



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

November 22, 2022

Attachment 2. Emergency Response Summary and Written Statements

SURVIVAL FACTORS

DCA22FA132

A. Emergency Response Summary

Members of the Survival Factors Group conducted the following interviews at Miami - Dade ARFF Fire Station 12, Miami, Florida on June 24, 2022.

Interview: Robert Williamson, Firefighter Foam Truck 2 Driver
Date: June 24, 2022
Location: Miami- Dade ARFF Fire Station 12
Start Time: 1045
Representative: Declined
Present: Emily Gibson (NTSB), Patrick Lusch (FAA), Angela Cruz (Boeing), Captain Patrick Lewis (Miami Fire Rescue)

During the interview Firefighter Williamson stated he was the driver of foam truck 2. He had been a firefighter since June 2012, and he had been at Miami airport for 3 ½ years. He worked the C shift, which was 24 hours on and 48 hours off. His shift started at 7am on the day of the accident. He arrived at 6:05am to be transported to the station. He was relieving the person who was currently assigned to the Foam 2 truck and was provided a pass-down briefing from the previous firefighter. He was notified of the accident over the PA speaker in the fire station. There was a "ring down" alert that was an "alert 3". Everyone ran to the trucks. An alert 3 meant an actual crash on the field with a fire visible. He was in the kitchen when the alert came through, and immediately went to his truck (Foam 2). He started the truck and headed directly to the site. He did not have to put on his gear as he was the driver.

As he proceeded out and the taxiway was clear of aircraft, he headed straight up taxiway papa toward the airplane. He saw heavy smoke and went directly to the airplane. There were no airplanes or traffic that was impeding his arrival. He believed it took less than a minute to arrive. He saw people evacuating the aircraft from left side. He positioned the truck on the right side of the airplane where he assisted in putting out the fire on the right side. He did not see any passengers on the right side of the airplane.

On his way to the airplane, he did not remember any further communications. There was some light chatter on the radio about a confirmed airplane crash which matched what he saw. The location of the crash was given over the PA, and they told him the runway and the frequency of the radio.

He stated his job was to remain in the truck and assist with putting out the fire. He monitored his foam and water quantity status. Water was laid first and then foam. When Foam 1 ran out of water, they backed out and he remained in position. Foam 1 was the first truck to arrive and apply agent to protect the fuselage. Foam 2 (his truck) went directly to the fire. He remained on scene until he was relieved after Foam 1 went and

refilled with water. Foam 1 and Foam 2 rotated out as each other became low. He refilled and came back to the site.

Firefighter Williamson stated he is not always on the Foam truck. His position is the Incident Command Technician (ICT), which is the driver/assistant to the Chief. He was driving Foam 2 that day because of a vacant position and he was certified. The Chief notifies the crews of the shift prior so he knew he would be Foam 2 driver.

He does not recall where the Incident Commander was located. His direction and orders for the incident came from Foam 4. He was fire ground and was positioning and rotating the trucks in and out. The Chief was overall commander, but Foam 4 oversaw the Foam trucks.

Firefighter Williamson saw flames, fire, and smoke enroute to the site. The fire was coming from the right wing. Trucks can lay foam and water for about 3 minutes continuously. From what he saw, passengers were trying to get away from the airplane. He heard one time the Chief giving a directive to get on the bullhorn to move passengers away.

Two firefighters are assigned to a truck, the driver, and the "tailboard." The driver lays the water and foam, the tailboard assists the driver. When he positioned at the site, he was positioned facing the tail and parked near the nose in front of the wing (45-degree angle to the wing root). Foam 1 was near the R1 service door.

Firefighter Williamson stated that alert 1 is a type of mechanical problem (not imminent danger), alert 2 is imminent danger, and an alert 3 is confirmed crash. When receiving an alert 3, all trucks respond immediately after hearing the alert 3 tone. Tactically, they first protect lives by protecting egress (Foam 1 protecting the fuselage). The subsequent arrivals of Foam 2, 3, and 4 fight the fire.

Interview: Glenn Testa, Firefighter, Foam Truck 1 Driver
Date: June 24, 2022
Location: Miami- Dade ARFF Fire Station 12
Start Time: 11:23 AM
Representative: Declined
Present: Emily Gibson (NTSB), Patrick Lusch (FAA), Angela Cruz (Boeing), Captain Patrick Lewis (Miami Fire Rescue)

During the interview, Firefighter Testa stated he was a foam truck driver. He was not assigned to a specific foam truck. Every day of a 6-day cycle he goes to a different truck. He was also paramedic trained.

On the day of the accident, he was driving the Foam 1 truck. He had been a firefighter for 23 years and with Miami airport about 2 years. This was his first airport. He mentioned that 10 or 11 years ago, he was here for an 11-month stint on HazMat duty. He worked 24 hours on, 48 hours off, on the C shift which is 7am to 7pm.

When the call came in, he was in the kitchen. He initially heard the claxon which is not what he normally hears. For about 5-10 seconds that sounded, then the alert tone sounded, and everyone ran to their trucks. He ran straight to Foam 1. As he was running to his truck, he heard the Tower say, "Alert 3 already on the ground off the end of Runway 9 and they are on fire." He thought to himself that was too perfect of an announcement, that this must be a drill. He got to the truck and rolled out with his "tailboard." He saw the red tail of the airplane at an angle and the silver fuselage reflecting the sun and then saw the smoke on the right side. He "pegged the accelerator towards the airplane." He saw people already evacuating. He decided not to activate the siren, because he did not want them to move in front of him.

He positioned the truck just to the right of the nose of the aircraft and as he started turning around, the Chief said the runways are available to ARFF. He deployed the nozzles as he came around to the airplane and began to pump agent. Before he came to a stop, he was already spraying the fuselage. He set the parking brake and assigned the bumper nozzle to cool the wing root and the fuselage. Once he did that, he started his roof turret to hit the wing that was on fire. The fire was under the middle of the right wing. There was also fire behind the wing beneath the engine and tail. He was not there long when the low water indicator alarm went off. The alarm sounds around 20%. Both nozzles were operating at 625 gallons per minute (not high flow). He backed out and went to the fill station to refill. Took a few minutes to get filled and went back to the scene. He took a position on the left side where he laid another foam blanket. By then most everyone had gotten out of the aircraft.

When he was first approaching, the left overwing window exits were open and people were coming out, along with the L2 slide. The L1 door did not deploy until about 5 seconds later. He did not see any passengers on the right side of the airplane. He thinks

that one of the right overwing window exits was open, but he did not see anyone coming out of it.

After returning, he went in to sweep the airplane cabin and reapplied foam on the left side because of the suspicion of a fuel leak.

Firefighter Testa also stated that they are always encouraged to do familiarization training and scenario planning.

Interview: Errol Johnson, Firefighter, Foam Truck 1 Tailboard
Date: June 24, 2022
Location: Miami- Dade ARFF Fire Station 12
Start Time: 12:07 PM
Representative: Declined
Present: Emily Gibson (NTSB), Patrick Lusch (FAA), Angela Cruz (Boeing), Captain Patrick Lewis (Miami Fire Rescue)

During the interview Firefighter Johnson stated he had been a firefighter for 20 years. He has been at Miami airport for about 15 years. He worked C, shift, 24 hours on and 48 hours off.

On the day of the accident, he was positioned as a tailboard for Foam truck 1. The tailboard job required the non-driving firefighter support the driver. "Tailboards" know all the procedures and all the equipment, but do not activate anything. They are in full control of the radio communications. The tailboard knows how to function with the refill stations. They are also the eyes and the ears of the truck. He made sure traffic was clear for the driver. He monitored the screens for fluid levels. He activated Purple K if requested (sodium potassium). This is an agent that nullifies and sucks out the oxygen in an area. He was seated next to the driver on the right side. He was responsible for the 3 radios in the truck. (1 for county communications, 1 for tower communications, and 1 was a duplicate of the handheld.)

He was in the kitchen when he was notified. The notification was confusing at first. It was a recall bell that went "on and on and on and on and no one knew what it was." Then they heard Alert 3 and ran to the trucks. On the way to the truck, they heard the airplane went off the runway and then they heard "on fire" as they were closing the doors to the truck. They hauled to the site, and he knew this was not a drill.

As they approached, they saw a dark plume of smoke, they assumed fire but did not see it at first. They saw people scrambling off the airplane. Once they approached closer, they saw flames and the melted wing, and they knew there was heat. He was fully 'bunkered out' (suited up) with his helmet and tank in case he needed to run in and pull people out.

The driver hit the fire and did an incredible job banking the foam to cool the fuselage and knock the fire out at the same time. He noticed the crew door (L1) was not open yet and was concerned he might have to get out and get them. He screamed at passengers after opening the truck door and yelled at passengers to get away from the airplane. They were trying to get luggage. He mentioned that the passengers seemed "chaotic."

One of firefighter Johnson challenges was to watch where the ramp drivers were and where the passengers were going.

Firefighter Johnson felt they may have lost about 10-20 seconds in delay because the confusion about the alert/claxon sound.

He saw people evacuating from the wings and a lot of people recording with phones and taking luggage.

He expressed that the department had a very proactive training chief. Their culture was that the driver and tailboard do everything together. Familiarization activities are often to account for MIA changes, and they do scenario planning together. He felt that the training they had prepared them well for this scenario.

Firefighter Johnson noted that the buses to corral the passengers came quite quickly, however, he felt that the ramp could have done a better job with creating a corridor or some actions to corral passengers even quicker.

Interview: Alexander Lurig, Battalion 6 Chief/Incident Commander
Date: June 24, 2022
Location: Miami- Dade ARFF Fire Station 12
Start Time: 2:46 PM
Representative: Declined
Present: Emily Gibson (NTSB), Patrick Lusch (FAA), Angela Cruz (Boeing), Captain Patrick Lewis (Miami Fire Rescue)

During the interview, Chief Lurig stated he had been in firefighting for 23 years and 2 ½ years with Miami ARFF. He was assigned Battalion 6, Shift C, which is 24 hours on and 48 hours off. He stated the Battalion Chief was usually the Incident Commander. The day of the accident, he had just returned from training. He was notified of the accident from a tone in the station that he was not used to hearing. It sounded like an older tone they used to have a long time ago. It might have been 10-15 seconds of a tone that was reoccurring with no follow-up information. Then, the electronic tone they are used to hearing came on and that was when they heard the tower call for an Alert 3 several times. He said, "aircraft down aircraft on fire."

Chief Lurig stated the watch office asked the tower where the event was located. Chief Lurig stressed that the two most critical items "Where are we going" and "What is the frequency" were the two most important pieces of information they need. He said he jumped in his SUV with the Incident Command Technician and headed towards the scene.

As he approached the aircraft, he got clearance to cross runway 1-2 and received clearance from the Tower. He made a wide approach to the aircraft to allow foam trucks to access first. The first thing he saw was people coming out of the aircraft and people on the tarmac walking around. There was a definitive fire building around the right wing. Foam 1 and 2 had already begun protecting the fuselage and knocking the fire. Foam truck 1 had pulled in just right of the nose and sprayed fuselage and Foam truck 2 was off at a 45-degree angle further back from Foam truck 1. Chief Lurig directed Foam truck 2 to get closer as he thought he was too far back. He stated he does not give too much direction, that he wants the firefighters to have autonomy to do their job. There is not enough time for him to have to tell them what to do. Purple K agent was not used as there were too many people. He was on scene from the time the call came until investigators responded.

When the fire was out and under control (approximately 10-15 minutes), the primary search of the aircraft was conducted. Also, a secondary search was conducted by Foam truck 2 tailboard and another firefighter. He used a ladder at the L1 door. He was handed a manifest. The manifest came from a folder on the cockpit door. He drove and met his rescue unit (who was on a different frequency) and told them to head to the site. He directed them to use the bus PAs to get people off the tarmac and get to the

busses as quick as possible. He stated there were lots of people on the ramp and that added a level of complexity. He stated they have two firefighters on every foam truck.

Injured passengers were transported from the scene. He knew of three and a 4th patient was sent later from the terminal. There were approximately 30 ARFF personnel who responded to the event. There were 17 at station 12, 8 at station 56, and the administrative staff, this was a normal amount for this shift. He did not request mutual aid.

When he arrived, passengers were self-evacuating from the aircraft. They were scattered around. Some were being directed around by ramp units. Some were jumping off wing from overwing window exits. They were also coming out of the L2 door. He did see the deployment of the L1 door slide. He did not see the crewmembers.

He estimated around 300 gallons of foam agent was used. Chief Lurig stated preexisting relationships at the airport led to success of the event. When asked about what additional training resources would be beneficial for firefighters to remain efficient as ARFF, he stated using a simulated environment would be beneficial to foam truck drivers to gain more proficiency especially with applying agent.

Chief Lurig turned over command once Foam truck 4 got there (around 3-4 mins). Foam truck 4 was 'fire ground', which is who monitors and manages the Foam trucks to maintain the foam blanket. This was done so that the incident commander can manage other aspects of the response.

**Written Statement:
Khalid Khan - Foam truck 3**

On Tuesday, 6/21/22, while working on Foam 3, we were dispatched to an Alert 3 (Alarm # 2149073) on RW 9. We were told by the ATC that a plane was on fire on RW 9. Upon arrival at RW 9 and TW T8, we saw a MD 82 of Red Air, on its belly, with flames and heavy black smoke coming from the right wing. F1 and F2 went on the right side of the aircraft and immediately attacked the fire with foam and water. My truck, F3, went on the left side of the plane and positioned itself to protect the egress and passengers from fire.

We noticed that passengers were still coming out of the two mini doors on top of the left wing and from the L2 door (where a chute had deployed). Those passengers were walking around all over the tarmac, some with carry-on luggage and belongings, while a few were standing near the plane and recording the incident on their cell phones. We used our sirens and asked Ramp personnel to get those people out of our way and be taken to a safer position. Ramp personnel did an outstanding job of accomplishing that task.

We noticed also that the crew started exiting the plane from the L1 door (it also had a chute deployed) - after all the passengers had left the aircraft. They were taking too long in my opinion because they were also handing over their hand carries and other belongings to the ones standing on the ground next to L1 door. I stepped out of my truck and told them to forget about their personal stuff and to expeditiously exit the aircraft. They all left the aircraft soon after that, but couple of them returned and asked me about their documents that they had left behind. I advised them that they should not worry about it and should proceed to the safe area. I confirmed with the crew if there were any passengers or crew members still inside the aircraft. They replied that everyone was out.

As soon as the passengers were clear of the left-wing area, F3 started applying Foam on it, because fuel was actively leaking from that wing as well. After, this I called the Fire Commander on the radio to inform him of my plan to do a Primary Search of the interior of the plane. He advised me to take a firefighter from F2 with me. I took F/F Manny Estemera from F2, and we went up and down the interior of the aircraft, including the Lavatories, and searched for potential victims. Primary Search was negative, and we found no one inside the aircraft.

Due to my assignment of Primary Search, the Fire Commander made F4 to be the Fire Ground/Fire Attack Group (leader). After that, F1, F2 and F3 stayed on the scene and periodically kept reapplying Foam blanket on the wings to keep the leaking fuel from igniting. F4 continued as Fire Ground.

**Written Statement:
Daniel Rodriguez, Lieutenant
Foam truck 4 "C" Shift
Station 59 MIA**

F-4 dispatched by Tower ring down to an Alert 3 RW 9. F4 Crossed the parallels at K6 and was given the go ahead from the Tower to access RW 12. Arrived at the downed REDAIR MD80 Tail #HI1064 on the Northeast grassy shoulder off RW9 and the T8 intersect. The AC's nose was just on the runway surface of 12 while the body remained in the grass. AC was on Fire at the R wing with occupants and crew actively evacuating the AC from the left over-wing exits x2. F4 was assigned by Command to perform a 360. Upon completing a semicircle, we noted that the Aircraft had slid off RW 9 and had several hundred feet of a trailing debris field leading back to RW 9. As a result, we limited the range of our 360 to not affect the debris field. The R wing had the remnants of the glide slope antenna involved in fire. Both Tail engines were not active and had their reverse thrusters in the deployed position and had no smoke or fire showing. The AC had it's L1 and L2 doors open, and the slides deployed upon our return to the front of the AC. One over wing exit on the right was open and Fire was knocked down by ARFF unit. After knocking down F-3 was assigned by command to access the AC and perform a primary search, so F-4 assumed fire attach group. Foam Units were assigned to maintain foam blanket on both sides of the AC due to an active fuel leak and alternately were sent to the fill station at the blast fence for water refill operations and then later to station 12 for foam refill operations. F-4 at 2100 deployed 100-gallon containment pool under the right wing to limit the remaining fuel spill. At 2130 F-4 relieved by F3 and cleared to quarters.