

Factual Report – Attachment 1
Interview Summaries

AIR TRAFFIC CONTROL

ERA17FA073

Interviewee: Claude Keith, Front Line Manager (FLM)
Representative: Mark Tomicich, Attorney for the FAA

Date: January 11, 2017
Location: Knoxville Air Traffic Control Tower (TYS ATCT)
Present: Christopher Simmonds-FAA, Eric Stormfels-NATCA, Lydia Baune-NATCA
Investigator: Brian Soper-NTSB

During the interview Mr. Keith stated the following:

His air traffic control experience began in the United States Air Force where he served on active duty as an air traffic controller from 1988 to 1991. In August of 1998 he was hired by the Federal Aviation Administration (FAA) and was assigned to Gulfport (GPT) ATCT. In April of 1999 he transferred to Tri-Cities (TRI) ATCT where he worked until August of 2001 when he transferred to TYS ATCT.

His work schedule the week leading up to and the day of the accident was as follows:

Tuesday	0700 - 1500 [overtime 1500 - 1700]
Wednesday	0700 - 1500 [overtime 1500 - 1700]
Thursday	0700 - 1500 [overtime 1500 - 1700]
Friday	0700 - 1500 [overtime 1500 - 1600]
Saturday	Worked 4 hours and 50 minutes of overtime, not sure of times
Sunday	Off
Monday	0700 - 1500 [overtime 1500 - 1700] (Day of accident)

His operating initials were CK and his supervisor of record was Mark Mustard. He was the FLM on duty at the time of the accident. He held a current medical clearance with a wavier for high blood pressure, which he was prescribed and taking regular maintenance medication for and was documented in his medical record. He was required to wear corrective lenses while performing air traffic control duties and stated that he was wearing his glasses at the time of the accident. He had no documented operational incidents or suspensions at TYS. He was a recurrent training instructor and facility scheduler for controller staff. He had not been on any recent details away of the facility.

On the day of the accident, he was working his normally scheduled shift, and was current and proficient on all positions for which he was certified. He said that training was not being conducted in the TRACON at the time of the accident. He did not perform toxicology testing after the accident. On a scale of 1 to 5 (5 being the heaviest) he classified the traffic load as "2" at the time of the accident. On a scale of 1 to 5 (5 being the most complex) he classified the traffic complexity as "2" at the time of the accident.

He had reviewed audio and video replays of the accident several times prior to this interview. He recalled nothing remarkable about the 72 hours leading up to the time of the accident, noting normal eating and sleeping patterns and routine daily activities. He said that a relief briefing was conducted when he assumed the duties as FLM, however, it was not recorded,

and a checklist was not utilized. He stated that he did not file an air traffic safety action program (ATSAP¹) report as a result of this accident. He estimated that he continued working FLM for about one hour after the accident.

At the time of the accident he was at the supervisor's desk in the TRACON. There were two control positions staffed in the TRACON, one at the Radar West (RW) position and one on the Radar West Associate (RWA) position. He was discussing the schedule with another controller who was not assigned operational duties at the time. He did not hear anything from the RW controller that indicated there may be a problem. The controller that he had been discussing the schedule with then relieved the RW controller.

He recalled leaving the facility to go home at 1700. He was out having dinner later with his family when he received a phone call from the controller in-charge of the TRACON (CICT) stating that they had been contacted by law enforcement, who had received a call from a concerned family member stating that an aircraft was overdue to land at GKT. He instructed the CIC to call the center [Atlanta Air Route Traffic Control Center (ZTL)] and issue an ALNOT² for the accident aircraft. He then called the Air Traffic Manager (ATM) and informed him of the situation, drove his family home, and returned to the facility to assist with required coordination and tasks required after an accident. He left the facility at approximately 0030 local on December 27, 2016. When asked if anything stood out as problematic with regards to ATC in this accident, he said no.

He stated that controllers would normally review the weather at the Information Display System (IDS) when they signed in for work. Sometimes PIREPs were called in to Flight Service (FSS) when they were received, versus using the Aeronautical Information System Replacement (AISR), because it was easier. Once a PIREP was received in the TRACON, he was not sure who's responsibility it was to disseminate the PIREP into the NAS. Sometimes, the TRACON would pass reports of icing back to the ARTCC when they were received, and, the tower would call down to the TRACON with PIREPs they had received. When asked about how they would obtain the current weather for GKT, he said that controllers could call the Automated Weather Observing System (AWOS) at GKT directly from the position, or, they could obtain the weather by initiating a request through the Flight Data Input Output (FDIO) computer. In his experience, it was not common for controllers to ask visual flight rules (VFR) aircraft if they had current weather when landing at uncontrolled airports.

He stated that he was able to monitor the audio of the controllers he was responsible for from the supervisor's desk. TYS ATCT was staffed with 2 of 4 authorized FLMs, 18 Certified Professional Controllers (CPCs), and 20 developmental controllers. He felt that on a normal day, he would spend about 60 percent of his time behind the desk doing administrative duties, and

¹ The FAA's voluntary safety reporting program for ATC personnel based on the Aviation Safety Action Program (ASAP) model. A defined partnership model where safety issues are resolved through corrective action rather than through punishment or discipline. The program includes collection, analysis, and retention of safety data reviewed and acted upon by the FAA and NATCA.

² Alert Notice – A request originated by a flight service station (FSS) or an air route traffic control center (ARTCC) for an extensive communication search for overdue, unreported, or missing aircraft.

that his workload was high. He felt it would be helpful if there was a radar display at the supervisor's desk, so supervisors could monitor traffic while performing other required duties.

Interviewee: Mark Mustard, Air Traffic Manager (ATM)

Representative: Mark Tomicich, Attorney for the FAA

Date: January 11, 2017

Location: TYS ATCT

Present: Christopher Simmonds-FAA, Eric Stormfels-NATCA, Lydia Baune-NATCA

Investigator: Brian Soper-NTSB

During the interview Mr. Mustard stated the following:

His ATM experience at TYS ATCT began in November of 2014. Prior to that, he had been an FLM at TYS ATCT since 1999.

His work schedule the week leading up to and the day of the accident was as follows (these hours routinely varied, sometimes starting a bit earlier or ending a bit later, depending on operations):

Tuesday	0800 - 1600
Wednesday	0800 - 1600
Thursday	0800 - 1600
Friday	0800 - 1600
Saturday	Off
Sunday	Off
Monday	0800 - 1600 (Day of accident)

When asked about facility training, he stated that the facility was up to date with required recurrent training. Refresher training, however, was not up to date. The facility had a staff support specialist retire in August of 2016. Until his retirement, the staff support specialist conducted monthly refresher briefings; but, since his departure, none had been completed and TRAX data was incomplete. Mr. Mustard planned to have the contract training coordinator brief all controllers on refresher items from the entire year and update TRAX³ by January 20, 2017. He planned to curtail on the job training (OJT) until the required refresher training was completed. He was not aware that the monthly topics for refresher training were contained in the national training order. He did not recall any training being provided with regards to operations in mountainous terrain, other than what may be contained within FAA Order JO 7110.65, *Air Traffic Control*.

When asked about simulator training at TYS ATCT, he said that since a previous external compliance verification (ECV) conducted by the Eastern Area Quality Control Group had noted that simulator training was required, and they had added it to their training plan; however, that

³ TRAX – A software program that allows automated preparation and maintenance of employee training records. TRAX is not a system of records. TRAX is a mechanism for entering and printing training reports that are placed in FAA Form 3120-1.

was as far as the facility had progressed. He had only one controller trained in providing simulations with AT Coach⁴, and the contract training coordinator was trained in SimFast⁵.

Discussing the accident, he stated he would not have done anything differently when the pilot asked for a VFR descent. However, after the simultaneous loss of radar and radio communications, the controller should have let someone know. The PIREP solicitation and dissemination issue (failure by ATC to solicit and disseminate PIREPs as required) was discovered later. Since the accident, he and the NATCA Facility Representative (FACREP) issued a “hot board item” on PIREP solicitation procedures, and that follow-up on how to properly disseminate PIREPs was still necessary. A hot board item, is a written summary of an issue or concern that is physically printed and placed on a clip board for controllers to read prior to working (this is a local procedure at TYS ATCT). He had conducted a performance discussion with the RW controller but could not verify if it had been documented in CEDAR. Training team meetings since the accident had included discussions of both ALNOTs and PIREPs, and he had encouraged supervisors to document each of those discussions into the comprehensive electronic data analysis and reporting (CEDAR⁶) program. Additionally, the contract training instructor discussed these two issues during refresher training conducted in January of 2017.

The facility did not have a standard PIREP form or template available for controllers to use while on position. The facility had recently conducted more system service reviews (SSRs)⁷ in compliance with direction from the district. These SSRs were conducted by management and did not include any of the general controller workforce. Monthly safety discussions were not being conducted, nor were regular meetings being conducted by the local safety council (LSC) holding regular meetings. When asked about the make-up of the LSC, he stated that the only documented members were ATM and FACREP. Local ATSAP information “share items” from the event review committee (ERC) were not being received or discussed collaboratively.

The poor location of the supervisor’s desk and the high wall that blocks the supervisor’s view of the radar control positions was discussed. The possibility of relocating the supervisor’s desk to either the center of the room, or the radar north position was also discussed. He acknowledged the challenge with the current layout of the radar room and was receptive to the discussion of the alternate layout ideas.

When asked about the accident that TYS ATCT was involved in about four years ago, he disagreed with the notion that there may be a safety culture issue at the facility. He felt it was

⁴ AT Coach is a family of products supporting standalone training, ATC Automation system-based training and testing, airspace modeling, and voice recognition-based simulation control. There are two simulation systems: the AT Coach™ Standalone Simulation and the AT Coach™ Embedded Simulator.

⁵ SimFast is a low-cost, radar simulation software tool that allows air traffic controllers to generate various air traffic scenarios, and can be used as a stand-alone tool, or as a means of building scenarios for other ATC simulators such as AT Coach.

⁶ Comprehensive Electronic Data Analysis and Reporting (CEDAR) is a tool to provide air traffic management with an electronic means of assessing air traffic employee performance, managing resources, and capturing safety-related information and metrics. The tool will provide a standard interface for collecting, retrieving, and reporting data from multiple sources. CEDAR will automate the creation, management, and storage of facility activities and events; briefing items; QARs; technical training discussions; and FAA forms— such as 3120-25, OJT Instruction/Evaluation Report; and 7230-4, Daily Record of Facility Operation.

⁷ An SSR is a review the air traffic services provided in any situation at any time under any circumstances.

more an issue of pilots being cleared “as filed”; then subsequently calling approach “on course” at an altitude below the minimum vectoring altitude (MVA) into high rising terrain. This forced controllers to vector below the MVA to keep aircraft clear of obstacles and terrain. Since the 2012 accident, controllers had been issuing the textual obstacle departure procedure (ODP⁸), which specifically directed aircraft away from the higher terrain early. He felt this resolved the issue with departures because controllers would only turn aircraft on course toward higher terrain after they were above the MVA.

Interviewee: Joshua Lawhon, Radar West (RW) Controller

Representative: David Harness, NATCA Facility Representative (FACREP)

Date: January 12, 2017

Location: TYS ATCT

Present: Christopher Simmonds-FAA, Eric Stormfels-NATCA, Lydia Baune-NATCA

Investigator: Brian Soper-NTSB

During the interview Mr. Lawhon stated the following:

His air traffic control experience began in May of 2008 when he received initial training at the FAA Academy in Oklahoma City, Oklahoma. After successful completion of initial training, he reported to Potomac (PCT) TRACON in July of 2008 where he was assigned to the Shenandoah sector. In July of 2013, he was placed on an extended leave of absence while he was deployed on active duty until September of 2015. He was then assigned to TYS ATCT.

His work schedule the week leading up to and the day of the accident was as follows:

Tuesday	1300 - 2100	
Wednesday	0730 - 1530	
Thursday	0730 - 1530	
Friday	0730 - 1530	
Saturday	Off	
Sunday	Off	
Monday	1200 - 0000	[overtime 2100 - 0000] (Day of accident)

On the day of the accident, he worked a credit hour on the front end of his assigned shift between 1200-1300 and was assigned three hours of overtime at the end of the shift because of the accident. His operating initials were JP and his supervisor of record was Geoffrey Wright. The supervisor on duty at the time of the event was Claude E Keith. He was the RW controller at the time of the accident. He held a current medical clearance with no restrictions. He had no documented operational incidents or suspensions at TYS, held no collateral duties, and had not been on any recent details.

⁸ A relatively simple ODP may be published textually unless a graphical depiction is required for clarity. Textual ODPs may include a climb gradient when required for obstruction avoidance; but must not include ATC related climb gradients. Textual ODP instructions must not exceed a maximum of one turn, one altitude change, and one climb gradient.

He held an Air Line Transport Pilot certificate (ATP) with an airplane multi-engine land rating with commercial privileges single engine land. He was also type rated in the Hawker Beechcraft Model 400 series (C/BE-400) and Mitsubishi MU-300 Diamond (C/MU-300). He was a rated pilot for the Tennessee National Guard flying KC-135 tankers out of TYS airport at the time of the accident.

He had been certified on the RW position for four to five months before the accident. On the day of the accident, he was working his normally scheduled shift and stated that he was current and proficient on all positions for which he was certified. He performed toxicology testing about 24 hours after the accident. On a scale of 1 to 5 (5 being the heaviest) he classified the traffic load as "3" at the time of the accident. On a scale of 1 to 5 (5 being the most complex) he classified the traffic complexity as "3" at the time of the accident.

He had reviewed audio and video replays of the accident earlier with staff, but not during his interview pre-briefing. He recalled nothing remarkable about the 72 hours leading up to the time of the accident noting normal eating and sleeping patterns and routine daily activities. He said that a relief briefing was conducted, it was recorded, and a checklist was utilized. He stated that he did file an ATSAP report because of this accident.

He recalled the weather as visual meteorological conditions (VMC) with no precipitation present. He recalled being on position for about 1 hour and 20 minutes prior to the event. He described the traffic as multiple arrivals into TYS, with several aircraft departing from TYS destined for GKT, and departing GKT destined for TYS. He had accepted the handoff on N1839X from ZTL and upon check in, the radar data block information displayed an altitude of 9,500 feet. He issued N1839X the TYS altimeter setting and approved the pilot's request for a visual flight rules (VFR) descent.

He recalled an aircraft about 25 miles south of TYS had reported the airport in sight, and that he had been instructing arrival aircraft to expect a visual approach. Several minutes later, he noticed that he had lost radar contact with N1839X. He attempted to advise the pilot of N1839X that he had lost radar contact as required, and the pilot did not respond. A few minutes later, he terminated the radar service of N1839X and approved the pilot to change to the common traffic advisory frequency, and again the pilot did not respond. He believed N1839X was one of the VFR primary targets he had observed circling just north of his last known position and, and therefore took no further action. He did not recall seeing the data tag of N1839X in a CST⁹ or "coast" status, just the loss of primary radar. He then closed out the flight progress strip and filed it with the rest of strips.

He was relieved at his normal rotation time, which was approximately five minutes after the loss of radar and radio communications with N1839X. He did not pass any information about N1839X during the position relief briefing. He recalled that he was completing a computer-based instruction course when he was informed there was a missing/overdue aircraft. The CICT

⁹ When all surveillance (radar) sources are lost, and the aircraft is no longer generating a radar return. The radar display "CST" and will temporarily continue displaying the aircraft's movement at the last heading and speed, as if it was "coasting".

approached him and asked if he remembered working N1839X, which he did, and proceeded to discuss the services he had provided to the pilot of N1839X.

He said that N1839X began his VFR descent almost immediately upon initial contact. He did not recall the last altitude he observed the aircraft leaving and had noticed the loss of radar while conducting the normal scan of his radar display. He had experienced losses of radar and radio communication in that area before and had treated them in a similar fashion. He did not notify anyone about the simultaneous loss of radar and radio communication because he said it was a frequent occurrence in that area.

He stated that the MVA in the area of the accident was 8,000 feet. He recalled that the MVA had been established due to the highest mountain peaks in that area. He did not recall the elevation of the highest peaks in that area and did not recall being trained on that information. When asked if he considered the pilot of the accident aircraft to be encountering any difficulty, he stated he seemed “unconcerned” on the radio. He further described the pilot as being very polite on the radio and had even asked for permission for his VFR descent.

He stated that the facility standard operating procedures (SOP) had guidance on the mountainous terrain in the area, and the limited radar and radio coverage in those areas. He said that radar coverage had improved since the recent introduction of FUSION¹⁰ into their radar system.

He was not aware of any AIRMETs for mountain obscuration or instrument flight rules (IFR) conditions in the area of the accident. He said FLMs were usually seated behind the counter at the supervisor’s desk and was not aware of what duties they may be performing. He was not sure of the amount of administrative functions performed in the TRACON but stated that the FLM was usually located in the TRACON rather than the tower. He did not know if the FLM could monitor a control position from the supervisor’s desk.

He said that anyone (controller or supervisor) could call to split the radar positions. He also stated that the FLM usually wanted at least two controllers in the TRACON at all times. He expressed that if the FLM wanted the radar positions split, a controller would immediately open-up the additional position. He further stated that controllers would monitor the number of strips accumulating at the position, and once it reached a certain point would make a recommendation to the supervisor to split the positions.

When asked if VFR aircraft routinely fly low over the ridges south of GKT, he said that he had observed aircraft flying at varied altitudes in and around the mountainous terrain south of GKT. He had observed a lot of what he described as “sightseeing aircraft” in the mountains south of GKT flying at low altitudes, and that this type traffic increased in the fall.

He stated he could issue a low altitude alert to an aircraft even if the low altitude alert did not alarm. He would do this by stating low altitude alert and issuing the pilot the minimum safe altitude in the area.

¹⁰ The combination of all available surveillance sources (airport surveillance radar [ASR], air route surveillance radar [ARSR], ADS-B, etc.) into the display of a single tracked target for air traffic control separation services.

When asked if he had experience with mountainous terrain while working at PCT TRACON, he said there were not many mountains in the PCT area of operation. He further stated that training on mountainous terrain at PCT was not much different from the that provided at TYS ATCT.

He stated that the most common way he was made aware of weather impacting the area was through what was posted on the information display system (IDS), where the hourly weather report was posted on one of the pages. AIRMETs, SIGMETs, and PIREPs however, were not entered into the IDS. He understood how to retrieve the automated weather for GKT by using the weather request function of the FDIO computer. The position relief checklist was routinely used during position relief briefings and he stated that briefings were "generally" recorded. He felt that primarily everyone did a good job with position relief briefings at TYS ATCT.

The last training, he could recall receiving related to operations in mountainous terrain, was having to learn the MVA maps in classroom training during his initial qualification. He stated monthly refresher training was "hit or miss." He had received one refresher training session last week, and it was provided by the training coordinator. He recalled it contained information on some other accidents and "the basics."

He said that he was on his second or third rotation through the radar position when the accident occurred. He was aware of a few PIREPs during his previous rotations, but said the weather was VMC all day. He had received a flight progress strip on N1839X that indicated the aircraft was VFR. When asked, he said that it was normal for radar controllers to mark VFR strips. He was unaware if the pilot of N1839X had received the weather report for GKT. He would normally ask pilots of IFR aircraft if they had the weather, but did not usually ask pilots of VFR aircraft.

He stated that it was normal for positions to be combined during traffic such as that during the time of the accident, and felt the traffic was very manageable. He said the FLM was in the room when radar contact was lost on the accident aircraft but was unaware of what he was doing at the time. He did not ask to be relieved after the loss of radar, and that nothing seemed out of the ordinary at the time. He was relieved in accordance with his normal break rotation.

He had returned to the TRACON after a break about 2 to 3 hours after being relieved, when the CICT approached him to discuss that N1839X was missing, and that is when he presumed something had happened to the aircraft.

He said that aircraft receiving VFR flight following would routinely terminate services and switch to the control tower advisory frequency (CTAF) without permission. He had experienced this at TYS ATCT, as well as when he worked at PCT TRACON. He even recalled doing it himself shortly after he had received his private pilot's certificate.

He characterized the quality of radar coverage in the area as anything above the MVA being good, and that it was not uncommon to lose radio coverage as well in the area near the ZTL commerce sector boundary.

He did not recall how they had previously handled ALNOT procedures for VFR aircraft when they switched over to CTAF without permission. He did not recall anything about this being covered in facility training either. He could not speculate on how other controllers performed with regards to ALNOT procedures. He further stated that it was routine for aircraft destined for GKT to squawk VFR and switch on their own in the area to the south of GKT.

When asked about training he had received since the accident, he recalled only seeing read and initial items and hot board items at the sign-in desk. He did not recall if the items were directly related to the accident itself, but did recall content on ALNOT procedures, as well as PIREP solicitation procedures. He said refresher training had just recently resumed after a period of no refresher training being conducted. He stated the training contained many topics, but did not recall them, or any specifics of the training.

When asked about the requirement to solicit PIREPs, he stated that they normally used the weather at TYS airport as the deciding factor on whether they were required to solicit, and did not consider the weather at GKT, mainly because they did not have immediate access to weather reports at the satellite airports via the IDS. He said that he solicited more when weather conditions dictated. Local dissemination of PIREP information was characterized as writing the information on a blank strip or piece of paper and then passing that information to the flight data position in the tower.

He did not recall simulator training being conducted during his initial classroom training and stated the simulator at TYS ATCT was not available. He did not recall running any programs outside of the STARS upgrade training when FUSION was introduced. He felt there were too many people in training at TYS ATCT, and competition for training time was very difficult and overwhelming.

In comparing the training he had received at PCT with that he had received at TYS, he said they both accomplished the same goals. He recalled the training at PCT was far more organized. He felt the main reason for the difference was that the training at PCT was much more structured and they had staff in place to support it. He stated that even if staffing were not an issue he did not believe simulator training would be better than OJT. Real traffic was different, and OJT was more useful than simulator training, which he felt to be unrealistic and somewhat predictable. He agreed that realistic simulator training would help a lot in training, as long as they were able to get their required OJT accomplished. He thought there were many controllers who would be willing to help accomplish simulator training.

When asked if there was anything he would do differently if he encountered a similar situation in the future, he stated probably not, because pilots switch to CTAF on their own so often. However, he would make sure other controllers understood what to do different now.

Interviewee: Steve Creasy, Radar West Associate (RWA) Controller
Representative: David Harness, NATCA FACREP

Date: January 12, 2017

Location: TYS ATCT
Present: Christopher Simmonds-FAA, Eric Stormfels-NATCA, Lydia Baune-NATCA
Investigator: Brian Soper-NTSB

During the interview Mr. Creasy stated the following:

His air traffic control experience began in February of 1989 as a co-op controller at ZTL. He then received initial training at the FAA Academy in Oklahoma City, Oklahoma and after successful completion in September of 1990, he reported to TYS ATCT.

His work schedule the week leading up to and the day of the accident was as follows:

Tuesday	0545 - 1345
Wednesday	2245 - 0645
Thursday	Off
Friday	Off
Saturday	Leave
Sunday	Leave
Monday	1500 - 2300 (Day of accident)

His operating initials were SC and his supervisor of record was Geoffrey Wright. The supervisor on duty at the time of the event was Claude Keith. He was the radar west associate (RWA) controller combined with the Data 2 position at the time of the accident. He held a current medical clearance with a requirement to wear corrective lenses while performing air traffic control duties and stated that he was wearing glasses at the time of the accident. He had no documented operational incidents or suspensions at TYS ATCT, held no collateral duties, and had not been on any recent details.

On the day of the accident, he was working his normally scheduled shift and stated that he was current and proficient on all positions for which he was certified. Training was not being conducted on the position he was working at the time of the accident. He did not perform toxicology testing after the accident. On a scale of 1 to 5 (5 being the heaviest) he classified the traffic load as "3" at the time of the accident. On a scale of 1 to 5 (5 being the most complex) he classified the traffic complexity as "3" at the time of the accident.

He had reviewed audio and video replays of the event earlier with staff, but not during his interview pre-briefing with the FAA. He recalled nothing remarkable about the 72 hours leading up to the time of the accident noting normal eating and sleeping patterns and routine daily activities. He said that a relief briefing was conducted, it was recorded, and a checklist was utilized. He did not file an ATSAP report as a result of this accident. He did not feel it was necessary, as he did not find out there had been an accident until more than 3 hours after the accident had occurred.

He was working the first position rotation of his shift when N1839X was transitioning through the airspace. He was monitoring the frequency of the RW controller as required. He did not recall N1839X initially checking in with the RW controller but did remember the aircraft

flying through the airspace at 9,500 feet. He did not remember seeing anything unusual about the aircraft and did not recall hearing the RW controller state radar contact loss or radar service terminated to the accident aircraft. He did not recall if his attention was on another task at the time of the loss of radar and communications but said that may have been when the tower had called him to inform him of the new ATIS code at TYS.

Before beginning his first position rotation in the TRACON, he had checked local weather by looking at the METAR for TYS on the IDS. He stated that the weather was VMC, with visual approaches being conducted at TYS. He was not aware of any AIRMETs for mountain obscuration at the time of the accident. He was not informed of any current PIREPs during his position relief briefing. He did not recall if any PIREPs were obtained while he was monitoring the RW controller.

He said that when the RW controller would obtain a PIREP, his responsibility at the RWA position was to write the information down on a blank flight progress strip or sheet of paper and leave it at the position for reference, then call the tower with the information. He said he would then go over to the supervisor's desk to either enter the PIREP into the AISR himself or give it to the supervisor to input for dissemination.

When asked about aircraft receiving VFR flight following services, he said it was normal to lose radar with aircraft over the mountains. He said that there was an assumption that VFR aircraft would miss terrain and he allowed aircraft to maneuver on their own without intervention. He said that it was common for pilots to fly through the valleys in the mountains and it was hard to tell a VFR aircraft that they were too low.

He remembered working at the RW position later in his shift when the CIC from the tower called the CICT to forward a phone call they had received from law enforcement about a report of an overdue aircraft. The call was disconnected and the CICT was able to find a number and call law enforcement back to obtain the information about 10 minutes after the initial call at approximately 1930.

He said that there was a lot of training being conducted at the facility and that he was currently assigned to two training teams. He was also regularly training four or five other developmental controllers. Training was hampered by staffing requirements, specifically the requirement of staffing the CIC positions, that often left nobody available to provide OJT. He further stated that training was just inconsistent.

He was not aware of the simulator ever being used for refresher training. He believed that simulator training had been getting better for the developmental controllers. He would like to see the availability to take an actual event playback and develop event based scenarios in the simulator.

Interviewee: Olive Miller, Training Coordinator

Representative: Richard Klumpp, Program Manager for Controller Training at SAIC
(Mr. Klumpp participated via telephone)

Date: January 12, 2017
Location: TYS ATCT
Present: Christopher Simmonds-FAA, Eric Stormfels-NATCA, Lydia Baune-NATCA
Investigator: Brian Soper-NTSB

During the interview Ms. Miller stated the following:

Her air traffic control experience at TYS ATCT began in 1987 as a certified professional controller. She was a supervisor at TYS ATCT from 1995 until she retired from the FAA in 2003. She was employed by Washington Control Group (WCG) as a full-time contract instructor from 2008-2012. She worked part-time from 2012-2014 (in 2013 contract changed from WCG to Raytheon). Her part time work was reduced to "casual" from 2014 until returning to full time status in May of 2016 as the training Staff Support Specialist was approaching retirement.

She worked closely with the training staff support specialist until his retirement in August of 2016, and said that he ran the training program, and she just "did whatever he asked of her." He did not incorporate any simulator training into refresher training as required. It was his style to talk through scenarios, rather than run actual simulations, because that was what he was more comfortable with.

She felt there were two major "holes" in the current training program, and that was simulator training and CIC training. CIC refresher training was accomplished via verbal briefings that she would give discussing the distractions and functions of a CIC. These briefings took anywhere from 10 to 30 minutes. She was not aware of the 1-hour minimum annual requirement put forth in the National Training Order.

She said that she did have SimFast experience, and that SimFast was available in the facility, but she preferred to use a radar scope vs. a computer monitor. She was aware that SimFast could be used with AT Coach. She had not been able to attend the ATCoach class that was held at the facility in the past. She said the facility did have one controller trained in ATCoach. She had recently used simulator training for both skill enhancement training and FUSION training. She conducted all simulator problems at TYS ATCT, and she believed that the facility was using the simulators to about 80% of their potential.

When asked about the accident that had occurred in 2012, she could not recall any details about it. She said she had helped implement training after that accident but could not recall exactly what that training consisted of. She did however, recall that after that accident, controllers began issuing a departure procedure that went to the VOR.

Following the most recent accident, she had held discussions with controllers on ALNOTs and PIREPs. In addition, the week of December 28, 2016, she conducted the scheduled December/January refresher training. Then, the week of January 3, 2016, she conducted the entire 2016 refresher training to all but 2 controllers, which included 8-10 topics. The briefing lasted approximately one hour. The 2016 training was accomplished in this manner because the facility had discovered incomplete TRAX records for refresher training after the training Staff Support Specialist had retired in August. She further stated she had begun to use the read and

initial boards to brief monthly refresher training items. She acknowledged that a plan would be necessary moving forward for conduct of the required monthly refresher training, though she did not know what that system would be yet.

If she could make one suggestion to improve the training program, she said that it would be to establish structure and routine. She felt it would be more effective, but it had never been done that way in the past. It would be great to see, for example, at the start of a 1300 shift, 45 minutes set aside to accomplish these refresher training briefings. She felt very supported by management at TYS ATCT.