

ERA21LA101

AIR TRAFFIC CONTROL

Group Chair's Factual Report - Attachment 1

Interview Summaries

April 22, 2023

Interviewee: Jason Creech
Representative: Justin Mendelson

Date/Time: February 1, 2021 / 1032 eastern standard time (EST)
Location: Conducted Virtually
Present: Marvin Frantz, Paul Suffern, John Kasel, Curt Fischer
Investigator: Charles Olvis

During the interview Mr. Creech provided the following:

He entered onto duty with the FAA in March 2014, reporting to the FAA training facility in Oklahoma City, Oklahoma. He graduated in May 2014 and reported to New York Terminal Radar Approach Control (N90 TRACON). He left N90 TRACON in September 2015 and reported to CAE ATCT. Prior to the FAA, the WSIC served in United States Air Force (USAF) as an air traffic controller. He joined the USAF in November 2003 and reported to Shaw Air Force Base (SSC) for duty. He remained at SSC until November 2011 when he was honorably discharged from the USAF. After the USAF, he worked as an air traffic controller for Midwest ATC in Afghanistan from December 2011 until December 2013.

He maintained a current class 2 medical clearance certificate with no restrictions. He did not hold any other aeronautical licenses.

He was facility rated at CAE ATCT, qualified on all operating positions, and was certified as a controller in charge (CIC). His regular days off were Wednesday and Thursday. His normal shift was 2 evening shifts from 1415 to 2215 (or 1300 to 2100) followed by 2 day shifts from 0700 to 1500 (or 0600 to 1400), and a mid-shift from 2200 to 0600. He routinely worked one overtime (OT) shift per pay period and on the day of the accident was working a scheduled OT shift from 0600-1400.

He stated that he had a schedule change the week of the accident and had finished work on Sunday January 10, at 1400. He said that he went home and stayed awake until between 1700-1800 when he went to bed. He awoke between 2000-2015, prepared for work, and drove to the facility. He worked a Sunday night mid-shift and reported nothing unusual during the shift.

He completed his mid-shift at 0600 on Monday, January 11, and returned home. He said he went to sleep after arriving home and awoke at 1030 or 1100; he remained awake the remainder of the day and managed normal family routines. He left home at 2100 for a Monday night mid-shift and reported nothing unusual during the shift.

He completed his mid-shift at 0600 on Tuesday, January 12 and returned home. He remained awake with normal family routines before going to sleep at 2200.

Mr. Creech awoke at about 0415 on Wednesday January 13, and reported to the facility for a 0600 to 1400 OT shift as the Watch Supervisor in Charge (WSIC)¹. After arriving at the facility, he grabbed his headset and checked the operating positions to see what needed to be staffed. As the WSIC, he was responsible for completing the normal pre-duty checklists, check of current NOTAMs², as well as ensuring all controllers had received the pre-duty weather briefing (PDWB). He stated that the airport had been IFR³ for most of the day with low ceilings. He stated that he did not recall anything notable about the weather brief from the day of the accident other than low ceilings and fog.

He said that he had to work operating positions all day on the day of the accident because there were only three controllers in the building, and one of the controllers was only qualified to work in the tower and was not qualified on any radar positions.

At the time of the accident, he had been signed onto ground control with the local control, flight data, and clearance delivery positions all combined to the ground control position. Additionally, he was the WSIC while working all ATCT positions. He recalled talking to either a vehicle or an airplane when the radar north (RN) controller, who was working at the local control position in a "TRACAB"⁴ configuration, reported he had lost radar and radio communication with N266DC. The RN controller told him that the airplane was executing a missed approach and after issuing the weather for CAE, he experienced a loss of communications and radar. Mr. Creech said he called the Richland County Sheriff to report a possible downed airplane when they advised they had already received reports. He said the other controller who was only tower certified relieved him and he began the accident and incident notification checklist.

He did not recall the weather at the time of the accident but remembered still being able to see parts of the airfield though there had been fog most of the morning. He said several scheduled air carriers departed that day and there was a US

¹ During the investigation, the FAA referred to the position as the WSIC, though facility guidance and documentation referred to the position as Operational Controller in Charge (OCIC).

² NOTAM - Notice to Air Missions. A notice containing information concerning the establishment, condition, or change in any component of the National Airspace System which timely knowledge is essential to personnel concerned with flight operations.

³ IFR - Instrument Flight Rules [ICAO]- A set of rules governing the conduct of flight under instrument meteorological conditions.

⁴ TRACAB - Terminal Radar Approach Control Cab - The term used to identify the configuration when the radar approach control operating position(s) of an ATC facility are located within tower cab. This was a normal configuration for TUL ATCT during the event day/time.

Navy P-8⁵ conducting practice instrument approaches at CAE. He said the facility had solicited PIREPs⁶ but could not recall what they were.

When asked to describe the PIREP procedure at CAE, he said that when they received a PIREP they would complete the CAE local PIREP form, disseminate it to the pilot as needed, and would transmit significant PIREPs via AIS-R⁷. The normal routine was for the operational supervisor (OS) to be notified of the PIREP and then enter it into the AIS-R. When the operation was in a TRACAB configuration and he was the WSIC, he would wait until the operation permitted him the time to enter it into AIS-R before doing so. He added there were no significant PIREPs on the day of the accident.

When asked what PIREPs would be entered into AIS-R, he said when the bases were below minimums, turbulence, or icing. He said the local standard operating procedures (SOP) offered guidance.

When asked if he provided pilots with alternate missed approach instructions⁸. He said he did not and that it was not a trained procedure.

He said the PDWB provided by the Center Weather Service Unit (CWSU) at Jacksonville Air Route Traffic Control Center (ZJX ARTCC) was good. He said the normal daily takeaway was to understand if the weather was forecast to be IFR or VFR⁹ and provided a good overall picture, but that it was too generalized and not tailored to a specific area. He added that the facility obtained most of their weather from local weather sources. He said the best tools for obtaining weather information were the

⁵ The Boeing P-8 Poseidon is an American maritime patrol and reconnaissance aircraft developed and produced by Boeing Defense, Space & Security, for the US Navy. It is a military variant of the civilian Boeing 737-800.

⁶ PIREP – Pilot Weather Report – A report made by a pilot of meteorological phenomena encountered by an aircraft in flight.

⁷ AIS-R – Aeronautical Information System-Replacement - a web-enabled, automation means for the collection and distribution of Service B messages, weather information, flight plan data, Notice to Air Mission (NOTAM) messages, Pilot Weather Report (PIREP) messages, and other operational information to all FAA Air Traffic facilities.

⁸ Alternate missed approach instructions are instructions not published on the chart but have been approved by the FAA and documented on FAA Form 8260.

⁹ VFR – Visual Flight Rules – Rules that govern the procedures for conducting flight under visual conditions. The term "VFR" is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

automated sources like AWOS¹⁰, ITWS¹¹, and the TAFs¹². He did not have any additional weather tools that he wished he had access to.

He described the control tower layout while working in a TRACAB configuration. He said that the radar controller worked from the local control position using a tower display workstation (TDW)¹³ that was mounted above the position. The local controller worked from the ground control position to the right of the local control position. He said that the flight data and clearance delivery positions were to the right of ground control but were never open as standalone positions. There was a TDW at the ground control position and was slaved off the TDW located at the local control position.

He said that other controllers would issue alternate missed approach instructions to avoid the CAE departure corridor, however his practice was to point out¹⁴ the airplane on the missed approach rather than issue alternate missed approach instructions. He said that if an aircraft on a CUB instrument procedure went missed approach, local control would have to hold departures. He said he had taken a point out from the radar controller on N266DC.

He said that normal staffing during the TRACAB configuration was standalone local and ground controllers working in the tower cab with one assuming controller in charge (CIC) responsibilities, and a radar controller and OS in the TRACON.

He said there were no documented local procedures for entering PIREPs into AIS-R when the WSIC was also working an operational position. When the facility was in a TRACAB configuration it did affect their ability to input PIREPs into AIS-R. He said he would not pass PIREPs to ZJX ARTCC when CAE was too busy, and only if the

¹⁰ AWOS - Automated Weather Observing System is equipped with meteorological instruments to observe and report temperature, dewpoint, wind speed and direction, visibility, cloud coverage and ceiling up to 12,000 feet, and altimeter setting.

¹¹ ITWS - Integrated Terminal Weather System - An automated weather information system, and it uses a variety of weather sensors to make full use of airport runways in all kinds of weather. The ITWS receives data from weather and surveillance radars and sensors, and then uses computer software to display current weather information in graphic and text formats. The ITWS provides weather products that are easy to understand and it removes the need for interpretation by meteorologists

¹² TAF - Terminal Aerodrome Forecast - According to NWS Instruction 10-813: "A NWS TAF consists of the expected meteorological conditions significant to aviation at an airport for a specified time period. For the U.S., this is the area within five (5) statute miles (SM) of the center of an airport's runway complex." www.nws.noaa.gov/directives/sym/pd01008013curr.pdf.

¹³ TDW - Tower Display Workstation - A tower situational display that is a part of the Standard Terminal Automation Replacement System (STARS) which displays radar data that has been collected by various sensors and processed by the radar data processor (RDP), combined with flight plan data, and then presented on a color monitor.

¹⁴ POINT OUT - An action taken by a controller to transfer the radar identification of an aircraft to another controller if the aircraft will or may enter the airspace or protected airspace of another controller and radio communications will not be transferred.

PIREP directly affected them. He said it was normal to pass PIREPs down to the TRACON and that when they were in a TRACAB configuration it was easy since they were sitting side by side. Mr. Creech stated the password for AIS-R was on a piece of tape adjacent to the computer. The AIS-R computer was in the back of the tower cab about ten feet from the local control position.

He said the facility had 17 certified professional controllers (CPCs) "on paper," but that there were 2 out of the building on high risk, 1 on Article 114 duties¹⁵, and 2 were out for COVID. Additionally, there was an OS out with COVID, which was the reason he was scheduled for the OT shift on the day of the accident. He said that as the WSIC he was allowed to call in controllers for an OT shift but on the day of the accident there were no controllers available. It was normal to have a tower only controller, a radar controller, and an OS staff the facility and would require the OS to work one of the positions.

He said the facility had returned to a basic watch schedule of 5 days on and 2 days off before Thanksgiving. Prior to that, due to COVID, they had been on a schedule of 5 days on and 5 days off. During the COVID schedule, he worked a straight mid-shift schedule and did not know how often the facility operated in a TRACAB configuration but that it was not a normal practice. He said that a TRACAB configuration depended on the OS; if it was a quiet day, it would open and when it was busy, they would split it back up. He said that the TRACAB configuration was manageable on a day-to-day basis. He said when there were three controllers and one was an OS it was manageable, but four controllers worked well. If there were three controllers and one was a partial qualification (either tower or radar only) it still worked without negative impact.

When asked about duty priority at CAE ATCT, he said that the duty priority taught there was that the operation always came first before any administrative work.

He said he had no concerns with an airplane on the missed approach procedure direct to the fix SKITR; he would obtain a point out to deconflict. The only issue was that a point out would be required with SSC air traffic control. He said he did not know if it was usual to receive a low altitude (LA) alert for an airplane flying the RNAV (GPS) Runway 13 approach into CUB.

He said that the facility had never gone into ATC-Zero¹⁶ due to COVID, however, they had gone into ATC-Limited¹⁷ for a confirmed COVID case. He said all

¹⁵ Article 114 duties refers to duties not involving a non-control position.

¹⁶ ATC-Zero - Operational Contingency Level (OCL) declared when it is determined that the facility is unable to safely provide published air traffic services, or traffic flow management in the case of the ATCSCC.

¹⁷ ATC-Limited - OCL declared when a combined Tower/TRACON or multi-area facility is unable to safely provide published air traffic services from one or more Areas while others remain in operation.

decisions on what would trigger an ATC-Zero were made outside of the facility but that from a staffing standpoint, a minimum of three controllers in the operation was the cutoff.

He said he could not remember the last time he had entered a PIREP into AIS-R, usually there was a supervisor to do that. When asked, he was able to provide the weather conditions that would require the solicitation of PIREPs.

He did not hear any transmissions between the RA controller and the pilot of N266DC because the controller was using a headset.

He said he had not received any refresher training since January 2020 and attributed it to COVID. He added that he would get a stack of papers and be instructed to sign them. He said that he had spoken with the air traffic manager (ATM) about three times since she had started but had no other interactions with her.

He said he felt like the facility had done everything they were supposed to do with respect to the air traffic control (ATC) handling of N266DC.

Interview concluded at 1144.

Interviewee: Makida Bridges

Representative: Mark Tomicich

Date/Time: February 1, 2021 / 1300

Location: Conducted Virtually

Present: Marvin Frantz, Paul Suffern, John Kasel, Curt Fischer

Investigator: Charles Olvis

During the interview Ms. Bridges provided the following:

She entered onto duty with the FAA in July 2002 reporting to the FAA training facility in Oklahoma City, Oklahoma. She graduated in September 2002 and reported to Greensboro (GSO) ATCT. In March 2007 she left GSO ATCT and reported to Florence (FLO) ATCT. She left FLO ATCT in March 2008 and reported to CAE ATCT, then left in April 2015 reporting back to FLO ATCT as an operations supervisor (OS). In July 2019 she was detailed to FAA Headquarters until April 2020 when she returned to CAE ATCT as the acting ATM. In September 2020 she was designated permanent ATM.

She had no ATC experience before being hired by the FAA and did not hold any other aeronautical licenses. She did not have a current medical certificate and was not required to. Her regular days off were Saturday and Sunday and she worked a Monday through Friday shift from 0800 to 1630.

She was first made aware of the accident by Mr. Creech about 10 minutes after it had occurred, when he called to inform her that the RA controller had lost radar and radio communication with the airplane and that 911 had been notified. She recalled the weather conditions had been foggy and misty off and on throughout the entire day of the accident. She said that she had been teleworking that day when she received the notification.

After being informed of the accident, she reported to the facility and spoke with the NATCA Facility Representative (FACREP) and support specialist to verify the situation. She reviewed the FALCON¹⁸ replay with audio, as well as additional data pertaining to the event. She said her initial review of the services provided by CAE ATCT met her expectations and she was satisfied. She said she began to recognize ambiguity when the pilot requested approach minimums. She said that when the pilot requested the minimums the controller responded with a PIREP from a previous arrival. She said it was her expectation that if the pilot asked for the approach minimums the controller would issue the minima from the approach plate¹⁹ and if the pilot asked for the weather minimums the controller should provide the cloud base report.

When asked if she had reviewed the PIREPs from the day of the accident, she said that there were no written PIREPs to review. She said that she would consider moderate to extreme turbulence, icing, low level wind shear, microbursts, and volcanic ash as significant with respect to PIREPs. She said that 1/4-mile visibility with fog and an indefinite ceiling at 200 feet was not a significant PIREP because it was typical weather for the area. She added that when the weather was below minimums for an approach, that also was not significant. When asked about CAE Order 7110.65F paragraph 2-2-8 where it provides an example of ceilings below user minimums as being a significant PIREP; she was not aware. She said that did not know the approach minimums for CUB.

She said the staffing level on the day of the accident was three controllers in a TRACAB configuration. She said that she could not recall the qualification level for the three controllers scheduled that day.

She was familiar with alternate missed approach procedures and said it was her expectation that they would be used when needed. When asked, she was not aware of an FAA form 8260 being on file for alternate missed approach procedures at

¹⁸ FALCON - A software system utilized for the instant / rapid replay of air traffic control operational incidents in a format much like the one displayed to the air traffic control specialist. It is used in terminal radar facilities to review training management issues, investigate accidents and operational errors, develop facility specific specialty training programs, and present facility-wide briefings on operational incidents.

¹⁹ Another term used to refer to the published Instrument Approach Procedure.

CUB because they had a published missed approach, and it was an uncontrolled airport. She said she was not aware of an FAA form 8260 being on file for CAE because it was a controlled airport. When asked about FAA Order JO 7110.65 4-8-9 requiring an approved FAA form 8260; she said that she was not aware of any being filed.

She said it was her expectation that the CAE ATCT controllers should solicit and document PIREPs when the weather was below 5,000 feet ceiling and 5 miles visibility and to pass them to an OS, who would enter them into AIS-R. She also expected the controllers to brief the PIREP to the relieving controller during their position relief briefing.

She described the TRACAB configuration as, radar at the local control position and tower at the ground control position. She said it was her expectation that all controllers would be actively working the control positions until someone was available to enter the PIREP into AIS-R. She said that ZJX ARTCC flight data may be called to enter a PIREP if the CAE controllers are too busy to enter it into AIS-R.

When asked about the writing of the schedule, she said it was written in collaboration with the local NATCA bargaining unit.

She said there were no additional weather tools missing that could be of use to the CAE ATCT controllers. She said she had no opinion on the usefulness of the PDWB.

She said there was a local safety council (LSC)²⁰ at CAE ATCT. When asked if they were operating under a collaborative workgroup scoping document, she did not know what that was. She said that she did believe there was a document that outlined the structure of the group and how they would operate. She said that during COVID the LSC was not active. She added that all face-to-face briefings had been stopped but that the monthly briefings were still entered into CEDAR²¹ for review. She was not aware of a deadline for the face-to-face briefings to start back up.

She stated that the staffing level for CAE ATCT was 14 CPCs; 2 were out of operation due to COVID, 2 were out of the operation due to being high-risk, and 3 were in training. Of the two new hires at CAE, one had prior terminal experience, and

²⁰ LSC - Local Safety Council - A collaborative management/labor union team that encourages employees to proactively engage in identifying and mitigating local safety concerns.

²¹ CEDAR - Comprehensive Electronic Data Analysis and Reporting - The CEDAR system provides air traffic management with an electronic means of capturing safety-related information, events, and metrics. It streamlines several facility managers' responsibilities, including assessing air traffic employee performance and managing resources, and provides a standard interface for the collecting, retrieving, and reporting of data from multiple sources. CEDAR automates the creation, management, and storage of facility activities and events; briefing items; occurrence reports; technical training discussions.

one had en route experience, however neither could be used for staffing. She said training had resumed in November 2020. She said the minimum COVID staffing level was 3 controllers and that number included controllers qualified in only radar or only tower. She said there had been no discussion about bringing back the high-risk controllers because they had been out more than 120 days and would require re-certification. She felt the staffing level was adequate if all the controllers were healthy.

She said there had been talk of reducing ATC facility hours due to COVID, however there was no pilot controlled lighting (PCL)²² at CAE, so they needed to stay open all night. She said that each facility was polled as to their capabilities, but that discussion had occurred before she arrived. She said she was unsure if there were any follow-on discussions with the airport authority to leave the lights on or to adjust airfield operating hours.

She was asked about FAA Order JO 7210.3BB, *Facility Operation and Administration*, regarding the guidance on ensuring operational duties in addition to administrative duties. She said she had reviewed the document and identified which duties could be delayed pending completion of operational responsibilities. She said that each supervisor determined if they were too busy to complete administrative duties and that there was no additional local facility guidance. She added that it was mission first and when the CIC or OS was not on position, they could continue to accomplish required administrative tasks.

She said the tower CIC should be standalone, however, when staffing prohibited that, it may be assigned to ground control based on traffic.

She said there were local procedures that defined the TRACAB configuration and when it should be used. She said the procedure was designed based on time of day, staffing, and traffic. She was unsure where the district guidance for TRACAB configuration was located.

The FAA form 7230-4, Daily Record of Facility Operation for the day of the accident indicated the facility was in a TRACAB configuration during the mid-shift hours and then showed it again later in the afternoon. She was unsure if the facility had stayed in a TRACAB configuration all day.

When asked what the PIREP log was, she said it was a spreadsheet located in both the tower and TRACON that was used to record the hour of the PIREP, weather conditions, and whether it had been entered into AIS-R. She said there was a memory aid area in the IDS²³ alerting controllers when PIREPs were required to be solicited.

²² PCL - Pilot Controlled Lighting - Also known as aircraft radio control of aerodrome lighting (ARCAL) or pilot-activated lighting (PAL), is a system that allows aircraft pilots to control the lighting of an airport or airfield's approach, runway edge, and taxiway lights via radio.

²³ IDS - Information Display System - A system that provides the ATC environment with a single point of

She said that during her review of this accident a "drift" was recognized with respect to the solicitation and dissemination of PIREPs and felt that another corrective action plan (CAP)²⁴ was needed. There had been a previous CAP addressing PIREPs in 2017 that was closed in 2018.

She stated the last external compliance verification (ECV)²⁵ was completed in 2019 but she was unsure if PIREPs had been reviewed. She said there was an internal compliance verification (ICV)²⁶ ongoing and that it was examining PIREPs and the performance of controllers.

Interview concluded at 1403

Interviewee: Matthew McDonald
Representative: Justin Mendelson

Date/Time: February 2, 2021 / 1045
Location: Conducted Virtually
Present: Marvin Frantz, Paul Suffern, John Kasel, Curt Fischer
Investigator: Charles Olvis

During the interview Mr. McDonald provided the following:

He entered on duty with the FAA in May 2017 reporting directly to CAE ATCT for duty. Prior to the FAA, he was in the USAF from July 2009 to May 2017 and was stationed at Tyndall AFB from March 2010 to May 2013 and Royal Air Force Base (RAF) Lakenheath from May 2013 until March 2017 when he was honorably discharged from the USAF.

He held a current class 2 medical clearance certificate with no restrictions. He was certified on all operating positions and was certified as a CIC. He held no other aeronautical licenses.

Mr. McDonald said his regular days off were Thursday and Friday. He normally worked two evening shifts, followed by an evening or day shift, followed by two day shifts. He reported his actual schedule leading up to the accident day was Saturday

access to static data, such as documents, lists, and maps, and to dynamic data, such as weather display systems or automated tools with quick accessibility to the controller.

²⁴ CAP - Corrective Action Plan - A plan of action that documents the interim mitigations, factors, corrective actions, and methods of verification to resolve a safety compliance issue. This plan includes dates of completed actions and/or expected dates for completion of all actions.

²⁵ ECV - External Compliance Verification - An ECV is conducted on-site utilizing the appropriate national checklist to assess a facility's overall performance. This evaluation is conducted every 2 years.

²⁶ ICV - Internal Compliance Verification - A facility's self-evaluation that is conducted by the facility/operations manager using the checklists and procedures outlined in this directive.

1415-2215, Sunday 1300-2100, Monday 1300-2100, and Tuesday and Wednesday 0600-1400.

On Monday, January 11, he awoke at 0900 and engaged in normal activities around home before his shift. He prepared for work at 1200 and left for work at 1245. He said that after work he went home and went to sleep at 2200; he reported no problems sleeping.

On Tuesday, January 12, he awoke at 0530 and left for work at 0545. After completing his shift, he returned home and engaged in normal activities around home. He went to bed at 2200; he reported no problems sleeping.

On Wednesday, January 13, he awoke at 0530 and left for work at 0545. He arrived to work at 0555 and received the PDWB. He checked CEDAR and then started his shift.

He did not recall anything notable about the PDWB on the day of the accident. He said the facility was in a TRACAB configuration and his first position assigned was local control, ground control, and clearance delivery combined to the local control position. He said Mr. Creech was the acting WSIC. He said the weather on the day of the accident there included reduced visibility as fog rolled in at the start of his shift but did not recall how thick the fog was. He said the control tower was about 100 feet tall and could not recall if he could see the runways.

He recalled there being normal morning air carrier departures. He did not remember specifically scanning the runways to see the airplanes but said he would always scan. He could see the cargo ramp lights across the airport, however, as the sun came up, he could no longer see the lights which defined where the cargo ramp was located. He said CAE did not have an ASDE-X²⁷.

He said breaks were 45 minutes. On the day of the accident, he was signed on to the radar position from 0944-1117. When he started working the radar position, he remembered there was a C-17²⁸ at North Air Force Auxiliary Field (XNO) requesting a re-route to their aerial refueling route (AR). The C-17 pilot wanted to add Charleston (CHS) to their flight plan, then on to the AR route. He was unable to correct the route in the FDIO²⁹ and advised the pilot they would have to file through their operations.

²⁷ ASDE-X - Airport Surface Detection Equipment-Model X - A surface movement radar that enables air traffic controllers to detect potential runway conflicts by providing detailed coverage of movement on runways and taxiways. ASDE-X collects data from a variety of sources to track vehicles and aircraft on the airport movement area and obtain identification information from aircraft transponders.

²⁸ The McDonnell Douglas/Boeing C-17 Globemaster is a large military transport aircraft developed and produced for the US Air Force.

²⁹ FDIO - Flight Data Input/Output - A system utilized to distribute flight plan information, weather information, and general information to associated Air Traffic Control facilities across the National Airspace System.

He said he had a VFR strip on N266DC but before he accepted the handoff on the airplane, the flight had been amended to an IFR flight plan. He took the radar handoff from Greer (GSP) ATCT. After the pilot checked on frequency, he asked the pilot to verify they were in receipt of the weather and to advise what approach was being requested; the pilot requested the RNAV Runway 13 approach. He said he was also working a P-8 conducting practice approaches at CAE. He said he cleared the accident aircraft for the approach and had issued the pilot alternate missed approach instructions. He advised the pilot to cancel the IFR in the air or on the ground and switched the flight to CTAF³⁰.

He said that he heard the accident pilot report going missed approach and then observed the radar target in a left turn to the assigned 050° heading. He then instructed the pilot to turn left heading 360°. He observed the airplane at 900 feet, followed by a descent to 600 feet, then experienced a loss of radar contact and observed the radar target go into "coast" [CST]³¹.

He advised Mr. Creech that he thought the aircraft had crashed. He said that before the accident, he did issue the weather at CAE and offered the RVR³² but the pilot did not respond. He told Mr. Creech to call the Richland County Sheriff's office. He then made multiple attempts to re-establish radio communications with the pilot of N266DC, with no response. He asked other aircraft on frequency to listen for an ELT³³ on 121.5. He said that no pilots reported receiving an ELT. He was unable to be relieved from position for a while following the accident due to low staffing.

When asked if he had heard the accident pilot request the approach minimums, he said he did and was getting the approach plates out when he heard the pilot say "or PIREPs" and then provided the pilot with a PIREP that had been received from a previous arrival into CUB. He said he could request the CUB weather

³⁰ CTAF - Common Traffic Advisory Frequency - A VHF radio frequency used for air-to-air communication at US, Canadian, and Australian non-towered airports.

³¹ CST - Coast Track - Status of an aircraft that is no longer giving a primary radar return. This will generate a track message on the air traffic controllers radar display utilizing the acronym "CST" and will temporarily continue displaying the aircraft's predicted movement based on the last known heading and speed.

³² RVR - Runway Visual Range - An instrumentally derived value, based on standard calibrations, that represents the horizontal distance a pilot will see down the runway from the approach end. It is based on the sighting of either high intensity runway lights or on the visual contrast of other targets whichever yields the greater visual range. RVR, in contrast to prevailing or runway visibility, is based on what a pilot in a moving aircraft should see looking down the runway. RVR is horizontal visual range, not slant visual range. It is based on the measurement of a transmissometer made near the touchdown point of the instrument runway and is reported in hundreds of feet. RVR, where available, is used in lieu of prevailing visibility in determining minimums for a particular runway.

³³ ELT - Emergency Locator Transmitter - A radio transmitter attached to the aircraft structure which operates from its own power source on 121.5 MHz and 243.0 MHz. It aids in locating downed aircraft by radiating a downward sweeping audio tone, 2-4 times per second. It is designed to function without human action after an accident.

on the FDIO but did not do it that day. He informed the pilot that a previous CUB arrival had gone missed approach at CAE before he was on position, about 45 minutes prior. He could not recall if the pilot had said that he had received the CUB weather.

He said that he issued alternate missed approach instructions to provide deconfliction with CAE approach traffic and to place the aircraft in a better position to conduct an approach at CAE in the event he went missed approach. He said that issuing alternate missed approach instructions was dependent on the situation at the time. When asked about the approach minimums at CUB, he said he would need to pull up the approach chart to get them.

He said that he had not solicited PIREPs but provided one by the pilot of the P-8 who had reported bases at 140 feet and tops at 1,300 feet. He said that PIREPS were solicited per the 7110.65 and all PIREPs were documented on a PIREP form. He said there were no opportunities for PIREPs available in the tower cab on the day of the accident. He wrote the P-8 PIREP on a note pad that he left in the tower but said there are usually PIREP forms available in the tower.

He said that PIREPs for icing or turbulence of moderate or greater were entered electronically in AIS-R; and added bases were not put into AIS-R. He said he would not transmit a PIREP of visibility or ceiling being reported below approach minimums. When asked about the CAE Order 7110.65 regarding significant PIREPs, he stated he was taught the ceilings were not significant and that icing, or turbulence were significant weather. He said he would advise the supervisor of any PIREPs for icing or turbulence.

He felt the PDWBs would be more useful if they were specific to South Carolina. He indicated that he would like more local weather from PDWB and found ITWS to be the most helpful weather tool available to him.

He said that he would enter PIREPs into AIS-R when he was the watch supervisor, however, he did not use AIS-R often enough to be comfortable with it. He would not make entries while he was working an operating control position. He said the IDS was located right of the tower and left of radar position. He said there was a PIREP memory aid box on the IDS, which was displayed on all IDS positions.

He said that going into, or coming out of, a TRACAB configuration was primarily dependent on staffing. With less than 4 people they needed to be in a TRACAB configuration, so no controller was forced to work by themselves. There was a checklist in the IDS to be used when going into a TRACAB configuration. This included a call forward to the local control position, having ZJX ARTCC put the

nighttime configuration in, configure the STARS³⁴, and make a log entry into the 7230-4. The FACREP [Mr. McDonald's representative] stated the TRACAB staffing decision was made outside the building at the district level. Mr. McDonald indicated the facility remained in a TRACAB configuration for his entire shift on the day of the accident.

When asked for the ways he could disseminate PIREPs, he said he would tell the pilot directly from the report he had received. He said if he were downstairs [in the TRACON], he would call the tower with bases and tops via the landline. He would pass PIREPs to ZJX ARTCC that might affect them, otherwise AIS-R was used to pass PIREPs. If a pilot was descending from ZJX ARTCC airspace and reported something that affected ZJX ARTCC, then he would pass that back to them. He would also pass the PIREP to the supervisor who would put it in AIS-R. He said PIREP procedures did not change when in a TRACAB configuration, except that because controllers were sitting next to each other they could relay PIREPs directly without using the landline.

When asked if he was aware of a CAP being developed at CAE ATCT because of this accident, he said he was not. He did not remember having any refresher training in the past year on PIREPs. He recalled something in CEDAR after the accident about PIREPs; he believed it was a memo.

He stated he was CIC(A) in radar on the day of the accident. He said he did not think the practice of scheduling only three controllers on a shift allowed him as CIC to comply with FAA Order JO 7210.3BB 2-6-2 g if the facility was busy. He said he was not concerned that non-control duties like PIREPs being entered into AIS-R, were not getting accomplished when staffed with only three controllers. He said that it was usually ok if the facility was not busy. He said CIC training covered the balance of duty priority between watch desk duties and operational position duties.

He was not sure if recalling people that were currently out on high-risk should be done to help with those other duties assigned to the watch desk and thought getting sick was even worse. He said he would call in OT if he was overall CIC.

When asked how often in a seven-day period CAE ATCT was in a TRACAB configuration, he said it depended on staffing. He said they went through a period of short staffing, so it was used more often during that time. He said no policy changes to the local CAE Order 7210.3 were made regarding when to go into a TRACAB configuration. He said prior to being quarantined, he would receive OT every shift.

³⁴ STARS - Standard Terminal Automation Replacement System - A system that receives radar data and flight plan information and presents the information to air traffic controllers on high resolution, 20" x 20" color displays allowing the controller to monitor, control, accept hand-off of air traffic, and assist with weather avoidance.

He said he had not watched a replay of the event. He said he had not worked the RNAV (GPS) Runway 13 approach into CUB in a while. He said normally they would run the LOC Runway 31 approach into CUB. He was unable to say if they normally get an LA alert on the RNAV (GPS) Runway 13 approach. Practice RNAV (GPS) approaches to CUB and returning to GSP or CAE required a turn back thru the CAE departure corridor. He said he would not extend the P-8 in the pattern as opposed to alternate missed approach instructions. He stated that he obtained a point out from local control. He had not been trained on, nor even heard of, FAA Form 8260.19.

He was not a member of the LSC.

Before ending the interview, he clarified why PIREPs of bases at CUB were not entered into AIS-R. He said that PIREPs at CAE would be more of an operational impact, whereas at CUB, PIREPs were not really an operational impact.

Interview concluded at 1215