NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

October 29, 2015

Attachment 1 - Flight Crew and Flight Training Manager Interviews

OPERATIONAL FACTORS

DCA15FA185

Interviewee:	**Kevin Stuart Hillyer, Senior First Officer**
Represented by:	Andrew Zucker, British Air Line Pilots Association
Date and Time:	October 28, 2015, 0900 EST
Location:	NTSB Offices, Washington, D.C.
Present:	Roger Cox, NTSB; Dan McLucas, FAA; Chris Hanson, British Airways; Kirby Simmons, Boeing; Tony Severs, AAIB

During the interview, First Officer (FO) Hillyer stated the following:

He was 45 years of age and was a B777 senior first officer. He had been in that position for 14 years, Previously, he spent 4 years flying the B747 classic and he had flown the HS125 and the L1011 in the Royal Air Force. He flew the L1011 for 3 years. He was hired by British Airways (BA) in November 1997. He held a UK ATPL certificate with the B777, B747 classic, and L1011 type ratings. He clarified his certificate, which he referred to as a "blue EU" certificate, conformed to current requirements. He held a class I CAA medical certificate with a limitation to fly as or with a copilot. His approximate total flight time was 14,000 hours and his approximate B777 flight time was 10,000 hours. He had not flown as pilot in command at BA.

FO Hillyer had experienced no accidents, incidents or violations. He recalled an event in which he lost an engine at 500 ft. on takeoff out of Ascension Island, but that did not result in an accident.

FO Hillyer explained the crew position "P3" was an extra pilot added to long flights to provide relief for other crew members and to provide extra monitoring and to act as safety pilot.

FO Hillyer did not wear eyeglasses. He did not know if the captain was required to wear eyeglasses or if he was wearing eyeglasses during the event.

FO Hillyer was asked to discuss his work and rest schedule for the three days prior to the event. He stated he was off on October 5-6 and left the UK on October 7. He was a "positioning" crewmember (non-flying) on the flight from Gatwick (LGW) to Las Vegas (LAS). The flight departed about 1000 local and arrived in LAS around 1600 local. After landing he met his crew, had a light meal with wine and then went to bed and read. He awoke early, took a walk, and had breakfast. He got about 3 hours of rest, including 1 hour of sleep in the afternoon. He expected to be able to get the first rest break and sleep about 3 hours on the flight back to London. The airplane was equipped with a business or first class seat for him to use.

On the day of the event he recalled the crew pickup at the hotel was at about 1430 local. He felt he remained on English time. He had eaten and exercised and rested during the day, and he felt normally alert and rested at the time he reported for duty.

FO Hillyer was asked to provide a brief narrative of the event. The taxi out was normal and he thought it was short. The cabin was ready and there was no delay. The captain stood the throttles up for takeoff. Just before 80 kts. There was a "bang" and the airplane veered left. The sound seemed non-threatening (like a sound in the simulator) and he thought a tire burst. The captain said he was stopping. The airplane stopped quickly and as they stopped the left engine fire light came on. along with a fire bell. The captain set the parking brake and the FO ran the engine fire checklist. FO Hillyer asked if he should make a PA. He then announced that passengers and crew should remain seated. The FO fired the first fire bottle and waited. FO Hillyer's eyes were drawn outside to a large shadow above the fuselage; it looked like a volcano. He asked the captain if he should go back and take a look. He left the flight deck and found some passengers were up in the aisle and could see outside. He tried to be reassuring. He met a cabin crewmember at door 2L; she said she'd been trying to call the flight deck.

As FO Hillyer looked out the window he saw all was black with an orange glow and the window glass was becoming crazed. He told a cabin crewmember to get ready to evacuate. As he returned to the flight deck agitated passengers were in the aisle and he said they would get them off. He returned to the flight deck and said we need to get off now. The pilots were waiting to fire the second fire bottle. FO Hillyer interrupted their thought process. The captain reacted immediately and told the FO to call the tower and then made a PA and initiated the evacuation alarm. FO Hillyer heard the commands from the back and the doors opening. He did not recall hearing a call for the evacuation checklist. He was not sure what his role should be.

There was bit of a lull while things were relatively calm as the FO began the checklist. He saw the FO working through the checklist. The FO "took it from the top" and was holding the outflow valve switches, but FO Hillyer could not estimate how much time elapsed while he did that. FO Hillyer observed the right engine EICAS indications and said the right engine was running, and the FO moved the right fuel control switch to cutoff using "his other hand." 5-10 seconds later the checklist was complete.

FO Hillyer did not remember the cabin manager coming into the cockpit, The FO got the tabards (fluorescent vests) and they left. Door 1L was not suitable because of the spray and they used door 1R even though it was wet. FO Hillyer went down first and it was surprisingly fast. He stood at the base of the slide. The captain came down and "got scuffed." The passengers were split into two groups, one on the right side and one of the left side. The FO came down and moved around the airplane to the passenger group on the left side, and FO Hillyer called the BA duty person to report the event. The duty person said he showed they were in the air.

The fire chief took charge. He and the crew were on the ramp for about 40 minutes. They were transported to their departure gate, where the captain made an announcement to the passengers. They then remained in an office for a couple of hours but nobody came. At the suggestion of the fire chief they were taken to a hospital. FO Hillyer stated he felt a taste of bitter fumes. At the hospital FO Hillyer was given an X-ray and blood test. However, he was not administered a drug and alcohol test. When released from the hospital they went

to Walmart to obtain some clothes, then returned to the hotel and had a meal. The elapsed time was almost as long as the flight back to Gatwick would have been.

FO Hillyer was asked how takeoff performance data was determined. He stated they entered environmental data, including digital ATIS, into an ACARS form and it was data linked to a central computer in London, which sent back takeoff settings. The data was displayed on the lower center screen and routed to the printer. He stated the side screens were not flight related but were used by maintenance.

Shown the takeoff data recovered from the event flight, he confirmed the maximum allowable weight for takeoff was 232.9 tonnes (metric tons) and the planned weight was 226.9 tonnes. The actual takeoff weight was 225.8 tonnes (from the final load sheet). They loaded the FMS (flight management system) with planned data and did not alter it if the final data was compliant. He confirmed the V speeds were 149 V1, 149 VR, and 153 V2. The passenger count was 156 + 1 and crew 3 + 10.

FO Hillyer stated the normal checklists were done using the electronic checklist and items that were already green were not verbalized when the checklist was read. For example, if the flaps were already in the planned position of "5", the checklist would be green and no verbalization was needed.

Asked if the engine fire procedure was to be done by memory, he stated yes, it was for items above the dashed line. When those steps were done they pulled up the checklist. There was just one checklist for engine fire in flight or on the ground.

Asked who ran the engine fire checklist, he stated the FO did the engine fire checklist once the airplane was stopped. He stated that in non-normal conditions, the FO was always the "P2" once the parking brake was set. FO Hillyer's role was to monitor. He did not recall who silenced the fire bell. Asked who started the APU, he stated he was not present when the APU was started.

He thought the FO turned off the autothrottle (AT) arm switch, but FO Hillyer did not see him do it.

Asked if he saw the forward cargo bay fire warning came on, he stated he was not sure but the captain said we had fire in the cargo hold. As they were standing up to leave the cockpit he recalled the captain started to reach for the switch but FO Hillyer could not recall if he moved it.

Asked if the evacuation checklist was supposed to be a memory checklist, he stated it was not. It had been a memory checklist at some point in the past. He thought this was changed about 2 years ago. He had practiced the current procedure in the simulator.

Asked if the evacuation checklist was run by memory during the accident, FO Hillyer stated he did not have a clear recollection of that. He stated it was hard to see what the captain

was doing from the P3 seat. FO Hillyer could see the FO had the QRH in his hand and was operating the pressurization panel.

He stated there was a period of time when he wasn't clear what his role was. He then observed from the EICAS that the number 2 engine was still running. Asked how long he was in the cockpit before he saw the engine indications, he stated he could not recall. The FO responded immediately and used his left hand to shut off the fuel control switch. His right hand remained on the pressurization switches. FO Hillyer did not know who pulled the right engine fire handle. He did see the FO had the QRH in his hand.

FO Hillyer stated the captain activated the evacuation alarm and then silenced it. The FO notified the tower. He did not recall who called stop during the rejected takeoff (RTO).

FO Hillyer verified P1 referred to the pilot flying (PF), P2 to the pilot monitoring (PM) and P3 to the relief pilot, or "heavy." He used the center jumpseat and slid it forward for takeoff. Asked where the electronic checklist was displayed, he stated the P2 used the center lower screen and all three pilots could see it. Asked what was displayed on the lower center screen during takeoff, he stated it was blank but the upper showed engine instruments. The captain stood the throttles to 50% and engaged the AT. The PM called out "thrust set," and normally called out "80 kt." The PF checks his airspeed at that point.
FO Hillyer's stated his attention was about 80% on engine indications and 20% on airspeed, and everything appeared normal.

Asked if the FO used the electronic checklist (ECL) to run the engine fire checklist after the airplane stopped, he stated yes, because he could monitor the timing mechanism before firing the second bottle.

Asked if he used the ECL for the evacuation, he stated the evacuation checklist is on the back cover of the QRH and that is what was used.

He was asked what callouts he would make during the takeoff, FO Hillyer stated the P3 would verbalize what he saw if no one else did. He did not make any callout on the accident RTO.

He was asked if the crew spoke to each other directly or via intercom. He stated they wore headsets which are snug and they normally use the intercom to talk to each other. They must press to talk on the intercom (no hot mike). The P3 radio panel was forward of his jumpseat by his left knee. He was able to communicate clearly to the crew when he returned from the cabin.

He was asked if reverse thrust was used during the RTO. He stated no reverse thrust was used. Normally the PM would select reverse thrust and ensure autobrake was used or verbalize what was happening. In the accident event, after the TL's were closed one started to move forward. By the time the FO closed the TL, the aircraft was stopped, so there was not time to deploy reverse thrust.

FO Hillyer did not recall hearing a chime from the cabin.

Two QRH's are provided on the flight deck. There is also a control column evacuation checklist. With either, it's a "read and do" checklist. It is a very unusual checklist. Each pilot does his part of it and calls it complete. He stated it was the only checklist they have like that.

When in the cabin he noted there was haze not smoke. He sensed a metal taste. He stated the cabin crew can initiate an evacuation in the event of a catastrophe.

During the RTO the spoilers were not deployed.

The FO obtained the tabards and Notice to Captain (NOTOC) before leaving.

FO Hillyer did not feel there were any distractions during the engine fire checklist. He did not see fire bottle 2 discharged. The FO used the paper QRH checklist for the evacuation.

Regarding evacuation training, he stated they do one at least once a year. He had done it in the last year, but didn't recall when. They routinely used the interphone.

His mindset when he first went back to the cabin was that probably no evacuation would be needed. That changed after he saw the fire and smoke.

Interviewee:	**Ian Callaghan, Senior First Officer**
Represented by:	Andrew Zucker, British Air Line Pilots Association
Date and Time:	October 28, 2015, 1100 EST
Location:	NTSB Offices, Washington, D.C.
Present:	Roger Cox, NTSB; Dan McLucas, FAA; Chris Hanson, British Airways; Kirby Simmons, Boeing; Tony Severs, AAIB

During the interview, FO Callaghan stated the following:

He was 30 years of age and was a senior first officer on the B777. He had been a senior FO for 6 years. He had previously served as an A320 FO. He was hired by BA in January of 2006. He held the UK ATPL with type rating on the B777, B787 and A320. He held a class I medical certificate with no restrictions. His total flight time was 7000 hours, of which 2600 hours was on the B777. He had no PIC time at BA. He had no prior accidents, incidents or violations and he had experienced no training difficulties.

Asked to describe his last three days activities before the event, he stated he had been in the simulator October 2-3, off October 4-5-6, and operated the flight from LGW to LAS on October 7. His simulator period was a license proficiency check (LPC), a "fixed check" with engine fire and failure performed. He believed he had done an evacuation in the simulator, but he could not recall the scenario.

He lived in Dublin. On October 5 he went to bed around 2300 and arose around 0900. On October 6 he flew from Dublin to Gatwick on Aer Lingus and stayed at the Hilton. He reported for duty on October 7 about 0945 local and operated the flight to LAS. The flight was on time, departed about 1100 local and arrived in LAS around 1400 local. He went to his room and to the pool, and then went to bed at 1830 local. He arose at 0300, had breakfast, and slept again from 0900 to 1130. The pickup for the event flight was at 1430 local. He had no issues with food or health and was alert and awake when he reported for duty.

He was asked to describe the accident events. He recalled the taxi was rather lengthy and slow, being uphill and with hot tarmac. The takeoff was normal until just before 80 kt., when he heard a "thud." There was a left swing, maybe a tire burst, and stop called. After the stop was called for, FO Callaghan noticed the TL moving forward, so he disconnected the AT. He called ATC. After the aircraft was stopped, the captain called for the engine fire checklist, and FO Callaghan ran it.

The P3 called attention to the shadow of the smoke. The captain told the P3 to go back. While the P3 was gone the captain said "I think we will need to evacuate." The P3 said they needed to evacuate after he returned to the flight deck. The captain did the PA and the FO did the evacuation checklist. They departed the airplane from Door 1R after everyone was off.

On the ground FO Callaghan spoke with the fire chief and then went to assist passengers on the other side of the aircraft. He asked the crew and passengers if they had any injuries or needed any extra attention. He phoned the duty flight crew manager (DFCM) in London and consulted the BALPA emergency guide. It was 50 minutes to an hour before the buses arrived. They rode buses to the terminal and after speaking to the passengers went to a company briefing room for 2-3 hours. He didn't feel he inhaled any smoke but he went to the hospital. The hospital was called Peace Haven. He did not have blood or X-ray tests and did not have drug or alcohol testing. He returned with the crew to the Westin hotel.

He recalled both he and the captain called stop. He did the engine fire checklist from memory. He completed all steps. Asked how he decided when to fire the second bottle, he stated he was 20 seconds into the 30 second countdown when the P3 came back in and said they had to evacuate. He decided to fire the second bottle then.

He was asked how he conducted the evacuation checklist. He started on the overhead, and he opened both outflow valves, pulled the right fire switch, and pulled the APU fire switch, but did not rotate the APU fire switch. He used his left hand on the pressurization and it took 15-20 seconds for the outflow valves to open. He said it felt like it took a long time. He called the tower.

He did not see what the captain was doing because he was looking at the valve position. Prior to the relief FO returning from the cabin he had purely a fire-fighting mindset, but the captain said after the first bottle was fired "I think we need to evacuate." At that time

it was not a command. 5-10 seconds after that the P3 returned to the flight deck. There was a brief discussion, and during this time the fire light went out. The P3 returned to the flight deck and said they had to get out. Shortly thereafter, the fire light then came back on.

Asked if he checked to see if the captain had moved both fuel control switches to off, he stated yes, he knew that because he was the one who selected the right fuel control switch off after the P3 said the right engine was still running. Asked if he was aware the evacuation was under way at that time, he said yes.

The captain conducted a trip briefing for the entire crew at the beginning of the trip, and he discussed flying time, weather, and the fact it was a night flight and ETOPS, but did not discuss the possibility of an evacuation.

FO Callaghan used the countdown timer on the checklist screen during the engine fire checklist. FO Callaghan used the QRH for the evacuation. The captain did not brief any MEL's. He did not remember hearing a call from the cabin.

He was asked if anything distracted him from accomplishing the engine fire checklist. He did not feel there were any distractions, but the third pilot interaction was unusual. The engine fire light went out briefly after the first bottle was fired, and that added a few seconds to the timeline before evacuating. He did not recall seeing a cargo fire indication.

He did not select reverse thrust or spoilers on the RTO for a combination of reasons. He was distracted by the thrust lever increasing.

FO Callaghan did not know if the captain used the QRH for the evacuation. He could not say what the captain was doing when the checklist was being run.

Interviewee:	**Christopher Philip Hanson, Flight Training Manager B777/787**
Date and Time:	October 28, 2015, 1300 EST
Location:	NTSB Offices, Washington, D.C.
Present:	Roger Cox, NTSB; Dan McLucas, FAA; Kirby Simmons, Boeing; Tony Severs, AAIB

During the interview, Captain Hanson stated the following:

He was 53 years of age and was the flight training manager B777/787 for BA. He had been in that position for 3.5 years and had been at BA for 19 years. He was type rated on the B777 and B787, had about 10,000 hours total flight time and about 1,000 hours on the B777. His duties and responsibilities included managing the training workforce for his fleet, about 130 training captains, dealing with performance issues of line pilots, and overseeing the checking and recurrent training cycles. He was responsible for the curriculum.

BA employed ATQP for training. He stated this system used feedback from real world experience to affect subsequent training and to provide continuous improvement.

He stated evacuations had been in the curriculum for the last 2-3 years. He had reviewed the curriculum from 2012 to 2015 and noted the following: RTO had been covered 6 times, evacuation 3 times, and fire and smoke 6 times. His fleet pilots have simulator training every 6 months. Each visit consisted of two days. The first was a check ride and the second day was training. LPC and LOE alternated.

The most recent RTO training was directed at low speed RTO.

Since the entry to service of the B777 the evacuation procedure had been done as a memory item. That changed following the "MMM" accident at Heathrow. The current "read and do" checklist had been in effect since he had been in his current position. It is the only BA procedure done as a parallel procedure. It differs from the Boeing procedure. He did not know why they used a "split" checklist, and he had never seen any other checklist done like this.

He had not seen any trends in RTO, evacuation, or fire and smoke training recently. Generally evacuations are handled well in training.

Asked to describe the normal evacuation training scenario, he stated it was usually a fire that could not be extinguished, and sometimes they did a call from the cabin about a fire getting worse. It could begin in flight or on RTO. They plan to modify training to present main gear steering issues based on real events. He is not aware if ATQP is used for cabin crew training.

BA's training failure rate was not zero. The door training for pilots is done once annually and cabin crews participate in that training.

Interviewee:	**Christopher Alan Henkey, Captain, BA 2276**
Represented by:	Captain John Marriott, British Air Line Pilots Association
Date and Time:	November 13, 2015, 1000 EST
Location:	NTSB Offices, Washington, D.C.
Present:	Roger Cox, NTSB
Via teleconference:	Dan McLucas, FAA; Chris Hanson, British Airways; Kirby Simmons, Boeing; Tony Severs, AAIB

During the interview, Captain Henkey stated the following:

He was 63 years of age and was a B777 captain at the time of the accident. He had no other duties at BA and had not been a check airman or management pilot. He was a resident of the United Kingdom (UK). He held an ATPL certificate with type ratings on the B777, Tri-Star, DC10, and 747-400. He held a class I medical certificate with a limitation to carry a pair of spectacles and a spare pair. They were "readers" intended for close vision. He was not wearing his spectacles at the time of the accident because he could see the instruments and outside the airplane without them.

The captain stated he had flown the B777 for the last twenty years. His previous flight assignment was captain on the B747-400. His date of hire at BA was August 1973. Prior to BA he attended a sponsored academy for BOAC (predecessor to BA). His estimated total flight time was 30,000 hours, of which 15,000 were on the B777. He had had no other employment while at BA.

The captain stated the accident trip was a regular bid trip and he had previously flown with the FO (P2) but not with the RFO (P3). He thought he had flown with the FO twice in the last 2-3 years.

The captain was asked to discuss his rest and activities in the three days prior to the accident. He stated he was off duty on September 5 and 6 and reported for duty at 0845Z on September 7. He and the RFO flew from LGW to LAS as passengers on September 7. The captain stated that on his days off he went to bed around 1030 and arose around 0630, and none of his activities during the day were strenuous or out of the ordinary. After arriving in LAS on September 7, he recalled taking a walk and joining the RFO around 1800 at a bar for a beer and a burger. He went to bed around 2100 and arose around 0400 local time. He had breakfast and did not sleep again during the day. He rested in his room at the Westin hotel until his van pickup time. He was not sure of the pickup or departure times but thought they were about 1300 and 1430. He had experienced an 8 hour time change in the last 24 hours and did feel "out of phase" with his body clock, but overall he felt alright and it was sunny out, which helped. He was okay but not as good as he could have been.

The captain was asked to discuss preparation for the flight. He stated that normally flight paperwork was obtained in the flight deck, but he had downloaded and reviewed the flight documents to his iPad and had discussed them with his crew in the van on the way to the airport. There was nothing unusual in the flight plan, NOTAMS, or fuel figures. The three pilots discussed salient points, including a possible emergency turn and close-in terrain. The FO had been to LAS a week before and had current knowledge of the area. The captain stated they used runway 7L because it was on the ATIS and ATC cleared them to that runway. He thought there was a slight tailwind but other flights were also using runway 7L. The captain briefed the cabin crew on the van, and the cabin manager also commented. He recalled saying the weather at both ends (departure and arrival) would be okay with some turbulence over the Atlantic, but he did not discuss emergency procedures. He stated cabin crews based at LGW have a cabin service manager and cabin crews based at Heathrow (LHR) have a cabin service director. He had flown with some of the cabin crew before, but not with the cabin manager. He had no concerns about them as this was a senior cabin crew.

The captain stated his general recollection of the accident events was that there was a lot of chaos, shouting and distractions. He had no prior knowledge of the possibility of engine trouble on the accident airplane. He had not had an engine fire previously in his career, and had only had a rejected takeoff (RTO) once, on a narrow body Trident many years before. On that occasion there was an instrument failure. He had never had to conduct an evacuation on an actual flight before.

The captain was asked to discuss his response to the engine fire warning from the time the parking brake was set to the time the engine fire handle was pulled. He stated he noticed the engine 1 EGT indication had turned red, followed by engine fire warning indications. He then called for the checklist. He noticed a grey shadow from over his shoulder and at that time the RFO (P3) asked if he should go back to the cabin. The captain told him yes. He heard nothing from Air Traffic Control (ATC), which surprised him a little. When the RFO returned to the cockpit it was clear to the captain that they had a major incident and an evacuation would be necessary.

Asked if he hesitated for any reason, he stated that at first he thought a tire had burst, so he did not use maximum braking. There were lots of warnings but he placed priority on the red fire warning. The checklist to be done was a memory procedure. Asked who did what, he stated he called for the engine fire procedure and the FO performed the items. While the FO did the actions the captain thought about evacuation and emergency services. Asked if he followed what the FO was doing, he stated he believed he did, and he believed he called out "confirm" with each of the FO's memory steps. Asked if the FO brought up the electronic checklist (ECL) while doing the memory items, he said no. It was his recollection that the FO brought up the ECL to use the timer (for the second fire switch). It was his memory they had a discussion before they fired the second fire switch. Asked who silenced the fire warning bell he stated he didn't remember but he probably did it himself.

The captain was asked to discuss BA procedure. He was asked when you are the PF doing the takeoff and get an engine fire and set the parking brake, at that point who is the PF and who is the PM? He stated he would be the PF and the FO would be the PM. If the situation was reversed and the FO was doing the takeoff and was the PF, the FO would set the brake and call for the checklist. In that situation the captain would then say "I have control" and he would then take the PF role and the FO would take the PM role and perform the checklist items.

During the actual accident, the FO was PM and performed the checklist and the captain said confirm and looked at the timer. However, he could not remember every detail because the RFO came back to the cockpit just before they fired the second engine fire bottle.

Asked who started the APU, the captain stated he thought it was the FO but he did not see him do it. When asked if he heard the hi-lo chime from the cabin, he stated he did not.

The captain was asked to discuss his actions from the time of the evacuation command until the time the number 2 engine was shut down. He stated he could not remember calling for the evacuation checklist or the exact words he used. He missed moving the number 2 engine fuel shutoff switch. He was turned toward the FO and talking with him when the RFO came back into the cockpit. At that point, he went straight to the PA and the evacuation alarm signal.

Asked why he did not pick up the checklist (QRH), he stated there was a huge amount going on. The evacuation checklist was supposed to be a read and do checklist. However, he was thinking about other things and the FO had the checklist out. The captain was happy to let the FO and RFO do the checklist. He was distracted by an aft cargo fire indication, the possibility of a bomb, and concern about what was going on in the back.

Asked if he monitored the FO's actions on the evacuation checklist, he stated no, he was not trained to do that. Given time, he would go back over the checklist to see that all items were done, but circumstances were different and the priority was to get off the airplane.

The captain was shown the evacuation checklist and directed to the word "both" in lower case letters and parentheses on both the Captain and FO sections of the checklist. He stated the evacuation checklist had been a "split checklist" for a very long time at BA and that it had been a memory checklist for a long time until it was changed to a read and do (reference) checklist about five years earlier. He thought it was important to continue to keep the drill memorized due to the possibility of losing the QRH or the presence of smoke. However, he knew he missed an item.

Regarding his method of making the PA, the captain stated he used his radio panel station box and his headset rather than pick up the handset.

Asked if he observed the FO operating the outflow valves (OFV), he stated he did not. His first steps were directed to items located down near his knee. Asked if the OFV's were normally open on the ground, he thought they were partially open, but they were not pressurized on the ground. He stated their way of remembering to open the OFV's was "to poke them in the eyes," meaning to use two fingers to press the OFV selectors, and then raise both toggle switches. However, he never saw the FO's hand near the pressurization panel.

The captain was asked to discuss his actions regarding the forward cargo bay fire warning. He stated he was the one who first noticed the cargo fire warning. He did not recall hearing a fire bell for the cargo fire. At the time he noticed the cargo fire warning several other things were going on. The captain and the FO were focused at that time on whether to fire the second engine fire bottle, because the engine fire light went out temporarily after they fired the first bottle. The FO had the QRH checklist out and they were also talking about whether they needed to evacuate. They were not committed to evacuate for sure until the RFO returned to the cockpit and said the situation was dire. While the captain was thinking about the cargo fire warning, he saw the other two pilots had donned their fluorescent jackets and were getting ready to exit the cockpit.

The captain recalled arming the cargo fire switch but was not certain if he discharged the fire bottles. When told 3 of the 5 bottles were found discharged, he said he may have fired them but he didn't remember doing so. He would be pleased if that were the case.

The captain was told the right engine fire handle was found in the down position and he was asked if anyone pulled the fire handle. He stated he did not touch it. The captain was

asked if he knew who turned off the APU; he stated he was not aware of the APU at all. He did not know it was started or if it was turned off. He was looking at the EICAS and so much was going on.

The captain was asked to summarize his thoughts as to why the right engine continued to run 44 seconds after the evacuation command. He stated he just missed it.

The captain stated he did not use the paper QRH at any time during the accident but during practice in the simulator he would normally pull it out and use it. He was influenced by the other two pilots and distracted by the cargo fire. He could not recall doing an evacuation drill in the simulator in the last three years, and the last time he did it in training it was from memory.

The captain did not recall receiving any calls from the cabin.

Asked if there was any difference in the way BA expected crews to call for a memory checklist versus a reference checklist, he said there was no difference. He would call Fire Engine Left checklist and they would go to memory items straightaway. Once they fired the first bottle they would use the ECL for the timer. Asked if the engine fire checklist was accomplished in a timely fashion, he said yes, but there were distractions. The fire light went out after the second shot, and that never happens in simulator and there is no procedure for that. Asked if the fire light going out delayed the evacuation decision, he stated they were discussing the evacuation at that time, so it may have affected them. He described the fire light going out temporarily and the RFO returning to the cockpit as a "double whammy." The cargo fire light was distracting as he was trying to imagine what was happening without seeing it.

The captain stated he did not ask but was surprised that ATC (the tower) did not see the fire and tell them. He did the evacuation checklist from memory but there were many distractions. Asked if the BA terms P1 and P2 were confusing, he stated he did find them confusing but not during the accident. P1 was PF so it was okay.

The captain stated he did not recall the evacuation alarm sounding continuously. He thought he silenced it.

The captain was asked if he recalled the autothrottle (AT) disarm on the rejected takeoff (RTO). He stated he meant to press it but did not hit it hard enough. Asked why BA expected the FO to apply reverse thrust on an RTO, he stated he thought it was not a good idea, but was a hangover from BOAC. On the "jumbo," (B747) the PF did his own reverse, which was a better idea.

Asked for any final comments, the captain stated there was just a lot going on in a short time and you couldn't build all these distraction into a simulator scenario.