NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

January 3, 2018

Attachment 1 – Flight Crew Interview Summaries

OPERATIONAL FACTORS/HUMAN PERFORMANCE

DCA17IA148

Interviewee: Dimitrios Kisses
Date: July 14, 2017
Time: 1301 EDT[1]

Via Teleconference: Captain Shawn Etcher, Dr. Sathya Silva – NTSB; Captain Robert Hendrickson, Christy Helgeson – Federal Aviation Administration (FAA); Ms. Beverley Harvey, Dr. Missy Rudin-Brown - Transportation Safety Board of Canada (TSBC); Captain Kisses – Event Captain; Mr. Marc Delorme – Attorney of Law, Air Canada Pilots Association (ACPA)

Captain Kisses was represented by Mr. Marc Delorme – Attorney, Director of Labor Relations – Air Canada Pilots Association (ACPA)

During the interview, Captain Kisses stated the following:

He was 55 years old.

He was an Airbus A-320 captain based in Toronto, Canada. His date of hire was February 15, 1988 and was the airline he had been employed by was merged with Air Canada in 2000.

He was an A-320 qualified captain, with an instrument flight rules (IFR) certificate. He was IFR current and had a current proficiency check on the A320 at the time of the event. He had a current and valid Class 1 medical certificate. He was type rated in the B-737, DC10[2], EMB120, ATR42, BA3100, and the Twin Otter.

He estimated his total flight experience as 20,000 hours or more, he had approximately 4,500-5,000 hours of flight experience in the A-320. He had flown for 4 years as a first officer in the A-320 and has approximately 3,000 hours of flight experience in left seat of the A-320. He estimated he had about 8,500 hours of flight experience since being employed with Air Canada, after the merger in 2000. He upgraded to the left seat on the A-320 in 2007. He medical certificate, issued in December 2016, did have a limitation that glasses must be worn. He further stated that he was wearing them at the time of the event.

His most recent line check flight was in April 2017 and his most recent simulator training was in February 2017. He had not failed any checkrides, had any unsatisfactory line checks, nor had any accidents or incidents during his flying career.

He was the pilot flying at the time of the incident.

He started flying for Bradley Air Services operating the Twin Otter aircraft in the Canadian artic. After which he was hired by Ontario Express to fly in the right seat of the BA-3100. He subsequently transitioned to the left seat in the BA-3100, then flew from the left seat on the EMB-120 Brasilia. After that he flew as a captain on the ATR-42. At that time, the airline had an

[1] Eastern Daylight Time
[2] According to pilot certificate information provided by the Transportation Safety Board of Canada this included a limitation of Second-in-Command only.

agreement to allow pilots to flow through to Canadian Airlines where he flew as the second officer on the DC-10, and was based in Vancouver. He then flew as first officer on the B-737 for Canadian Airlines, which subsequently merged with Air Canada. Following the merger, he flew in the right seat of B-737, then the right seat of A-320, and then transitioned to the left seat on the A-320.

He had never been terminated or asked to resign from any of his previous employers.

When asked to describe his chain of command at Air Canada he stated that he reports to the Chief Pilots LaBelle, and the Assistant Chief Pilot Hughes.

He stated that there were about 3,400 pilots and different types of aircraft at Air Canada. The pilots are based on a seniority system. He could not recall how many days he normally was off duty but he stated that he had about 11 days off in June 2017. He further stated that he bids reserve to accommodate his life style and that there were several other pilots that did the same.

He described reserve duty at Air Canada as being based on seniority. The company schedulers will call a reserve pilot and offer the flying schedule or trip. Depending on seniority a reserve pilot could pass or accept the assignment. The normal reserve window at Air Canada was from 0500 to 2100 EDT. The event flight was assigned and notification was given following his required crew rest, which ended at 1113 EDT, on the day of the incident flight. For a reserve pilot, the company minimum callout window was at least 2 hours prior to a report time. For the incident flight, the report time was at 1940 EDT, 1 hour and 15 minutes prior to the original departure time of 2055 EDT, the actual departure time was at 2125 EDT. The incident flight had departed about 30 minutes behind schedule. Although he was unsure the reason for the delay he did provide that it was not a flight operation's issue.

When asked to describe how a pilot could communicate a concern to management at Air Canada, he stated that there a couple of ways to communicate any concerns. If it was an immediate concern, he could bring it to the person involved and then write it up in a report and send it to the company. If not, an immediate concern he would advise dispatch.

When asked if he communicated with dispatch prior to, during, or after the incident flight, he stated that he sent their dispatch ride reports while enroute. He also notified dispatch of their go-around.

When asked when he reported the go-around to their dispatch he stated that he reported it the next day after he woke up. He further stated that they are only required to report events "sooner than later" but there was no specific time frame. He did not report it until the next day because he was very tired and it was very late. He reported to the company that they had done a go-around and that he was filing an Air Safety Report (ASR). The dispatch asked the reason for the go-around and he relayed the reason.

When asked if Air Canada has any SMS[3], he replied that they have the ASR, which was installed on their company iPads, via the AQD[4] program. The report was a few pages in length with an area for a narrative of the event. He further stated that filling out an ASR was never punitive.

[3] Safety Management System

[4] Aviation Quality Database

When asked to describe the event he stated that he met with the first officer at the gate. They had discussed the flight and went through the flight plan. During the discussion, they identified issues that might be of importance for them during the flight. While at the gate, waiting for their airplane to arrive, he briefed the flight attendants and then again after he reviewed the airplane maintenance logbook to ensure there were no technical issues. They began passenger boarding and departed about 30 minutes late, which the delay was not a flight operations issue but was not sure what the reason was for the delay. The push back from the gate, taxi out, and departure were normal. There was a "little weather" around Toronto and Michigan and then the flight was uneventful, until about midpoint. At the midpoint, there were thunderstorms they had to navigate through. Once they had navigated through the weather, they then proceeded to San Francisco[5]. As the approached San Francisco, they were cleared by air traffic control to descend via the Diamond 3 arrival; however, he could not recall the initial altitude they were assigned but thought it was flight level 270[6]. There was "quite a bit" of traffic in the airspace and the controller had vectored them off the arrival and assigned them speed reductions. Their airspeed was reduced to point that he had to extend the flaps to the flaps 1 setting. The flight was given vectors, which included a right turn, then a left turn. He anticipated being placed back on the arrival; however, the controller vectored them instead. The controller then descended the flight and subsequently cleared the flight for FMS[7] Bridge Visual to runway 28R. They complied with the clearance as well as with the altitudes per the assigned approach. He then commanded the first officer to "clean up" the flight plan, by removing the waypoints that were associated with the Diamond3 arrival. Prior to the descent, they briefed the anticipated approach plate and looked at the details in order to discuss any threats with the approach, as required in their SOP[8]. Some of the threats they discussed was that it was getting late and that they would "keep an eye on each other." He classified the briefing as per Air Canada's SOP. Following the briefing was when they were cleared to descend via the Diamond arrival. Once they joined the bridge visual approach, everything was "normal" and that nothing was "out of the ordinary." The beginning of the approach was coupled with the autopilot engaged. The controller asked to confirm that they had the traffic in front of them and the bridges in sight. The first officer asked him [the captain] if he had, which he confirmed, and the first officer informed the controller. The controller cleared the flight for the visual FMS to 28R. He reported that the flight crossed all the fixes that were charted at the correct altitude. He further stated that at the waypoint labeled as "F101D" he was required to cross it at or above 1,200 feet, which they did. He had disconnected the autopilot just prior to that point; however, the auto thrust remained on. The aircraft was configured for landing prior to that waypoint and he had transitioned to flying visually. While on the approach, he was looking out the aircraft window and he could see runway lights, which he had perceived to be runway lights for runway 28L. He further stated that he thought it was "strange," as he recalled that the runway was to be closed. However, he thought that runway 28L was open. He further stated that what was actually runway 28R he thought was runway 28L, and that what was actually the taxiway he thought was runway 28R. He had been to SFO "lots of times" but not that much recently. On previous flights, he recalled seeing both runways illuminated. He then asked the first officer to confirm that the runway was clear and that no traffic was on their

[5] San Francisco International Airport (KSFO)

[6] Flight Level 270 was 27,000 feet above mean sea level based on a barometric altimeter setting of 29.92 inches of mercury.

[7] Flight Management System

[8] Standard Operating Procedures

runway, as he had noticed, at the far end of what he thought was runway 28R was a "small" light. The first officer queried the controller if the runway was clear, to which the controller stated that they were the only ones on it and cleared to land. As the flight continued he felt that "things were not adding up" and that it "did not look good." He recalled that the airport was quite dark, it was a dark night, and that there was "a lot" of chatter on the radio frequency. He could hear the controller talking on what he perceived as the ground frequency also. As they approached the runway, something "still felt odd" and he elected to go-around. He simultaneously began a go-around when the first officer told him to go around. A few seconds later, the controller also ordered them to go-around, which they already were in the process of doing. The flight was then handed off to the approach control frequency and was vectored back around and subsequently landed on runway 28R uneventfully. After landing he requested that his first officer ask for a phone number of the control tower, so he could report to the controller that they were filing an ASR.

When asked to describe the thunderstorm activity they encountered while enroute, he stated that there was quite a bit of weather. He further described the weather as a line with severe thunderstorms extending up to 40,000 feet or more. He further described it as an unprecedented amount of lighting. They identified an area on the weather radar that they could navigate through otherwise they had to go south "down to Texas" to get around the weather. The area was about 12 miles wide and he classified it as stressful navigating through the weather. He had ordered the cabin crew to be seated prior to entering the weather. However, prior to penetrating the weather, they were notified, via another aircraft ahead of them, that there was light chop only. They were aware of the lighting as well as the other weather type threats that he had to keep aware of while navigating around the weather. The flight was through the line of weather in about 15 minutes; however, once they exited the line they noted another very active cell off their left, that they were able to circumnavigate.

When asked how they mitigated any threats discussed at the top of descent he stated that it was done by talking about the threats with each other in order that they both would be alert about the threats.

When asked to describe the threats they discussed when briefing the approach, he stated that they discussed the potential for birds on the approach, that it was a night landing and that perception was different, traffic, and the busy airspace they were to be operating in.

The first officer obtained the ATIS[9] prior to the approach briefing. He obtained it via the airplane's ACARS[10]. The first officer had it printed out so they both could look at the information. He could not remember if he saw the runway 28L closure on their ATIS printout. He did see that it was going to be closed on their paperwork they obtained prior to their departure; however, he could not recall if they discussed it during the approach briefing.

When asked how he conducted the approach briefing he stated the following: "It is an FMS bridge visual to runway 28R the approach plate is 19-3-1 and was effective 10 November. The final approach course is 284 need 2100 feet [ceiling] and five miles [visibility]. The decision altitude will be at 513 feet on baro[metric] altimeter. The missed approach will be as published or as

[9] Automatic Terminal Information System

[10] Aircraft Communication Addressing and Reporting System

directed by ATC[11]. It will be a flap full, autobrakes off approach. Thrust reverse will be as required." He further stated that they would also brief exit points from the runway.

When asked if SOP guidance required the localizer to be used as a backup to the FMS, he stated that it was recommended to back up the FMS with the localizer. After they were taken off the STAR[12], vectored, and then placed back on the FMS bridge visual, they missed putting the localizer in as a backup. The frequency was not tuned on the first approach but was used on the second approach. Both pilots were to have the localizer frequency dialed in and the course up.

He could see the runway environment, prior to the bridges and having been there prior there were certain cues that it was an airport, such as runway and terminal lights. He could see the terminal lights and the surrounding body of water. The runway environment could be seen when they were just prior to the bridges. He did not observe the "rabbits"[13] but he could see the lead in lights for what he thought was runway 28L and white lights for what he thought was runway 28R. He thought that the runway 28R lights were dimmer and that the lights, for what he thought was 28L, were bright but he would have liked the lights to be a little bit brighter, for fatigue, as it was 0300 body clock time.

When asked if noticed anything left of what he perceived as runway 28L, he stated that nothing to the left drew his attention. He further clarified that he did not see an "X" on the airport environment and that since it was at night he felt that depth perception was not very accurate.

When asked what altitude or distant from the perceived threshold he was when he initiated a go-around, he stated that he felt that he was about 400 feet above ground level and about one-half mile from what he thought was runway 28R.

When asked what made him decide to perform a go-around he stated that he felt things were not "adding up" and determined that they needed to go-around. He perceived that he initiated the go-around at least 400 feet and at least a half mile prior to the runway.

When asked if the airplane landing lights had illuminated anything in front of them as they approached the airport, he stated that he could not recall if the aircraft lights were illuminating anything.

He further stated that at the same time he was doing the action at the beginning of the go-around the first officer said, "go around go around." Normally, the call for a go-around was a single call of "go around."

During a go-around, he transitioned from looking outside to looking inside at the instruments and would focus on flying the procedures. He further stated that the water and runway environment were "very dark."

[11] Air Traffic Control
[12] Standard Terminal Arrival Route
[13] Aviation vernacular for the sequencing flashing lights

When asked to describe the procedures that he used during the go-around he stated that he would apply TOGA[14] thrust, rotate to the go-around attitude depicted by the flight director, call for go-around flaps to be set. When the pilot monitoring would call positive rate, he would command that the landing gear was to be retracted, they would fly the airplane up to the altitude as briefed or issued by ATC, and they would notify ATC that they had gone around. Although he could not recall definitively but he thought the controller had gave them a certain heading and 3,000 feet for the altitude. He was not sure what pitch attitude was commanded by the flight director but their procedures say that they are to "immediately pitch" to that attitude.

When asked if there was any force felt by them during the go-around he stated that by adding power and pitching the airplane up there was some sort of force they could feel. He further stated that a go-around was an aggressive maneuver but he felt it did not exert excessive G forces.

There was no discussion between him and the first officer following the go-around. He further stated that they "were doing a job." He recalled the approach controller asking what was the nature of the go-around. He informed the first officer to reply that they were not lined up with the runway.

The vector for the second approach did not take long, but they discussed the approach on the downwind. At which time he stated to the first officer "let's tune the ILS[15]" for the second approach. The first officer asked, "would you like the localizer up." He was going to ask for that anyway.

When asked his reason to go-around, he stated that they realized they "were not where they wanted to be." As he conducted the go-around he realized that there were lined up with the wrong pavement. He further stated that he did not see any traffic on the first approach.

He classified the second approach and landing as normal.

When asked if he and the first officer discussed the go-around after they landed, he stated that they had a short discussion but he could not recall for sure what was said. Once they parked at the gate they shut down the airplane and maintenance came to the flight deck to ask how the airplane was. He further stated that he went to the back to say good-bye to the passengers and did not observe any that appeared to be distressed. He then contacted the air traffic controller tower to inform them that he was going to be filing a safety report.

When asked to describe his wake and sleep schedule for the previous three days he stated that on Tuesday night he thought he went to bed about 0030-0100 EDT. On Wednesday, he awoke about 0700-0800 EDT and then went to sleep about midnight on Wednesday night. Thursday, the day prior to the event, he awoke about 0800 EDT and went on duty between 1600-1700 EDT. On Thursday night, he went off duty at 2313 EDT which was following a trip from LaGuardia Airport. He estimated that he fell asleep between 0200 and 0300 EDT. He has children in the house and was awakened at 0745 EDT the day of the event. About 1120 EDT crew scheduling had assigned him the event flight. He remained awake until Saturday at 0500 EDT, when he got to his room in

[14] Takeoff Go-Around

[15] Instrument Landing System

San Francisco. On Saturday, he awoke between 0845 and 0900 PDT[16], after being awakned by a hotel guest in the room next to his. He was awake until 1000. He was then napping between 1000 and 1115 PDT. At 1400 PDT went on duty to fly flight 750 back to Toronto which departed at 1649 PDT. He went off duty Sunday morning following their arrival of 0035 EDT.

He clarified that Wednesday was a day off and Thursday he was on duty and flew to LaGuardia.

He felt that he normally obtains between 6 and 7 hours of rest and he feels rested following that amount of sleep. He did not consider himself a morning nor a late evening person.

He consistently goes to bed after midnight but when travelling he felt it was "hard to get into a natural rhythm." He typically had a hard time winding down and falling asleep immediately after flights.

In the three nights prior to the event he classified his sleep quality as "fairly rested." He felt the LaGuardia trip threw off his sleep cycle "a little bit Since they arrived so late." Prior to the event flight, he considered himself rested. He started feeling the fatigue about midpoint on the flight around the time they encountered the area of thunderstorm activity that they penetrated.

He does not have any history of sleep disorders. There have been no changes to his health, financial situation, nor personal life within in the preceding year.

He considered his health as "pretty good;" however, he does not exercise as much as he would like to.

He has not had any color vision issues.

During his examination for his most recent medical certificate, his hearing was "pretty good" and there were "no issues."

He was not on any prescription medications.

He did drink alcohol occasionally and stated that the last time he consumed an alcoholic beverage was on Monday but he could not recall for certain. He does not smoke tobacco nor does he use illicit drugs.

He further clarified that he does not take any prescribed or over the counter medication and did not take anything in the 72 hours preceding the event flight

When asked to describe his workload, he stated that, consistent with a typical flight, the workload was "pretty intense" from the gate up to cruise. During, cruise flight he felt it was "quieter;" however, if there was weather enroute the workload increased. As a flight gets closer to the destination the briefings are done and the workload would then increase. Once established, the approach was "always busy" and the night of the event there was "quite a bit of chatter on the

[16] Pacific Daylight Time

radio." There was also higher workload during the event flight when they were navigating through the weather.

They had no maintenance items with the airplane, prior to and during the flight, and he stated that the airplane was "clean."

Being on reserve his schedule was not consistent. During the preceding four months, he estimated that he had flown into SFO once or twice.

When asked if he had encountered runway closures during his flying career, he stated that he had been flying for about 30 years and that this was not the first runway closure he had encountered. However, he could not recall seeing "runway 28L dark, ever."

He saw the approach lights on what he thought was runway 28L the lead in lights, as well as the general runway lights.

After they queried the controller about traffic on the runway with what he thought was runway 28R, he though he saw something at the very end of the runway. However, he further clarified that he observed no traffic on the beginning of what he thought was runway 28R.

During their first approach to the airport they were following traffic that was on final; however, he "lost the traffic" in front of him as he transitioned to the visual approach. He felt that the traffic that they were following was not significant. When the traffic was what he felt was on short final, he lost visual on it, which he thought was because the traffic they were following had landed.

When asked to describe what he looks at during a visual approach, he stated that when conducting a visual approach, he will be looking at the approach lights, other traffic, the runway environment, and will not be looking at his instruments.

When asked to describe what navigation system the A-320 had, he stated that the incident airplane was equipped with an artificial horizon and navaids. He restated that they had not tuned in the ILS on the first approach. The airplane was also equipped with a moving map display but "it is not very accurate" in terms of position accuracy. The display was visible during the visual approach. He always referenced the display but he classified it as "not a radar accurate picture." He disengaged the autopilot, when the flight was on an approximate 4-mile final. Their procedure was to turn the flight directors off when they transition to a visual. In order to turn off the flight directors there was a push button. He stated that a pilot could turn off the flight directors when the autopilot was disengaged or later. On the event flight, he could not recall when he turned off his flight director.

He classified the noise, in the airplane, as nothing more than "normal" and there were no difficulty hearing radio communications.

He loved working for Air Canada and felt it was a good company to work for as it is a major airline in Canada. He has not felt any pressure to fly from the company nor had he felt any personal pressure to fly this flight.

He classified his mood during the flight, as "ok" and he thought he was starting to get tired. He also classified the first officer as being a "very easy-going guy and in a fairly good mood." He had never flown with the first officer prior to the incident flight.

The first officer performed the procedures per the company SOP and as the company expected them to operate.

During training the go-around training was conducted in the simulator and was part of the training program. He could not recall how often it was taught but thought that they were not provided go-around refresher training every 8 months; however, the training they receive was mandated by Transport Canada. Some of the go-around scenarios he was aware of have been when ATC command the go-around, the pilot not feeling comfortable with what they see, something on the runway, a technical issue on the runway, as well as others he has heard of.

He has done go-arounds in the airplane in the past but it was not done often. He estimated that his most recent go-around was over 10 years prior incident flight when he was a first officer.

He did receive training in CRM[17] and he felt that it was a "very good program at Air Canada." CRM training did not include any simulator training but it was taught in the classroom with an instructor and it was mostly lectures with some scenarios. He felt that the CRM during the event was "good" between him and the first officer and they worked well together.

He could not recall what his Vref[18] speed was for the event flight, nor what their weight was.

He was not given a drug or alcohol screening following the event.

When asked if there was anyone else in the flight deck other than him and the first officer, he stated there was not. There was no one in the cockpit jumpseat during the incident flight.

When asked who can initiate a go-around, he stated that it could be initiated by either crew member and that it does not have to be initiated by the flying pilot.

When asked when they had discussed the potential go-around, he stated he thought that it had been discussed as part of the approach briefing as that was when they normally discussed a go-around.

He stated that the company recommended using the automation as much as possible. He further clarified that he had kept the auto thrust engaged and only disengaged the autopilot about 4 miles from the runway. He further provided that when the airplane began the climbout during the go-around he engaged the autopilot, which he estimated was about 1,500 to 1,700 feet above the ground.

[17] Crew Resource Management
[18] Approach speed

When asked how they command the engines to power up during the beginning of the go-around, he stated that they pushed the thrust levers full forward and it will flash if the auto-throttles want something different. The pilot flying was the one that was to push the thrust levers forward.

When asked what occurred when he completed his duty the night before, he stated that he completed his duty at 2313 EDT, which was when he released and that time was based on 15 minutes after the flight blocked in at the gate. After which, he cleared customs, took the train to the parking lot, got to his vehicle, and then drove home. Pilots were allowed 12 hours of rest at their home base airport.

The airplane was equipped with autobrake, thrust reversers, TCAS[19], and weather radar. The incident airplane did not have GPS installed. On their navigation display they always display the TCAS and on the night of the incident the weather radar was only painting the ground, as there was no weather in the San Francisco area.

He resided and was based in Toronto. He needed eyeglasses for reading and the eyeglasses he had were bi-focal lenses which he used primarily for reading. He further provided that he did need his eyeglasses for reading but that it was not difficult to transition from looking at something close up and then looking at something in the distance.

When asked if they talked about anything during cruise flight, he stated that the had normal conversations like "do you have family." Pilots do talk to each other during cruise. The only unusual event on the incident flight was the weather they had went through.

When asked to clarify who deselected the flight directors after the autopilot was disengaged, he stated that they both deselect their respective flight director with the button on the glareshield.

When asked if they had received any audible alerts during the approach or landing, he stated that they only and the autopilot disconnect aural alert.

When asked if there had been any changes to their procedures prior to the incident flight, he stated that the company does amend the SOP occasionally. The operator had recently transitioned to company issued iPads and they have a section called "documents." When a pilot checks in they are required to read those documents, which included the recent changes to the SOP. He further provided that he likes technology and he liked the iPad as items on the screen could be shown in a larger format which made it easier to see, especially when he would zoom in on a document.

When asked how he verified that they were landing on the correct runway, he stated the he assessed all the visual cues include the approach lights and backed that up with the navaids.

He classified the lighting at the different airports as some being more lit up than others. The airplane's landing lights are positioned in the what he felt was the right place and that they illuminate far enough for him to see what he needs to.

[19] Traffic Collision Avoidance System

When asked if he had ever lined up for the wrong runway or a taxiway in the past, he stated he never had.

When asked if there was something he would provide to other crewmembers if they encountered similar conditions as the incident flight, he stated that he would suggest the crew should initiate a go-around much earlier and back up the approach with the navigational aid. They did not back up the visual approach on the incident flight due to all the distraction and they had gotten busy.

He would like to suggest to the company to put a memo out, reiterating the procedures, as it could happen to anyone. Possibly even implementing a training session in their simulator to have the pilots do a similar approach including conducting a go-around to emphasize the importance of the procedures to the pilots. He would reinforce that if they "don't like what they see" to go-around. He felt that Air Canada has procedures in place and that those procedures were followed.
The interview concluded at 1515 EDT

Interviewee: Matthew Dampier
Date: July 14, 2017
Time: 1309 EDT

Via Teleconference: Captain Shawn Etcher, Dr. Sathya Silva – NTSB; Captain Robert Hendrickson, Christy Helgeson – Federal Aviation Administration (FAA); Ms. Beverley Harvey, Dr. Missy Rudin-Brown - Transportation Safety Board of Canada (TSBC); Marcel Comeau – Air Canada Airlines – Technical Advisor to the TSBC; First Officer Dampier – Event First Officer; Mr. Gord Heieis – Accident Incident Investigator for the Air Canada Pilots Association (ACPA)

First officer Dampier was represented by Mr. Gord Heieis Accident/Incident Investigator for the Air Canada Pilots Association (ACPA)

During the interview, First Officer Dampier stated the following:

He was 42 years old.

He was a first officer on the Airbus A320. His date of hire with Air Canada was 3 December 2007 or 4 December 2007.

He was a line pilot for Air Canada and he was based out of Toronto.

He had an Airline Transport Pilot certificate with type ratings in the Airbus A-320, EMB190, and Beech 1900. He flew the A-320 and EMB-190 when he was at Air Canada. He had been flying the A-320 for about 4 years.

He had about 10,000 hours of total flight experience and 2,500 of those hours were in the A-320 aircraft. All of the A-320 hours were as a first officer. He had never been a captain at Air Canada.

His most recent simulator and line check occurred at the end of April 2017.

He had recently failed his upgrade training to captain in the A-320 when he failed his final command line check which occurred at the end of March. When asked what he felt was the reason for the failure, he stated there were lots of "little things" and he was making "lots of stupid little mistakes." He stated that the upgrade was "bad timing" as he had things going on at home at the time.

He has never been involved in an accident or incident, nor had he ever been terminated or asked to leave any of his previous employers.

He started his flight training in the United Kingdom when he was 21 years old. He obtained his private pilot license in the United Kingdom. However, there was a lot of rain and it was expensive learning to fly in the United Kingdom so he found a flight school in Canada where he completed the rest of his pilot ratings. He became a flight instructor at a local flight school where he trained and was an instructor for about 3 ½ years on and off. Halfway through his flight instructing, he returned to the United Kingdom where he attempted to convert his Canadian pilot certificates to JARs[20] but that became too expensive to convert. He then returned to Canada, where he continued as a flight instructor and then flew parachute jumpers in a Cessna 206. He was hired in 2003 at Air Georgia flying the caravan airplane out of Toronto, then the Cheyenne II airplane, left seat on the Beech 1900D, and then the right seat. He was also a training captain at Air Georgia. He was subsequently hired by Air Canada where he flew the EMB190 for about 5 years, then in 2012 he transitioned to the A-320.

He further stated that the day of the event started out "normally." He downloaded the flight plan at home on his work iPad prior to leaving for the airport. He had done a scan through the first few pages of the flight plan to verify that there wasn't any complicated MEL[21]s or a big delay. They have a WSI[22] app on the iPad, which he loaded the incident flight's route on it. He also loaded the route in his Jeppesen manual which was also on the iPad, and included loading the approach plates he would need for the pairing. He got a call from dispatch as he was arriving at the airport, which they stated that their flight release had been amended and was now "release 2." They called him because they saw that someone had downloaded the release 1 – which he had. He recalled that the release was amended to version 2 due to an increase in the zero-fuel weight. He then proceeded to, and cleared United States customs, and went to the flight planning room. Air Canada was going through a transition from paper to paperless flight releases. As a first officer, he knows that some captains want the full printout and some do not. He normally just printed off the flight planning section without NOTAMs[23] or weather as all that information was provided to the crew electronically on the iPad. He used to go through the release and circle and highlight items he thought were important; however, on the iPad they were unable to circle or highlight those items. He began to fill out the information sheet that the captain provided to the flight attendants. That sheet included items such as weather and time enroute. He then proceeded to the gate where he met the captain. They discussed the flight plan and met the flight attendants in the boarding area. The inbound flight was late because there was a lot of weather around Toronto, so their flight was delayed. Once all the inbound passengers exited the airplane, they went onboard and everything

[20] Joint Aviation Requirement
[21] Minimum Equipment List
[22] The Weather Company
[23] Notice to Airmen

went "normal" per their SOPs. They pushed back about 35 minutes late. He recalled a little remaining weather around Toronto when they departed and they also encountered some weather around the Midwest, which was about halfway along their route of flight. The weather was a big line of thunderstorms and some of the thunderstorms appeared to be embedded. They saw a large hole in the line of weather, on their weather radar, that they could navigate their way through. It was difficult to determine how far north and south the line went. As they headed through the area, the hole was about 30 miles wide and started closing up as they penetrated the line. The tops were about 41,000 feet or higher.

At the top of descent, they checked the weather but he did not remember anything "unusual" and everything went according to their SOP. As pilot monitoring he was responsible to load the arrival and approach when the pilot flying wants. Once everything was loaded the captain conducted a briefing which included the DYMND 3 arrival, FMS BRIDGE VISUAL approach, and where they planned to exit the runway. They have a threat briefing card on the back of their "QRH Normal." Some of the threats for the incident flight were mountainous terrain, it was nighttime, and their alertness. They both were starting to feel very tired as it was about 0230 to 0300 EDT. The began the pre-descent checklist, and air traffic control (ATC) then cleared them to descend on the DYMND 3 arrival; however, he could not recall if they were told to expect the FMS Bridge approach at that time. They were vectored off the arrival by the controller, who informed them that it was for spacing. They made a right turn to about a 300-degree heading, then did a 180 degree turn and came back. They visually acquired the preceding flight. The captain asked for "flaps 1" to which the first officer complied. The controller subsequently asked if they had the traffic and the field insight. The captain told the first officer that he did to which the first officer informed the controller, and they were cleared for the visual approach. Up until the F101D waypoint everything was "normal." During the approach, as the pilot monitoring, he was looking outside and inside the cockpit. They were approaching SFO at an angle per the visual approach. The captain disconnected the autopilot and hand flew the approach, beginning to bank the aircraft to lineup on final approach. When the pilot flying would hand fly the approach the pilot monitoring's workload increased. As they got close to F101D waypoint he recalled that it was a busy time on the approach. He had been in there the night prior but it was not as busy as the incident night. As they descended he wanted to verify that they were at or above 1,200 feet at F101D, he set the missed approach altitude after passing that waypoint, which was 3,000 feet. They have a stable call at 1,000 feet (above ground level). He looked inside to verify they were in the landing configuration, which he thought they were at the full landing configuration but could not recall for certain. He checked to verify the flight was in a stabilized approach profile by scanning the PFD[24] and looking at rate of descent and altitude. He could not recall when they were cleared to land but everything "felt busy." He also felt that there was "a lot of chatter" on the frequency. As pilot monitoring he must make sure they were stable at "100 above" which was 613 feet above mean sea level, on the incident approach. He further stated that there was "a lot" going on. The captain asked for the heading bug to be set for the missed approach, as was their SOP. At some point but could not recall when, the captain asked if he could confirm the runway was clear, he looked up and he expected to see the runway; however, when he looked up he could not understand what he was looking at. He further provided that he could not process what he was looking at. He contacted tower and asked for confirmation on the landing clearance and that they runway was clear. He clarified that what didn't seem right was that there appeared to be a line of stationary lights. The controller confirmed cleared

[24] Primary Flight Display

to land but felt it was "glossed over." He felt something was not right and he stated, "go around go around." The captain selected TOGA power. They went around, began to clean the airplane up, ATC then issued the go around command and told them to climb to 3,000 feet, and he replied to the controller that they were going around. They made a left turn out and the captain made a PA[25] to the cabin. On the vector for the second approach he asked the captain if they should set the ILS[26] frequency. On the second approach, they landed uneventfully and when he switched to ground it was the same guy on ground as tower, they taxied to the gate. He remembered being surprised it was the same person on tower and ground. Once they completed the parking checklist, he contacted ground and asked for a phone number. They did the termination checklist. Normally one of the pilots would say goodbye to the passengers, neither one of them did. The captain, called the tower and also briefed the lead flight attendant; however, he could not recall when that all occurred. He and the captain did talk about the event as they walked away from the aircraft.

When asked for clarification on the flight plan he had download while still at home; he stated that he looked at the flight plan which was comprised of three parts: the flight plan, weather, and NOTAMs. He only looked at the first few pages of the flight plan to see if there were any MEL's[27], time enroute, estimated load, and fuel, which he classified as basic items. He looked at the weather when he loads the route into the iPad but normally they look at the weather and NOTAMs as a crew when they meet up at work. When they had a physical flight plan they could mark things to note but cannot when the flight plan was on the iPad.

He just had a quick look through on the WSI app which he observed weather in the Toronto area and enroute. The weather in the Toronto area made him think there could be a possible delay.

He printed the first five pages or so of the flight plan, in the flight planning room, as Air Canada was going paperless.

When asked what he looked at on the flight plan he stated, that he conducted a quick scan through the weather and NOTAMs. When he met the captain, they discussed that as well but he could not recall the details of that briefing. He could not recall if he had noticed the NOTAM for runway closures at San Francisco.

He met the captain at the departure gate. As a crew, they used to always meet in the flight planning room on the Canadian side; however, things have changed a little and they are to meet at the other side of customs.

It was the first time he flew with the incident captain.

The briefing normally included discussion of the flight plan and they would circle things that "pop up" and anything unusual. The flight was going to be heavy and it was the reason for release number 2. They would normally discuss NOTAMs of note. If weather was going to be a factor they would also discuss that.

[25] Public Address
[26] Instrument Landing System
[27] Minimum Equipment List

He could not recall if they discussed the NOTAMs but it's part of the Air Canada SOPs so he would think they would have.

There was always a little pressure to get out on time; however, for the incident flight he did not feel rushed.

Everything was normal from push back, taxi out through cruise. The weather in the Midwest was stressful as they could not see a way around it. It was violent as there was a lot of lightning. They had everyone remain seated and belted. It was mostly light turbulence that they encountered with an occasional jolt of moderate turbulence. He could see that the hole they were going through to cross the line of weather was closing in as they transitioned through it. He could not recall how narrow the hole got. They were both starting to feel tired after they went through the weather. He may have even said he was looking forward to getting to the hotel.

When asked to describe the work he had to do as pilot monitoring he stated, that as pilot monitoring when they get closer to the destination he would obtain the destination weather and alternate weather. For the incident flight, the weather was "good." About every 90 minutes, he would check the fuel and conduct a navigation accuracy check, as the incident airplane was not equipped with a GPS. He would then step through the system pages of the airplane to make sure everything looked normal.

The pilot flying will ask for the arrival and approach procedures to be loaded into the airplane navigation computer. Once that was complete, the pilot flying would then begin the brief.

When asked to describe how he would check the destination or enroute weather, he stated that he would type in the station identifier on the weather page in the ACARS and then select "other," putting in the flight would reveal airports along the route of flight. As they get closer to their destination, they will look at the weather forecast. Prior to top of descent, they will obtain the destination ATIS. ATIS was obtained via the ACARS, he will select ATIS and type in the identification for the airport, press send, and it will print off the information. If anything was "unusual" he will put it in on the console for the captain to read it and then discussed with the captain.

He could not recall if there was anything unusual. Normally they get NOTAMs from the flight plan and during the briefing they will brief the NOTAM. However, he could not recall the details on the incident flight, but he thought everything was according to the SOP.

When asked what the ACARS printed off when it came to ATIS information, he stated that it just printed the weather only.

He loaded the arrival and approach and the pilot flying verified what he input. He could not recall the briefing for the approach as it was about 0230 EDT for their body clock. He did not recall anything unusual with the briefing.

The flight was cleared for the FMS Bridge Visual and thought they were first cleared to the ARCHI intersection after the vectors.

When asked to classify his workload, he stated that he would not classify the night of the incident as "normal" when compared to the previous night's arrival, which was quieter.

When asked if he could recall when they arrived the night prior at San Francisco, he stated that they landed on the night of the 6th on scheduled around 0230 EDT. He could not recall which runway they landed on nor if he was the pilot flying or pilot monitoring on that flight. He also could not recall what the runway looked like that day.

When asked when the captain disconnected the autopilot, he stated that he was not sure how far from the runway that was accomplished; however, he felt the workload was high when the captain began to hand fly the approach. As pilot monitoring when the pilot flying was hand flying he (pilot monitoring) would turn of both flight directors by pressing the respective flight director buttons. Normally they leave the auto throttles on. He further stated that as pilot monitoring, when the captain called for anything he would do what was requested, check the PFD, vertical speed, airspeed, confirm that they were tracking if the localizer or ILS was in use. He normally will be looking inside and outside the aircraft "a lot." At waypoint F101D his workload increased dramatically. He was looking more inside than outside as he was checking the approach charts, setting missed approach, and did not look outside again until the captain queried him to verify that the runway was clear.

When asked if they had the localizer frequency dialed in and were using it, he stated that they did not have the ILS dialed in for the approach. He should have noticed it on the PFD but did not notice it and was unsure how he missed it. He would normally set that up prior to the briefing. He would first go to the performance page, put in the MDA[28], and then confirm with the captain what flaps they were to use, check routing and altitude constraints. The final page was RAD NAV[29] and he stated he must have missed that page.

When asked to clarify what he meant by the line of lights he observed on the runway, he stated that the lights were stationary type of lights. Further described the lights as a line of lights perpendicular across the runway. The lights he observed were green in color. He was not sure when he saw the lights but he thought that he observed them when the flight was inside the F101D fix. He saw a lot of green lights and was not sure why. At one time, he looked to his left and saw a runway lit up. He asked if that was runway 28L and had a horrible feeling in his stomach. When he figured out that something was wrong he commanded the go around. The approach was designed to come in at an angle, when compared to the airport. He could see runway lights before they were at F101D. He could not recall how many sets of runway lights he saw.

When asked to describe a go around call he stated that they should say "Go-Around. Flap" the pilot flying would select TOGA thrust and the airplane would begin to perform the go-around maneuver. He could not recall why he stated, "go around go around" twice.

He did not recall seeing airplanes but does remember seeing lights and that it did not look like a runway.

[28] Minimum Descent Altitude
[29] Radio/Navigation

When asked what they did differently on the second approach he stated he put in the ILS frequency when the flight was toward the end of the downwind leg near the base turn. On the go around he was still trying to figure out what happened. That was when he realized he didn't have the ILS frequency tuned in. He then suggested it to the captain and put tuned it in.

Although what occurred after the go around was not clear but they did do another visual approach and recalled that the approach looked "as it should." At that point, he thought they may have been lined up on taxiway C during the first approach.

When asked to describe the brightness of the lights he observed on the first approach he stated that the lights were "normal" on the first approach. Although one thing that threw him off was that it did not look like a taxiway either. He was not sure but thought it may have been because they were tired.

When asked when they recalled that runway 28L was closed, he stated that he could not recall figuring they realized that while they were in the aircraft and it was after the flight that he figured out 28L was closed. He confirmed that he did not see any lighted "X" on the left side of their approach.

When asked to describe the line of lights he observed, he stated that the line of lights he observed was further down the runway maybe one-third of the way down what they thought was the runway. He just remembered not understanding what he was looking at. The lights looked like runway edge lights and were green lights but he could not recall for sure. He further stated that he observed both rows of edge lights on the taxiway. He did not see anything on the approach end of the taxiway.

When they confirmed with tower, everything just did not look right. He felt that a go around was appropriate. When he viewed the lights, they did not change or move. It was confusing and with tower confirming that they were cleared to land it led him with a false feeling that things were ok.

Tower never told them they were lined up with the wrong pavement. When ATC called the go around they were already on the go around prior to that transmission. The lights still looked green on the go around. The tower then transferred them to NORCAL departure.

When asked what he meant by being busy prior to the approach, he stated that there was a lot of chatter on the frequency and he could not get in touch with ATC straight away. He recalled the captain being a little agitated that they could not get in touch with ATC. He was waiting for a break to transmit but could not recall the time he had to wait. He had not made any attempts to contact tower prior to the call to verify the runway was clear that was heard by tower.

He was asked to describe what he could recall on the approach around the F101D waypoint, he stated that as they were approaching the waypoint F101D, they were coming in at an angle to the runway. The captain was starting to make the turn towards the runway and he was checking the altitude as they had to be at or above 1,200 feet above mean sea level. He then had to confirm they were configured, the approach was stable, set the missed approach altitude, when he looked outside the window they were already aligned with the taxiway.

When asked to describe if there were any specific ways they flew the approach, he stated that there were a couple of ways to fly the approach "managed" and open descent. In "managed" the computer will honor the altitudes in the approach. They are not required to do a "managed" descent. In open descent, the pilot flying will descend to the altitudes which required the pilot monitoring to do a little more work. The previous arrival into San Francisco (night prior) he and that flight's captain did the managed descent. It was busy the night of the event, as they were pulled off the arrival and vectored.

Reporting any events to the company was normally done by the captain but the first officer can also do it. By the time they got to the hotel it was about 0430 EDT. The previous policy required that the Air Safety Report (ASR) had to be filed within 24 hours but he didn't believe the new policy had any time requirement. The captain elected to accomplish that the next day. They met up the next day to get the facts together and verified that report was correct and it was filed on July 8th.

When asked to describe his schedule for the preceding 72 hours, he stated that on Monday and Tuesday he was on a day off. On July 5th, he operated a flight to San Francisco, Thursday morning, July 6th, he went to sleep about 0400 Toronto time and woke up about 1000 Toronto time. We he got up he had breakfast, with the captain on that trip, and then went for a walk. He took a 1-hour nap during the afternoon, got ready for work, and operated the flight back to Toronto. That flight arrived at Toronto on the morning of July 7th, the day of the incident, about 0030. He then went home and went to bed about 0300 EDT. He slept for approximately 5 hours woke up around 0900 EDT. The rest of the day he "took it easy." His wife and taken the kids out for the day so there was no family in the house and he was able to sleep in. He had lunch at noon and then took a 90-minute nap around 1300 EDT. After he woke up from the nap he spent time with his kids, had dinner, and then went to work. He arrived at the airport about 1910 EDT and had a report time of 1940 EDT.

When asked to clarify his previous trip, he stated that he departed on July 5th and landed in San Francisco on the morning of July 6th. After rest, he operated the flight that returned Toronto on evening of July 6th and that flight arrived in Toronto in the early morning on the 7th of July.

On July 5th, he woke up around 0800 EDT and then took a nap in the afternoon for about 90 minutes. He spent time with his children, which he estimated was for about an hour, then got ready for work.

On Tuesday evening, July 4th, he could not recall exactly what time he went to bed; however, normally he went to bed about 2200-2230 EDT and read for about half hour and then fell asleep by 2300 EDT. He would normally wake up around 0700 EDT.

He considers himself a more of a "normal day person." He has children in the house, and they do not allow him to be a night person, as they would wake him up in the morning. He would like to sleep until 0800 or 0900 EDT. Normally he is more alert in the evening; however, he around 2300 EDT he usually would felt sleepy. He would like to get 8 hours of sleep at night to feel rested.

On Tuesday night, July 4th, he felt he had a proper night's sleep. On Wednesday night, July 5th, he was in San Francisco and slept about 5 hours and then took a nap in the afternoon, before reporting for work. When he got arrived back in Toronto on July 7th he got to sleep about 0300 EDT and was awake a by 0900 EDT. He said he was a "pretty heavy sleeper" and it takes him a little time to get to sleep but when he was a sleep he sleeps "heavy." If working a night flight, he normally takes a nap in the afternoon for about 90 minutes and during that nap he felt he slept well.

He had no history of sleep disorders and there had been no changes to his health in the past year.

There had been some changes in his personal life as his wife took a severance and was no longer employed outside the home. They have gone from having 2 incomes to 1 income; however, they can live on his salary. He felt his life became less stressful when his wife stayed at home because there was less he had to do.

No other major changes in his life in the past year. The process to upgrade to captain, at Air Canada, was about 4 months in duration. There were family issues during that occurred during his upgrade and those issues did get resolved. He felt that the issues had no effect on the incident flight. Everything was good for the previous few months.

He considered himself in "good" health and that he had no health issues.

His last medical was in May of 2017 and he had no restrictions on that medical certificate.

He had no issues with color vision in the past.

He described his vision as starting to get worse as he ages. He can pass his medical without eyeglasses; however, he does take his eyeglasses with him when he flies, even though he has 20/20 vision. He described that when he sits to read for an extended period of time he will get a headache.

He had no issues with his hearing.

He was not currently taking in prescription medication. The most recent prescription he had, was for a back issue about 18 months prior to the incident, but he was on no prescriptions at the time of the incident.

He does consume alcohol. Normally when he was at home, he would have a glass of wine or a beer with dinner. He estimated that he had maybe 3 to 5 alcoholic beverages per week. Prior to the incident the most recent time he had consumed an alcoholic beverage was possibly with dinner on Monday (July 3rd) or Tuesday (July 4th).

He does not smoke tobacco, nor does he use illicit drugs.

He did not take any medication that would affect performance, within the preceding 72-hours of the incident.

When asked how he liked to work at Air Canada, he stated that he likes working there because there were lots of variety and that he has nothing bad to say about it. He has not felt any pressure to operate a flight. He further stated that, he had called out fatigue not long prior to the incident. He has not had any issues or ramifications for Air Canada for calling in fatigued.

There were no issues with the incident aircraft and that it had no MEL items.

There were no abnormal issues with noise, temperature, or vibration during the flight that he could recall. He had no issues hearing radio communications on the incident flight.

He had no issues with the visibility of the instruments in the cockpit.

He classified the captain, as a nice guy and easy going. The captain set up a nice work environment in the flight deck. Just a "regular skipper." They worked effectively as a crew.

When asked about any audible altitude call outs made by the A-320 aircraft, he stated that it depends on the FIN[30] but normally there was altitude callouts beginning at 50 feet and the callout would be in 10-foot increments down to 20 feet. The airplane also had an audible "retard" command if the thrust was not retarded during the landing flare. Some of the airplanes will have a callout at 100 feet, but this airplane did not. He did not recall hearing a 50-foot call during the event.

When he got together with the captain, the next day to discuss the event, they thought they were at 400 feet when they initiated the go around. However, since then they realized that it was lower than that. He was shocked at how low they were. He thought that a possibility was because what they were looking at appeared to be narrow and maybe that was why they thought they were at higher altitude. He was not looking inside the aircraft at his altimeter at this point in the approach.

He did not know what he saw but he knew it wasn't right and that it did not look right. At the point of the go around "it did not look like a runway to me so I called the go around."

Some of the main things he and the incident captain were discussing was how they got into the situation. One of the items he and the captain discussed was that he had not set-up the localizer to track inbound to the runway. He stated that it had upset him that he had not set it up.

When asked about his normal work schedule, he stated that normally he works about 16 days a month. They have a bidding system where they bid for their days off and he normally bids to be off weekends in order to spend time with his family. He normally works 4-days a week somewhere between Monday and Friday. He would like to fly more hours while at work, in order to have more days off. For July, he got "a horrible schedule" he was projected to fly about 86 hours during the month. The flying he was assigned required a check-in in the evening and then operate a return flight, and arrive in Toronto around 0030 EDT. He was to do a lot of San Francisco turns; however, he had a Los Angeles turn assigned during the month.

[30] Air Canada inscribes a three-digit number on the airplanes vertical tail of the aircraft. The FIN for the incident aircraft was 220. Source https://www.aircanada.com/ca/en/aco/home/fly/onboard/fleet/fins.html

It is only recently that they have changed and they used to meet in the flight planning room and now Air Canada wants the crew to meet at the gate. He does not like to talk about the upcoming flight, in front of the passengers. The briefing of the flight attendants occurred after the cockpit crew briefed themselves.

When asked if he was wearing his eyeglasses at the time of the incident, he stated the he does wear eyeglasses even though they were not required and that he was not wearing them at the time of the incident.

When asked how long of commute he has from the Toronto Airport to his home, he stated that he does not have much of a commute and that the commute to work was about 35 minutes.

The localizer frequency was required to be tuned per page 2 of the approach pages for that approach. Normally when doing an approach, he would do that anyway. If doing an ILS, he would not have to manually tune it as it would have been set through the FMC[31]. However, since the approach they were assigned was a visual approach they had to tune them manually. The preceding trip to San Francisco was also a visual approach and he thought he would have tuned the ILS; however, he could not remember for certain. On the incident flight he thought he just "forgot" to tune in the frequency.

When asked how many times other than the incident flight and the flight on July 5th, he said that he had flown into San Francisco at least one other time prior, since he returned to flying the line. He does not normally bid for San Francisco trips; however, he primarily focused his bidding points on days off. For July, he had also selected regional flying with his bidding points.

When asked if he noticed anything out of his peripheral vision while conducting a go around and he stated that he did not recall seeing any aircraft on the ground during the go around.

When asked to further clarify or describe the stationary lights he observed, he stated that he thought it was a line of green lights at the beginning of what he thought was the threshold and then further down the runway.

When asked if recalled seeing any blue taxi lights, he stated that he did not see any; however, when he looked to their left and he observed a runway and runway lights. He was confused why the runway on the left was lit and what he was looking at was different.

When asked if he could recall a NOTAM for a closed runway, he stated that he did not recall the NOTAM for runway 28L being closed.

When asked if, in Canada, the runway was illuminated when it was closed for some reason, he stated that in Canada the runway lights would be off if it a runway was closed and sometimes there would be an "X" placed on the runway.

The interview concluded at 1516 EDT

[31] Flight Management Computer

Interviewee: Matthew Dampier
Location: Air Canada Operations Headquarters, Mississauga, ON, CA
Date: August 10, 2017
Time: 1532 EDT[32]

Air Canada Operations Headquarters, Mississauga, Ontario, CA: Captain Shawn Etcher, Dr. Sathya Silva – NTSB; Captain Robert Hendrickson, Christy Helgeson – Federal Aviation Administration (FAA); Ms. Beverley Harvey, Dr. Missy Rudin-Brown - Transportation Safety Board of Canada (TSBC); Mr. Gordon Heieis – Accident Incident Investigator for the Air Canada Pilots Association (ACPA)[33]

First Officer Dampier was represented by Daniel Cadieux, Air Canada Pilots Association.

All photographs presented to First Officer Dampier are in Interview Appendix A.

During the interview, First Officer Dampier stated the following:

At F101D, he was heads down. For a normal visual approach, his scan is split between heads up and heads down. He looked up as they turned onto the final approach course at F101D. He then went heads down because he didn't want to bust the 1200 ft. altitude restriction at F101D. He also needed to ensure they were stable by 1000 feet. He stated there was a lot going on. He was heads down until the captain asked him to ask ATC if the runway was clear. Until that point he was configuring the aircraft, deploying flaps 2 and gear, and checking airspeed. He was "really paranoid" they were going to bust an altitude. Further back in the approach, he was busy looking for other aircraft.

Managed descent honors all altitude restrictions. In open descent, the PF manually changes the altitude selector for each crossing restriction. He did not know why it was chosen to fly in open descent. The SOP's do not state that you cannot fly an approach in open descent. They were pulled off of the approach for spacing by ATC. He could not recall whether they were flying in managed or open descent prior to that point. He had always flown in managed descent when coming into SFO. He thought it was unusual to fly the approach in open descent, but it was a visual approach and VFR conditions so he didn't say anything to the captain about the decision. During the approach, he wanted to make sure the captain wasn't changing the altitude prior to arriving at the fix and he was "paranoid" about that. He was uncomfortable flying the approach in open descent versus managed descent.

He could not recall the approach briefing. He did not question the captain on why he chose to fly in open descent as it was an allowed procedure. The Jeppesen manuals state that if you descend in open descent that workload is increased, and workload was increased. He was much busier than in past approaches. He felt he was doing something all of the time and didn't have time to look outside. He recalls that the ATC frequency was busy. At F101D, which was the final waypoint on the approach, he was ensuring that they were in the final landing configuration, the missed

[32] Eastern Daylight Time
[33] Mr. Heieis attended the interview via teleconference.

approach altitude was set, the heading bug was set to runway heading, and that the aircraft was stabilized. For some of these tasks he was crosschecking information on the iPad.

In some respects, the iPad is easier to use than paper as it is lighter, you have the ability to zoom in, it also automatically goes to the taxi chart when you land. The Jeppesen paper was heavy but easy to use. In the iPad, it's a challenge to find stuff in there. For example, with the FMS Bridge Visual it's possible that you'd miss the 2nd page. He was aware of the 2nd page on this procedure for the incident flight. Sometimes the iPad has technical difficulties as well for example it may not turn on properly. He personally prefers the iPad over paper.

He was tired during the incident flight. He was tired the night before as they had returned around 2am but he felt more tired on the night of the incident. Normally, the first night of a cycle is the worst and the second night is better. During the incident flight, it seemed as if time was moving slowly when they crossed the thunderstorms.

On the previous night he flew into SFO, they were landing on the 28 runways and did the FMS bridge visual.

The incident captain hand flew after F101D. The captain asked him to set the heading bug to runway heading. He went to the Jeppesen chart to find runway heading but was having a hard time finding it on the Jeppesen chart, so he referred to the taxi chart instead.

He turned both flight directors off. The flight director button is next to the ILS button on the FCU.

When he looked up at the runway they were inside F101D but above 600 feet msl. The captain said something along the lines of – can you confirm cleared to land? I think I see someone on the runway.

When presented with the screen shot of the runway environment taken during a helicopter flight post-incident, he stated that, at the time of the incident, it looked like there were "lots" more lights than in the photograph. There were lights crossing the midfield. He identified the runway crossing lights on the taxiway as the lights he saw. When he looked up, he said that there was a little part of him that thought "is it a taxiway?" but thought he must have been seeing it wrong, especially since ATC said that no one was on the runway and the captain thought it was a runway "no, the captain wouldn't be lined up with a taxiway". He looked over to the left and thought that it could be the left runway. He thought he saw edge lights. He also saw many more green lights and felt the taxiway centerline lights were much brighter than in the photograph. The runway lights on 28R were either equal to the brightness in the photo or brighter. He does not remember seeing any lights to the left of 28R.

He looked up expecting to see a runway. He presumed it was a runway, even though there were cues that it wasn't a runway. He focused on that.

When close in, there were many more lights like runway edge lights and more green lights.

Photograph number 3 shown to him, he stated was below minimums. He had looked up above minimums, somewhere between photograph 2 and photograph 3. He could not recall seeing any red lights. He thinks he said aloud "is that 28L?" at that point. He does not know if he said "go-around" because he knew it was a taxiway, or because it did not look right.

He recalled that the frequency was busy. He knows that when he's tired or busy, his ears perk up to "Air Canada" but everything else is background noise. He asked if the other aircraft who transmitted during the incident were on tower frequency as well. He heard the call for "Air Canada go around" and verbally responded to the call. He did not hear what was said before ATC gave him an altitude/heading for the missed approach. They were working radio, noting altitude and heading, and cleaning up the aircraft at the time of the call. It was a similar workload time to the workload around F101D, but it was different situations. With the go around, there was a sense of relief as he knew they were flying out of a dangerous situation.

He remembers clearly that he set MDA at F101D. He is able to read the go around altitude without the zoom on the iPad. He believed it was 3000 feet.

NORCAL approach gave them a right turn to the downwind and set them up for the approach again. He thinks that between the go around and setup for the next approach is where he realized they were lined up for a taxiway. He believes he verbalized it but couldn't recall if the captain responded. When they came back and lined up on the runway, he knew at that point that it was the taxiway that they had lined up on before.

For the second approach, he could not remember how it was flown. He thought that it had been flown visual and with the ILS, but he could not remember.

After landing, they switched to Ground, and he thinks that it was the same ATC on that frequency. At the gates, they did the parking checklist. Then the captain asked him to call the tower to ask for phone number, which he did. Then they finished the checklist, and all passengers deplaned.

He cannot remember if the captain called the tower, first or if he briefed the flight attendants. He was only able to hear the captain's side of the conversation with tower. When the captain briefed the flight attendants, he didn't tell them they were lined up with a taxiway. The flight attendants were joking with them about the go around being abrupt. Go arounds are never that smooth. It wasn't great or perfect, but go arounds are not normally perfect. It was safe. After flight attendants had been briefed, the crew had a little chat about what had happened. A maintenance person came on board. He thinks that the captain spoke to the maintenance person.

They got to the hotel around 4:30 am Toronto time. They discussed when they would file the ASR.

During taxi to the gate, he was distracted and shaken up. He realized that he almost landed on a taxiway and the result "could have been bad."

He slept okay after the incident flight. He read for about 45 minutes to wind down and slept for about 5-6 hours. When he transitions to night flying, his sleep is not great.

They met up the next morning around 11 am local time to talk about the ASR. The captain had written a rough draft on paper. He read it and it made sense. They both agreed it felt like they had gone around at 400 feet. He could not recall what order they talked to people in, possibly dispatch, duty pilot, then ACPA. For a go around, you typically file an ASR on your iPad. He has not personally used the iPad to send an ASR yet. They knew it was a big deal because they knew they lined up with a taxiway which is why they called the duty pilot. He believes the captain told the duty pilot that he lined up with a taxiway instead of a runway and went around. This was the same story he believes the captain told dispatch as well. They called ACPA to make sure they're doing the right procedure. The return flight to Toronto was smooth and the crew was working well together.

He described the captain as easy going and a regular captain. He did not feel any barriers to speaking up and felt that the captain was open to his suggestions.

Normally, if it was an ILS approach, they'd select the ILS pushbutton at 10000 feet. If the bridge visual is loaded, they would put in the ILS frequency as a backup into the RADNAV page. It would have shown on his display as a pink triangle. With the localizer, it would have been deflected to the left when on the incident approach. He was pretty sure if the RADNAV is tuned, both should show up on the display. He thinks that if it was armed, the FD would try and follow the ILS. He would have flown the descent in managed descent if he was PF as that is simpler and easier.

When asked what he would have done differently now, he said that he would have made everything as simple as possible, so used a managed descent. He would have used as much automation as possible.

He met with the captain at 11am local time on Saturday to discuss the incident. They brought a different FIN back to Toronto around 1630 local time and pushed at 1650.

The interview concluded at 1745 EDT.

Interviewee: James Kisses
Location: Air Canada Operations Headquarters, Mississauga, ON, CA
Date: August 10, 2017
Time: 1800 EDT[34]

Air Canada Operations Headquarters, Mississauga, Ontario, CA: Captain Shawn Etcher, Dr. Sathya Silva – NTSB; Captain Robert Hendrickson, Christy Helgeson – Federal Aviation Administration (FAA); Ms. Beverley Harvey, Dr. Missy Rudin-Brown - Transportation Safety Board of Canada (TSBC); Mr. Gordon Heieis – Accident Incident Investigator for the Air Canada Pilots Association (ACPA)[35]

Captain Kisses was represented by Daniel Cadieux, Air Canada Pilots Association.

[34] Eastern Daylight Time
[35] Mr. Heieis attended the interview via teleconference.

All photos presented to Captain Kisses are in Interview Appendix A.

During the interview, Captain Kisses stated the following:

When he was on F101D, he picked up what he thought was runway 28R because he could see 28L. He disconnected the auto-pilot and started hand flying. He was looking outside at that point.

When showed the photograph 1, he stated that the taxiway lighting was brighter at the time of the incident, and that the "side" lighting was on. The lighting that was there the night of the incident made taxiway Charlie look like a runway. He remembers lead off lights that were flashing green. From F101D forward, he didn't like what he saw. Something was not right as there was some midway lighting on the pavement. He asked the incident first officer to verify cleared to land, but there was a lot of chatter on the frequency and it took a while to get a hold of ATC.

He stated at no point was he going to land, he just had to find out why the runway was looking that way. When ATC reported that there was no traffic, he decided to go around.

The localizer was available, but it wasn't tuned. However, it was a visual approach. The ND has an extended line. They were zoomed out and he wouldn't have seen the line on the display. They flew the approach in NAV mode. It was a complicated approach. There were altitude step downs at which they had to meet restrictions. He could have flown the managed descent and put in the lowest altitude or flown in a different mode and dial in every altitude manually. He chose to dial manual altitudes until at some point during the approach, he set managed descent. He disconnected the auto-pilot prior to F101D. He flew in selected descent, not open descent. Initially he did the step down manually. The aircraft looked like it was handling it so he selected managed approach. The PF selects altitude if the autopilot is on. The PM dials in altitude if the autopilot is off. It is a requirement to disconnect the autopilot from the FAF inbound. The autopilot probably would have tracked to the runway but it is not Air Canada procedure.

He continued his approach toward what he thought was 28R. His interpretation of 28L was actually 28R. The 28R he was aiming for didn't look normal and didn't fit his pattern recognition. That was why he asked ATC to confirm that the runway was clear. When ATC said that they were the only one on it, it didn't make sense so he decided to go around. He continued down because he wanted to make sure if something was there on the runway. He had called "autopilot off- FD standby." There was not much stick movement and it was not an aggressive turn to final. The environment was quite dark. He did not recall seeing any white lights in the area of 28L when referring to photograph 2. It was all dark on the left side of the airport. He does not remember seeing all of the green lights depicted in photo 2. Eventually he switched his attention to focus in front of him.

He stated he admits that he took too long to go around. He remembers seeing a runway light, or lights on the seawall. It looked like a T-bar like what would be on the runway. He didn't see all of the green lights as some of them were obscured. He saw VASIs and lead-in lights on (what he thought was) 28-L, but not on 28-R. He felt something was not right. He saw lights just past the touchdown point on 28-R. He tried to check, but ATC were very busy. When listening to ATC, he listens for his flight number instead of all of the chatter. He then initiated a go around.

He did not think that photograph 3 looked familiar as he was at a different deck angle and looking at the environment through a glare shield, with an aircraft nose and windscreen in the way. The deck angle was 5 degrees which is not similar to the helicopter's deck angle.

The normal procedure for the go around was to select go around flaps, attitude, and to follow the flight director. They are also trained to do go arounds from wheels touch. They would select TOGA thrust, then set TOGA attitude to FD. Thrust and attitude is one fluid movement. There was not much talking during the go around as it was busy. He believes he said, "go around" simultaneously as he was executing it.

He did not remember any transmissions concerning Air Canada 759. The tower was talking to ground, other airplanes there was lots of chatter. He thought he heard tower talk on ground, clearance delivery, and tower.

When going around, his suspicions were confirmed and he put it in the back of his head. ATC told them to go around about 400 feet, which was well into the go around. He was not sure how the incident first officer answered NORCAL's question for the reason for the go around. ATC gave vectors up to 5000 feet. They did the pre-descent checklist, and in range check list. The incident first officer asked whether to put in the localizer. He said yes and they reactivated the approach. They did a coupled ILS approach to 28R. They did a left pattern back. A right pattern would have put them over the mountains. They would arm the approach and have both autopilots on. The aircraft would track the localizer. Once the glide slope came in, it would track the glide slope too. They were busy getting the aircraft configured. The same controller was on ground as was on the tower. He did not think they switched frequencies on the ground.

After he talked with NORCAL, he did a brief announcement to passengers to say that they had done a go-around and would be landing in 6 or 7 minutes. The crew had a quick discussion after speaking with NORCAL. He thinks that they said they would talk about it more when they were on the ground. They wanted to focus on setting up the approach.

On the second approach, he cannot remember if there was any chatter on the radio.

From clearing the runway, to the gate, they exited to the left and were given routing to the gate. Then they switched to United ramp frequency. It was the same guy from approach, taxi, ramp, etc., on the radio.

He does not remember talking about the incident until well after. He remembers a mechanic coming on board, so he told him to give him a minute to do their shutdown checklists and termination checklist. Passengers were getting off; none of them looked unhappy. At the gate, just before shutdown, he asked the first officer to get the phone number for the controller. He used first officer's cell phone to call because the first officer's phone had better coverage in the U.S. so would not incur extra charges.

He talked to the controller at the gate before they left the airport. The controller was busy, and he felt like he was "intruding" because he could hear voices in the background, so he told the

controller that he'd call later. 40 minutes later, he called from the hotel and had the same conversation, but got interrupted again. It was about 0130 local time (430 Toronto time) by the time he got off of the call. He had a chat with the incident first officer. They realized what had happened, but that time in the morning, they did not do anything.

He debriefed the flight attendants. He didn't feel the go around was aggressive for him but one of the flight attendants, who had been seated rear-facing, joked that it had been aggressive, like an amusement ride. He didn't recall hearing "where is this guy going?" on frequency at the time. He didn't notice anything before the heading and altitude given for their missed approach.

He does not think the incident occurred because of a workload issue. It's not unique to use open descent. But it does not matter whether open or managed, you would be able to handle the workload.

He does not know why he did not use managed approach from the beginning.

He called dispatch and advised them of the go around. They asked the nature of the go around and he told them that they lined up with the wrong pavement and it looked like it was taxiway C. He told the duty pilot that he lined up with the wrong environment, went around, it was taxiway C. The duty pilot asked if the localizer was tuned and he told him "the localizer was not tuned in on the first approach, but subsequently on the second approach it was tuned in.". The duty pilot said make sure to file an ASR. They then called ACPA.

The incident first officer stated that the FAA tower management had called him on his cell phone asking for the incident captain. The captain called the number back, and they identified themselves as FAA human factors, and said that they were in the tower. They asked for his name and asked him if he knew what his altitude before the go-around was, and told him he was at "this" altitude. This call occurred on Saturday. He told them that he had been lined up on the wrong runway.

The flight back Toronto was a normal flight. He characterized the first officer as a pleasant guy, mild mannered. He asked him about his background when they were in cruise. He felt that the first officer would speak up if needed and felt that he was open to receiving feedback as well.

The crew discussed the 28L closure when they were in Toronto before the flight. It was supposed to be open with their original arrival time so they didn't put much emphasis on it. They had a delay of 35 minutes before departure that day, and so they arrived after 28-L had been closed.

He stated that SFO is a busy airport, with a lot of traffic and closely spaced, parallel runways. Aircraft are arriving from many different international time zones with pilots experiencing similarly variable circadian rhythms. He questioned what the outcome of a similar incident would have been if the flight crew had been from a non-English speaking country, or came from a culture where there was typically a steeper authority gradient between captain and first officer. He recommended that SFO do ILS's into 28R instead of visuals, staff more controllers in the tower, leave runway lights on for the closed runway, and have X's on the closed runway that can be seen from left or right of centerline.

The interview concluded at 2015 EDT.

Operational Factors/Human Performance

Attachment 1 – Flight Crew Interview Summaries

Appendix A

Interview Photographs

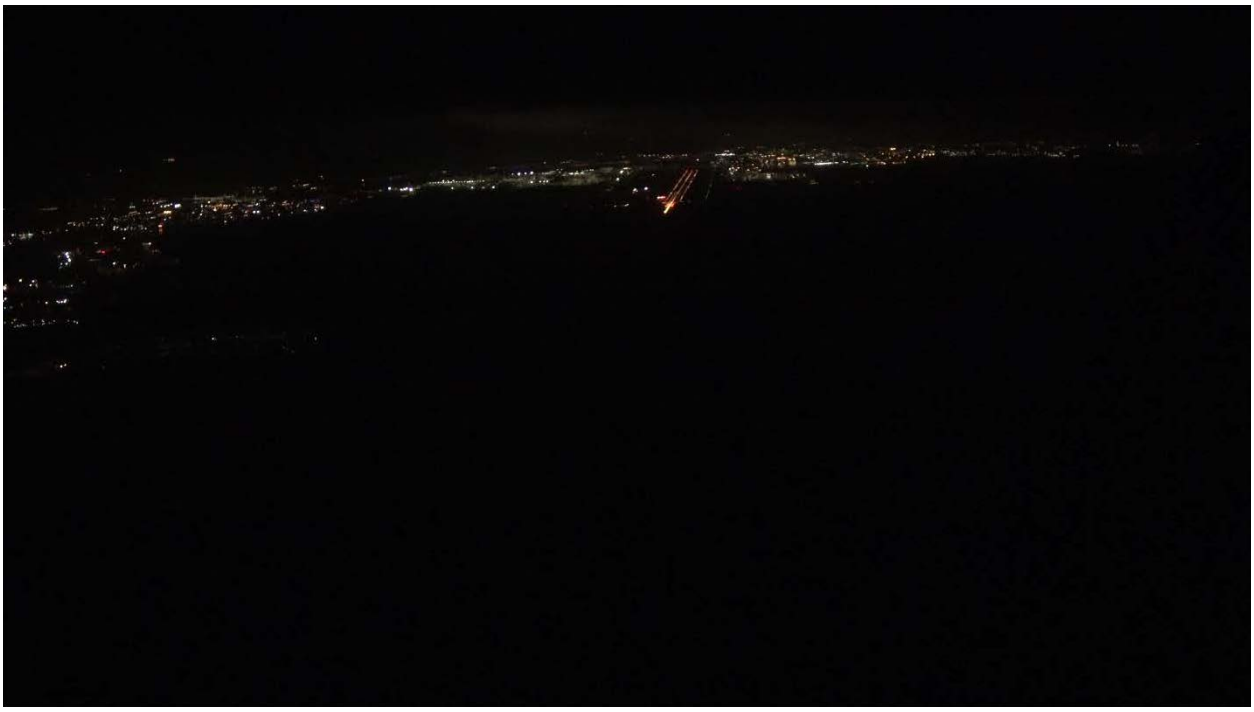

Photo 1: Taken from about F101D

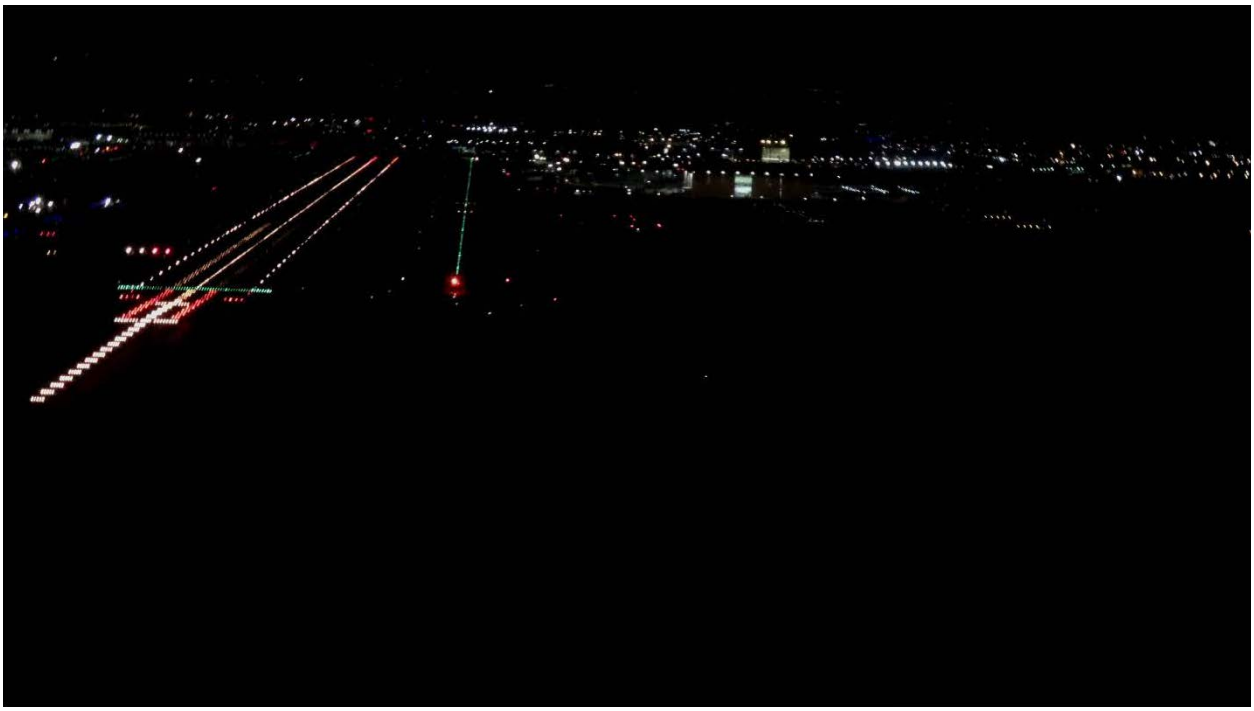

Photo 2: Approximately 1 Mile Final

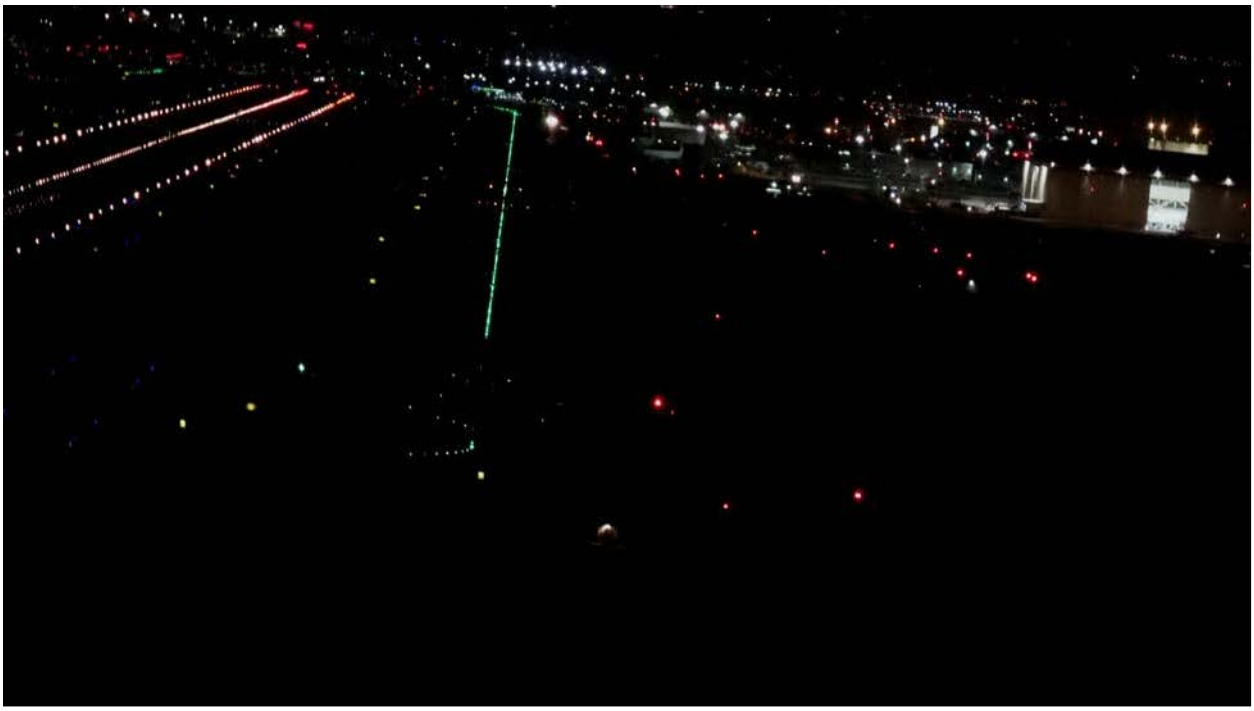

Photo 3: Approximate Go Around Location

[redacted]

From: [redacted] >
Date: Friday, March 23, 2018 at 11:34
To: Daniel Cadieux [redacted]
Subject: Clarification

Dear Captain Cadieux,

Here is my response to Captain Etcher's Questions ,answered to the best of my recollection.

Please ensure they are forwarded at your Earliest convenience

Dear Captain Etcher

Here are the answers (clarification) to your questions.

1)
Because of the vectoring prior to joining the Approach, I felt that I needed to use selected (VS Mode) to get back to profile... The mode can be used as long as the altitudes of a particular gate are not violated. And clearly, we did not violate any of those restrictions.

Therefore,

The descent initially was flown in selected to catch up with the profile to the best of my recollection. That was, part due to the ATC controller taking us out of the normal approach and due to radar vectoring.

Once I was comfortable that the airplane, and the automation was caught up with the FMC, and the profile, the rest of the approach was flown in Managed mode as per the profile published on the approach plate.

The auto pilot and flight director were then disconnected at the transition point (FAF) as indicated on that particular approach, which I believe it's called F101D, and we reverted to the Visual portion of the approach, as outlined in the Air Canada SOP.

To summarize, the approach was flown in managed mode prior to disconnecting the auto pilot for the visual portion of the approach.

2)

The descent mode was selected to manage (as in the airplane managing its own descent via the profile coded in the FMS database), and that happened quite a few miles away, and prior to the Bridge, I was by then monitoring the automation making sure it met the "gates " as per the published approach plate.

3)
When there is a mode change, the FMA annunciator is used to ensure that the correct or desired mode is indeed what the pilot has selected. The display changed to Speed on autopilot disconnect and goes blank when FD are selected off.

Respectfully,

Captain Jim Kisses