

Factual Report – Attachment 1

Interview Summaries

AIR TRAFFIC CONTROL

WPR18FA141

Interviewee: Braedan Pilcher (BP)
Date / Time: May 21, 2018 / 1035
Location: Air Traffic Control Facility, Boise Idaho
Present: David Waudby, Daniel Meyers
Investigator: Andy Olvis
Representative: Thomas West

During the interview Mr. Pilcher stated the following:

Mr. Braedan Pilcher began working for the FAA in November of 2016 at the FAA academy in Oklahoma City, OK. Upon completion of that training he reported to Boise ATCT (BOI) in February of 2017. He completed Radar Training Fundamentals (RTF) course in March of 2018 and then returned to BOI. He was in training for all radar positions. Mr. Pilcher did not have any prior Air Traffic Control experience and had no other aeronautical licenses. Mr. Pilcher's medical was current with no restrictions.

Mr. Pilcher's regular days off (RDOs) were Tuesday and Wednesday. He typically worked 1300-2100 on Thursday and Friday and 0700-1500 on Saturday, Sunday, and Monday. His supervisor was Mr. Yahn.

On Sunday May 13, 2018 Mr. Pilcher recalled arriving at work at 0700 and signing in. He stated that he typically goes to the tower because that's the only place he was certified. He believed that he worked local because he was not certified as a tower controller in charge (CIC). He recalled that Mr. Sloan, who was on his training team, arrived at work around the same time and they ended up training on Arrival/Departure Radar South (ARS) around 1000. He recalled the traffic was steady but not "super busy" because he was a very new radar trainee.

The pilot of N2377R called on the departure frequency, but that at the time Mr. Pilcher didn't know who the aircraft was. He remembered that the pilot of N2377R called again and said his transponder wasn't working yet. He wasn't sure where the aircraft was and what it was doing, so, he moved on to other higher priority duties. He heard the pilot say the word "yet" about his transponder not working and he believed that the aircraft would tag up with alphanumeric's on the radar display shortly. After the second frequency check in by the pilot of N2377R, he remembered seeing the primary target, and local called on the landline to inform him that the aircraft was just to the right of Saint Alphonsus. He thought that local might be monitoring him because it was a special situation to have an aircraft with no transponder. He remembered that he thought it was a requirement for the tower to call the radar controller about a primary only aircraft.

Mr. Pilcher believed that he had left the flight progress strip for N2377R in the printer tray. He had no requirement to use the strip for departures. For arrival flight progress strips, he would typically remove the flight progress strip from the printer and then throw it away when he started working the aircraft. He did use flight progress strips for overflight traffic to know where they were going. The training department told Mr. Pilcher to find a technique that worked for him, and that his trainer demonstrated techniques to use.

Mr. Pilcher recalled that the target was on a heading towards McCall airport. At that time, he had a position, direction, and the callsign so he was able to radar identify the primary target of the aircraft. Mr. Pilcher radar identified the accident aircraft using what he believed to be position correlation after the tower controller had called down with the position. He did not verify the altitude of the aircraft on initial contact.

A short time later, Mr. Pilcher was relieved from the departure control position. Mr. Pilcher remembered that he used the position relief checklist to give a position relief brief to Mr. Yahn, and that weather and PIREPs took priority in the briefing. He kept looking at his on the job training instructor (OJTI) and that his instructor was telling him that more items needed to be included in the briefing. He recalled looking to his instructor for assistance because he was trying to determine if he had issued all the pertinent information in each section of the briefing. He was not looking for information about what he had missed from the checklist, but what he specifically missed from the special activities section and the fact that there were several weather issues to cover. He had gone over all the traffic that he remembered. The N2377R radar display alphanumeric's had never populated on the radar display and he forgot about the aircraft. He believed that he had forgotten the aircraft because it was not tagged, and he was accustomed to seeing traffic that was tagged. He did not recall ever working another primary only aircraft during training sessions. Both he and his instructor completed the required two-minute overlap after the position relief and watched to make sure the relieving controller knew what was going on. He ensured the oncoming controller had all the required information that he needed. He remembered discussing with the instructor the importance of briefing the oncoming controller about the weather, and that they did not discuss the primary only traffic.

Mr. Pilcher felt that his position relief brief was terrible because he was all over the place with the flow of information. He felt that the briefing was "choppy" because he was so new on the position, and that he was alternating his attention back and forth from the radar display to the checklist. His position relief briefings in the control tower were different because he knew what information was important in the control tower. He typically went over the information displayed on the National Airspace System Information Display system (NIDS)¹, and then got to the traffic portion of the checklist. He didn't normally go down the checklist in order because he was familiar with what was printed and simply tried to cover everything on the list.

Mr. Pilcher had received classroom training on the Standard Terminal Replacement System (STARS)² prior to training on clearance delivery and on the radar positions. He was not sure how to initiate control on an aircraft before this incident. He had completed simulator training prior to training on live traffic, but he did not recall if that simulator training included initiating a data block on a primary only target.

The relieving controller was Mr. Pilcher's supervisor of record. He said they did discuss the situation with the primary target the next day. They did not review the replay but did discuss

¹ NIDS – National Airspace System (NAS) Information Display System – A real-time data collection and display system that provides air traffic controllers access to traffic, weather, and surveillance data in one touch-screen workstation.

² STARS is a digital automation system capable of tracking all aircraft within the defined airspace using information from available FAA and U.S. Department of Defense (DoD) surveillance systems

what happened and what to expect in future events. Mr. Pilcher participated in a Covered Events Review (CER)³ of the incident the next day. They began by discussing what a CER was, then listened to the audio tapes and watched the Falcon⁴ replay. They discussed what the facility could do in order to mitigate this type of issue in the future. Mr. Pilcher believed the mitigation plan was good and stated that most, if not everyone, was already initiating data blocks on primary targets already. He believed that his instructor would have just tagged the primary target immediately.

Interview concluded at 1145.

Interviewee: Christopher Sloan (CR)

Date / Time: May 21, 2018/ 1330

Location: Air Traffic Control Facility, Boise Idaho

Present: David Waudby, Daniel Meyers

Investigator: Andy Olvis

Representative: Thomas West

During the interview Mr. Sloan stated the following:

Mr. Christopher Sloan began working for the FAA September 2007 as a veteran's readjustment act (VRA) hire reporting directly to Seattle Air Traffic Control Tower (SEA). In November 2014, he transferred to Seattle terminal radar approach control (S46 TRACON) where he stayed until September 2015. In September 2015, he transferred to Boise Idaho (BOI) where he has remained.

Prior to the FAA, Mr. Sloan served as a civilian air traffic controller at Gray Army Airfield (GRF) in Fort Lewis/Tacoma, Washington. He had prior military ATC experience in the United States Army as an air traffic controller from November 2001 until November 2006. He served as an air traffic controller at Cairns Army Airfield, Fort Rucker/Ozark, Alabama. He did not have any other aeronautical licenses, and his ATC medical was current with no restrictions.

Mr. Sloan's regular days off (RDOs) were Wednesday and Thursday. On Fridays he worked a 1600 to 0000 shift, on Saturdays he worked a 1400 to 2200 shift, on Sundays he worked a 0700 to 1500, on Mondays he worked a 0545 to 1345, and on Tuesdays he would work the mid-shift from 2200 to 0700. On the day of the accident Mr. Sloan worked a 0800 to 1600. His supervisor was Mr. Yahn.

On the day of the accident Mr. Sloan arrived at work and started the day checking the read and initial board and obtained a weather brief. Normally he would look at the staffing in the tower and TRACON to try and get the best training for his developmental controller Mr. Pilcher. He would look to see where Mr. Pilcher would be required for manning and would work his training

³ The intent of a CER is to supplement and document the existing required review of air traffic services rendered during an aircraft accident. In addition, CERs require SDPs to review each accident in-depth, looking beyond the areas of individual performance. A CER must include a review of all aspects of service (individual performance, equipment issues, weather, etc.) and identify any issues that cannot be ruled out as potentially contributing to the accident.

⁴ FAA NAS radar play back tool used by air traffic control facilities.

around those times. Mr. Sloan remembered the accident aircraft had departed during Mr. Pilcher's first radar training session of the day. He remembered they had assumed the position a little after 1000 and stayed on position until a little after 1200. The traffic was busy for Mr. Pilcher for the bulk of the training session; however, at the end it tapered off. Mr. Pilcher had lower training hours and there had been a lot going on; there were a lot of things that Mr. Pilcher hadn't seen before. There had been a lot of weather to the southeast and east with thunderstorms requiring aircraft deviations. The weather to the west and to the north was fine, and BOI had been reporting visual flight rule (VFR) weather conditions. Mr. Sloan did not remember any decreasing ceilings or precipitation to the north.

The accident aircraft had contacted Mr. Pilcher and reported something like "we are off". Mr. Sloan remembered seeing a primary target just north of BOI. Mr. Pilcher acknowledged the pilot with "roger". The BOI ATCT controller called Mr. Pilcher on the intra-facility landline and said that the primary target just east of the Saint Alphonsus hospital was N2377R; Mr. Pilcher advised the pilot of N2377R that the flight was "radar contact". The pilot responded that the transponder was warming up, and Mr. Sloan believed they would soon receive the appropriate transponder code and the associated data tag on the STARS radar display. Mr. Sloan remembered they had received a departure flight progress strip and Mr. Sloan believed the data tag would associate on the radar display soon. Mr. Pilcher did not force the data tag onto the primary target identified as N2377R. Mr. Sloan did make a mental note to discuss the process of forcing the data tag onto a primary target with Mr. Pilcher when they were relieved from position.

Mr. Sloan did not know why he hadn't instructed Mr. Pilcher to force the data tag onto the target. They had been discussing a TCAS RA⁵ event that had happened shortly before the accident aircraft had departed. Mr. Sloan's expectation bias was that the accident aircraft would "tag up". Ultimately, Mr. Sloan said that he had completely forgotten about the primary target of the accident aircraft.

There was no memory jogger to assist controllers with remembering a VFR primary target being worked by the departure controller when a data tag was not forced onto the radar display. Flight progress strips were not required, and neither were data tags. So, there was nothing written or on the radar display to assist the controller in remembering the primary target. Mr. Sloan believed the best memory jogger was initiating the data track on the primary target; he would normally initiate a track right away and did not know why he had not this time.

Mr. Sloan believed that Mr. Pilcher had accomplished radar identification after the tower had called down with the position of the aircraft. He assumed the control tower had observed the departure within a mile of the departure end of the runway, so Mr. Sloan accepted that as one of the primary target identification methods. He did not recall if he talked to Mr. Pilcher about what altitude the aircraft was when radar identifying the aircraft.

⁵ Traffic Collision Avoidance System Resolution Advisory (TCAS RA) - a system designed to reduce the incidence of mid-air collisions with other aircraft. A resolution advisory is an indication given to the flight crew recommending a maneuver intended to provide separation from all threats, or a maneuver restriction intended to maintain existing separation.

The position relief briefing (PRB)⁶ provided to Mr. Yahn was “brutal”. Mr. Pilcher had been struggling through it and needed some coaching to complete it. Mr. Sloan wanted Mr. Pilcher to emphasize the weather and an AWOS at an adjacent satellite airport that was unreliable. Mr. Sloan believed he did use the PRB checklist on the NIDS.

Mr. Sloan did not know why the PRB had been so jumbled; Mr. Sloan had not told Mr. Pilcher to just follow the checklist line by line. Mr. Sloan had been “plugged” in to another approach position and monitored the PRB from the north radar position. Mr. Yahn was relieving Mr. Pilcher and had been working the radar supervisor position. They had been relieved as part of the normal training rotation. Mr. Sloan debriefed with Mr. Pilcher after the PRB was conducted and discussed the TCAS RA incident and how to best handle that type of situation in the future. Mr. Sloan said that they had both completed the 2-minute overlap after the PRB.

Because there had been two separate training sessions, Mr. Sloan would have written two FAA 3120.25 training forms for two individual training sessions. Mr. Sloan believed the briefing provided to Mr. Pilcher was complete, and that he had completely forgot about the accident aircraft at that time. Mr. Sloan said that the relief brief was scattered, and that Mr. Pilcher had needed assistance the whole way through. The 3120.25 training for that training session was not necessarily reflective of Mr. Pilcher’s performance.

Mr. Sloan had conducted the “bulk” of Mr. Pilcher’s training. This incident had been the first time Mr. Pilcher had experienced a primary target while working with Mr. Sloan. That is why Mr. Sloan made a mental note to discuss this issue with him. When training issues became a problem, or mistakes were continuously repeated, Mr. Sloan would annotate them on the training form and brief the trainee.

Mr. Sloan became aware of the incident unofficially through the union vice president (VP) who had called him at home on Sunday evening. The VP had called to ask about the accident aircraft and wanted to know if he knew anything about the flight. Mr. Sloan informed him that they had worked the accident aircraft and that it was enroute to McCall airport. Mr. Sloan’s initial response was “oh crap I hope they find him”. He felt panicked because a person was missing. Mr. Sloan thought that he may have made a mistake. He realized later that evening that he and Mr. Pilcher had forgotten about that aircraft after they had radar identified the aircraft. Mr. Sloan remembered that he may not have relayed the aircraft information in the PRB and told the union vice president.

Mr. Sloan reviewed the incident with Mr. Pilcher during the CER and discussed forgetting about the aircraft. Mr. Sloan filed an Air Traffic Safety Action Program (ATSAP)⁷ report on Tuesday when he worked a 0600 to 1400 shift. Mr. Sloan reported the CER was professional and that everything that needed to be addressed had been. Mr. Sloan indicated that his supervisor had

⁶ A step-by-step process for conducting a position relief briefing and transferring position responsibility from one specialist to another.

⁷ A confidential, non-punitive, safety-reporting program for employees in En Route, Terminal, and System Operations. This program is administered by ATO Safety with the participation of NATCA and AOV.

not discussed the incident with him other than during the CER development; there was no record of performance record of conversation (PROC)⁸ conducted on this incident.

A normal training session was an hour to an hour and a half. Mr. Sloan remembered pushing for training that day, but that staffing was a little short, so they ran long with the length of training because Mr. Pilcher was a tower certified controller. "I think fatigue had something to do with his PRB, I don't know about the event". Mr. Sloan did not think that Mr. Pilcher was ready to fully digest the incident and learn from it. Mr. Sloan was trying to coach Mr. Pilcher through the incident and trying to make sure he was ok; the two of them had open communication.

Mr. Sloan did not use flight progress strips as a matter of routine. He did use strips for satellite sector arrivals and overflights. Mr. Sloan had discussed how strips were usable, how to organize and manipulate, but had given Mr. Pilcher the choice of whether to use them or not.

Interview concluded at 1440.

Interviewee: Shannon Swing (SW)

Date / Time: May 21, 2018/ 1525

Location: Air Traffic Control Facility, Boise Idaho

Present: David Waudby, Daniel Meyers

Investigator: Andy Olvis

Representative: Mark Tomicich

During the interview Mr. Swing stated the following:

Mr. Shannon Swing began working for the FAA in January of 1992 and reported to the FAA Academy in Oklahoma City, OK for initial training. After completion of initial training, he reported to Anchorage ARTCC in April of 1992. He transferred to Seattle TRACON in June of 1997 and remained there until January of 2003. He then transferred to Boise ATCT in January of 2003 and became an operational supervisor in December of 2007. Mr. Swing had no prior military air traffic control experience. Mr. Swing's ATC medical was current with no restrictions and he held no other aeronautical certifications.

Mr. Swing's RDOs were Friday and Saturday. He typically worked 1400 to 2200 on Sunday, 1300 to 2100 on Monday and 0615 to 1415 on Tuesday, Wednesday and Thursday. On Sunday, May 13, 2018, Mr. Swing was working from 1400 to 2200 and performed general supervisory duties to include completion of time and attendance records after arriving at work.

At about 1730 to 1745 Mr. Swing received a page from the controller-in-charge (CIC) to call the control tower. The CIC advised Mr. Swing that he had received a phone call from airport operations and from St. Luke's Hospital inquiring about the pilot of N2377R. He talked to the

⁸ A record designed to articulate operational performance expectations, manage employee operational performance, and assist employees in reaching their fullest performance potential while working in the operational environment.

CIC about doing an automation search using CountOps⁹. A CountOps search had been completed by the CIC but did not indicate that N2377R had been tracked by radar automation. Count ops could search for exact or variations of the call sign. Mr. Swing asked the CIC if the call sign for the aircraft was correct. He said that no one had looked for the flight progress strip and asked the CIC to call FSS to see if N2377R had filed a VFR flight plan. He had used COUNTOPS and conducted numerous searches using various parts of the call sign and would have known in five minutes if they had talked to N2377R. Mr. Swing knew that anybody who leaves Boise airport had to get a beacon code and communicate with Boise ATCT.

Mr. Swing conducted a search for the aircraft using Falcon and started his search at 1030 for the next 200 minutes or “whatever it would let me run”. He said the internet was very slow, but around 1200 in the replay, he saw a primary target go north. He used Digital Audio Legal Recorders (DALR)¹⁰ to listen to the clearance delivery position and heard the pilot of N2377R call clearance delivery. Mr. Swing called the tower to have them call FSS to start an Information Request (INREQ)¹¹ or Alert Notice (ALNOT)¹². The CIC advised that ZLC ARTCC oversaw search and rescue, so Mr. Swing asked the CIC to call ZLC to issue an INREQ or ALNOT.

In order to search for the aircraft, Mr. Swing used DALR to listen to the ground control, local control and approach control positions. He heard local control coordinating the position of the aircraft with the departure controller. He did not hear the aircraft position during the approach control PRB. Mr. Swing thought the coordination by the local controller was enough for the departure controller to radar identify the aircraft with position correlation. Mr. Swing said that ATC could not apply Class C airspace separation services to an aircraft that had no altitude information, or did not have the altitude verified by the pilot.

Mr. Swing continued to watch the replay to see where the radar target was lost. The indicated the target was lost 20 miles north of BOI and thought the aircraft must have been low. If the aircraft was at 9000 feet, radar would have continued to depict the target. Since BOI radar was fused, Mr. Swing believed that the aircraft would have been depicted at an altitude between 5,000 and 6,000 feet. Mr. Swing concluded the aircraft must have been operating below 5,000 feet MSL.

Once ZLC ARTCC had been notified and an ALNOT or INREQ initiated, it was out of Mr. Swings hands, so he did not do any other investigative activities. He called the acting air traffic manager Bill Washington but could not recall the exact conversation. He did remember that he had advised him that an aircraft was missing

⁹ CountOps is an FAA automated system that utilizes data from National Offload Program (NOP), STARS, and Common ARTS to provide hourly counts of air traffic activity at TRACONS, towers, and airports. It includes counts for more than 2,000 towers and airports.

¹⁰ NAS voice recording system installed and used at FAA air traffic control facilities. Recorded voice data includes all air-to-air, air-to-ground and landline-based communication associated with an air traffic control operational position.

¹¹ When an aircraft on a VFR flight plan is overdue by 1 hour, or by 30 minutes on a IFR flight plan, the Flight Service Station servicing the destination airport issues an INREQ (Information Request).

¹² The ALNOT will be issued at the end of the INREQ or when the estimated time that the missing aircraft's fuel would be exhausted or when there is serious concern regarding the safety of the aircraft and its occupants.

Mr. Swing said that the PRB with the off going departure controller was long and that the developmental sounded tired. He said that the OJTI kept prompting the developmental on the PRB to continue the briefing, but the developmental needed to give a more complete weather picture. Traffic was complete, except for the accident aircraft information. He felt that the training team was using the PRB checklist.

According to Mr. Swing, there was nothing better than initiating a data tag on a primary target to keep track of the aircraft, or, the use of flight progress strip as a memory aid. However, the use of a flight progress strip was not required.

Most of the CER was completed by Mr. Swing. He did consult with the regional office on the conduct of the CER because he had never done one before. The CER was started on Monday, and he did not believe they finished before Wednesday. He emailed both supervisors of the deficiencies he had uncovered in the CER. He did not know if a PROC were completed on those results.

The following deficiencies were noted by Mr. Swing:

Ground Control: Taxied aircraft to RWY10R at taxiway B3. Aircraft did not use call sign during read back.

Local Control: Cleared aircraft for takeoff on RWY10R, but aircraft was at taxiway B3 on RWY10R

Local control did not use "November" when transmitting to N2377R

Approach Control: Radar identification and incomplete relief briefing

Mr. Swing briefed the facility on how to initiate a data tag on primary target using STARS and conducted face-to-face briefings with 2/3 of the facility controllers on completing radar identification. He said that primary target only aircraft did not depart BOI often, and if you did see a primary target, BOI was not providing any ATC services. He had not seen a controller start a track on a primary target before, but it was his expectation that they would. He believed there was a systemic issue with the tower position correlation and that that face-to-face briefings would address this issue. He believed a lot of learning had taken place as a result of this incident and it was still being absorbed by the workforce.

Interview concluded at 1630.

Interviewee: Clayton Phipps (DH)

Date / Time: May 22, 2018/ 0845

Location: Air Traffic Control Facility, Boise Idaho

Present: David Waudby, Daniel Meyers

Investigator: Andy Olvis

Representative: Thomas West

During the interview Mr. Phipps stated the following:

Mr. Clayton Phipps began working for the FAA in September of 2007 as a VRA hire and reported directly to Boise ATCT (BOI). He was a staff support specialist and was fully certified at BOI. Prior to the FAA, Mr. Phipps was in the United States Marine Corps serving in multiple locations as an air traffic controller. He held a private pilot license that was not current. Mr. Phipps' medical was current with a restriction to wear glasses.

Mr. Phipps' RDOs were Saturday and Sunday. He typically worked an 8-hour day shift on Monday, 9-hour day shifts on Tuesday, Wednesday, and Thursday and a 5-hour day shift on Friday. His supervisor of record was Bill Washington.

On Monday May 14, 2018 Mr. Phipps recalled arriving at the facility and looking at the mandatory occurrence reports (MOR's). He recalled seeing the public inquiry into the accident aircraft, so he checked the facility log and noticed that the ALNOT was neither cancelled nor carried over to the next day's facility log 7230-4. He remembered coordinating with the front-line manager (FLM) to return the ALNOT back into the facility log. He noticed the Civil Air Patrol aircraft were already airborne searching for the lost aircraft. Mr. Phipps looked at the radar data but didn't see any radar returns further along the original route of the aircraft to the north. He said that he then passed the information to Western Service Area Quality Assurance (QA).

The service area had called the facility and said the facility needed to complete a services rendered telcon (SRT)¹³. He remembered collecting all the data and typing the synopsis of the incident for the initial portion of the SRT. Mr. Phipps was in for the SRT to run the Falcon replay but left the SRT to be completed by Jeremy Yahn and Shannon Swing.

Later in the day, Mr. Phipps helped to complete the CER. Everyone involved in the handling of N2377R was in the facility, so they were able to complete interviews and wanted to complete the CER quickly. The facility felt like they needed to complete it quickly because it had to be done within three days. The facility reconvened and completed the CER on May 16, 2018.

Mr. Phipps believed that the CER was not rushed but that the mitigation of the issues was not done well. The safety issues identified in the CER was the local control position calling the departure position about the untagged primary targets and using that as a means for radar identification, and, that the facility did not require a radar controller to force a data block onto a primary only aircraft. When the facility conducted interviews for the CER, they realized that controllers had started incorrectly radar identifying primary targets. A mitigation was put in place to bring the facility back to within standards. The mitigation briefing stated that if a controller did not see a primary target within one mile of the departure end, another form of radar identification must be used. They did not address the need to verify altitude information even though Mr. Phipps agreed that it should have been.

¹³ A telephone conference conducted with the ATO Safety Event Response Group, the Director of Operations, Mission Support Staff, Office of Accident Investigation and Prevention, Operations Control Center, the involved Facility and others as needed to review and assess ATO services associated with a significant or noteworthy event.

Mr. Phipps did not interpret the call from the tower as position correlation for the radar controller to call radar contact. The facility taught as part of classroom training that the call was advisory in nature only and was to give the radar controller information as to what aircraft to expect. The facility taught primary radar identification methods in the classroom before training on the three different radar positions. He said that a student controller should also have been trained on primary radar identification at radar training fundamentals (RTF).

The BOI standard operating procedures (SOP) was just rewritten last year and the section about prearranged coordination did not change. There was no differentiation between VFR and IFR aircraft when using prearranged coordination and it had been written this way since he arrived at BOI. In the case of N2377R, the aircraft still would not have been tagged up because the pilot said that the transponder was still warming up.

BOI had only stopped mandating the use of strips when they moved to the new facility. He recalled that strip usage was mandatory prior to that and that controllers normally just place a data block on primary targets that have been radar identified.

Mr. Phipps said that if he had been working approach control in this situation, N2377R would have been the first aircraft he talked about in his PRB because he would have been waiting for “something” from that aircraft. He did not recall the difference between the tower and the radar checklists, even though he helped to develop them. He did not work traffic on a regular basis but that he did use the checklist to complete PRB’s. Mr. Phipps would expect a controller with Mr. Pilcher’s experience to miss the primary target in his PRB, but that he would expect the OJTI to fix it.

Mr. Phipps was the training administrator. Before a class started, he would discuss with the OJTI to let them know about the developmental’s strengths and weaknesses and remind him of what topics need to be covered in the class. He was the person who signed off on simulator scenarios and would help to develop them. Mr. Phipps recalled that the facility did train how to handle primary only aircraft but only in the classroom portion of the training program. The AT-Coach¹⁴ simulator did not allow the facility to depict primary only targets in a realistic manner. He said that a primary target did not display correctly with enough intensity to be a useful training tool; it had not worked since the facility went to FUSION. He said displayed weather did not display correctly in this mode either.

Interview concluded at 0930.

Interviewee: Jeremy Yahn (YN)
Date / Time: May 22, 2018/ 1045
Location: Air Traffic Control Facility, Boise Idaho
Present: David Waudby, Daniel Meyers
Investigator: Andy Olvis
Representative: Mark Tomicich

¹⁴ High-fidelity simulator used for conducting simulation training, utilizing locally developed scenarios. All facilities must conduct simulation training prior to starting OJT.

During the interview Mr. Yahn stated the following:

Mr. Jeremy Yahn began working for the FAA in September of 2002. He was hired under a VRA bid and reported directly to Boise ATCT (BOI). He had previous experience as an air traffic controller in the Air National Guard at Klamath Falls, Oregon from March of 1998 to June of 2001. He was an air traffic controller with SERCO at Missoula, MT from April of 2000 to September of 2002. He became an FLM in January of 2008 at Boise ATCT. He was certified on all positions except for local control. He expected to recertify on local control soon and had lost his certifications due to a medical break.

Mr. Yahn held no other aeronautical certifications and his ATC medical was current with a restriction for glasses. He stated he was wearing his glasses at the time of the incident.

Mr. Yahn's RDO's were Wednesday/Thursday and worked Friday and Saturday from 1300 to 2100, Sunday, Monday, and Tuesday from 0600 to 1400. His supervisor of record was Bill Washington

On Sunday May 13, 2018, Mr. Yahn arrived at work, and that it seemed like a normal Sunday. He said it was the first training session for Mr. Pilcher and Mr. Sloan. The staffing was not excessive, but there was enough staffing to support training. There were rain showers in all quadrants of the airspace. Mr. Yahn set up the training plan and a position rotation in conjunction with the CIC. His plan was not to have Mr. Pilcher and Mr. Sloan training for 2 hours consecutively, but Mr. Sloan liked to train. His usual training sessions were between one to one and one-half hours, and he targeted training time for one hour.

During the training session, Mr. Pilcher and Mr. Sloan had a TCAS RA and he had to complete an MOR; he discussed the TCAS RA with Mr. Pilcher and Mr. Sloan. He did not remember if he asked Mr. Sloan if they wanted off the operating position and would usually coordinate if there would be a delay in obtaining a position relief.

A short time later Mr. Yahn "plugged" into the south radar position with Mr. Pilcher and said he was ready to get them off position. He already had enough time to preview the position, weather and equipment. Mr. Pilcher went through the PRB in order and thought he was done, but Mr. Sloan prompted him for more information that he had missed. Mr. Pilcher told him the Caldwell airport AWOS was unreliable. It seemed that Mr. Sloan was trying to make it a complete briefing as possible.

Mr. Yahn said there are PRB checklist differences for the tower and TRACON. Local control did not have the Bozeman or Mountain Home areas, but the traffic and weather were the same. He had heard Mr. Pilcher give a PRB and thought he was very strong "ability wise" and wanted to do good. He would expect any controller at his experience level, and point in training on radar, to need some prompting by the OJTI.

Mr. Yahn did not recall how many strips were in the printer after he assumed the operating position. He normally did not throw away strips, and would take them out of the hopper, and put

then on the desk, and review them. His general practice was to use strips to the maximum extent possible but did not remember what he did on that day. Mr. Yahn had no idea a primary radar target existed or that he was providing service to. He said that they would get primary targets between Nampa airport and Caldwell airport and would occasionally slew over the target to get speed.

Mr. Yahn first became aware of the incident at 0600 Monday upon arriving at work. He said Mr. Phipps had asked him if Mr. Swing had talked to him about the missing aircraft and ALNOT. He then called ZLC ARTCC to see if they had any news. He pulled up Falcon to see if Shannon Swing missed something in the search of the aircraft but did not see anything new. He waited to hear information from the search and rescue aircraft and saw Civil Air Patrol (CAP) aircraft in the area.

When he began reviewing the incident, Mr. Yahn heard the tower controller relay the position of the aircraft and the departure controller radar identifying the accident aircraft. That was when he realized he should have been talking with the aircraft after assuming responsibility of the position.

Mr. Yahn received several phone calls from QCG and the region who indicated they were going to treat it as a preliminary accident. He did not remember who he had spoken with, but there was going to be an SRT. He then looked at the SRT checklist and called Mr. Washington, Mr. Swing and Mr. Phipps. He stated that Mr. Phipps was at the facility and Mr. Swing was coming in. Mr. Washington would dial into to the SRT. He did not know if they were assuming a crash because he did not have the info about where the aircraft was. Mr. Phipps and Mr. Swing helped compile the information on the incident. During the SRT, it was briefed that the aircraft information was not passed in the PRB. He said that his involvement with the investigation ended with the SRT, and he was not part of the CER.

Mr. Yahn was still in the process of reviewing this training session for individual performance management and had 10 days to complete the PROC. Mr. Swing emailed Mr. Yahn on May 16th or 17th about potential issues that were identified during the training session. He felt he needed to investigate the entire training session including a review of the training form. He said he was also waiting for the NTSB investigation and that was why he had not completed a PRC. Mr. Yahn had not sat down with the training team yet, but they had talked in the hallway about making sure to tag up primary targets.

Mr. Yahn said some of the identified deficiencies noted were takeoff clearance issued without intersection location, radar identification methods, and information omitted from PRB. He said that he would review data before writing a PRC, talk to the person, and then provide feedback.

The requirement for the local controller to provide a position for a primary target departure was advisory in nature and not to be used for radar identification. Mr. Yahn believed it came from the time when they could not initiate target data tags in the old Automated Radar Terminal System (ARTS)¹⁵ system.

¹⁵ Automated Radar Terminal System (ARTS) is an air traffic control computer system that air traffic controllers use to track aircraft.

Mr. Yahn did not review training reports and they are usually filed with Mr. Phipps. He would usually see them a few days later and reviewed them. He had seen the training report from this incident and thought it was incomplete and that there should have been more information included.

Interview concluded at 1150.

Interviewee: **Kenneth Hamner (KH)**

Date / Time: May 22, 2018/ 1230

Location: Air Traffic Control Facility, Boise Idaho

Present: David Waudby, Daniel Meyers

Investigator: Andy Olvis

Representative: Thomas West

During the interview Mr. Hamner stated the following:

Mr. Kenneth Hamner began working for the FAA May 2003 after being selected through an off the street bid. He reported to the FAA training facility in Oklahoma City OK and following successful completion transferred to Reid-Hillview Airport of Santa Clara County (RHV) in San Jose, California. In November 2016 he transferred to the Northern California TRACON (NORCAL) in Mather, California. In November 2016, Mr. Hamner transferred to BOI for duty where he has remained.

Mr. Hamner had no prior ATC experience and had attended Mt. San Antonio college for the collegiate training initiative program. He held no other aeronautical licenses and his medical was current with no restrictions. His supervisor was Mr. Shannon Swing.

His RDOs were Friday and Saturday. On Sunday is shift was normally 1445 to 2245, on Monday it was normally a 1300 to 2100, on Tuesday it was normally a 0700 to 1500, On Wednesday it was normally a 0600 to 1400, and on Thursday it was normally a midshaft from 2200 on Wednesday to 0600 on Thursday.

On the day of the accident Mr. Hamner had worked a 1600 to 0000 shift. He remembered that it had been raining and that he had brought in in steaks for coworkers to grill. Mr. Hamner began working in the tower and ended up working as CIC combined with clearance delivery (CD). Between 1730 to 1800 that day, he had received a telephone call from St Luke's hospital inquiring about an aircraft that was supposed to have departed BOI earlier in the day. They said the pilot was supposed to have left at about 11 am on his way to McCall Idaho airport. The individuals who were supposed to meet him at the McCall airport were concerned because he hadn't arrived. Mr. Hamner said that BOI to McCall airport was not a very long flight, and this was much later in the day. The individual told him that the pilot's pickup truck was at Western Aviation on BOI, but that the aircraft he was scheduled to fly was not there. Mr. Hamner told the individual that he would do some research and return the call.

Mr. Hamner utilized the CountOps program to conduct most of the search for the missing aircraft. It could look up callsigns and variations of the callsigns of aircraft that either depart, land, or overfly BOI airspace. Mr. Hamner went back about 12 hours searching for the accident aircraft call sign but did not find it. He had been curious if the approach controller made a mistake with the callsign, so he tried several variations of the callsign to find it; they were not successful in locating the accident aircraft. He called the FSS because he felt the pilot should have received a weather brief from a specialist. FSS indicated that they had not spoken with the pilot.

Mr. Hamner was “scratching his head” because he could not figure out why Count Ops could not find the accident aircraft. He used Count Ops to search for all VFR targets departing BOI to the north and didn’t find anything. He called the FLM Mr. Swing to inform him what was happening, and Mr. Swing indicated he would investigate it. A short time later, BOI airport operations (OPS) called to ask the same basic questions as St. Luke’s about the missing pilot. Mr. Hamner told BOI Ops that St Luke’s had also called and that an initial search indicated that BOI ATCT had not worked the aircraft. Mr. Hamner told them research was still in progress and that he would advise them as soon as he had information. He kept widening his search in Count Ops until it was 5 days of data. He said that he wasn’t finding the accident aircraft in the system.

Mr. Hamner tried to use Falcon and pull data from the tower, but that it kept giving an error; “check internet connectivity.” Mr. Hamner advised Mr. Swing who indicated he would use the Falcon downstairs. Mr. Swing instructed Mr. Hammer to call the FSS. Mr. Hammer informed Mr. Swing that he had already done so and that the FSS had no information. Mr. Swing reported he had heard the accident aircraft on the BOI CD position and matched up the communications tapes with the Falcon replay. He looked for a primary radar target on Falcon and found the accident aircraft. Mr. Swing followed the aircraft through the services that were provided by BOI.

Mr. Hamner believed that he had called airport services and informed them that BOI had found the aircraft had departed BOI and asked them to inform St. Luke’s. When Mr. Swing found the aircraft on Falcon, he asked me to start an “INREQ”. Mr. Hamner told him that he would initiate an ALNOT and called ZLC to get it started. He was eventually transferred to the ZLC OM and Mr. Hamner provided all the details. The ZLC OM indicated VFR aircraft missing would normally be done through the FSS. He told the OM that they had already gone through the FSS who didn’t have any information on the accident aircraft. Mr. Hamner told the OM they could contact the FSS. Mr. Hamner eventually received a call from the FSS who wanted to know the name of the person making the initial report. Mr. Hamner told them that he had taken the initial call from airport operations and provided the FSS with that telephone number.

Later, Mr. Swing had come upstairs and told Mr. Hamner that he had tracked the accident aircraft as far as the radar system would go; near Horseshoe Bend. Mr. Hamner said that the radar system would normally drop low flying aircraft at Horseshoe Bend, and that communications would normally drop there as well. Mr. Hamner added that the accident aircraft had received services from BOI but that no one knew where the aircraft was located.

Mr. Hamner had no further involvement in the accident until Mr. Swing started asking questions about rules and regulations. Mr. Swing would occasionally ask Mr. Hamner because he

knew Mr. Hamner's background and relied on his knowledge. Mr. Hamner did not participate in the CER or the SRT.

Initiating a data tag onto a primary radar target was not a requirement at the time of the accident, but that because of the accident and the following CER, it was now. The use of strips was not required in radar and was still not required following the implemented mitigation procedures. Departure strips that print provided a "rolling call" which are the strips that Mr. Hamner considered important and would use.

Mr. Hamner did get a face to face briefing about radar identification methods. The briefing was to adhere to the 7110.65 or at least how management was interpreting it. He believed that BOI had followed the rules and thought the facility had done a pretty good job other than the controller had never said "goodbye" (meaning radar service terminated).

Interview concluded at 1330.