National Transportation Safety Board
Office of Aviation Safety
Washington, DC 20594

DCA23FA149

AIR TRAFFIC CONTROL

Group Chair's Factual Report

October 18, 2023

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A. INCIDENT

Location: Austin, Texas
Date: February 4, 2023
Time: 0640 central standard time (CST)[1]
1240 coordinated universal time (UTC)
Airplane 1: Boeing 737-79P, N7827A, Southwest Airlines Flight 708 (SWA708)
Airplane 2: Boeing 767-32LF, N297FE, FedEx Flight 1432 (FDX1432)

B. AIR TRAFFIC CONTROL GROUP

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Group Member	Brandon Johnson Air Safety Investigator National Air Traffic Controllers Association (NATCA) Salt Lake City, UT

C. SUMMARY

On February 4, 2023, at about 0640 central standard time (CST), Federal Express (FedEx) flight 1432 (FDX1432), a Boeing 767-32LF, and Southwest Airlines flight 708 (SWA708) a Boeing 737-79P were involved in a runway incursion with overflight that resulted in a loss of separation at the Austin-Bergstrom International Airport (AUS), Austin, Texas. There were no injuries reported to the 128 passengers and crew onboard the SWA airplane or to the 3 crew members onboard the FedEx

[1] All times are in central daylight time (CDT) unless otherwise noted.
[2] A subject matter expert (SME) from AS-60 was embedded with, but not an actual member of the ATC group. A human performance (HP) section has been included within this report documenting pertinent HP information related to air traffic control.

airplane. SWA flight 708 was a regularly scheduled international passenger flight operating under the provisions of 14 *Code of Federal Regulations (CFR)* Part 121 from AUS to the Cancún International Airport (CUN), Cancún, Mexico. FedEx flight 1432 was a domestic cargo flight operating under the provisions of 14 *CFR* Part 121 from Memphis International Airport (MEM), Memphis, Tennessee to AUS.

D. DETAILS OF THE INVESTIGATION

On February 4, 2023, the air traffic control (ATC) work group was formed. Notification was made to the FAA advising our intent to conduct on-site investigative work at Austin Airport Traffic Control Tower (AUS ATCT), the facility that was providing services to both FDX1432 and SWA708 at the time of the incident. Notification clearly identified what personnel we were requesting to interview and that all interviews would be recorded (audio only) and provided for transcription in accordance with NTSB investigative procedure. The ATC work group was formed and consisted of the group chair and a human performance investigator from the NTSB, a subject matter expert from the FAA, and an air safety investigator (ASI) from NATCA. On-site investigative work was scheduled for the week of February 6, 2023.

On February 6, 2023, the group arrived in Austin, Texas and conducted an organizational meeting and reviewed the tentative agenda for the week.

On February 7, 2023, the group met at AUS ATCT and was provided an in-brief by the Air Traffic Manager (ATM) and members of his staff. Also in attendance at the meeting were representatives from the FAA's Safety Intelligence and Response Group (SIRG), Central Service Area Quality Control Group (CSA QCG), and Office of Accident Investigation and Prevention (AVP-100). The group was provided with an operational tour of the Terminal Radar Approach Control (TRACON) and tower cab with emphasis on the positions that provided services. The group then reviewed data and controller background information and conducted interviews with the Local Control East (LCE) controller and Operations Supervisor (OS) that were providing services from the tower cab on the morning of the incident. (The OS interview was conducted virtually as she had traveled to attend traffic management school in Warrenton, VA.)

On February 8, 2023, the group returned to AUS ATCT, reviewed additional data, and ensured receipt of all data and documentation that had been requested. The group conducted a supplemental interview with the LCE controller that had been interviewed the day prior, and interviews with the AUS ATCT NATCA Facility Representative (FACREP), and ATM.

On February 9, 2023, the group returned to AUS ATCT and conducted an interview with the Contract Weather Office (CWO) Supervisor. The group then

returned to the hotel, completed field notes, obtained concurrence, and concluded the on-site portion of the ATC field investigation.

E. FACTUAL INFORMATION

1.0 History of Flight

The following is a basic timeline constructed from certified audio recordings provided by the FAA[3].

0545:12 The LCE controller received a position relief briefing from the off-going mid-shift controller. This included information of very low visibility of 1/4 mile with obscuration, and that the lights were 'cranked up[4]' and there were RVR[5] values being reported.

NOTE: From the time the LCE controller signed onto the position and leading up to FDX1432 checking in, seven aircraft departed runway (RWY) 18L and three aircraft departed RWY 18R. RVRs were provided by the LCE controller 11 times to 10 flights as listed below. (Values are in feet and TD is touchdown, MP is midpoint, and RO is rollout Note: RWY 18R has no midpoint sensor):

TIME	AIRPLANE	RUNWAY	TD-V	MP-V	RO-V
0548:36	*Airplane 1*	*RWY 18L*	*1000*	*1400*	*1800*
0553:50	*Airplane 2*	*RWY 18L*	*1200*	*1200*	*1200*
0556:17	*Airplane 3*	*RWY 18L*	*1800*	*1200*	*1200*
0559:30	*Airplane 4*	*RWY 18L*	*1600*	*1600*	*1200*
0609:04	*Airplane 5*	*RWY 18R*	*1600*	*- - - - -*	*2000*
0611:35	*Airplane 6*	*RWY 18L*	*1200*	*2000*	*1400*
0613:00	*Airplane 7*	*RWY 18R*	*2800*	*- - - - -*	*1600*
0615:26	*Airplane 7*	*RWY 18R*	*2400*	*- - - - -*	*1600*
0617:01	*Airplane 8*	*RWY 18L*	*1200*	*1200*	*1200*
0622:54	*Airplane 9*	*RWY 18L*	*2400*	*800*	*1600*
0628:41	*Airplane 10*	*RWY 18R*	*1200*	*- - - - -*	*1600*

[3] A partial transcript of the ATC certified audio is included in Attachment 1: ATC Audio Transcript, and certified audio recordings are in Attachment 2 – ATC Audio Recordings.
[4] Cranked up referring to the lights being turned up to their highest intensity setting.
[5] 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.

0634:02 The crew of FDX1432 checked in with the LCE controller and reported established on the CAT III[6] ILS[7] approach for RWY18L. The controller provided the RVR values of touchdown-1400, midpoint-600, rollout-1800 and cleared them to land. The crew acknowledged.

0638:47 The crew of SWA708 checked in with the LCE controller holding short of runway 18L ready to go.

0638:58 The LCE controller provided the RVR values of touchdown-1200, Midpoint-600, rollout-1600, advised of traffic on a three-mile final [FDX1432] and cleared them for takeoff from RWY 18L.

0639:13 The crew of SWA708 acknowledged the clearance with a correct readback.

0639:29 The crew of FDX1432 queried the LCE controller to confirm they were cleared to land on RWY 18L.

0639:34 The LCE controller confirmed their landing clearance to RWY 18L and advised the crew of FDX1432 of traffic departing RWY 18L ahead of them.

0640:10 The LCE controller queried the crew of SWA708 to confirm they were on the roll. The crew responded in the affirmative.

0640:31 The crew of FDX1432 broadcast "Southwest abort"

0640:34 The crew of FDX1432 broadcast "FedEx is on the go"

0640:44 The LCE controller instructed SWA708 to turn right when able. The crew responded "negative."

SWA708 continued on their flight plan route, and FDX1432 executed a go-around and returned for landing on RWY 18L without incident.

2.0 Flight Track Surveillance Information

2.1 Automatic Dependent Surveillance – Broadcast

Certified ADS-B[8] data from FAA owned and operated ground stations was provided by the FAA, however, while all contained consistent data on FDX1432,

[6] CAT III - A category III Approach is a precision instrument approach and landing with no decision height or a decision height lower than 100ft (30m) and a runway visual range not less than 700ft (200m).

[7] ILS – Instrument Landing System – A precision instrument approach system that normally consists of a Localizer, Glideslope, Outer/Middle Markers, and approach lights utilized by a properly equipped pilot to conduct an ILS approach.

[8] ADS-B – Automatic Dependent Surveillance-Broadcast - A surveillance system in which an aircraft or vehicle to be detected is fitted with cooperative equipment in the form of a data link transmitter. The aircraft or vehicle periodically broadcasts its GPS-derived position and other information such as

these data contained minimal coverage of SWA708 prior to their becoming airborne. ADS-B data from other commercially available sources had additional data, with the most viable data being contained in the SAAB Aerobahn Data, which contained a detailed record of the location of both FDX1432 and SWA708 throughout the incident timeframe. These data were not available to ATC and therefore two sets of data are referenced in this report; the data available to ATC, and the data only available forensically and used by the NTSB's Office of Research and Engineering (RE) to conduct their performance study[9]. Please see the RE Performance Study for detailed flight track graphics and proximity information.

2.2 SAAB Aerobahn Information

The flight track information used in the RE Performance Study, and playback provided with this report[10] was provided by Saab, Inc. and is a recording from Saab's Aerobahn Global Flight Manager tool. Aerobahn Global Flight Manager is a commercial product typically used by airport operators and airlines to improve the efficiency of their operation. At the time of the incident, Aerobahn was being evaluated by commercial users and was not being utilized by air traffic control. A screen capture of this replay is provided below in figure 1.

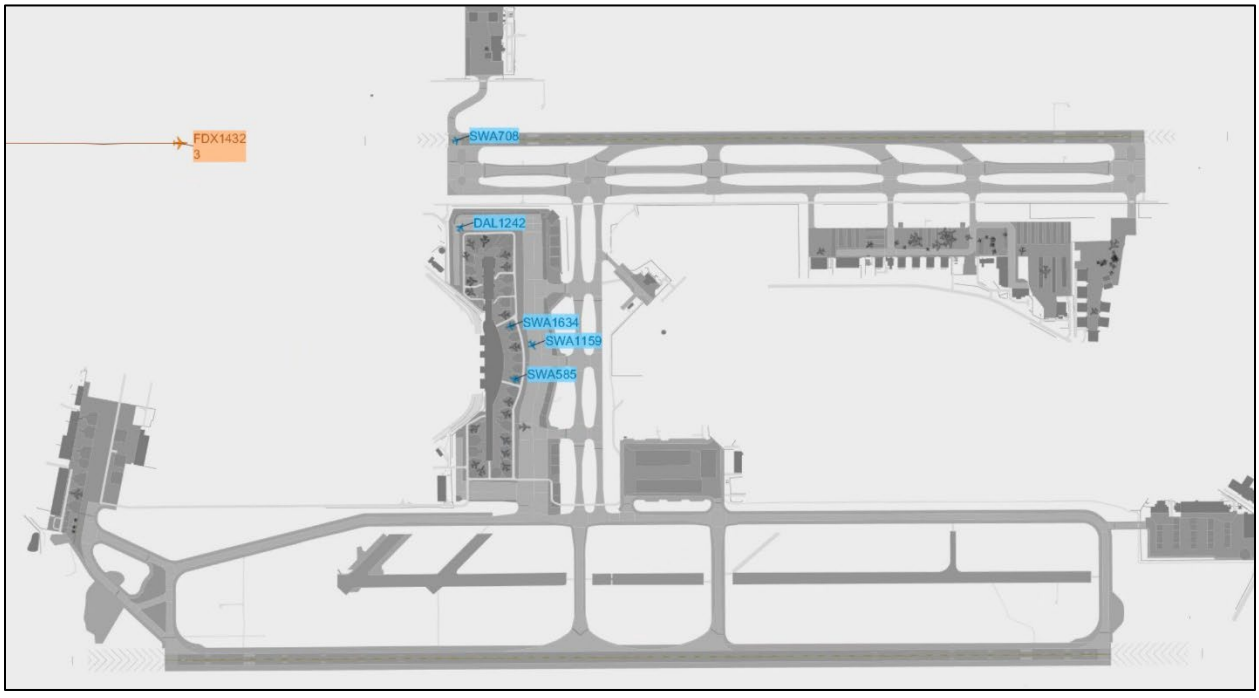

Figure 1: Screen capture of the SAAB Aerobahn Colllaborative Decision Making (CDM) and Efficiencies platform playback as viewed through a beta desktop application display.

velocity over the data link, which is received by a ground-based transmitter/receiver (transceiver) for processing and display at an air traffic control facility.

[9] The Office of Research and Engineering conducted an FDR and ADS-B Aircraft Performance Study on this event and is included in the public docket for this investigation.

[10] A playback of the SAAB Aerobahn data is provided in Attachment 3: SAAB Aerobahn Playback.

3.0 Meteorological Information

AUS, at an elevation of 542 feet had an Automated Surface Observing System (ASOS)[11] which was augmented by contract weather observers. The latest sectional chart for the area indicated a magnetic variation of 3.5° E over the area.

Surrounding the time of the incident the following reports were disseminated longline[12] to users. A review of the National Weather Service (NWS) products showed no SIGMETs[13] or Convective SIGMETs were current over the route of flight surrounding the time of the incident, however the Houston Air Route Traffic Control Center (ZHU ARTCC) Center Weather Service Unit (CWSU) issued a Center Weather Advisory (CWA)[14] #101 at 0457 CST, which was valid through 0700 CST for LIFR[15] conditions. There was also valid G-AIRMET[16] and both the CWA and G-AIRMET are detailed in section 3.3 below. The reported conditions at the time of the incident are provided below.

3.1 Surface Observations

At 0618, AUS[17] reported wind calm, visibility of 1/4 statute mile, runway 36R RVR 1800 variable 2400 feet, freezing fog, vertical visibility 200 feet above ground level (agl), temperature -1° Celsius (C), dew point temperature -1° C, and altimeter

[11] ASOS – Automated Surface Observing System – Automated sensor suites equipped with meteorological instruments to observe and report wind, visibility, ceiling, temperature, dewpoint, altimeter, and barometric pressure. These systems generally report at hourly intervals, but also report special observations if weather conditions change rapidly and cross aviation operation thresholds.
[12] "Longline" refers to the dissemination of weather observations with the intent that they are available in near-real time to national databases (effectively, the whole world) and accessible to the general public from a large number of vendors. This does not include public accessibility to observations from a reporting station's Very High Frequency (VHF; line-of-site) or telephone broadcast, where applicable. Longline dissemination of weather observations is the primary vehicle through which the general public has access to surface weather observations, particularly outside of the aviation community.
[13] SIGMET – Significant Meteorological Information - A weather advisory issued concerning weather significant to the safety of all aircraft. SIGMET advisories cover severe and extreme turbulence, severe icing, and widespread dust or sandstorms that reduce visibility to less than 3 miles.
[14] CWA – Center Weather Advisory - An aviation weather warning for conditions meeting or approaching national in-flight advisory (AIRMET, SIGMET or SIGMET for convection) criteria. The CWA is primarily used by air crews to anticipate and avoid adverse weather conditions in the en route and terminal environments.
[15] LIFR – Low Instrument Flight Rules – IFR weather conditions when ceilings are less than 500 feet above ground level and/or visibility is less than 1 mile.
[16] G-AIRMET – Graphical Airmen's Meteorological Information - A decision-making tool based on weather "snapshots" displayed at short time intervals. The Aviation Weather Center (AWC) issues them every 6 hours and are updated/amended as necessary, coincident with the text AIRMET products.
[17] The NWS uses the 4-digit International Civil Aviation Organization (ICAO) format for station identifiers (as seen in the body of some formatted weather observations). This report uses the 3-digit International Air Transport Association format for station identification, which does not use the geographic designating digit ("K" for stations in the continental U.S. and "P" for U.S. stations in Alaska and the Pacific region) as found in the ICAO format.

30.43 inches of mercury. Remarks: automated station with a precipitation discriminator, temperature -0.6° C, dew point temperature -0.6° C.

AUS was reporting LIFR conditions, and the longline observations that were disseminated on weather circuits and general flight categories were as follows (observation closest to incident time is in bold for emphasis):

LIFR METAR KAUS 041153Z 00000KT 1/4SM R36R/1800V2400FT FG SCT002 02/M01 A3043 RMK AO2 SLP309 T00171011 10028 21022 56011=

LIFR SPECI KAUS 041200Z 00000KT 1/4SM R36R/1800V2400FT FZFG SCT002 M01/M01 A3042 RMK AO2 T10061006=

LIFR SPECI KAUS 041218Z 00000KT 1/4SM R36R/1800V2400FT FZFG VV002 M01/M01 A3043 RMK AO2 T10061006=

LIFR SPECI KAUS 041247Z 00000KT 1/8SM R36R/1800V2400FT FZFG VV002 M01/M01 A3043 RMK AO2=

3.2 Pilot Weather Reports

A search of pilot weather reports or PIREPs[18] within 50 miles surrounding the period indicated no reports from 0000 through 0900 CST over the area.

3.3 In Flight Advisories

The NWS Houston CWSU issued a CWA #101 at 0457 CST, which was valid through 0700 CST for LIFR conditions over the region with ceilings below 500 feet agl, and visibilities at or below 1/2 mile in fog. The CWA advisories that were current are depicted in figure 2.

The NWS issued a G-AIRMET at 0245 CST that was valid through 0700 CST for a large area of IFR conditions over Texas which included the incident location. The applicable G-AIRMET is depicted in figure 3.

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

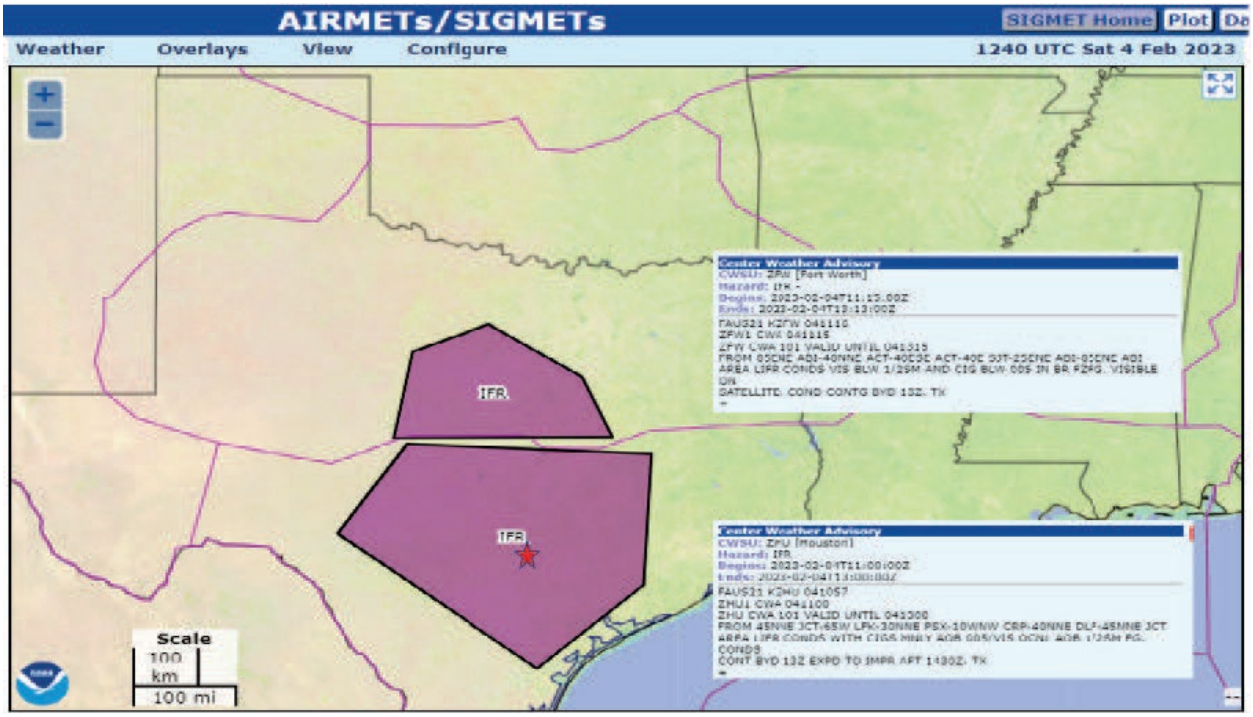

Figure 2. Center Weather Advisory (CWA) current for LIFR conditions over the area. The approximate incursion location is marked by the red star.

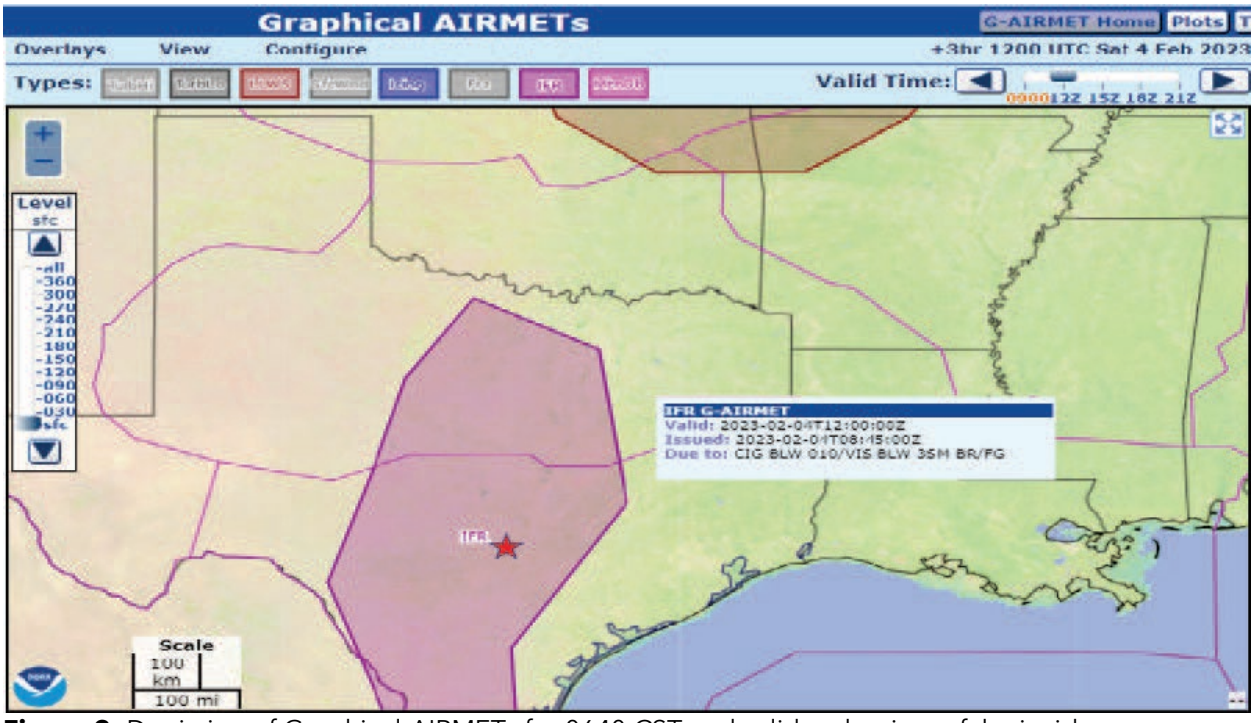

Figure 3: Depiction of Graphical-AIRMETs for 0640 CST and valid at the time of the incident.

3.4 Contract Weather Office

AUS has an assigned Contract Weather Office (CWO) that is staffed with six certified weather observers assigned to monitor and augment the installed ASOS and provide general weather support to the airport and ATCT. The CWO operates 24 hours a day, with one person on shift at a time. The office is located on the 2nd floor of the tower, has no windows, and has no access to the internet. There is no "normal point of observation" and taking an observation requires observers to go down two flights of stairs to the ground floor and complete their observations from several areas around the tower structure. CWO staff must go outside and use their personal cell phones to access the internet to review weather radar information, or to access other NWS related products, and connectivity is intermittent especially when weather was impacting the area.

3.4.1 CWO Supervisor

The CWO Supervisor was a certified weather observer, had been certified since 1995 and had been assigned to AUS ATCT for the last 20 years. The CWO Supervisor was not working at the time of the event, however, considering the meteorological conditions at the time of the event, was interviewed by the group.

3.4.2 CWO Equipment

The CWO did not have the appropriate equipment to adequately perform their assigned duties. The only equipment located in their office was an ASOS monitor. They did not have internet access to monitor weather radar, or access NWS products. They were provided a computer by the FAA to access the FAA intranet, however they were unable to log onto it without an FAA email address, and they had been unsuccessful after repeated requests in getting one, and therefore the computer remained off and unused.

3.5 Weather Sensor Information

There was an ASOS installed at the facility, and more detailed information is available in the Meteorology factual report. The technical operations person that maintained this equipment was not available while we were on-site at AUS. Figure 4 below shows the location of the installed sensors, with photos of the main and back-up arrays inset. According to the interview conducted with the CWO Supervisor, there had been long-term accuracy concerns regarding the reported temperatures from their installed ASOS. According to the CWO Supervisor, it was believed to be linked to its physical location on the airfield. The location was such, that it sat low in sort of a "bowl", and allowed the cold air to sink, and provided temperature readings that could be significantly lower than that on the airport operating area. Locally based airlines had significant concern with regards to its effect on their deicing requirements. The CWO was able to verify this disparity, and therefore began

augmenting the METARs when the disparity was noted but was then instructed by the FAA to stop, and they no longer augmented the temperature values.

Figure 4. Location of ASOS Main and Backup weather sensor arrays.

4.0 Air Traffic Control Facility

AUS ATCT was a level 9 combined tower and Terminal Radar Approach Control (TRACON) facility, commonly referred to as an "up-down." The TRACON was not involved with this event and the on-site investigation was focused on the services provided by the tower. Figure 5 shows the positions that the LCE controller and OS were working from at the time of the incident with pertinent equipment information annotated. Figure 6 shows two places that RVR information can be accessed by controllers, with the RVR display panel or the RVR selection on the NAS Information Display System (NIDS)[19]. Figure 7 is a close-up photo of the tower radar display workstation replay that was recorded from the day of the incident. AUS ATCT was not equipped with any form of surface surveillance/detection capability.

[19] NIDS – NAS Information Display System – Replacement tool for the Information Display System (IDS-4) that integrates a number of systems displaying traffic, weather, and surveillance data, into one easy-to-use and fully customizable workstation with a touchscreen display.

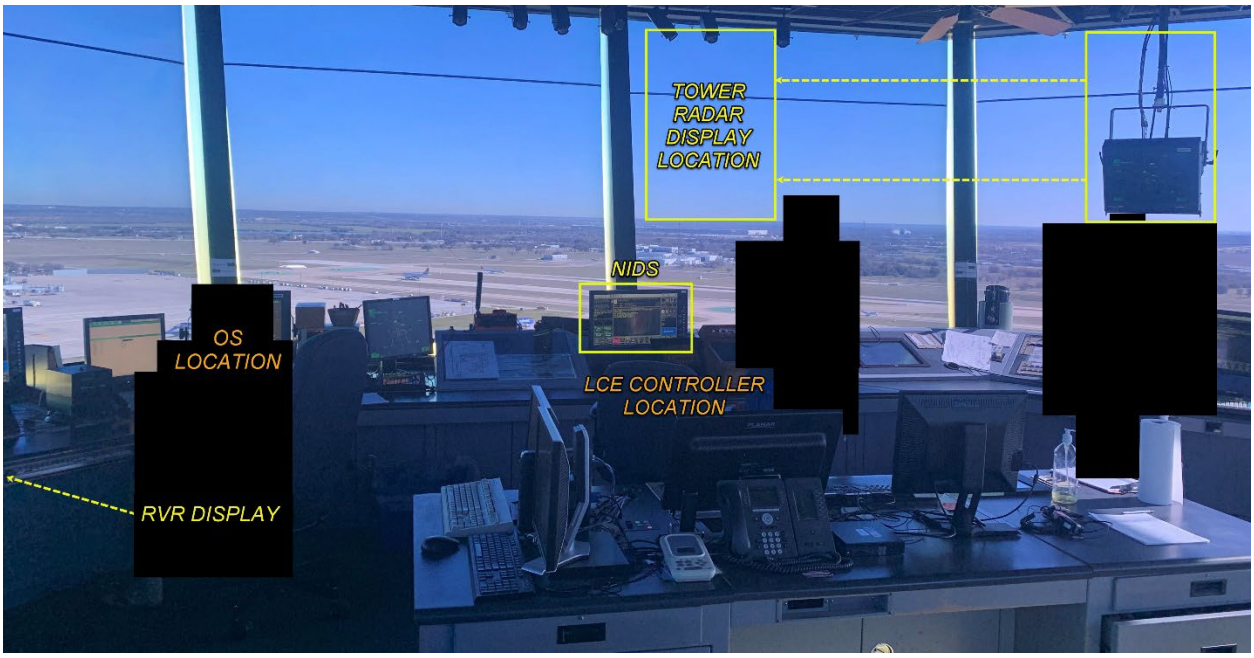

Figure 5. Tower cab shows applicable control positions and pertinent equipment locations (individuals redacted for privacy).

Figure 6. Photographs of RVR Display Panel (left) and the RVR Display on NIDS (right) – (NOT the values from the time of the incident).

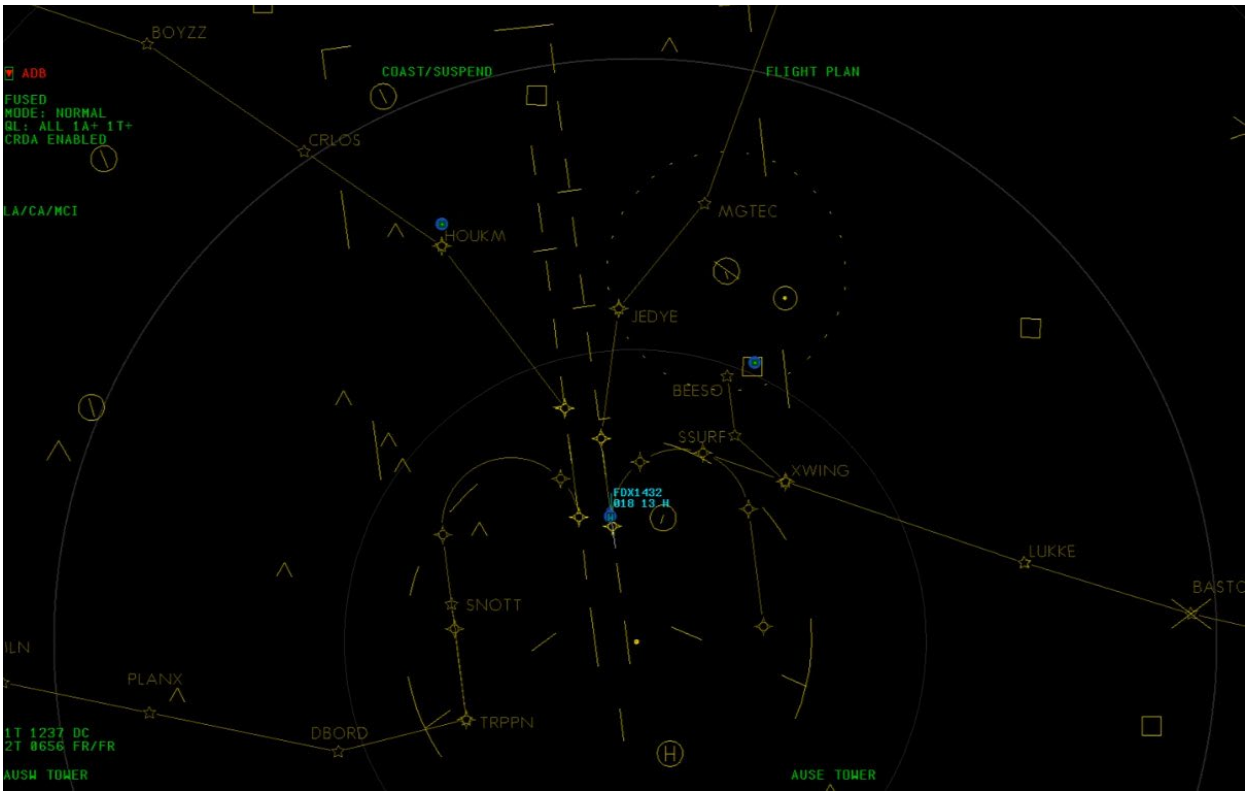

Figure 7. Close up photograph of tower radar display as it was set up on the morning of the incident. FDX1432 can be seen near the center of the display.

4.1 Facility Staffing

According to information provided by the FAA, AUS ATCT was authorized six OSs and had three onboard with a fourth OS on detail outside the facility. There was one authorized Operations Manager (OM) with none onboard, and a vacancy announcement was pending. They were authorized a Certified Professional Controller (CPC) staffing increase in September 2022 from 38 to 42 CPCs. They had 33 CPCs and 5 trainees onboard and a vacancy announcement was pending. In 2022 the facility had one CPC loss via the National Centralized Employee Requested Reassignment (ERR) Process Team (NCEPT)[20], one CPC loss due to promotion, and one CPC loss to Runway Safety. There was one additional CPC on full time Terminal Flight Data Manager (TFDM)[21] Article 114[22] duties. During the period from February 1,

[20] The NCEPT is comprised of representatives from FAA and NATCA, and its goal is to facilitate timely releases of controllers requesting transfers and improve the distribution of the workforce.
[21] TFDM is part of the Program Management Organization (PMO). Within the PMO, the Air Traffic Systems (ATS) Directorate is responsible for systems that support air traffic operations today, as well as for developing new surveillance and automation tools that are the basis for NextGen. TFDM is one of the seven NextGen Transformational Programs and one of three Traffic Management Programs in the ATS's Decision Support Systems.
[22] Article 114 refers to an article in the FAA-NATCA Collective Bargaining Agreement (CBA) that identifies workgroups of controllers and managers that work collaboratively to modernize and improve the National Airspace system, and to enhance work life and productivity of employees.

2022, through January 31, 2023, the average time on position for CPCs was 4 hours 38 minutes. The average time on position inclusive of other duties as assigned was 5 hours and 45 minutes.

On the morning of the incident, there were five CPCs, one CPC-in training (IT)[23], and one OS on duty. In the tower cab, there was one CPC-IT (fully certified in the tower, but still in training in radar) and one OS on position. The Local Control West and Local Control East positions were combined and being worked by the CPC-IT from the Ground Control East position. The Ground Control (GC) West, Ground Control East, Clearance Delivery (CD), and Tower Oversight positions were combined and being worked by the OS to gain currency time in the tower and were being worked from the Clearance Delivery position[24].

4.2 Interviewed Air Traffic Control Personnel

The LCE controller and OS that were working in the tower at the time of the incident, NATCA facility representative (FACREP), and the ATM were interviewed, and all interviews were recorded and transcribed by Free State Reporting, Inc.[25]

4.2.1 Local Control East Controller

The LCE controller was combined with the local control west (LCW) position and working from the Ground Control East (GCE) position in the tower cab and providing services to both FDX1432 and SWA708 at the time of the incident. He had been certified on LCE since July 2019 and was current and proficient in accordance with facility standards on the day of the incident. He held a second-class medical clearance with a waiver for sleep apnea for which he was prescribed a Continuous Positive Airway Pressure (CPAP) machine that he stated he used as prescribed. Toxicology testing was conducted as a result of this event; however, it was not performed until Sunday, more than 24-hours after the incident which was not as prescribed in *CFR* Part 120. No documentation was available or provided by the FAA as to the reason for the delayed testing.

4.2.2 Operations Supervisor

The OS was combined with GC and CD positions and working from the CD position in the tower cab at the time of the incident. She was current and proficient in

[23] The CPC-IT was fully certified in the tower, however, was still training in radar. There was no requirement for the controller to be monitored in the tower.
[24] AUS ATCT Daily Facility Operations and Position logs, as well as ART Viewer (program used for controller scheduling) daily summary are provided in Attachment 4: AUS ATCT Facility Logs and Records.
[25] Certified transcripts of all recorded interviews are included in Attachment 5: Interview Transcripts. Each person interviewed received a copy of the transcript for their review prior to being placed as an attachment to this report.

accordance with facility standards on the day of the incident. She held a second-class medical clearance with a requirement to wear corrective lenses while performing ATC duties and she stated that she was wearing them at the time of the incident. Toxicology testing was conducted as a result of this event; however, it was not performed until Monday, more than 48-hours after the incident which was not as prescribed in *CFR* Part 120. No documentation was available or provided by the FAA as to the reason for the delayed testing.

4.2.3 NATCA Facility Representative and Certified Professional Controller

The NATCA FACREP was a CPC and was not on duty at the time of the incident; however, he had worked in the tower during the overnight shift prior to the incident. He was facility rated on all control positions within both the tower and TRACON and had been working at AUS ATCT since December 2013.

4.2.4 Air Traffic Manager

The AUS ATM was not in the facility at the time of the incident. He came to AUS ATCT from Denver TRACON (D01) in March 2021. He had spent almost 16 years at D01 where he held several positions from CPC to Support Manager for airspace and procedures. He arrived at AUS ATCT just as the COVID pandemic was rapidly spreading and impacting ATC facilities across the National Airspace System (NAS).

4.3 Air Traffic Control Training

A review of facility training records and documentation revealed that the LCE controller had failed to complete 24 required refresher training items[26]. The review also revealed that several other controllers were also missing numerous required training items. Records did indicate that the LCE controller had received a facility verbal briefing regarding "Inaction during critical phase of flight" in September 2019. Additionally, the ATM stated that he had directed all facility OSs to conduct team meetings with all employees clarifying required action even during critical phase of flight, but the group was unable to determine if the LCE controller had attended these meetings through the review of provided training records.

The facility was equipped with a 'suitcase style' (portable with small monitors and limited capabilities) tower simulator system (TSS), however all ATC staff interviewed stated the simulator's limited capabilities and intermittent performance was not adequate to conduct meaningful simulations. They also stated however, that they had never actually used the simulator themselves, and were speaking either third-hand or had only "observed" others attempts to use it. The system had replaced the procedure in which staff used to travel to San Antonio (SAN) ATCT to conduct

[26] All facility training records pertaining to the LCE controller are provided in Attachment 6: AUS ATCT Training Records – LCE Controller.

tower simulator training on the full scale TSS located there. The ATM, who was also filling the role of Training Administrator, stated they had no known AUS scenarios/simulations built for the simulator, and was unaware of any plans to create them. He did not feel that the portable TSS was a valuable training tool for staff there.[27]

4.4 Air Traffic Control Procedures

4.5 FAA Orders[28]

FAA Order 7110.65Z, Air Traffic Control

FAA Order 7210.3CC, Facility Operation and Administration

4.6 AUS ATCT Facility Orders[29]

AUS ATCT Order 7210.3, Standard Operating Procedures

AUS ATCT Order 3120.4C, AUS ATCT Technical Training

5.0 Surface Movement Guidance and Control System Program

AUS ATCT and the City of Austin Department of Aviation (DOA) entered into a Letter of Agreement (LOA) for the purpose of standardizing operations during low visibility conditions[30]. This LOA, also referred to as the "SMGCS Plan" was known to exist by all those interviewed, and all assumed they had received initial training on it at some point but could not recall any training specifically, initial or refresher. The OS stated she was "familiar" with the SMGCS plan but could not recall a time in which she had ever been a part of it being active. She said that on the morning of the incident, she had not officially entered SMGCS because the RVR was not consistently below 1200. She stated however, that she was using the SMGCS taxi instructions and had the surface lights turned up. The LC controller could not provide any details as to what the SMGCS plan contained, or what his duties or responsibilities would be during SMGCS operations.

At the time of the incident, there was an FAA Advisory Circular (AC 120-57B, Surface Movement Guidance and Control System) that provided guidance in the development of SMGCS plans for US airports where scheduled air carriers were authorized to conduct operations when visibility was less than 1,200 feet RVR. Since

[27] All related facility training documents are provided in Attachment 8: AUS ATCT Facility Training Documentation.
[28] The pertinent FAA Orders are available online at www.faa.gov
[29] The pertinent AUS ATCT Facility Orders are provided in Attachment 7: AUS ATCT Facility Orders.
[30] A copy of the SMGCS Plan LOA is provided in Attachment 9: Letter of Agreement: LVO-SMGCS Plan Letter of Agreement (LOA)

then, the FAA has published a revised Advisory Circular (AC 120-57C, Low Visibility Operations/Surface Movement Guidance and Control Systems (LVO/SMGCS).

F. LIST OF ATTACHMENTS

Attachment 1: ATC Audio Transcript
Attachment 2: ATC Audio Recordings
Attachment 3: SAAB Aerobahn Playback
Attachment 4: AUS ATCT Facility Logs and Records
Attachment 5: Interview Transcripts
Attachment 6: AUS ATCT Training Records – LCE Controller
Attachment 7: AUS ATCT Facility Orders
Attachment 8: AUS ATCT Facility Training Documentation
Attachment 9: LVO-SMGCS Plan Letter of Agreement (LOA)

Submitted by:

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