containers by replacing the plastic entry curtain with a "roll down" shade made of the Pallet Bag material. The shade is held in place by clam locks. They feel this will provide another 20 minutes (total of 45 min) of fire protection versus the plastic curtain.
- They do not do live fire training during emergency training. Their crews are not trained to fight fires on a main deck during flight. They emphasize landing immediately, and have encouraged that philosophy as a culture. For their 2 man crews, they emphasize not going back to fight a fire, and to “get on the ground”.
- The portable oxygen bottle is not accessible from a seated position in the cockpit on their fleets.
- They do not train for a failure of the oxygen system during a smoke/fire/fumes event.
- There was no consideration given to including the goggle vent on a checklist during the SFF initiative discussion back in 2004.
- “I think it would be very optimistic to think that a casual manipulation of the vent and goggles system once in training would adequately prepare someone to deal with ‘no kidding’ smoke in the cockpit.”
- The smoke goggle/mask combinations do not work well, and “I pity folks in a smoke scenario to get that done” with masks and goggles.
- The FSS has a light in the cockpit that tells the crew that there is a fire in the cargo hold, and the crews are told “to get the aircraft on the ground”. If smoke is noticed, the crew is guided to go to the smoke removal checklist.
- Fedex does not have smoke-generation capability in the simulators. They looked at it in the past, but the system wasn’t adequate and was deactivated from the simulators.
- The Fedex HUDs are projected images onto a combiner, and they had conducted tests on the visibility of the HUD in reduced visibility environments (Embry Riddle study). Their HUDs are LCD based, which are brighter than the CRT based.
- Regarding EVAS, they were “turned off” from EVAS because they couldn’t see the standby instruments when the EVAS was deployed during an electrical smoke scenario. They said they may consider looking back into the EVAS
- There is a problem with the lack of knowledge for hazardous material located on the main deck.
- If the FAA turns off the carriage of lithium batteries “we’re out of business”.
- Fedex wants the shippers to “tell us what is in the packages and then we can build the layers of defense. It’s when we don’t know” that there is a problem.
- “99%” of their hazmat issues derive from “undeclared” material.
- Fedex does not accept any DG (dangerous goods) from China. Most lithium batteries that can be purchased on the internet originate from China and lack standards and are of poor quality.
- Regarding delegation of PM/PF, the PF “flies the aircraft” while the PM reads the checklist and handles the emergency. The PF will fly while also handling the radios, but will also keep the PM updated. Culturally, Fedex has found that most captains will choose to become the PF and assign the PM duties to the F/O.
- The portable O2 and the Halon bottles are not assessable from a seated position on their MD-11 fleet.

- The observer seat oxygen masks are more readily assessable to the pilots than the portable oxygen bottles.
- Pilots have no room to preflight the pallets in a cargo compartment, nor are they able to ascertain what the material is based upon a visual inspection.

Call ended at 12:05 EST.