



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

April 10, 2015

Group Chairman's Factual Report

AIR TRAFFIC CONTROL

CEN15FA056

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A. INCIDENT

Location: McDade, Texas
Date: November 23, 2014
Time: 0944 central standard time¹ / 1544 universal coordinated time²
Airplanes: N14AV, Aero Commander 500A

B. AIR TRAFFIC CONTROL GROUP

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C. SUMMARY

On November 23, 2014, at about 0944 central standard time, an Aero Commander 500A airplane, N14AV, impacted terrain near McDade, Texas. The airline transport pilot, the sole occupant, was fatally injured, and the airplane was substantially damaged. The airplane was registered to and operated by Aerial Viewpoint Aerial Photography under the provisions of 14 Code of Federal Regulations Part 91 as a positioning flight. Visual meteorological conditions prevailed for the flight and no flight plan was filed. The flight departed the David Wayne Hooks Memorial Airport (KDWH), Houston, Texas, at 0854 and was en route to the Austin Executive Airport (KEDC), Austin, Texas.

D. DETAILS OF THE INVESTIGATION

The air traffic control group convened on Monday, December 1, 2014. The group met with Bob Morris, Austin air traffic control tower (AUS ATCT) air traffic manager (ATM) for an in brief. Others present were Jeff Stein, AUS support specialist, Nick Fuller, event investigation manager, Greg Blackford, the AUS National Air Traffic Controllers Association (NATCA) facility representative, and John Crawford, Federal Aviation Administration (FAA) Central Service Area (CSA) quality control group. The group received an inbrief from the facility that included a review of the ATC services provided to N14AV and a tour of AUS. The workgroup reviewed all AUS data related to the incident and reviewed the training folders for the controllers to be interviewed. The group interviewed Michael Rauner, the off-going Radar East controller, and Brian Potter, the front line manager.

¹ All times are expressed in central standard time unless otherwise noted.

² UTC – Coordinated Universal Time – an international time standard using four digits of a 24-hour clock in hours and minutes based on the time in Greenwich, England.

On Tuesday, December 2, 2014, the group reconvened at AUS and conducted interviews with Michael Rauner, the accident controller working the Radar East sector, support specialist Jeff Stein, Michael Powers, a frontline manager (FLM) that had assisted with the accident, and the ATM. The group requested additional data in support of the investigation.

On Wednesday, December 3, 2014, the group reconvened at AUS and met with Bob Morris for an out brief. Others present were staff from AUS, Nick Fuller, and John Crawford. Joining via telcon were staff and managers from the Central Service Area and FAA headquarters.

E. FACTUAL INFORMATION

1.0 History of Flight (UTC)

At 1522:16, N14AV contacted Austin approach control level at an altitude of 6,500 feet after Houston terminal radar approach control (TRACON) had passed responsibility of the flight to Austin approach control. After acknowledging the pilot, the AUS Radar East sector air traffic controller issued the pilot the Austin altimeter of 29.66 inches of mercury.

At 1527:59, the pilot of N14AV reported he was descending; there was no reply or acknowledgement from the controller.

At 1544:23, the last radar target for N14AV was detected by the AUS ASR-9 radar indicating an altitude of 800 feet mean sea level.

At 1546:40, the controller told the pilot of N14AV that radar service was terminated and approved a frequency change. There was no acknowledgement or reply by the pilot.

There were no further communications with the pilot.

2.0 Radar Data

Radar data for this report was obtained from the Standard Terminal Automation Replacement System (STARS) recordings of radar targets from the airport surveillance radar (ASR-9) located at the Austin Bergstrom International Airport.

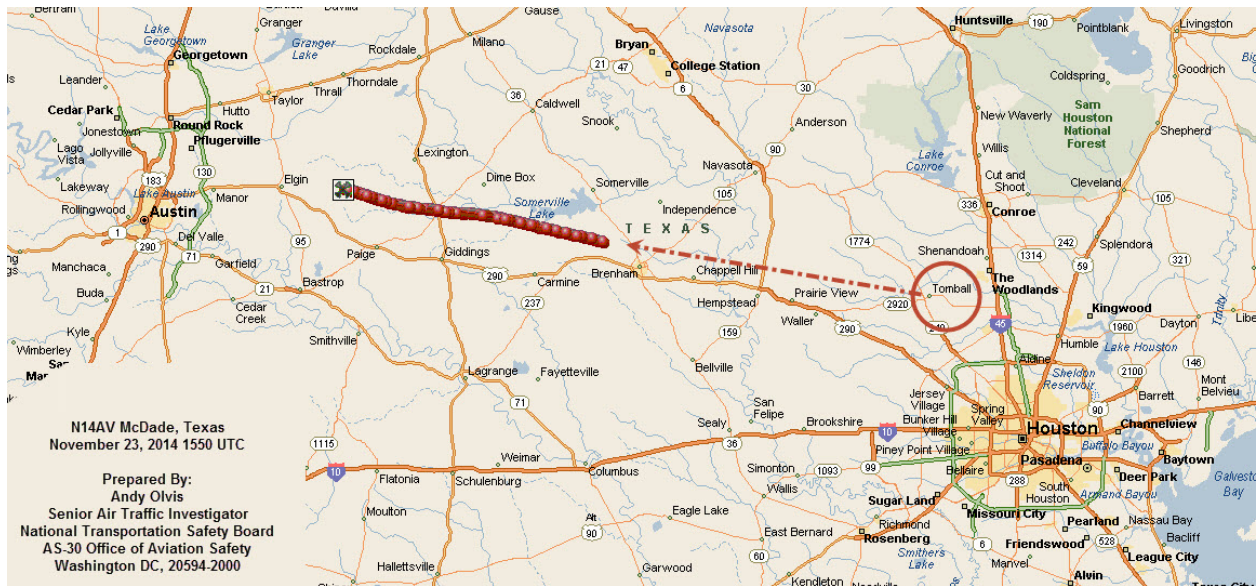


Figure 1 - Image depicting the departure airport and route towards KEDC.

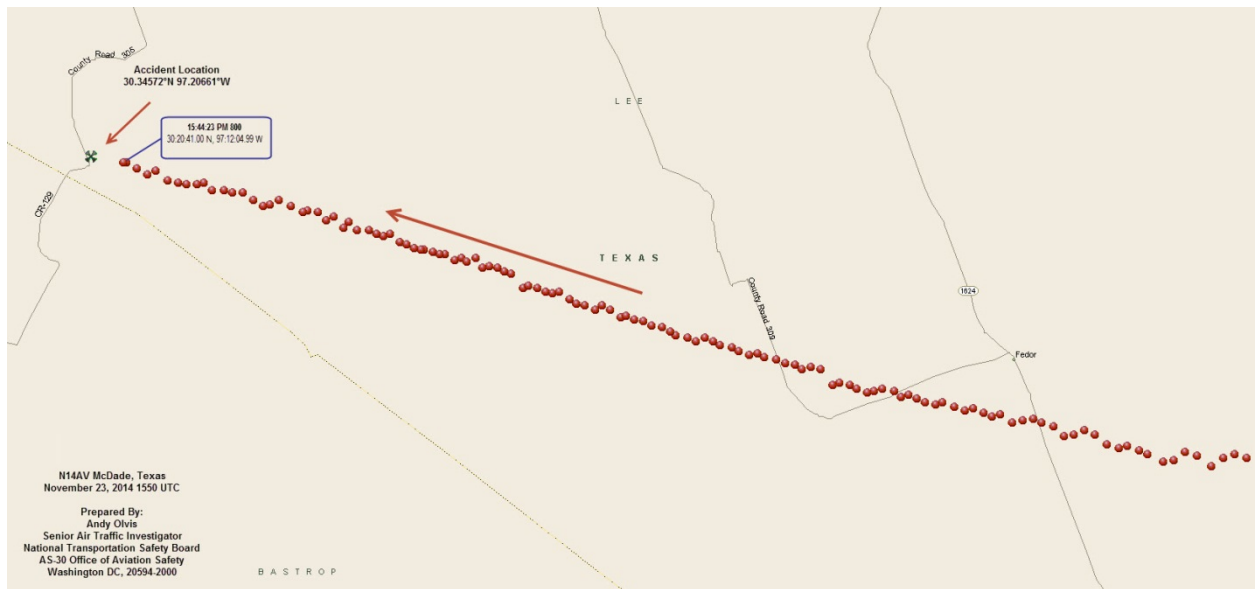


Figure 2 - STARs .PPB radar plot of the flight as it progressed towards KEDC.

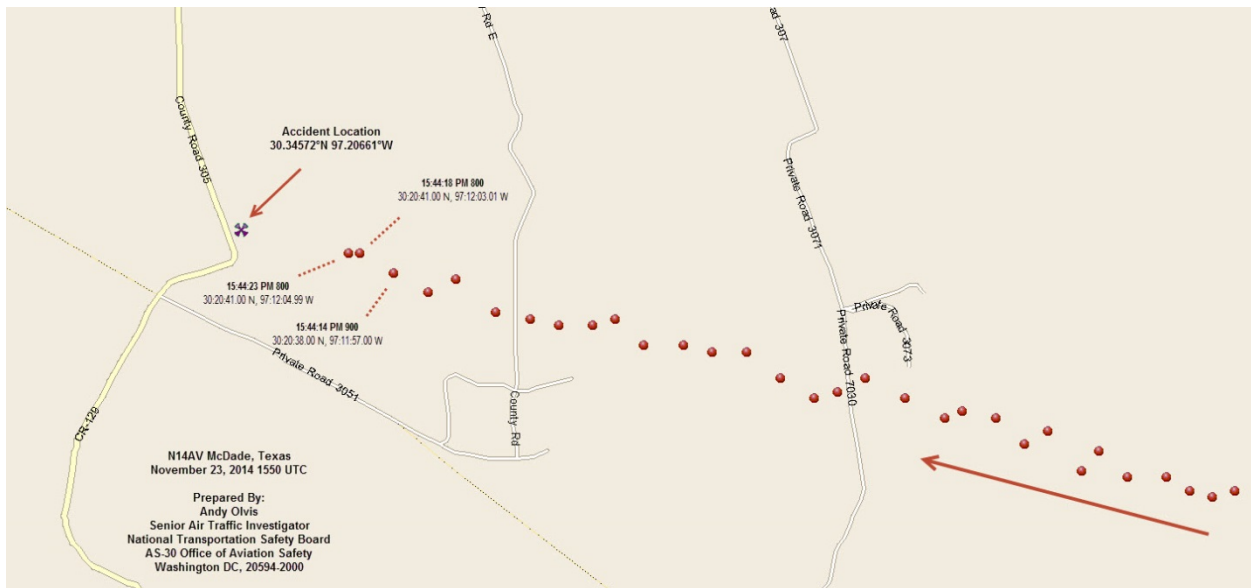


Figure 3 – STARS .PPB radar plot indicating the final segment of the flight.

3.0 Weather Information

The EDC airport weather was obtained from commercially available historical weather data.

KEDC AUTO 231535Z AUTO 23009KT 10SM CLR 18/13 A2966 RMK AO2

KEDC weather at 1535 UTC, wind 230 degrees at 9 knots, visibility 10 statute miles, sky clear, temperature 18° celsius (C), dew point temperature 13° C, altimeter setting of 29.66 inches of mercury.

4.0 Personnel Interviews

4.1 Radar East Off Going Controller

Mr. Michael Rauner began working for the FAA in July 2009. He had no previous ATC experience. He attended the FAA training facility in Oklahoma City, Oklahoma for basic air traffic control from July 2009 until October 2009. After graduating from the FAA training program in October 2009, Mr. Rauner transferred to Austin ATCT. He was qualified on all positions in the TRACON and tower, and was designated a controller in charge (CIC). Mr. Rauner's medical certificate was current with no restrictions, and he held no other aeronautical ratings.

On the date of the accident Mr. Rauner was working his regular scheduled shift of 0700 to 1500. He had taken a handoff from Houston TRACON on N14AV. A short time later, the pilot contacted Austin approach reporting level at 6,500 feet; Mr. Rauner issued the altimeter and the pilot acknowledged. A short time later, the pilot advised Mr. Rauner he was descending. Mr. Rauner believed he had acknowledged the pilot, but was not certain. For the next 15 to 20 miles, Mr. Rauner observed the aircraft in a gradual descent; there was nothing out of the ordinary for the flight.

A short time later, Mr. Cole arrived to assume the Radar East control position. Mr. Rauner provided Mr. Cole a position relief briefing, including a brief of all active traffic. When conducting a relief briefing, Mr. Rauner said his practice was to point to the active traffic, working from top to bottom on the radar indicator. Depending on the circumstances and amount of time available, Mr. Rauner would use the flight progress strips to assist in the brief. Mr. Rauner remembered there was a flight progress strip on N14AV. After the position relief had been accomplished, Mr. Rauner conducted the required two-minute overlap and was “plugged in³” at an adjacent position. He could not recall the altitude of N14AV during the two-minute overlap, but did remember watching the radar indicator. After the two-minute overlap was complete, Mr. Rauner went on break.

After he returned from break, Mr. Rauner was working the approach data position when he heard the FLM, Mr. Potter, take a telephone call from the Sheriff’s department about an aircraft accident. Mr. Potter asked the controllers if any of them had lost an aircraft near the reported location. At first, none of the controllers thought much of it because no one had worked any air traffic near the initial reported area. A short time later, Mr. Cole, who was still working the Radar East position, remembered there had been an aircraft that had been low in the area and suspected that the downed aircraft was possibly N14AV. Mr. Potter conducted a FALCON review and observed N14AV in the area; he believed it was involved in the accident. According to Mr. Rauner, Mr. Potter did not have Mr. Cole relieved from the Radar East position because Mr. Potter was busy conducting an event review. Mr. Rauner was no longer involved in the accident and moved on to other responsibilities.

Mr. Rauner terminated VFR services to most aircraft landing at satellite airports after the pilot reported the airport in sight. Occasionally, he would make sure the VFR aircraft had the current weather, but that was traffic and workload dependent. When he was in training, Mr. Rauner said that his instructor did not provide him a “hard and fast rule” about when to terminate aircraft going into satellite airports. If an aircraft that he was responsible for had gone into coast mode (CST, indicating loss of radar contact) and he was unable to contact the pilot via radio, Mr. Rauner would notify the supervisor and get his opinion of the aircraft status. Mr. Rauner understood that an aircraft in CST mode was not in radar contact, and that he should transmit “radar contact lost” to the pilot. Mr. Rauner would file the flight progress strips after he terminated radar service on VFR arrival aircraft.

For an aircraft on an IFR flight plan landing at a satellite airport, Mr. Rauner would use the technique of placing a STARS ring around the airport as a reminder to get the cancellation time from the pilot.

It was Mr. Rauner’s experience that Austin air traffic controllers would lose radar contact on aircraft 5 to 10 miles from satellite airports. There were instances when tracked targets would drop to CST for one or two sweeps, and that they might lose radar contact on targets farther away from the antenna and at a lower altitude. It was his general practice to notify the pilot when they were radar contact lost, and to notify the supervisor. A lot would depend on if Mr. Rauner

³ “Plugged in” refers to air traffic controllers having their headsets inserted into the communications system headset jack.

observed a 1200 beacon code and the track was in CST indicating to Mr. Rauner that the pilot had switched to the common traffic advisory (CTAF) frequency on their own.

Mr. Rauner did not use memory aids when working traffic to satellite airports. He would use data blocks on the radar indicator with a scratch pad indicating the destination airport. Mr. Rauner said if he observed an aircraft excessively low, he might advise the pilot.

Mr. Rauner had known Mr. Cole for about five years. They had a good working relationship but were not friends outside of work. He had not talked to Mr. Cole about the accident since it occurred; however, they had discussed filling out the Air Traffic Safety Action Program (ATSAP) forms. His opinion of Mr. Potter was that he was a good supervisor and helped out the controllers.

Mr. Rauner had no complaints about the facility training program and felt like it was good. He acknowledged there were a few training failures; however, he believed there were a variety of different reasons why. Mr. Rauner was trained in the use of the CIC emergency binder, and said that if he were the CIC during an emergency, he would locate the binder and call to get a search and rescue effort going.

As a result of a covered event review (CER) of the handling for an accident that occurred in Austin on September 10, 2014, the facility had developed briefing items. Mr. Cole could not recall specifically what training was covered, but did remember “getting something.” He could not recall if the brief was provided via email or by a supervisor. Most training was conducted via the Comprehensive Electronic Data Analysis and Reporting (CEDAR)⁴ or the Electronic Learning Management System (eLMS)⁵ courses.

Mr. Rauner said the STARS training he had received was adequate and he liked the STARS system better than the Automatic Radar Tracking System (ARTS) IIE system. AUS was still working out the system commands and counted on Austin controllers from other facilities with STARS experience.

4.2 FLM

Mr. Brian Potter began with the FAA on August 31, 1997 as a veteran’s recruitment appointment (VRA) hire, reporting to the FAA training facility in Oklahoma City, Oklahoma. After completing the initial training program, he transferred to the Fort Worth Meacham International Airport. In September 2006, Mr. Potter transferred to AUS. Mr. Potter’s previous ATC experience was service in the United States Navy from September 1990 to July 1996. He was stationed aboard 2 aircraft carriers, and at Naval Air Station Corpus Christi. After leaving the Navy in August 1996, Mr. Potter was an air traffic controller at Saint Croix Federal Contract Tower (FCT.) Mr. Potter held no other aeronautical ratings, and his medical certificate was current with restrictions to wear eyeglasses.

⁴ CEDAR is an FAA application that will automate the creation, management, and storage of facility activities and events; briefing items; QARs; technical training discussions; and FAA forms.

⁵ FAA eLMS is an online learning management system where employees take training courses.

On the date of the accident, Mr. Potter worked his regular shift of 0700 to 1500 as the operations supervisor in charge (OSIC). He became aware of a possible aircraft accident about 1015 when he received a call from the Department of Public Safety (DPS) notifying him of an aircraft accident in Lee County. Mr. Potter displayed a radar map indicating the county lines and worked to provide an exact location of the accident. The closest airport to the location provided was the Giddings airport. He asked the controllers on the watch if they had any information regarding a lost aircraft in the vicinity of the Giddings airport; there were none. Mr. Potter also notified the ATM of the accident and advised that he was in the initial stages of reviewing the information. He had given the DPS dispatcher the number to the regional operations center (ROC) in Fort Worth; and, after concluding the call with DPS he called the ROC to let them know the DPS dispatcher would be contacting them. He also told the ROC he would continue to research the event. All of this coordination lasted about 10 minutes.

At the supervisor's desk, Mr. Potter was able to review the FALCON replay of the air traffic activity for the watch. He reviewed two hours of recording at fast speed, and was able to locate the data block of N14AV. The aircraft was observed being handed off from Houston approach and the data track stopped in the vicinity of the accident location provided by the DPS dispatcher. Before he could listen to audio, the ROC called, confirmed the call sign of the aircraft, and informed Mr. Potter that someone from quality control (QC) was in need of information pertaining to the accident. Mr. Potter told the ROC that there may have been ATC involvement, but that he still needed to listen to the communications recording.

Mr. Potter was not able to sync the audio to the FALCON replay at that point. As he reviewed the replay, he wrote the times down using hours and minutes, not minutes and seconds. Mr. Potter was trying to answer several questions: Did the pilot communicate with Austin approach after responsibility for the flight was transferred from Houston Approach, was Austin approach communicating with the pilot when the accident occurred, and did the pilot cancel VFR flight following with the approach controller or did the approach controller terminate radar service?

Mr. Potter relieved Mr. Cole from control duties and asked him to write down his recollections of the accident aircraft. Mr. Potter said he did not collect a statement from Mr. Cole, and that these recollections were merely to help if a statement were needed. Mr. Potter didn't require the controller to write a statement because he had called the quality assurance (QA) personnel for assistance with the accident and thought the statement would come later. Mr. Potter called the ATM and asked for assistance with handling the aircraft accident. The ATM suggested that Mr. Potter contact the support specialist for assistance in reviewing the event to prepare for the services rendered telcon (SRT). Mr. Potter continued to use the accident notification checklist, and asked Mr. Powers, the FLM in the control tower, to help him review the event and watch the operation.

After reviewing the audio and independently correlating the times, Mr. Potter was concerned that Mr. Cole may have had "blindly terminated" radar on N14AV after the aircraft had crashed. Mr. Potter did not want to make that conclusion, and intended to enlist the support of Mr. Stein from the AUS QA department to make the determination. Mr. Potter could not remember if he communicated those concerns to Mr. Stein, but provided him with the times to sync things up quickly. Mr. Potter could not recall if he advised anyone else about the possibility of a blind

termination on an aircraft that had already crashed. He remembered that he was continually reminded by the ROC about the time issue regarding the SRT.

Mr. Potter had called Mr. Powers, the supervisor from the air traffic control tower, to relieve him from position. Mr. Potter could not recall the details of the information that he transferred to Mr. Powers during the relief briefing, including whether he mentioned the possibility of the blind termination of N14AV.

Mr. Potter did not get a controller statement from Mr. Cole regarding the event, and by this point was deferring to Mr. Stein and Mr. Powers; he did not know if it was out of bounds to ask the controllers for the statement. Mr. Potter said he got Mr. Stein and Mr. Powers up to speed on the event, but could not remember the conversation. The next time he observed the radar replay was after Mr. Stein had synced up the audio and video replay. They were in a hurry to prepare for the SRT, and after reviewing the synced replay with Mr. Stein, he heard the controller terminating radar service and observed the track on FALCON continue for a few more sweeps. This was a relief to Mr. Potter because it may not have been a blind termination.

Mr. Stein conducted the SRT while Mr. Potter was in the room observing. Mr. Potter could not recall how the SRT was briefed, and whether or not possibility of a blind termination was mentioned. He had filed a mandatory occurrence report (MOR) because he was worried about times and wanted other people in the FAA to know they were upfront and honest about the accident. Mr. Potter did not want anything in the MOR that he might have to change a later date.

Mr. Potter felt that Mr. Cole was a good primary instructor in the TRACON and had the opportunity to observe him on a daily basis. While reviewing the accident, Mr. Potter heard Mr. Cole's conversation with the local controller regarding a release from Austin's runway 17L; he was very unhappy with how that coordination transpired. Mr. Potter intended to discuss the event with Mr. Cole and document it with a performance record of conversation (PRC). Mr. Potter was unable to get the paperwork completed, so he asked Mr. Powers to complete it for him. Mr. Potter had no input in the PRC discussion.

4.3 Oncoming Radar East Controller

Mr. Caleb Cole began working for the FAA in April 2010 as a direct hire at the FAA training facility. After graduating from the initial training program in July 2010, Mr. Cole reported to AUS (ATCT). He was qualified on all positions at AUS. He had no previous ATC experience and held no other aeronautical licenses. Mr. Cole's medical certificate was current with a restriction to wear corrective lenses while conducting ATC duties. He was wearing contact lenses during the accident.

On the date of the accident, Mr. Cole worked an alternate work schedule from 0800 to 1800. He received a recorded relief briefing from Mr. Rauner, and assumed the Radar East control position combined with Radar South. He remembered scanning the southwest corner of the airspace and was busy with some VFR aircraft, parachute activity, and other normal traffic. After a few minutes of working traffic, Mr. Cole saw the data block of N14AV had not moved on the radar display, and did not see the data block in coast (CST) status on the radar display. He believed the pilot of N14AV had switched from the Austin approach frequency to the advisory frequency so

he terminated radar services. Mr. Cole did not receive an acknowledgement from the pilot when he terminated radar service.

Mr. Cole remembered the supervisor telephone ringing and shortly afterward recalled Mr. Potter asking Mr. Rauner if he had lost any aircraft while working the Radar East sector somewhere near Lee or Williamson County. He displayed the county maps on the STARS display and realized the aircraft that he had terminated radar service on earlier in his watch could potentially be the missing aircraft. Mr. Cole informed Mr. Potter that it might have been one of the aircraft he was working, but told Mr. Potter that he could not remember the call sign. Mr. Potter began reviewing the radar data and observed the N14AV data track not moving.

Mr. Cole had terminated radar services when the aircraft was at 800 feet. This was unusual to him because N14AV was lower than what would have been expected at that distance from the airport. He hadn't considered the possibility that the aircraft had crashed because it had never happened to him before. He had not noticed anything unusual about the flight except that the aircraft data tag was not moving on the display. After a few minutes, Mr. Cole manually slewed out to the N14AV data block and dropped it from the STARS display. He had not informed Mr. Potter that he had lost contact with the aircraft.

When conducting on the job training instruction, Mr. Cole instructed trainees to terminate radar service if the pilot requested to terminate the service, if the pilot had the field in sight and there were no potential conflicts between the aircraft and the airport, or, if the aircraft was within about 15 miles of the airport and no traffic has been observed between the aircraft and airport. He did not routinely ask pilots to report the field in sight before terminating radar service

According to Mr. Cole, a data block in CST typically occurred if an aircraft data tag was not moving, or if the aircraft went below radar coverage. If an aircraft displayed RDR in the data block, it would indicate the aircraft was not being detected by radar or that the radar was losing the target. In the past there have been times after taking a handoff from another facility that Mr. Cole had observed the data tag completely drop off the radar and then reappear.

Mr. Cole could not recall any face-to-face briefings after Austin's last accident occurred on September 10, 2014. The facility usually held team briefings at least once a month, and they generally talked about what supervisors thought was important. Mr. Cole could not recall anything about "radar contact lost" briefings.

4.4 Support Specialist

Mr. Jeffrey Stein began with the FAA in December 1986, reporting to the FAA training facility in Oklahoma City, Oklahoma. After graduating from the initial training program in March 1987, Mr. Stein reported to San Angelo ATCT. In January 1991 he transferred to El Paso International Airport, and, in May 1998 he transferred to Austin International Airport. Before he became a support specialist in March 2014, Mr. Stein had been certified on all positions at Austin ATCT. He held a private pilot license with an instrument rating, and maintained a third class medical certificate.

On the day of the accident, Mr. Stein was on his regularly scheduled day off. He was asked to report to work after AUS was notified of an aircraft accident. Mr. Potter called Mr. Stein after being notified by the DPS that an aircraft that had crashed east of AUS. Mr. Potter told Mr. Stein that he had reviewed the FALCON replay and learned that AUS had been in contact with the pilot. Mr. Stein told Mr. Potter to get the accident package out and to go through the accident notifications. He also informed Mr. Potter that he was on his way into the facility to provide assistance.

When Mr. Stein arrived at the facility, Mr. Potter was already in contact with the ROC and had made other required notifications. Mr. Potter briefed Mr. Stein on the event and told him there had been a fatality. Mr. Potter gave Mr. Stein the time of the event. Mr. Stein retrieved the FALCON replay and audio. Mr. Stein was able to synchronize the audio and video to get an idea of the sequence of events. Mr. Powers was at the facility to assist Mr. Stein.

Mr. Potter had not informed Mr. Stein about any concerns regarding the handling of the aircraft, and Mr. Stein had not noticed anything unusual on the replay. He was under the impression that FALCON showed what the controller saw on the radar display, and that FALCON was a replay of the STARS system; he was not familiar with CST track data. Mr. Stein did not see the target advance and reverse on the FALCON replay until the NTSB inbrief. During an initial review of the event, Mr. Stein briefed that when he held the cursor over the last track data block, the FALCON system indicated a ground speed of 63 or 64 knots and an altitude of about 800 feet. Mr. Stein's impression after reviewing the synchronized replay and other audio recordings was that the handling by Austin air traffic controllers was satisfactory, and there was nothing abnormal.

Mr. Stein had quickly collected and reviewed data for the accident in preparation for the SRT. When he conducted the SRT, he followed the SRT checklist and passed the information he had obtained. After the SRT had been completed Mr. Stein continued to examine the data, and concluded he may have made a mistake about the sequence of events; that the termination of radar services occurred after radar contact had been lost.

Mr. Stein first became aware that the radar service of N14AV had been terminated after the track went into CST status on Monday, November 24, and was not aware of this information during the SRT. Mr. Stein reviewed the FALCON playback again after learning about the possibility that the approach controller terminated radar service after losing radar.

Austin ATCT did not have an operations manager or support manager due to a facility downgrade in September, and Mr. Stein was tasked with investigatory matters, QA duties, and being a liaison to outside interest groups. He said that the facility leaned on him to conduct many tasks.

If he were trying to locate a lost aircraft, Mr. Stein would use CountOps or FALCON. He recently learned that FALCON had a search function for aircraft using a call sign that would show every sector that worked the queried aircraft. Once he obtained the aircraft times from CountOps, he could get the information he needed regarding the flight from FALCON. Mr. Stein had not received any training on FALCON, and was not very confident other than basic use.

According to Mr. Stein, Austin did not have the best rapport in the district as it related to ATC performance by its controllers. When he had been a controller in Austin, the facility had gone through a long string of weak management. The last few managers had been strong; however, in the past it had been a big problem.

4.5 Assisting FLM

Mr. Michael Powers began working for the FAA in July 2007 as a VRA hire at Corpus Christi ATCT, and in 2011 transferred to AUS ATCT as a supervisor. Before working for the FAA, Mr. Powers spent nine years as an air traffic controller in the United States Air Force, both enlisted and as a commissioned officer. He held no other aeronautical ratings and his medical certificate was current with no restrictions.

On Sunday, November 23, 2014, Mr. Powers had been scheduled to work a 1330 overtime shift. That morning, he received a text message from Mr. Morris informing him there had been an aircraft accident and for him to report to work in order to assist Mr. Potter. Mr. Powers arrived at the facility at about 1130 that morning and began assisting Mr. Potter. He started working on the FAA 8020 accident report form using information provided by Mr. Potter, obtained the weather report, and faxed initial information to the ROC. Additionally, Mr. Powers attended to numerous phone calls the facility was receiving and continued to assist Mr. Potter in any way possible.

Mr. Powers did not obtain a controller statement from Mr. Cole until Monday or Tuesday following the accident. He recalled that after the accident, he spoke to Mr. Cole and asked how he was doing. Mr. Powers also discussed the procedure for obtaining a drug test, and reassured him about the process.

Mr. Powers said that Mr. Potter had mentioned it appeared radar services had been terminated after radar contact had been lost on the accident aircraft. Mr. Powers had not communicated that concern to anyone outside the facility, and could not recall if he discussed it with Mr. Morris. When he was with Mr. Stein getting the FALCON data synchronized with voice data, it didn't appear to Mr. Powers that radar services to the aircraft had been terminated after radar contact was lost. Mr. Powers said FALCON appeared to show the aircraft still on the radar display with both speed and altitude at the last known position. He observed the aircraft "stop flying" on FALCON, but thought that perhaps the aircraft was circling to land in a field, or that the target was moving very slowly. Mr. Powers was not sure whether FALCON was derived from actual radar data or track data.

The first time Mr. Powers became aware of a discrepancy in the information provided on the SRT was the following day through an email from Texana District Manager Greg Motl. After reviewing the incident, they believed that the FALCON data indicated that the controller had terminated radar service before the crash. A second review indicated that might not have been correct, and that the controller terminated radar service after the crash. Mr. Powers had been using the FALCON system for about a year, but had received no formal training on it.

Mr. Powers trusted Mr. Stein as the facility expert in the QA process. Mr. Stein was the specialist that had assembled all the data. Mr. Powers said they all had jobs to do and that he had to trust Mr. Stein to be accurate.

According to Mr. Powers, AUS ATCT was the perfect facility level for new controllers. The traffic was good and would help prepare new controllers for larger facilities if they wanted to move up. Mr. Powers said the AUS training program was one of the best he had ever seen, and was very structured. Regardless of past experience, every controller went through the same initial training program..

Since arriving at AUS ATCT, Mr. Powers had done a handful PRCs on his employees, but had not done any individual performance management.

As a result of the covered event review following the September 2014 accident, the tower CIC position was staffed during peak traffic periods to the extent possible. There was a briefing item on CEDAR about the accident issues, but could not recall any specifics. He believed it had to do with when to pull the crash phone for an accident.

4.6 ATM

Mr. Bob Morris began with the FAA in September 1987, attending the FAA training facility in Oklahoma City, Oklahoma. After graduating in December 1987, he transferred to Rockford, Illinois ATCT. In December 1990, Mr. Morris transferred to Houston Hobby ATCT, and in December 1993, he transferred to Houston Intercontinental ATCT. In December 1996, he transferred to Houston TRACON, and in December 2001, Mr. Morris transferred back to Houston Hobby ATCT as a support manager. In December 2003, Mr. Morris transferred to Houston TRACON as a support manager, and remained until December 2007 when he transferred to Milwaukee as a support manager. In December 2010 he transferred from Milwaukee back to Houston TRACON as the support and staff manager. In August 2014, Mr. Morris transferred to Austin as the air traffic manager. Mr. Morris' previous air traffic control experience was in the United States Navy from 1978 to 1987 where he was at various shore commands for air traffic control duty. Mr. Morris had a private pilot certificate, but he was not current and his medical certificate had expired.

On the date of the accident, Mr. Morris was on personal leave and driving towards Green Bay, Wisconsin. He received a call from Brian Potter, the FLM on duty, told him that the DPS had called and reported a fatal accident near McDade, Texas. He assisted Mr. Potter by reviewing the steps of the accident investigation checklist and notifications that would be required.

A short time later, Mr. Potter called back and told him there might have been a problem with the ATC handling, or some other involvement with the accident. Mr. Potter said the approach controller might have terminated radar service on the aircraft after the airplane had already crashed. Mr. Morris instructed Mr. Potter to contact Jeff Stein and Michael Powers and get them into the facility in order to assist in reviewing the accident. Mr. Morris also told Mr. Potter to contact Greg Motl and the ROC to inform them that AUS ATCT might have more involvement than was initially reported.

A short time later, Greg Motl called Mr. Morris, saying he had heard from someone in the Austin facility about the possibility the approach controller terminated radar on a downed aircraft. Mr. Morris had not heard the audio replay or observed the FALCON replay of the event so he was not certain of the sequence of events. Mr. Morris informed Mr. Motl that he would participate in the SRT after he arrived at his destination.

Mr. Morris participated in the SRT, but Mr. Stein conducted it by following the checklist to provide a briefing of the event. Mr. Morris had still not seen the FALCON replay, but had heard the transmissions between the pilot and the approach controller, and they sounded normal. Mr. Morris was aware of the possibility that the approach controller had terminated radar service on an aircraft that had already crashed, but wanted to wait to form an opinion until after the conclusion of the SRT. Mr. Morris said he did not have a clear picture of the event, and he thought that the QCG and district offices would take the lead in the investigation; Austin would learn more about its involvement later.

Mr. Morris became aware that the air traffic controller had terminated radar on a crashed aircraft on the Monday following the accident. Mr. Motl had contacted Mr. Morris to tell him that there was an issue with the air traffic control handling. According to Mr. Morris, there was still a question as to whether the termination of radar service occurred before or after the track went to CST mode. Mr. Morris said that in his mind, there was still confusion about the timing of the radar service termination. It was not until he returned from personal leave and observed the playback at the facility that he got firsthand information about the controller terminating radar service to an aircraft in CST mode.

Mr. Morris said he relied heavily on Mr. Stein for all matters to include QA, procedures and airspace, local outreach, and advice. Mr. Stein had been in Austin for a very long time, and had the corporate knowledge that Mr. Morris relied on. Mr. Morris said that Mr. Stein had the voice of authority and that people listened when Mr. Stein spoke.

In 2012, the Austin air traffic control facility was downgraded as a result of a drop in air traffic. After the downgrade, the facility operations manager position was eliminated, and the associated responsibilities were assigned to the air traffic manager. Any administrative tasks formerly performed by the OM were either given to an FLM or to Mr. Morris to complete.

Mr. Morris said that he was not proficient or well-versed in the use of FALCON. He was able to conduct rudimentary tasks, to include conducting an SRT and synching the voice and radar replay. As a result of this accident, he learned a lot about the FALCON replay product. Mr. Morris incorrectly believed that when the radar track went into CST mode, the FALCON replay would drop it. If the target was not moving on FALCON it should cause the reviewer to question the status of the aircraft. On the FALCON replay of the accident sequence, no one from Austin had told him that the aircraft may have been in a tight right or left hand turn descending to make an emergency landing.

Mr. Morris said that the PRC was a tool to be used by the FLMs, and that the ATM was responsible for performance management in the facility. Performance management may have been done previously in Austin, but it had not been documented so was ineffective. Mr. Morris

said that of the 16 PRCs that have been completed in Austin during the last 12 months, 15 occurred shortly after his arrival.

Submitted by:

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