

Factual Report – Attachment 1

Interview Summaries

AIR TRAFFIC CONTROL

DCA19MA086

Table of Contents

Interviewee:	Natalie Hart (East Arrival (D))	3
Interviewee:	Lucas Miller (Relief for Final Center (I)).....	5
Interviewee:	Steven Zepeda (Final Center (I))	7
Interviewee:	Artemio Hinojosa Jr. (Operations Manager (OM))	11
Interviewee:	Michael Richardson (Operations Manager in Charge (OMIC)).....	12
Interviewee:	Michael Schawinsky (Relieved Departure South/Departure East (L/E))	15
Interviewee:	Luther Dismel (Departure South/Departure East (L/E)).....	16
Interviewee:	Michael Brittain (Supervisor (SI))	18
Interviewee:	Donald Magley (Watch Supervisor (WS))	20

Interviewee: Natalie Hart (East Arrival (D))

Representative: Anthony Silver

Date / Time: February 25, 2019 / 0904–1004

Location: Houston TRACON (I90)

Present: Dave Waudby, Michael Richards, Amy Huschka, and Curt Fischer

Investigator: Betty Koschig

During the interview Natalie Hart stated the following:

Her air traffic control experience began in September 2007 when she was hired by the FAA and attended initial training at the FAA Academy in Oklahoma City, Oklahoma. After successful completion of initial air traffic control training she worked at Raleigh-Durham International Airport (RDU) from 2007 to 2016, and then I90 from 2016 to present. She was qualified on all positions in the area and was certified as an on the job training instructor (OJT). She held a Bachelor of Science degree in Air Traffic Management and Aviation Safety. Her supervisor was Mike Brittain. Her operating initials were NH. She held a current second-class medical certificate with a restriction to have eyeglasses with her.

On Saturday, February 23, 2019, Ms. Hart worked her regularly assigned shift and was assigned to the “D” arrival control position at the time of the accident. Her work schedule for the week leading up to, and including the day of the accident was:

February 17, 2019	Sunday:	Annual Leave
February 18, 2019	Monday:	0600–1400
February 19, 2019	Tuesday:	Regular day off (RDO)
February 20, 2019	Wednesday:	RDO
February 21, 2019	Thursday:	1430–2230
February 22, 2019	Friday:	1315–2115
February 23, 2019	Saturday:	0645–1445

Ms. Hart stated that she felt well rested on the day of the accident and had approximately seven hours of sleep the night prior to the accident; 6 to 7 hours of sleep was normal for her. She ate well, did not smoke, and drinks alcohol occasionally but did not drink alcohol the night before the accident.

Ms. Hart had watched the radar replay of the accident. When asked to describe her recollection of events leading up to the accident, Ms. Hart stated that she completed her pre-duty weather briefing, and knew it was going to be a “weather” day. When she plugged into position it was slower than usual, but traffic was increasing. IAH had been landing runway 26 right (26R) but she anticipated they were going to open another arrival runway. Then the traffic management coordinator (TMC) came over and coordinated and confirmed they were opening runway 26 left (26L) for arrivals.

Ms. Hart took the handoff of Giant¹ (GTI3591) from ZHU and everything seemed normal. She issued the ATIS, altimeter and runway 26L transition to the pilot. She described the weather ahead to the pilots and advised them that she would be able to work them in whichever direction they decided to go; direct east or west [of the weather] to accommodate them.

Ms. Hart handed Giant off to the (I) controller, and the pilot changed to the final controller's frequency. The final controller had a few other aircraft he was vectoring to final when she noticed Giant's altitude portion of the data block display "XXX." She yelled to the final controller "Hey, are you watching him showing XXX," but he did not respond. The final controller finally did respond and said "Yeah, I see it." The data tag went into "coast" (CST) and then went back to "XXX" before she saw the data tag separate from the primary target.

Ms. Hart took one or two more handoffs on arriving aircraft and then enlisted the help of the operations supervisors (OS). She heard the final controller trying to contact Giant on the guard frequency, and the TRACON became hectic with a lot of energy in the room. She stated that Mr. Miller then relieved the final controller.

They had a couple of airplanes pass through the area [where GTI3591 had flown] and those pilots were asked if they heard an ELT (emergency locator transmitter) or had ground contact, and the pilot's responses were negative to both.

Ms. Hart was relieved from the position 10 to 15 minutes after the accident, and then left the control room. She went to the National Air Traffic Controllers Association (NATCA) office and talked to the final controller to verify what she had seen. Ms. Hart was assigned other duties for the remainder of her shift and had not been back to work since the day of the accident.

That day, Ms. Hart had been on two positions prior to the accident, and the average time on position was between 1 hour to 1 hour and 10 minutes, with a 30-minute break. They were occasionally on page backs when the traffic was slower on weekends. She recalled having been on a break for 35 minutes before she had relieved the D arrival controller.

When asked about the arrival procedures and weather conditions leading up to the accident, Ms. Hart said aircraft came in on the LINKK arrival from the southeast corner post, and there was a line of weather moving west to east stretching from north of Beseda to southwest of Hobby (William P Hobby (HOU) Airport, Houston TX) with some breaks [in weather]. Departures (controllers) had been working aircraft much closer to IAH and the aircraft were going through the weather.

Giant had been the first aircraft that she had worked for that arrival route, so she did not have any pilot reports (PIREPs) to relay to pilots. The controller she relieved had only been on for a few seconds, and he did not have any additional information regarding the weather.

When Ms. Hart had worked on the departure controller position prior to her break, departures were climbing to 16,000 ft off IAH and the worst complaint she had was light to

¹ "Giant" is the telephony designator assigned to Atlas Air aircraft. The call sign, together with a flight number, is the aircraft identification for radio voice communications with air traffic personnel.

moderate chop. The moderate chop report had been more towards the end of her session. She had advised the flight data controller about the “tops” but was not sure if she had mentioned the chop report.

Ms. Hart had a good working relationship with all the controllers. As far as staffing was concerned, she believed they could always use more people for staffing.

When asked what weather information the traffic management unit (TMU) provides, Ms. Hart said the TMU did not provide information on the weather or intensity. They provided information on headings for weather or in trail sequencing. How the controllers got aircraft there [to the airport] was on us [ATC] and the TMU only provided flow related information. Ms. Hart said that she often found a good spot to route aircraft around weather and would use that spot until it no longer worked.

When working traffic, and weather was present, Ms. Hart said that she negotiated with the pilots and gave them latitude to find something that worked for everybody. When asked if she thought the weather was significant on the day of the accident, Ms. Hart said no. She stated that the departure position had quite a bit of volume (traffic) going through the weather.

When asked if she was familiar with integrated terminal weather system (ITWS)² Ms. Hart stated she was familiar with it, as she had worked with it from her previous assignment at RDU. She stated it was easier to use at RDU (control tower) because she had been more mobile [able to get up and walk around; at I90 they had a lot to look at and it was like comparing apples to oranges. She used ITWS for wind information before taking finals (positions).

When asked how she set up her radar scope, Ms. Hart stated that her scope had the normal STARS settings for the position and all levels of weather were selected.

Ms. Hart stated that she had filed an air traffic safety action program (ATSAP)³ report.

Interviewee: Lucas Miller (Relief for Final Center (I))

Representative: Anthony Silver

Date / Time: February 25, 2019 / 11:45–12:43

Location: Houston TRACON (I90)

Present: Dave Waudby, Michael Richards, Amy Huschka, and Curt Fischer

Investigator: Betty Koschig

During the interview Lucas Miller stated the following:

His air traffic control experience began in October 2008 when he was hired by the FAA and attended initial training at the FAA Academy. After successful completion of initial air traffic control training he worked at Savannah/Hilton Head International Airport (SAV) from December

² See the Meteorology Factual Report for detailed information on ITWS.

³ ATSAP is a voluntary reporting program that allows air traffic controllers and other employees to report safety and operational concerns.

2008 to August 2014, and then I90 from 2014 to present. Prior to working for the FAA, he served five years on active duty in the United States Marine Corps (USMC) and had been stationed in Japan, South Carolina, and Iraq. He had qualified on all positions in his area and was certified as an OJTI. His operating initials were LM.

Mr. Miller held a current second-class medical certificate with a restriction to have eyeglasses in his possession. He had eyeglasses but did not need them to work the position. His collateral duties included NATCA Vice-President at I90, and the professional standards representative. He obtained a Bachelor of Science degree in Professional Aeronautics from Embry Riddle Aeronautical University (ERAU).

On Saturday, February 23, 2019, Mr. Miller worked an overtime (OT) shift and was the relief controller for the (I) position after the accident had occurred. He said he worked about 32 hours of overtime a month, which was comprised of six-day work weeks and some holdover overtime. His work schedule for the week leading up to, and including the day of the accident was:

February 17, 2019	Sunday:	0700–1500
February 18, 2019	Monday:	0500–1300
February 19, 2019	Tuesday:	RDO
February 20, 2019	Wednesday:	1500–2300 (OT shift but normally a RDO)
February 21, 2019	Thursday:	1500–2300
February 22, 2019	Friday:	1300–2100
February 23, 2019	Saturday:	1030-1830

On the day of the accident, Mr. Miller stated that he felt more rested than usual and had gotten good sleep that night before, he approximated about 7 1/2 hours, which was more than average. He felt well and had not experienced sickness or stress. He did not smoke and only drank (alcohol) occasionally and had not drank alcohol 12 hours prior to his shift. He stayed busy outside of the workplace.

At the time of the accident, Mr. Miller had been on a break. He was told about the accident when he arrived in the TRACON. He reported to the supervisor's desk and was assigned the final center position (0). He prebriefed and then obtained the position relief briefing from the controller being relieved.

When Mr. Miller took the position, he looked for primary targets to locate the missing aircraft. The subsequent arrival after Giant, an Air Shuttle, was taken off the arrival route and vectored north to remain east of the weather. Mr. Miller wanted to vector the next arrival (second after GTI3591) to the north, but the pilot elected to navigate west via the same route that Giant had taken; that pilot reported moderate chop. The third aircraft also flew the same path that Giant had flown; the pilot reported it had smoothed out below 7,000 ft.

The supervisor asked for Mr. Miller to obtain PIREPS and ask pilots if the ground was visible from 8,000 ft. The pilots reported instrument meteorological conditions (IMC) and moderate chop 7 to 10 miles southeast of Giant's last known position.

Mr. Miller was relieved from the position after about ten minutes after the accident. He did not file an ATSAP. He said that staffing was good that day.

When asked if it was common to have both pilots from the same airplane (captain and first officer) talking to you, Mr. Miller stated it was not common, but it would not pique his interest as unusual. In this case it (GTI3591) stood out only because he recalled that one of the pilots had an accent.

Mr. Miller had completed the pre-duty weather briefing and reviewed the terminal area forecast (TAF)⁴. He felt he got more from out of a TAF than he did from the pre-duty weather briefing. He said the weather was not unusual that day. The flashing workstation message always seemed to be flashing along with system area and controller information display system (NIDS⁵). The data controller was responsible to ensure a PIREP was taken every hour, and the supervisor recorded that a PIREP was received. PIREP information was entered into the NIDS.

When asked to describe the weather, Mr. Miller recalled there had been moderate precipitation 10 miles in diameter 5 to 10 miles north of the accident site and scattered light precipitation. He recalled very little weather was observed on GTI3591's flight path. He stated in general, he was concerned that controllers did not usually see weather developing as quickly as the pilots saw it.

Mr. Miller had no concerns regarding training, equipment, frequencies or coworkers. He had solicited ELT reports from pilots, but they did not report any ELTs.

When asked how he set up his radar display, Mr. Miller stated his scope had normal STARS settings for the position and all levels of weather were selected.

Interviewee: Steven Zepeda (Final Center (I))

Representative: Anthony Silver

Date / Time: February 25, 2019 / 1400–1456

Location: Houston TRACON (I90)

Present: Dave Waudby, Michael Richards, Amy Huschka, and Curt Fischer

Investigator: Betty Koschig

During the interview Steven Zepeda stated the following:

His air traffic control experience began in 2004 when he enlisted in the United States Air Force (USAF), and served for four years on active duty as an air traffic controller. He had been stationed at Minot Air Force Base and Lajes Field. In April 2008, he was hired by the FAA, through the veteran's recruitment appointment (VRA), and he attended initial training at the FAA Academy in Oklahoma City, Oklahoma. After successful completion of initial air traffic control training he

⁴ A Terminal aerodrome forecast (TAF) is a concise statement of the expected meteorological conditions at an airport during a specified period (usually 24 hours). See the Meteorology Factual Report for detailed information.

⁵ NIDS is a tool that provides real-time data collection and display dissemination. This tool integrates a number of systems displaying traffic, weather, and surveillance data, into one easy-to-use and fully customizable workstation.

worked at I90 from July 2008 to present. He was qualified on all positions in the area and certified as an on OJTI. His supervisor was Mike Brittain. His operating initials were ZA.

Mr. Zepeda held a current second-class medical certificate with a restriction to have on corrective lenses while performing air traffic control duties. He stated that he had corrective lenses on at the time of the accident. He attended some college courses but did not obtain a degree.

On Saturday, February 23, 2019, Mr. Zepeda worked his regularly scheduled shift and was assigned to the final control (I) position at the time of the accident. His work schedule for the week leading up to, and including the day of the accident was:

February 17, 2019	Sunday:	1430–2230
February 18, 2019	Monday:	1315–2115
February 19, 2019	Tuesday:	RDO
February 20, 2019	Wednesday:	RDO
February 21, 2019	Thursday:	1315–2115
February 22, 2019	Friday:	1430–2230
February 23, 2019	Saturday:	1200–1300 (credit time), 1300–2100 (regular shift)

Mr. Zepeda worked overtime about two shifts during the past month. He said that he felt well rested on the day of the accident. He got plenty of sleep the night before his shift, about 9 hours. He went to bed early that night. He got about 8 hours sleep on both Friday and Thursday night. He felt fully capable to do his job and had not been experiencing any illness that day. He smokes cigarettes but did not drink alcohol. He had been eating well, and nothing unusual was occurring in his life that would impact him at work.

Mr. Zepeda recalled that when he sat down on position, IAH had been landing only runway 26R, and weather was moving to the east quickly. Then IAH opened runway 26L. He had run a few flights into runway 26R, and it was “severe clear” at that point on that side (west) of the weather, so visual approaches had been working good for that side.

Giant (GTI3591) had been the first flight to fly in from the southeast for runway 26L. He recalled the arrival controller telling him that she would leave Giant on the arrival (LINKK ONE) for him to decide (direction into IAH).

When Giant3591 checked in with Mr. Zepeda, he had asked the pilot how they would like to get around the weather. Mr. Zepeda told the pilot that he could go to the west or could go to the north. There had been a pause, but then the pilot came back and said that he would go to the west.

Mr. Zepeda told the pilot that due to the departures he would need to expedite his descent to 3,000 ft. Mr. Zepeda then pointed out Giant to the departure controller (L/E). Mr. Zepeda remembered reinforcing to the pilot that they would stay on that heading for about 18 miles or so, and then he would turn them north bound for a base leg.

Mr. Zepeda said he had other airplanes that had checked in at that point. He noticed the altitude portion of the data block indicated “XXX,” and at first thought it was normal because the

flight was in an expedited descent, but it [XXX on the data tag] lasted too long. He asked the pilot to “say altitude” and the pilot did not respond. Mr. Zepeda said that things started to become a blur after that; but he recalled reaching out multiple times to contact the pilot. He saw the data tag change from “XXX” to “CST,” and then to no data tag, and then he yelled for the supervisor to come over. He informed the supervisor that Giant had dropped off radar and he needed help. The supervisor scurried back to get help while Mr. Zepeda reached out to a United Airlines (UAL) pilot to see if he received an ELT, but the pilot did not report an ELT.

Mr. Zepeda then reached out to Giant3591 on the guard frequency multiple times and did not receive a response. He felt disoriented with things going on, but he descended UAL to 4,000 ft, just in case Giant3591 popped back up (on the radar).

Then the supervisor sent controllers in to relieve him. Mr. Zepeda conducted a simultaneous relief briefing of the (I) and final south (O) positions. He had not received any ELT reports from other airplanes that were in that area. He did not know what to tell the relieving controllers as far as turbulence in that area since he had no reports.

After that Mr. Zepeda went to the NATCA break room. He had been trying to figure out what happened; he had been in there (the break room) for approximately 20 or 30 minutes. Then he spent the rest of the afternoon discussing the event with Mr. Miller and watching the radar replay. He believed he may have been sent home around 1830.

Mr. Zepeda stated there were no equipment issues, no radio issues; radar was fine, and Fusion⁶ was fine. Mr. Zepeda had no concerns with the training program at I90.

Mr. Zepeda conducted the pre-duty weather brief that day. He had solicited one or two bases and tops reports. He felt the weather was routine for the region.

Mr. Zepeda filed an ATSAP report.

There had not been any distractions in the radar room. The room was quiet. Mr. Zepeda had been on the position probably about 30 to 40 minutes prior to the accident. The relief briefing had been recorded. He did not recall if the relieved controller mentioned turbulence reports or PIREPs, but he did not believe so.

Mr. Zepeda described the depicted weather on the scope, as a line of weather moving east with large pockets of breaks between the cells, not a solid line. The largest part of the weather stretched 20 miles long, and the areas around it were clear. Other aircraft had operated in those clear areas.

Mr. Zepeda explained that anytime an aircraft conducted a higher rate of climb or descent (than the standard rate) the data tag would show “XXX” because the data could not catch up with the aircraft. He expected that to happen, and it normally lasted about 3 seconds. When Mr. Zepeda

⁶ FUSION is 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. FUSION is the equivalent of the current single-sensor radar display.

instructed a pilot to expedite descent, he looked for the aircraft to descend at a better than normal rate. There was opposite direction traffic (departures from IAH) for Giant3591, and he wanted to get him underneath that traffic.

The TMU or supervisor would advise controllers about weather if there was something reported. They would tell the controller who had airplanes in that weather area. Mr. Zepeda had his scope set up on a standard display, all weather levels were on and depicted, and he had the typical airspace maps that were used.

When asked if he had any doubts about the pilot's actions before the prolonged XXX data tag occurred, Mr. Zepeda thought that he and the pilot were in concurrence; he let the pilot make the decision on the route that he wanted to take.

Mr. Zepeda explained that no other aircraft had gone through that area recently because the gate had been shut down, Giant3591 was the first one. Mr. Zepeda was not sure when the last flight went through that area (prior to the gate being closed).

When asked why Mr. Zepeda mentioned turbulence to the relieving controller during the relief brief, he said at that point, given the situation he could not rule that out as a possible factor. He did not know if anything was there, and he did not want to rule it out. Because he did not know what had happened, he wanted the controller to use caution "there" (where the data tag had dropped off).

Mr. Zepeda had been comfortable that the flight would get below the departures, until the XXX stayed too long, then he knew something was not quite right. He stated that "Everything was on par up to that point; it was a normal increased rate of descent." Mr. Zepeda had observed airplanes conduct higher rates of descents.

When asked what the Southwest Airlines (SWA) descent issue briefing in November was about, Mr. Zepeda stated that was due to a procedure where SWA pilots requested to be taken off the arrival and asked for a shortcut into runway 13R. They were told to not do that procedure because the pilots were putting their airplanes into a precarious situation due to steep descents.

Mr. Zepeda had not been well versed on the ITWS and did not look at it unless the TMU wanted to show him something. Occasionally, the TMU would advise them of ITWS information, but only to turn the boat around (airport flow).

When asked when he learned what happened to the flight, Mr. Zepeda said he found out about 45 minutes after the accident.

Mr. Zepeda said it was not unusual for pilots (on the same airplane) to switch up talking on the radio. It was a normal operation, very common place here. They gave pilots lots of instructions, so it was common for pilots to switch who talked. He remembered the second Giant3591 pilot that talked to him had tripped up on the call sign, and he had an accent.

Mr. Zepeda stated at the time of the accident it had been a low task time, however the airport arrival flow would be coming in from that direction.

Mr. Zepeda believed that the people at I90 work well together; they were a well-oiled machine. Personnel and management seem to get along well in the room. He had not been in the room long enough to speak on the staffing level that day.

Interviewee: Artemio Hinojosa Jr. (Operations Manager (OM))

Representative: Mark Tomicich

Date / Time: February 26, 2019 / 0915–1000

Location: Houston TRACON (I90)

Present: Dave Waudby, Michael Richards, Amy Huschka, and Curt Fischer

Investigator: Betty Koschig

During the interview Artemio Hinojosa Jr. stated the following:

He was on a temporary 180-day detail to I90 as an OM. His air traffic control experience began in March 1993 when he served in the United States Navy as an air traffic controller. During his nine years of service he had been stationed at different duty locations in Norfolk, Virginia. In December 2002, he was a direct hire by the FAA. Mr. Hinojosa had been at I90 on a detail assignment, from ZHU, from January 2019 to present. Before working on the temporary detail to I90, he had worked as a certified professional controller (CPC) at Kansas City ARTCC from 2002 to 2008 and I90 from 2008 to 2012, as a TMC at IAH from 2012 to 2015, and as a OM at ZHU from 2015 to 2019. He had qualified on all positions in the area when he had worked at I90 as a CPC. His operating initials were AT.

He held a current second-class medical certificate with a restriction to wear eyeglasses. He stated he was wearing them at the time of the accident.

On Saturday, February 23, 2019, Mr. Hinojosa worked his regularly scheduled shift plus 1/2 hour prior to the shift as per his usual routine and was assigned to the OM position, monitoring operations, at the time of the accident. His work schedule for the week leading up to, and including the day of the accident was:

February 17, 2019	Sunday:	1200–2000
February 18, 2019	Monday:	0600–1400
February 19, 2019	Tuesday:	0600–1400
February 20, 2019	Wednesday:	1100–1500 (OT for SUP meeting) (normally RDO)
February 21, 2019	Thursday:	RDO
February 22, 2019	Friday:	1200–2000
February 23, 2019	Saturday:	1200–2000

Mr. Hinojosa stated he did not work many hours overtime. He felt well rested on the day of the accident, having slept for about 9 hours the night before. The 48 hours prior to the accident he slept around 9 hours each night. He had not feeling ill and said there were no outside factors

affecting his work life. He did not smoke, and he rarely drank alcohol. He had not had a drink in the 12 hours prior to his shift.

Mr. Hinojosa recalled that he came in early on Saturday and checked his email. He walked into the TRACON and let the supervisors know he was there, then got a picture of the weather and staffing from them. He had been talking to another OM, away from the boards, when he heard a controller yell “I lost one.”

He stated that both OM’s went to the controller’s scope at the arrival position. The track was in coast. He did not observe any history or tracks of the target. When he saw the type aircraft, he went into action immediately and issued an alert notice (ALNOT) with ZHU. He used the latitude/longitude function on STARS to get an exact location of the lost aircraft. He recalled that the controller’s scope had been set to a normal display and that all weather levels were depicted.

Mr. Hinojosa had no issues when going through the accident checklist, other than one contact who did not answer. All notifications went smoothly, and the information was readily available. He stated that he had been well trained. There were no red flags with the accident. He felt that there were no distractions in the room and that all equipment was in working order.

At the beginning of his shift, Mr. Hinojosa did not review the pre-duty weather brief but discussed the weather with TMU and the operations specialist (OS). He felt there were normal weather issues.

He had seen normal deviations that day, and departures were never stopped. At one point, he discussed swapping east departures with the TMU, but it never happened.

Mr. Hinojosa said there were no conduct or performance issues for the controllers involved in this accident.

He believed I90 had a good working environment and staffing was not low at the time of the accident. There were a lot of trainees; 12 to 15 on west and 4 to 5 on east. Training was going well.

Interviewee: Michael Richardson (Operations Manager in Charge (OMIC))

Representative: Mark Tomicich

Date / Time: February 26, 2019 / 1157–1240

Location: Houston TRACON (I90)

Present: Dave Waudby, Michael Richards, Amy Huschka, and Curt Fischer

Investigator: Betty Koschig

During the interview Michael Richardson stated the following:

His air traffic control experience began in 1985 while in the USAF. He served for three years on active duty as an air traffic controller. In 1988, he was a direct hire by the FAA and worked as a CPC at Great Falls International Airport, Salt Lake City TRACON, Chicago

TRACON, IAH, and I90 from 2002 to 2007. From 2007 to present, Mr. Richardson had worked as the traffic management officer (TMO) and as an OM at 190. His operating initials were MR.

Mr. Richardson stated that he did not hold a current medical certificate. He attended ERAU for three years, majoring in Professional Aeronautics, but did not obtain a degree.

On Saturday, February 23, 2019, Mr. Richardson worked his regularly scheduled shift and was assigned to the OMIC position. His work schedule for the week leading up to, and including the day of the accident was:

February 16, 2019	Saturday:	0500–1300
February 17, 2019	Sunday:	0500–1300
February 18, 2019	Monday:	RDO
February 19, 2019	Tuesday:	RDO
February 20, 2019	Wednesday:	1100–2030
February 21, 2019	Thursday:	1130–1930
February 22, 2019	Friday:	0500–1300
February 23, 2019	Saturday:	0500–1300 (normal shift), 1300–1700 (overtime)

He did not work much overtime but did work 4 hours of overtime on the accident day; he went home about 1700. Mr. Richardson stated that he felt rested on the day of the accident and had slept for about 8 hours the night before. He stated that on Thursday nights he only got about 6 to 7 hours of sleep. He had not been experiencing any illness and had been eating well, which included a fish fry at the facility, on the day of the accident. He had no personal distractions affecting him. He did not smoke cigarettes and drank very little alcohol. He did not drink alcohol during the 12 hours prior to his shift on the accident day.

Mr. Richardson stated that he conducted the services rendered telephone conference (SRT) for the accident. He had seen the radar replay of the accident.

As normal, when he arrived to work in the morning, he discussed the game plan for the shift with the TMC. On the morning of the accident he was aware of a front (weather) that would be affecting the terminal area. They completed their morning push, and the front moved through the area sometime after that. It had been clear behind the front. After that he attended a fish fry at the facility and was back on the control floor about 1220 and was in the room for about 20 minutes prior to the accident.

Mr. Richardson stated that he was at the watch supervisor's desk (WS) as the event began to unfold. Mr. Magley came over and said, "we lost one." He looked at a radar display and saw the accident aircraft's data tag drop off. He searched for a primary target on the same track that the accident aircraft had been on but did not find one. He immediately began to consider that this was a terrorist event and looked for a primary target headed toward downtown Houston.

Mr. Richardson stated that he began to start the accident checklist and told Mr. Hinojosa to call the ARTCC to issue an ALNOT. He then called law enforcement and delegated other tasks to people with open phones. He started completing the "dash 9" (Aircraft Accident/Incident

Preliminary Notice) and had it faxed to the region. He then started on the SRT checklist. Following that, Mr. Morris, the air traffic manager (ATM) arrived, and they conducted a telephone conference at about 1530. Mr. Brittain reconstructed staffing information for the SRT checklist. Mr. Richardson said the SRT was completed, and after doing some items related to drug testing, he went home.

Mr. Richardson noted that the phone number for the National Weather Service was incorrect on the emergency checklist. Mr. Richardson stated that there were no issues with weather earlier in the morning.

When asked to explain “descend via,” Mr. Richards stated that IAH had been doing them since 2012 or 2013, and that at present they were pretty “solid,” but occasionally aircraft will bust altitudes, but that usually occurs with regional jets and not with mainline aircraft. Mr. Richardson did not remember any training related to SWA descent issues. He did not know about the status of the covered event review (CER).

During the accident sequence Mr. Richardson did not walk up to the controller positions, he observed from the back. He had never seen a fatal accident like this.

He stated that had he seen a primary target headed toward downtown Houston, following the loss of the accident aircraft’s data tag, he would have called North America aerospace defense (NORAD). Mr. Richardson first heard about the accident confirmation when law enforcement called with witness reports of the crash. He cancelled the ALNOT when he was 100% sure that the crashed aircraft was Giant3591. The ALNOT was in effect for about 30 minutes.

Mr. Richardson stated that TMU had set flow restrictions on the day of the accident due to weather. He stated that the ITWS was typically used to see the movement of weather and monitoring of the ITWS was a joint responsibility between the TMC, supervisors, and OMs. He was not monitoring the ITWS prior to the accident and did not know who had been. The most common use of the ITWS was looking at the gust fronts and being able to monitor frontal passages. The ITWS could help determine when to turn the airport around, but the negatives of the ITWS are that it can overemphasize the weather radar picture. Mr. Richardson stated that the ITWS was a great prediction tool and was very accurate for gust fronts and wind shifts at the airport.

Mr. Richardson stated that the accident aircraft was a “pathfinder” [first aircraft to fly through the gate after it was opened] and would “set the tone” for the aircraft behind it. Other aircraft eventually went through the weather that the accident aircraft was avoiding. There were no problems with flow following the accident. There had been no severe ride reports and only reports of moderate chop; nothing alarming. The TMCs would review ITWS information and based on that they would advise controllers on the possible impact to the flow.

Regarding the PIREP “workstation message,” he did not know about the PIREP solicitation in the standard operating procedure (SOP). Mr. Richardson stated that the last of the weather was going through IAH about noon. The ZHU center weather service unit (CWSU) provided tactical decision aids/gate forecasts.

Mr. Richardson said that Mr. Gill was a TMU person on the floor during the accident and Mr. Rodriguez had just shown up.

Mr. Richardson said he did not review the pre-duty video weather briefings; that was probably “overkill” for him given the other weather briefings he was involved in.

On the day of the accident there was nothing out of the ordinary except the frontal passage. He did not use the NIDS emergency page, but controllers should; he did not know if the controllers had used it.

Interviewee: Michael Schawinsky (Relieved Departure South/Departure East (L/E))

Representative: Prescott Bartlett

Date / Time: February 26, 2019 / 1432–1502

Location: Houston TRACON (I90)

Present: Dave Waudby, Michael Richards, Amy Huschka, and Curt Fischer

Investigator: Betty Koschig

During the interview Michael Schawinsky stated the following:

His air traffic control experience began in 2001 while in the USAF. He served four years on active duty as an air traffic controller and had been stationed at Randolph Air Force Base. In December 2005 he worked for Midwest Air Traffic Service and was stationed in Afghanistan. In June 2007 the FAA hired him, through the VRA, and attended initial training at the FAA Academy in Oklahoma City, Oklahoma. After successful completion of initial and en-route air traffic control training he worked at Fort Worth ARTCC from 2007 to 2009, Lubbock Preston Smith International Airport from 2009 to 2011, Kansas City International Airport from 2011 to 2014, and I90 from 2014 to present. He was qualified on all east area positions and certified as an OJTI. His supervisor was Dean Hall. His operating initials were SC. He stated that he held a current second-class medical certificate with no restrictions.

On Saturday, February 23, 2019, he worked his regularly scheduled shift and had been assigned to the combined departure (L/E) position prior to the accident. His work schedule for the week leading up to, and including the day of the accident was:

February 17, 2019	Sunday:	RDO
February 18, 2019	Monday:	RDO
February 19, 2019	Tuesday:	1515–2315
February 20, 2019	Wednesday:	1300–2100
February 21, 2019	Thursday:	0700–1500
February 22, 2019	Friday:	0700–1500
February 23, 2019	Saturday:	0500–1300

Mr. Schawinsky worked about 8 hours of overtime per month. He stated that he felt rested for the shift. He got about 6 1/2 hours of sleep the night before the accident, which was normal for that early morning shift. He got about 7 or 7 1/2 hour sleep each night the previous two nights

(Wednesday and Thursday). He felt healthy, no illness. He had been eating well. He had nothing going on in his life that would impact him at work. He did not smoke and did not drink within 12 hours of reporting to work.

Mr. Schawinsky stated he was relieved from the L/E position around 1830 UTC by LD (Mr. Dismel).

Mr. Schawinsky had not seen the radar replay of the accident. He had zero recollection of the accident or anything to do with it. The only thing he would have seen would have been the limited data tag. He had been busy working departures out (from IAH) during bad weather. IAH had been on a west flow, HOU may have been in a runway31 configuration, he had not been sure, but he was sure they had not been on runway 22, which was the only runway that impacts his departures. He had been getting diversions with aircraft on downwind, and he only had a small window to expedite climbing traffic. There were aircraft on the downwind, and he had to stop his departures at 4,000 ft to get under the traffic. The departures were going toward a big line of weather. He expedited their climb to 6,000 ft after the flight paths crossed.

Mr. Schawinsky thought the tops were between 10,000 and 12,000 ft with light to moderate chop. He believed that earlier they had light to moderate turbulence reports from some large airplanes, but he did not recall the exact altitudes. He did not recall if he specifically told the relieving controller about ride reports during the recorded position brief, but he said in that type of environment, during the overlap period, he knew for sure that he covered ride reports, flight conditions, information about where airplanes wanted to go, how ZHU were taking aircraft, previous coordination with ZHU, and flow. He always gave a thorough briefing of the position.

When asked what the difference was between chop and turbulence Mr. Schawinsky said he had not been trained on it, but he did have good understanding of it. They leave it up to the pilots to describe what they are experiencing. The term turbulence was less desirable than chop. It was normal to expect chop in and out of airspace. Turbulence could have more impact.

After he completed the overlap (after the position relief briefing), he went on break. He did not recall how long he had stayed on the position for overlap. He did not find out about the accident until later that day or the next day when he check their facility app⁷; and what was written was very basic in nature.

Interviewee: Luther Dismel (Departure South/Departure East (L/E))

Representative: Prescott Bartlett

Date / Time: February 27, 2019 / 1120–1156

Location: Houston TRACON (I90)

Present: Dave Waudby, Michael Richards, Amy Huschka, and Curt Fischer

Investigator: Betty Koschig

During the interview Luther Dismel stated the following:

⁷ An App is a computer program or software application designed to run on a mobile device.

His air traffic control experience began in August 2009 when he was hired by the FAA and attended initial training at the FAA Academy. After successful completion of initial air traffic control training he worked at Philadelphia International Airport on from October 2009 to January 2015, and I90 from 2015 to present. He had qualified on all positions in his area and was certified as an OJTI. His supervisor was Don Magley. His operating initials were LD.

He held a current second-class medical certificate with no restrictions. He obtained a Bachelor of Art degree in Criminal Justice from the University of Maryland in 2004 and obtained a Master of Science degree in Homeland Security Management from the University of Maryland in 2007.

On Saturday, February 23, 2019, he worked his regularly scheduled shift and was assigned to the combined departure (L/E) position at the time of the accident. His work schedule for the week leading up to, and including the day of the accident was:

February 17, 2019	Sunday:	0545–1345
February 18, 2019	Monday:	RDO
February 19, 2019	Tuesday:	RDO
February 20, 2019	Wednesday:	1300–2100
February 21, 2019	Thursday:	1300–2100
February 22, 2019	Friday:	1300–2100
February 23, 2019	Saturday:	0700–1500

Mr. Dismel worked approximately 8 hours of overtime per month. He said he felt well rested on the day of the incident, having slept for 8 hours the night before. The 48 hours prior to he had slept around 6 to 8 hours each night. He had not felt ill and said there were no outside factors affecting his work life. He did not smoke, but he did drink alcohol. He had not had a drink in the 12 hours prior to his shift.

He remembered a line of weather somewhere in the middle of his airspace. He had been vectoring through a gap. He recalled the arrival controller had pointed out the accident aircraft and he said, “point out approved,” since he was not using that airspace. The point out aircraft was between 8,800 to 8,000 ft when he observed it. He did not notice the tag drop on the aircraft. He recalled hearing the commotion in the room and someone said they “lost one.”

He was busy, because he had to vector all aircraft off their routes due to the weather. He had quite a few aircraft at the time of the point out. There had been a hole further south of the point out aircraft that he had been vectoring aircraft through. He recalled there had been light to moderate precipitation levels but did not recall the tops. He had no trouble vectoring aircraft through the gaps. The weather seemed normal for Houston.

He completed the pre-duty weather briefing. During the position relief briefing, prior to taking the position, he was given information on where the deviations were going, and possibly some ride reports. He did not recall getting a PIREP.

Mr. Dismel did not notice any distractions in the TRACON, and all equipment was functioning normally.

Interviewee: Michael Brittain (Supervisor (SI))

Representative: Mark Tomicich

Date / Time: February 27, 2019 / 0930–1035

Location: Houston TRACON (I90)

Present: Dave Waudby, Michael Richards, Amy Huschka, and Curt Fischer

Investigator: Betty Koschig

During the interview Michael Brittain stated the following:

His air traffic control experience began in November 2009 when he was hired by the FAA and attended initial training at the FAA Academy. After successful completion of initial air traffic control training he worked at Memphis TRACON from 2010 to 2014, as a CPC and then a supervisor. From 2014 to present he had worked at I90 as a supervisor. He had qualified on the L/W, monitors, and flight data positions at I90. Prior to working for the FAA, he served in the United States Army Reserve from 2001 to 2009, where he worked as a supply Sargent. He had been stationed in Alabama, and Bagdad, Iraq. He stated that he held a current second-class medical certificate. His supervisor was Mike Richardson. His operating initials were ME.

On Saturday, February 23, 2019, he worked his regularly assigned shift and was assigned the SI position (supervisor on the floor). His work schedule for the week leading up to, and including the day of the accident was:

February 17, 2019	Sunday:	0530–1330
February 18, 2019	Monday:	2130–0600 (credit earned) (normally RDO)
February 19, 2019	Tuesday:	RDO
February 20, 2019	Wednesday:	1030–1230 (OT for Sup meeting) 1230–2030 (normal shift)
February 21, 2019	Thursday:	1400–2200
February 22, 2019	Friday:	1230–2030
February 23, 2019	Saturday:	0630–1445

Mr. Brittain worked about 32 hours of overtime a month. He stated he felt rested and had gotten 8 hours of sleep prior to Saturday's shift. Other nights prior he had slept more than 8 hours. He had not been ill, had no distractions outside of work, and did not smoke. He only drank socially, but not within 12 hours of his shift.

He had not seen the radar replay of the accident. He recalled that he had been eating lunch at the watch desk and he asked Mr. Zepeda (I controller) if visual approaches were working well. Mr. Zepeda stated that visual approaches worked, out of 4, 000 and 6,000 ft.

Mr. Brittain went over the plan for the shift and things were working well. He heard Mr. Zepeda call for a supervisor, and he was advised they lost communication with Giant. Mr. Brittain saw Giant (radar target) disappear from the radar scope and the data tag dropped. He told the I

controller to place a data tag on the location of the last known position and then he informed the OM (about the occurrence). He recalled that Mr. Richardson (OMIC) assigned duties. Mr. Brittain called the Chamber police department and Harris County police department. The police had multiple 911 calls for an aircraft crash. The WS called Atlas Air to obtain the manifest. The OMs were completing the checklists at that time.

The accident checklist was pulled from the binder. He stayed in contact with Chambers County police. He called the Coast Guard and although they had been notified, he was able to relay more information to them.

When the ATM arrived at the facility, Mr. Brittain prepared documents for the SRT. Another supervisor arrived in the area to work the SI position so Mr. Brittain could continue to work the accident.

He talked to the controller and advised him not to watch television TV news and told him to call if he needed something. He stated Mr. Zepeda realized that there was nothing that he could have done.

Mr. Brittain typed up the mandatory occurrence report (MOR) in order to time stamp the event and to mark it as significant. He stated it was not a requirement to submit a MOR after an accident.

He did not recall the SWA descent issue briefed in November but knew it was an flight management system (FMS) issue.

He had been Mr. Zepeda's supervisor since January but did not fill out the paperwork for Mr. Zepeda to return to work.

He recalled that Mr. Zepeda's scope looked good. He described the day as normal. Weather was not out of the norm for Houston. There were no equipment outages that impacted the operations. There were no severe turbulence reports, but moderate turbulence had been reported 30 miles north, and light to moderate chop elsewhere.

Mr. Brittain had not reviewed the pre-duty weather briefing but had received a TMU weather briefing, which was more up to date and met the requirement. He was not required to review the pre-duty weather briefing. He received a weather briefing at the beginning of the shift and every time there was a push (heavy traffic flow). He described the [subject of] weather as being a "continuous conversation." There had been nothing about the weather (that day) that had alarmed him.

Mr. Brittain normally monitored the ITWS and notified controllers (of changes), even if it did not impact flow, but he had not monitored the ITWS prior to the accident. He had not had a discussion with the controller about the ITWS weather and did not know about a gust front.

The pre-duty weather was logged (as completed) by highlighting the controllers and supervisors' initials. When asked what a positive impact the pre-duty weather brief had, he stated controllers who received a pre-duty weather briefing were better prepared.

When asked how the operational supervisor recorded that "one" PIREP that was obtained per hour, he said the forms were dropped off at the supervisor's desk by the data controller, and the watch supervisor ensured they were obtained. They would obtain PIREPs if they needed one.

He had experienced a situation with the loss of a small aircraft, before but nothing like this. [After GTI3591's data tag had dropped from the radar display], he thought the airplane had crashed and worked the notification process. He contacted law enforcement so they could be their eyes and ears on the ground.

Interviewee: Donald Magley (Watch Supervisor (WS))

Representative: Mark Tomicich

Date / Time: February 28, 2019 / 0930–1010

Location: Houston TRACON (I90)

Present: Dave Waudby, Michael Richards, Amy Huschka, and Curt Fischer

Investigator: Betty Koschig

During the interview Donald Magley stated the following:

His air traffic control experience began in 2000 while in the USAF. He served four years on active duty as an air traffic controller. He had been stationed at Cannon Air Force Base, and Bagdad and Balad, Iraq. In February of 2006 he was hired by the FAA and attended initial training at the FAA Academy in Oklahoma City, Oklahoma. Before transferring to I90 in 2017, he worked as a CPC at Oakland ARTCC, Salt Lake ARTCC and Southern California TRACON, and as a supervisor at Anchorage ARTCC. His supervisor was Mike Richardson. His operating initials were XL.

Mr. Magley held a current second-class medical certificate. He obtained a Bachelor of Arts degree in Management from California Coast University.

On Saturday, February 23, 2019, he worked his regularly assigned shift and was assigned the WS position. His work schedule for the week leading up to, and including the day of the accident was:

February 17, 2019	Sunday:	0000–0800
February 18, 2019	Monday:	RDO
February 19, 2019	Tuesday:	1115–1915 OT (normally RDO)
February 20, 2019	Wednesday:	1400–2200
February 21, 2019	Thursday:	1300–2100
February 22, 2019	Friday:	0700–1500
February 23, 2019	Saturday:	0530–1330

Mr. Magley worked about 32 hours of overtime each month. He was rested and had gotten 7 hours of sleep prior to Saturday's shift. On the other nights (48 hours prior) he had slept more than 7 hours per night. He had not been ill, had no distractions outside of work, and did not smoke. He rarely drank alcohol and had not had a drink within 12 hours of his shift. He had not seen the full radar replay of the accident.

Mr. Magley had been with Mr. Brittain at the watch desk discussing the plan for the shift, including leave requests and leave issues for the evening shift. He had discussed with the TMU how they were going to flow the runways. He heard Mr. Zepeda yell "Giant is NORDO or not responding." As he walked over to the scope, he saw that Giant3591 was descending rapidly and displaying XXX. The target (primary) was gone when he got to the radar scope. He then asked Mr. Zepeda if he said, "radar contact lost" and to point to Giant's last known position on the radar scope. He instructed Mr. Zepeda to manually place a data tag over that position.

Mr. Magley walked back (to the watch supervisor's desk) and told Mr. Richardson and Mr. Brittain what had occurred. Mr. Richardson had pulled out the checklists to start making phone calls.

He remembered that Mr. Zepeda called for Giant3591 on the guard frequency. Mr. Magley told Mr. Zepeda to "remain calm, work your traffic and we are getting you a relief." He asked another supervisor to run the duty board, and he paged in a controller in charge (CIC) to assist running the room. Mr. Jefferson arrived in the room and worked as CIC. The final positions were then split, and he recalled a back and forth discussion about whether visual approaches would work. Eventually it was decided to assign final control monitors.

Mr. Magley stated that he completed the pre-duty weather briefing, however, he was not required to complete that briefing, according to the 7110.65 [FAA JO]. He recalled that the weather was not great, but that was nothing new. There was nothing alarming with the weather.

When asked about PIREP procedures, he stated that the flight data controller got the PIREPs (from the radar controllers) and submitted them in aeronautical information system replacement (AISR⁸) and National Airspace System information display system (NIDS)⁹ and shared them with the room. The supervisors ensured that PIREPs are collected. The TMU did not necessarily advise controllers of ITWS weather; they used it as more of a flow planning tool because of its prediction capabilities.

Mr. Magley stated that Houston controllers worked good as a team. He was a member of the facility RESPECT¹⁰ team, one of the first facilities to roll out the program.

⁸ Aeronautical Information System Replacement is a web-enabled, automation means for the collection and distribution of Service B messages, weather information, flight plan data, Notice to Airmen (NOTAM) messages, PIREP message, and other operational information to all Federal Aviation Administration Air Traffic facilities.

⁹ NIDS provides real-time data collection and display dissemination that supports ATC operations in TRACONs and towers.

¹⁰ RESPECT is a collaborative effort between NATCA and the FAA to maintain a workplace where all employees are supportive of their peers, treated with dignity and respect, tolerant of differences, and demonstrate empathy and compassion towards one another.

He noticed that Mr. Zepeda's radar scope had a normal display set-up, to include all required weather. He was not aware of any equipment problems, radio problems, or distractions. Staffing was good at the time of the accident. He added that occasionally the facility had staffing concerns.

When asked who he contacted on the checklist, Mr. Magley stated he called Atlas Air, the Federal Bureau of Investigations (FBI) and automated surface observing system (ASOS) operations and monitoring center (AOMC)¹¹. He said one phone number on the emergency checklist was not working and commented that the Coast Guard should be added to the checklist.

When asked who monitored the ITWS, he stated, "All of us were monitoring the ITWS." During the 45 minutes prior to the accident, the ITWS showed a line of weather moving from west to east. He did not remember a gust front being depicted.

¹¹ The AOMC has the capability to archive the 5-minute observations from the previous 12 hours of weather observation data from attended and unattended locations. The supervisor or controller-in-charge must ensure that the 5-minute observations are archived following notification of an aircraft mishap at a location where an ASOS is operational. AOMC requests must be made within 10 hours of the incident.