

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ERA23FA330

AIR TRAFFIC CONTROL

Group Chairman's Factual Report

June 22, 2025

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A. ACCIDENT

Location: Junction City, Georgia
Date: August 10, 2023
Time: 1005 eastern daylight time (EDT)¹
1405 coordinated universal time (UTC)
Airplane: N210JT, a Cessna P210N

B. AIR TRAFFIC CONTROL GROUP

Group Chairman	Sarah Lewis National Transportation Safety Board Washington, DC
Group Co-Chairman	Betty Koschig National Transportation Safety Board Washington, DC
Subject Matter Expert ²	Michael Richards National Transportation Safety Board Washington, DC
Group Member	Daniel Meyers National Air Traffic Controllers Association Philadelphia, PA
Group Member	Rachel Brandt Federal Aviation Administration Birmingham, AL

C. SUMMARY

On August 10, 2023, about 1005 eastern daylight time, a Cessna P210N, N210JT, was substantially damaged when it was involved in an accident near Junction City, Georgia. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

¹ All times are in eastern daylight time (EDT) unless otherwise noted.

² A subject matter expert (SME) from AS-30 was embedded with but not an actual member of the ATC group. A meteorological (MET) section has been included within this report documenting pertinent MET information related to air traffic control. A full MET factual report will be included in the docket.

The airplane departed Sarasota/Bradenton International Airport (SRQ), Sarasota, Florida about 0800 with a destination of Thomaston-Upson County Airport (OPN), Thomaston, Georgia. The airplane was operating under an instrument flight rules flight plan and had been cruising at flight level (FL) 200³. About 1005, Atlanta Large Terminal Radar Approach Control, (A80 TRACON), Macon radar sector lost radar and radio contact with the airplane during its enroute descent. Preliminary review of Automatic Dependent Surveillance-Broadcast (ADS-B)⁴ and weather radar data showed the flight track entering an area of heavy precipitation then entering into a rapidly descending clockwise turn until ADS-B surveillance was lost. The wreckage was located approximately 0.3 miles northeast of the last recorded ADS-B position in a heavily wooded area.

D. DETAILS OF THE INVESTIGATION

On Wednesday, October 11, 2023, the Air Traffic Control (ATC) group convened at A80 TRACON located in Peachtree City, GA. The group attended an in-brief conducted by the Acting Air Traffic Manager (AATM) and members of their staff. Also in attendance were representatives from the FAA's Eastern Service Area Quality Control Group (ESA QCG) and the Safety and Intelligence Response Group (SIRG). The ATC group was then provided with an operational tour of the facility with emphasis on the involved positions. The group then reviewed data related to the accident and conducted interviews with the Operations Manager (OM) and the Macon Sector Radar (MCN-M) on the job training instructor (OJTI) who was monitoring a trainee on the position.

On Thursday, October 12, 2023, the group reconvened at A80 TRACON and conducted an interview with the MCN-M controller trainee, the Controller-In-Charge (CIC) of the accident sector and the Operations Supervisor (OS).

On Friday, October 13, 2023, the group reconvened at A80 TRACON and interviewed the AATM. The group then concluded the on-scene phase of the ATC field investigation and completed the group field notes.

³ Flight Level (FL) – A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represent hundreds of feet. For example, flight level (FL) 250 represents a barometric altimeter indication of 25,000 feet; FL 255, an indication of 25,500 feet.

⁴ ADS-B - Automatic Dependent Surveillance-Broadcast - A surveillance system in which an aircraft or vehicle to be detected is fitted with cooperative equipment in the form of a data link transmitter. The aircraft or vehicle periodically broadcasts its GPS-derived position and other information such as velocity over the data link, which is received by a ground-based transmitter/receiver (transceiver) for processing and display at an air traffic control facility.

E. FACTUAL INFORMATION

1.0 History of Flight

The following history of flight was compiled using certified audio⁵ and ADS-B⁶ data, and aircraft accident package⁷ provided by the FAA. All times are rounded to the nearest minute for brevity and altitudes are in feet above mean sea level (msl),

0954 A controller from Atlanta Air Route Traffic Control Center (ZTL ARTCC) contacted the Macon (MCN-M) sector which was combined with the Columbus radar sector. The center controller advised the MCN-M controller that N210JT was deviating left for weather and released control of the aircraft to A80 TRACON.

0958 The pilot of N210JT first contacted A80 TRACON and reported they were descending to 11,000 feet. The MCN-M controller trainee provided the Columbus altimeter and instructed the pilot to descend and maintain 8,000 feet. The pilot acknowledged with a correct readback.

0959 The MCN-M controller trainee asked the pilot of N210JT what type of approach they were requesting and if they had the weather at OPN. The pilot requested the RNAV approach⁸ to runway 30. The MCN-M controller trainee asked the pilot if he could proceed direct to the initial approach fix of SINFO and the pilot responded, *"in about a couple of minutes I just want to get around this buildup on my right-hand side."*

The MCN-M controller trainee instructed the pilot to fly heading 080° when able, vectors for the RNAV approach to runway 30. The acknowledged with a correct readback.

1000 [A position relief briefing occurred which de-combined the Columbus sector from the Macon sector.]

1001 The MCN-M OJTI controller advised the pilot of N210JT, *"I don't know what you're missing on your right but I know that the one you're going*

⁵ A partial transcript of the pertinent ATC audio is included in Attachment 1: ATC Audio Partial Transcript. Certified ATC audio provided by the FAA is included in Attachment 2: ATC Audio Recordings

⁶ Certified ADS-B data is included in Attachment 3: ADS-B Data.

⁷ The FAA Aircraft Accident Package is included in Attachment 4: FAA Aircraft Accident Package.

⁸ RNAV Approach - A non-precision instrument approach procedure which relies on aircraft area navigation equipment for navigational guidance.

into is the one I see and it looks pretty bad at your 2 o'clock 5 miles 20 miles in diameter heavy to extreme precipitation uh unless you plan on doing a left turn out to 0-8-0 I'd advise starting your turn at this time."

1002 The pilot of N210JT advised that he would start his turn.

1004 The MCN-M OJTI controller stated, *"and zero Juliet Tango say intentions sir I see you reversing course that's generally unable um you need help."* There was no response from the pilot of N210JT.

The MCN-M OJTI controller made continued attempts to contact N210JT, including through communication relay with a nearby aircraft, and there were no further responses from the pilot of N210JT. Search and rescue operations began immediately, including the OM issuing an Alert Notice (ALNOT)⁹ at 1022.

Figures 1-3 below illustrate various views of the accident flight track with pertinent information included for reference.

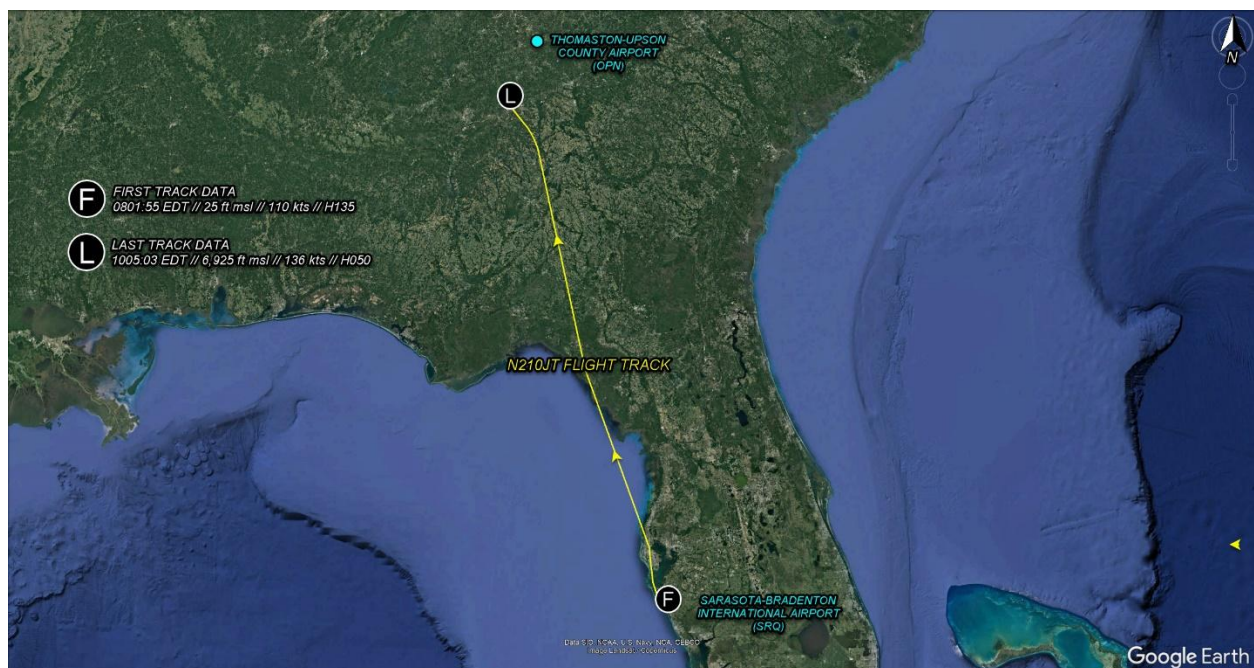


Figure 1. Overhead view of the accident aircraft's entire flight track overlaid onto satellite imagery.

⁹ ALNOT - Alert Notice - A request originated by a flight service station (FSS) or an air route traffic control center (ARTCC) for an extensive communication search for overdue, unreported, or missing aircraft.

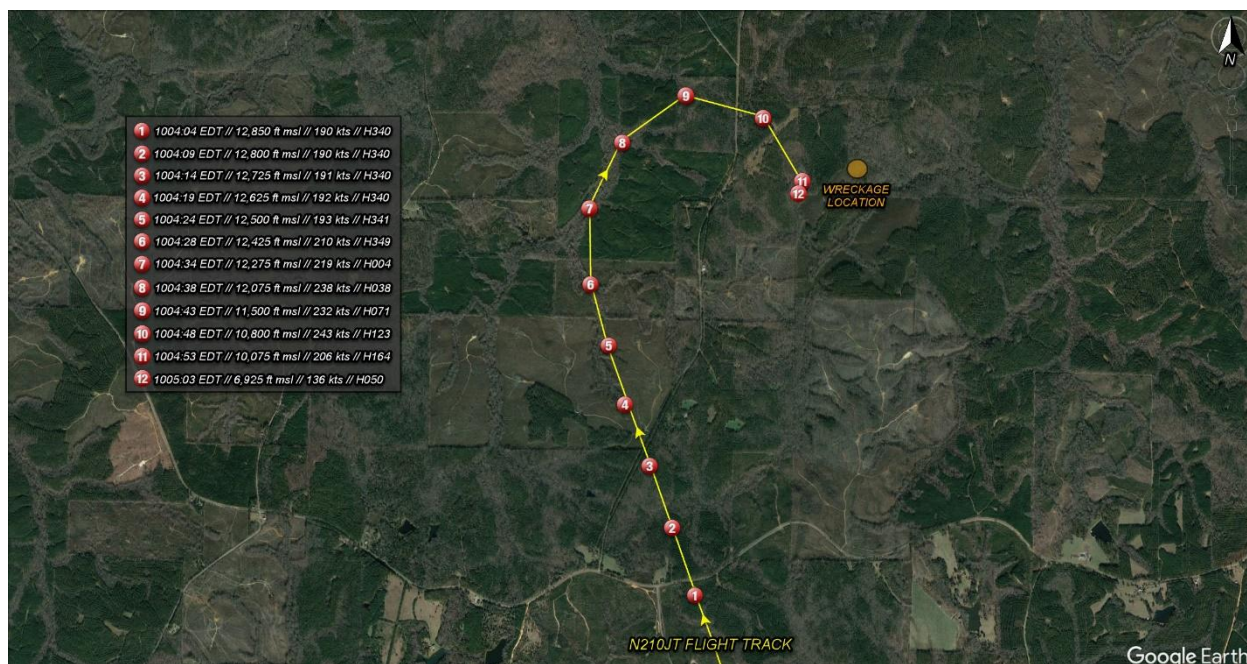


Figure 2. Overhead view of the final segment of the accident aircraft's flight track with time, altitude, ground speed, and heading information and overlaid onto satellite imagery.



Figure 3. Profile view of the final segment of the accident aircraft's flight track.

2.0 Flight Track Surveillance Information

2.1 Automatic Dependent Surveillance - Broadcast

Certified ADS-B data from FAA owned and operated ground stations was provided by the FAA. The data appears to be consistent throughout the accident sequence.

3.0 Standard Terminal Automation Replacement System Precipitation Depiction

Screenshots of the Standard Terminal Automation Replacement System (STARS¹⁰) display from the A80 TRACON during times surrounding the accident time are presented in Figures 4-8. The images, and the times associated with the images, were provided by A80 TRACON management. Figure 9 describes how different radar precipitation levels are presented in the STARS display while presenting a slightly different color shading (a green shading rather than a blue shading) than in Figures 4-8; however, the solid color/dots are consistent between the versions.

¹⁰ STARS - Standard Terminal Automation Replacement System - A system that receives radar data and flight plan information and presents the information to air traffic controllers on high resolution, 20" x 20" color displays allowing the controller to monitor, control, accept hand-off of air traffic, and assist with weather avoidance.

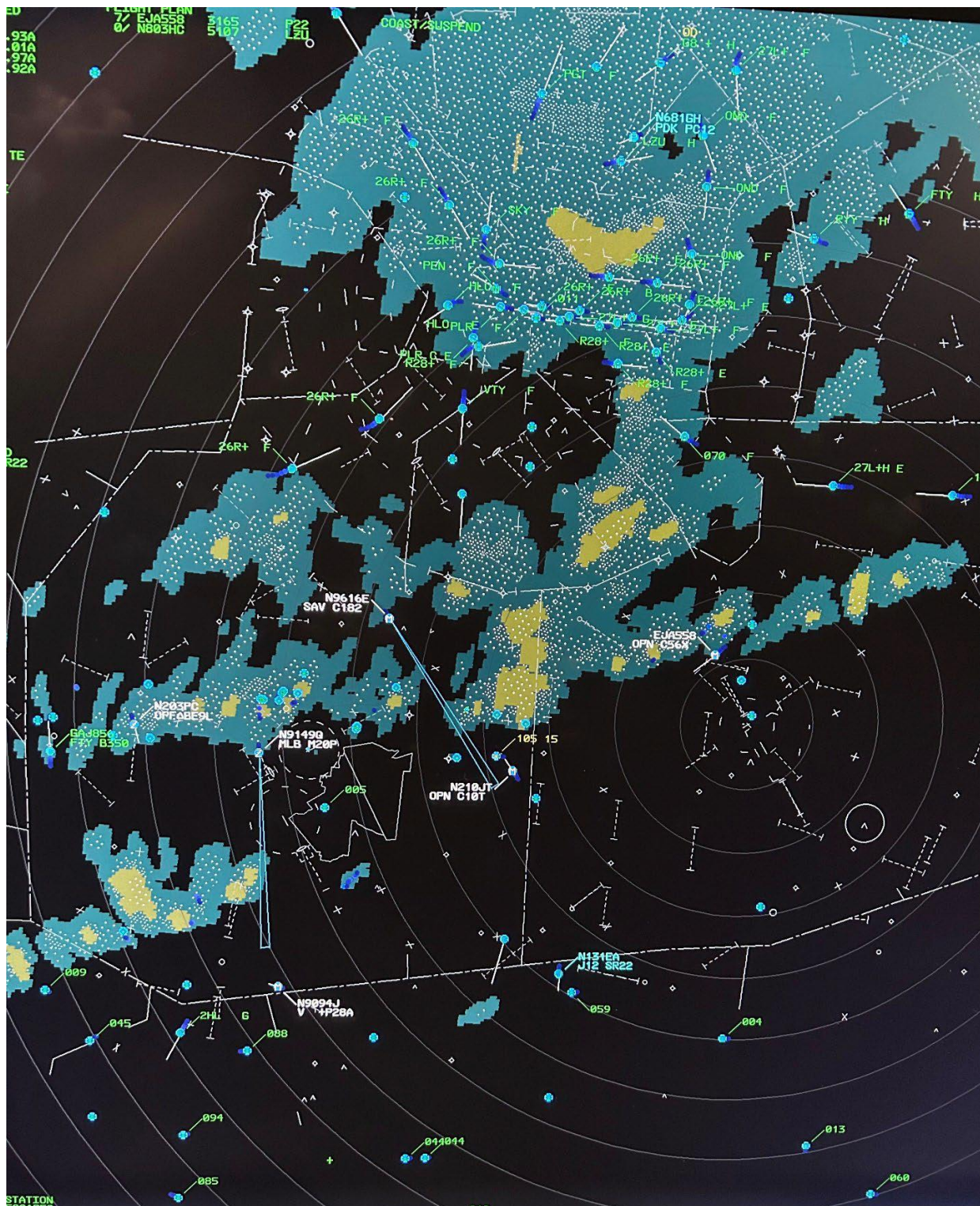


Figure 4. A80 STARS weather depiction from 1001. The accident aircraft is identified by 'N210JT' located slightly below the center of the photo.



Figure 5. A80 STARS weather depiction from 1002. The accident aircraft is identified by 'N210JT' located slightly below the center of the photo.

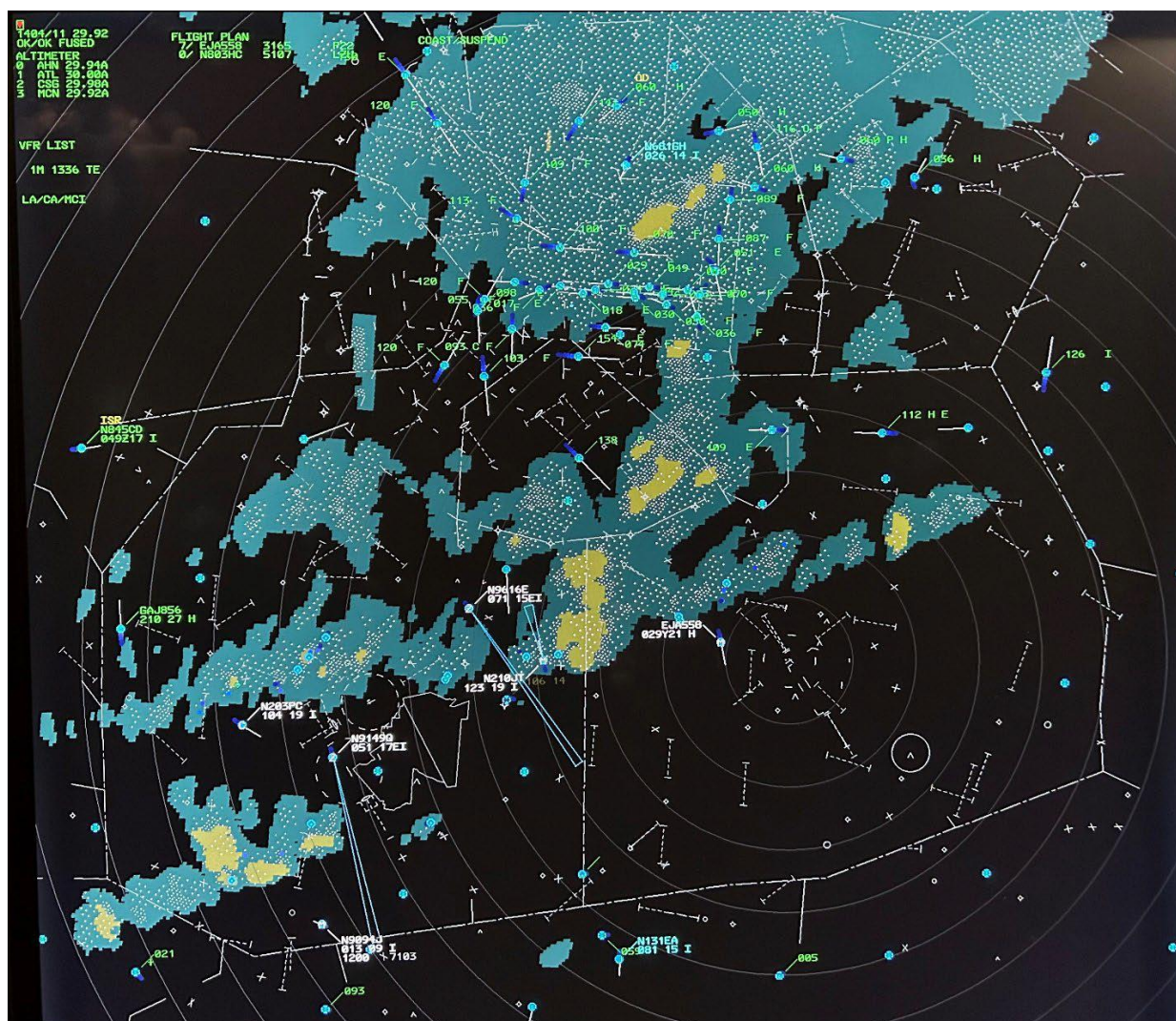


Figure 7. A80 STARS weather depiction from 1004. The accident aircraft is identified by "N210JT" located slightly below the center of the photo.

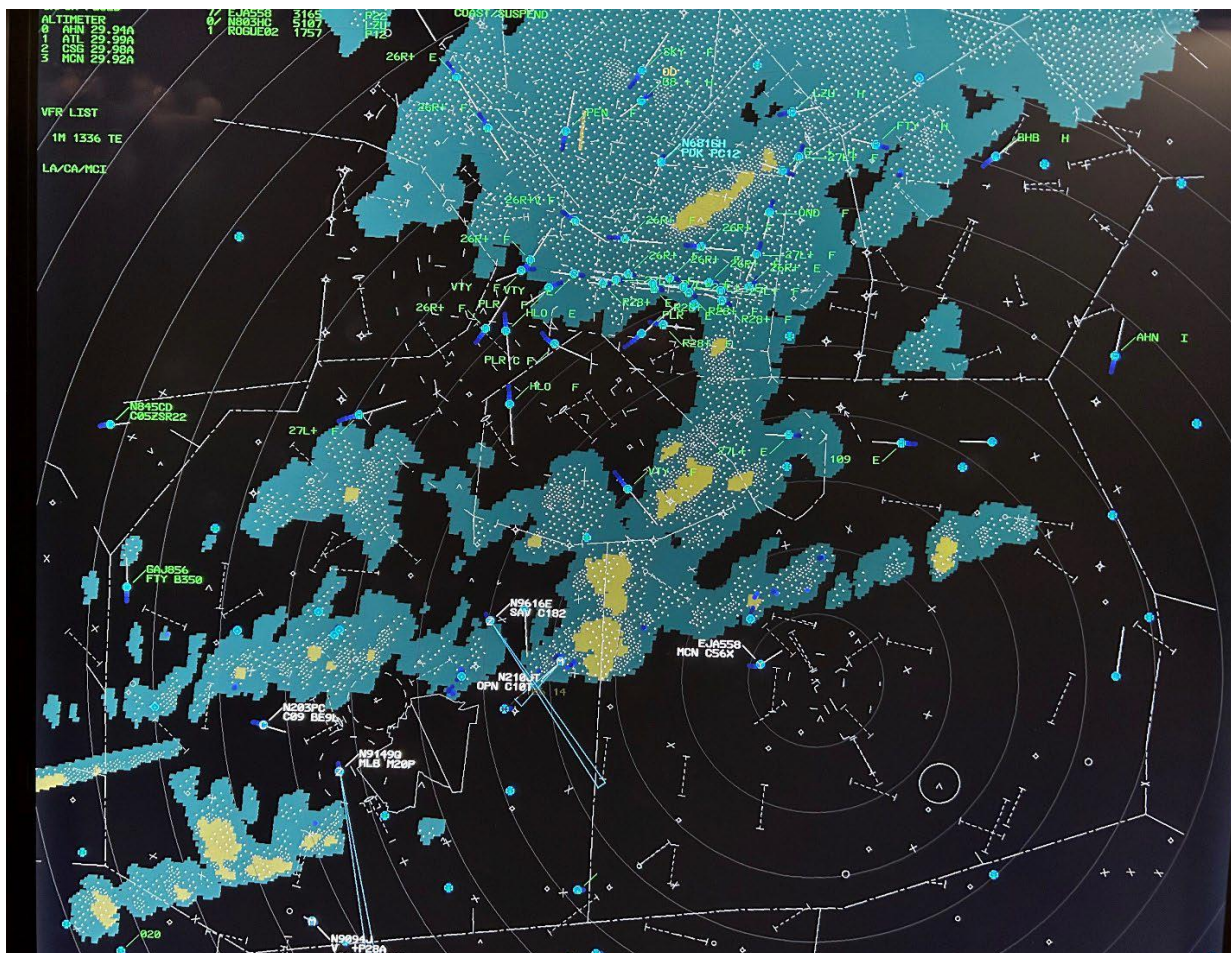


Figure 8. A80 STARS weather depiction from 1005. The accident aircraft is identified by "N210JT" located slightly below the center of the photo.

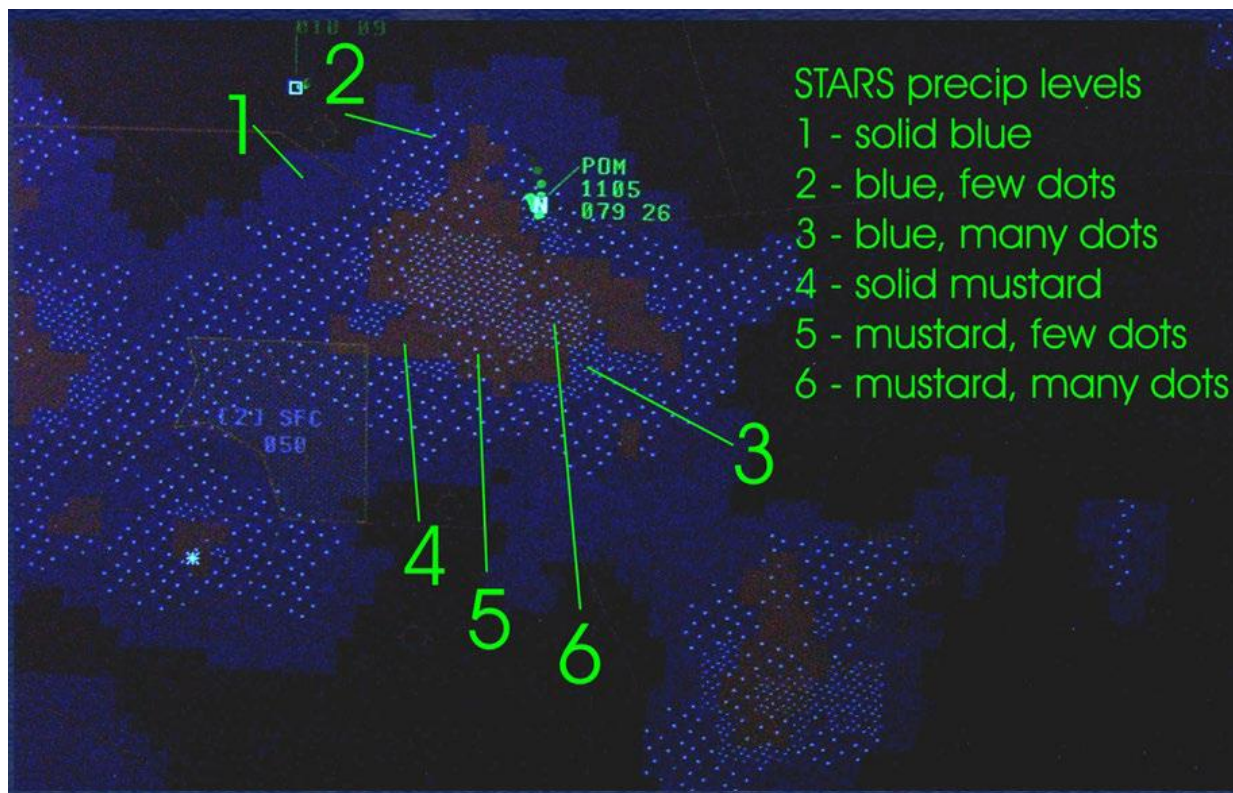


Figure 9. Example of the weather radar presentation in STARS.

The dBZ thresholds for the color scale (levels) presented in the STARS display are as follows (approximately):

- Level 1: 18 < 30 dBZ
- Level 2: 30 < 41 dBZ
- Level 3: 41 < 46 dBZ
- Level 4: 46 < 50 dBZ
- Level 5: 50 < 57 dBZ
- Level 6: 57+ dBZ

4.0 Meteorological Information

4.1 Surface Observations

An Automated Weather Observing Station (AWOS¹¹) was located at Butler Municipal Airport (6A1¹²) in Butler, Georgia, which was located about 10 miles

¹¹ ASOS - Automated Surface Observing System - Automated sensor suites equipped with meteorological instruments to observe and report wind, visibility, ceiling, temperature, dewpoint, altimeter, and barometric pressure. These systems generally report at hourly intervals but also report special observations if weather conditions change rapidly and cross aviation operation thresholds.

¹² This report uses the 3-digit International Air Transport Association format for airport identification, which does not use the geographic designating digit (e.g., "K" for stations in the continental U.S. and

southeast of the accident site at an elevation of about 665 feet. It had a magnetic variation of about 5° west. Automated longline¹³ reports from the 6A1 AWOS during the times surrounding the accident time are presented here.

[0955] K6A1 101355Z AUTO 28015G22KT 10SM BKN017 BKN021 29/24
A2997 RMK AO2 T02880243

[1015] K6A1 101415Z AUTO 33011G23KT 270V350 10SM OVC019 29/24
A2998 RMK AO2 T02910241

At 0955, the 6A1 AWOS reported a wind from 280° at 15 knots with gusts to 22 knots, visibility 10 statute miles or greater, ceiling broken at 1,700 feet above ground level (agl), broken clouds at 2,100 feet agl, temperature of 29°C and dew point temperature of 24°C, altimeter setting of 29.97 inches of mercury; Remarks: automated station with a precipitation discriminator, temperature of 28.8°C and dew point temperature of 24.3°C.

At 1015, the 6A1 AWOS reported a wind from 330° at 11 knots with gusts to 23 knots, wind direction variable between 270° and 350°, visibility 10 statute miles or greater, ceiling overcast at 1,900 feet agl, temperature of 29°C and dew point temperature of 24°C, altimeter setting of 29.98 inches of mercury; Remarks: automated station with a precipitation discriminator, temperature of 29.1°C and dew point temperature of 24.1°C.

4.2 Pilot Weather Reports

Prior to and at the time of the accident the facility was actively soliciting pilot weather reports (PIREP¹⁴). These reports included information detailing turbulence encounters, low ceilings, and precipitation. More detailed information is included in the Meteorology Specialist's Factual Report.

"P" for U.S. stations in Alaska and the Pacific region) as found in the 4-digit International Civil Aviation Organization (ICAO) identifier format. Weather observations from airports in this report are referenced by their reporting station's identifier (using ICAO format that includes the geographic designating digit), not by the airport at which the reporting station is located.

¹³ "Longline" refers to the dissemination of weather observations with the intent that they are available in near-real time to national databases (effectively, the whole world) and accessible to the general global public from a large number of vendors. This does not include public accessibility to observations from a reporting station's Very High Frequency (VHF; line-of-site) or telephone broadcast, where applicable. Longline-dissemination of weather observations is the primary vehicle through which the general global public has access to surface weather observations, particularly outside of the aviation community.

¹⁴ PIREP - Pilot Weather Report - A report made by a pilot of meteorological phenomena encountered by an aircraft in flight.

4.3 In Flight Advisories

4.3.1 Significant Meteorological Information

There were no non-convective Significant Meteorological Information (SIGMET¹⁵) advisories active for the accident flight.

At 0955, the National Weather Service (NWS) Aviation Weather Center (AWC) issued Convective SIGMET 42E that was active for the accident location and valid until 1155. It warned of an area of thunderstorms with tops to FL450¹⁶. The Convective SIGMETs polygon was moving from 270° at 40 knots. Convective SIGMETs imply severe or greater turbulence, severe icing, and low-level wind shear.

5.0 Air Traffic Control Facility Information

A80 TRACON was a level 12 ATC facility located in Peachtree City, Georgia which is about 20 miles southwest of Hartsfield - Jackson Atlanta International Airport (ATL) and almost 30 miles from downtown Atlanta. The A80 TRACON is one of the busiest control facilities in the world. From August 10, 2022, through August 10, 2023, A80 TRACON had 1,087,968 total operations. It controls a huge area over north-central Georgia, as well as portions of South Carolina and Alabama, covering over 200 airports, including ATL airport.¹⁷

5.1 Facility Staffing

At the time of the accident the FAA stated that there were 22 certified professional controllers (CPCs), two traffic management coordinators (TMCs), two OSs, one OM, and three trainees on duty. There was one CPC and one trainee performing other duties. There were four CPCs and one TMC available. The Columbus radar position was de-combined from the MCN-M position (the involved position) approximately ten minutes prior to the event. The two OSs were providing general supervision.

¹⁵ SIGMET - Significant Meteorological Information - A weather advisory issued concerning weather significant to the safety of all aircraft. SIGMET advisories cover severe and extreme turbulence, severe icing, and widespread dust or sandstorms that reduce visibility to less than 3 miles.

¹⁶ Flight Level (FL) - a standard nominal altitude of an aircraft, in hundreds of feet. This altitude is calculated from the international standard pressure datum of 1013.25 hPa (29.92 inches of mercury), the average sea-level pressure, and therefore is not necessarily the same as the aircraft's true altitude either above msl or agl.

¹⁷ <https://github.com/openscope/openscope/blob/develop/documentation/airport-guides/katl.md>

5.2 Interviewed Air Traffic Control Personnel

The controllers providing services to N201JT, and controller and supervisors that were providing oversight at the time, were all interviewed. All interviews were recorded and transcribed by Free State Reporting, Inc.¹⁸

5.2.1 Macon Sector Radar Controller Trainer

The MCN-M OJTI controller previously served in the United States Air Force Reserve from 2003-2004. They entered on duty with the FAA and attended the FAA Academy in February 2009. Upon completion of initial training, they began working at A80 TRACON. They received their OJTI certification in December 2017. They transferred to Minneapolis TRACON in September 2019. In May 2021 they returned to A80 and had been recertified on the involved position since September 2021. They were current and proficient in accordance with facility standards on the day of the accident. They did not hold any other aeronautical ratings.

The controller was 39 years old, possessed a current second-class medical clearance with no waivers or restrictions. They did have a limitation to possess vision corrective lenses to meet the ATCS Health Program standards and use as appropriate for ATCS duties. At the time of the accident, they were using corrective lenses which was in compliance. Neither post-accident drug nor alcohol testing were ordered nor conducted.

The following table shows the MCN-M OJTI controller's work schedule for the days up to and including the day of the event.

Day	Date	Shift	Hours	Overtime
Friday	Aug 4	Off	None	None
Saturday	Aug 5	Off	None	None
Sunday	Aug 6	Eve	1430-2230	None
Monday	Aug 7	Eve	1430-2230	None
Tuesday	Aug 8	Eve	1345-2145	None
Wednesday	Aug 9	Day	0645-1445	None
Thursday	Aug 10	Day	0600-1400	None

¹⁸ Certified transcripts of all recorded interviews are included in Attachment 5: Interview Transcripts. Each person interviewed received a copy of the transcript for their review prior to being placed as an attachment to this report.

5.2.2 Macon Sector Radar Controller Trainee

The MCN-M controller trainee attended a Collegiate Training Initiative (CTI) school from 2014 until they entered on duty with the FAA in September 2016. They did not complete their CTI due to accepting employment with the FAA. They attended the FAA academy and were assigned to New York (ZNY) ARTCC in January 2017. They transferred to A80 TRACON in April 2022. They did not hold any other aeronautical ratings.

They were certified on an uninvolved departure radar position and were training on the radar position involved at the time of the accident. They were current and proficient in accordance with facility standards on the day of the accident.

They were 28 years old, possessed a current second-class medical clearance with no waivers, restrictions, or limitations. Neither post-accident drug nor alcohol testing were ordered nor conducted.

The following table shows the MCN-M controller trainee's work schedule for the days up to and including the day of the event.

Day	Date	Shift	Hours	Overtime
Friday	Aug 4	Off	None	None
Saturday	Aug 5	Off	None	None
Sunday	Aug 6	Leave	None	None
Monday	Aug 7	Eve	1345-2145	None
Tuesday	Aug 8	Day	0745-1545	None
Wednesday	Aug 9	Day	0645-1445	None
Thursday	Aug 10	Day	0600-1400	None

5.2.3 Controller-In-Charge

The CIC previously served in the United States Air Force at Dover Air Force Base from 2002 through 2006. They were a direct hire by the FAA through the Veterans Recruitment Appointment (VRA) process in August 2007. They attended the FAA academy and in September 2007 were assigned to A80 TRACON where they had been for their entire career. They were certified to provide general supervision as CIC in the involved sector and were current and proficient in accordance with facility standards on the day of the accident. They did not hold any other aeronautical ratings.

They were 44 years old, possessed a current second-class medical clearance with no waivers, restrictions, or limitations. Neither post-accident drug nor alcohol testing were ordered nor conducted.

The following table shows the CIC controller's work schedule for the days up to and including the day of the event.

Day	Date	Shift	Hours	Overtime
Friday	Aug 4	Day	0545-1345	None
Saturday	Aug 5	Mid	2215-0615	None
Sunday	Aug 6	Off	None	None
Monday	Aug 7	Off	None	None
Tuesday	Aug 8	Eve	1525-2325	None
Wednesday	Aug 9	Eve	1230-2030	None
Thursday	Aug 10	Day	0630-1430	None

5.2.4 Operational Supervisor

The OS previously served in the United States Coast Guard from 1997 until 2007 where they served as an avionics technician and a helicopter air crewman. They were hired by the FAA in August 2007, attended and completed the FAA academy training, and were assigned to DeKalb-Peachtree (PDK) Airport Traffic Control Tower (ATCT) in October 2007. From there, in January 2011, they went to Palm Beach (PBI) ATCT. In January 2016, they transferred to A80. They were promoted to Operational Supervisor in March 2022. They were current and proficient in accordance with facility standards on the day of the accident. They held a Private Pilot Certificate with a Rotorcraft rating.

They were 45 years old, possessed a current second-class medical clearance with no waivers, restrictions, or limitations. Neither post-accident drug nor alcohol testing were ordered nor conducted.

The following table shows the OS's work schedule for the days up to and including the day of the event.

Day	Date	Shift	Hours	Overtime
Friday	Aug 4	Day	0600-1400	None
Saturday	Aug 5	Leave	None	None
Sunday	Aug 6	Off	None	None
Monday	Aug 7	Off	None	None
Tuesday	Aug 8	Eve	1500-2300	None
Wednesday	Aug 9	Eve	1300-2100	None
Thursday	Aug 10	Day	0545-1345	None

5.2.5 Operations Manager

The OM previously served in the United States Air Force as an air traffic controller at Cannon Air Force Base in 1997 until 2001. They were a direct hire with the FAA through the VRA process in October 2001 and assigned to Roswell (ROW) ATCT. In June 2005 they transferred to Oklahoma City (OKC) ATCT. They then promoted to Operational Supervisor at Columbia (CAE) ATCT in February 2010, Boston (ZBW) ARTCC in June 2012, and Atlanta (ZTL) ARTCC in October 2014. In October 2017 they were promoted to Air Traffic Manager at CAE ATCT. In August 2019 they became Air Traffic Manager at Greer (GSP) ATCT. In January 2021 they became the Operations Manager at ZTL ARTCC. In January 2023 they transferred to Operations Manager at A80 TRACON. They did not hold any other aeronautical ratings.

They were 45 years old, and were not required to maintain a medical clearance as OM.

The following table shows the OM's work schedule for the days up to and including the day of the event.

Day	Date	Shift	Hours	Overtime
Friday	Aug 4	Leave	None	None
Saturday	Aug 5	Off	None	None
Sunday	Aug 6	Off	None	None
Monday	Aug 7	Eve	1300-2100	None
Tuesday	Aug 8	Day	0700-1500	None
Wednesday	Aug 9	Day	0800-1600	None
Thursday	Aug 10	Day	0600-1400	None

5.2.6 Acting Air Traffic Manager

The AATM was hired in June 2001. They reported to the FAA academy in January 2002 and upon graduating, assigned to Fort Meyers (RSW) ATCT in April 2002. In April 2005, they transferred to A80 TRACON. In 2012 they were selected for a supervisory position and returned to RSW ATCT, remaining for two years until returning as a supervisor to A80 TRACON. Since then, the AATM has held a variety of positions, including OM, Support Manager, and Assistant ATM. In 2021 they held a detail position in the Directors Office as an Executive Technical Representative prior to being named A80 AATM in 2022. They held a Commercial Pilot Certificate with Airplane Single Engine Land and Instrument Airplane ratings.

They were 44 years old, and were not required to maintain a medical clearance as AATM.

5.3 Air Traffic Control Training

Training was in progress at the time of the accident. The MCN-M controller trainee had been training with the MCN-M OJTI controller on the MCN-M position for approximately 29 minutes prior to the accident. According to post-accident interviews, both the MCN-M trainee and OJTI controller stated that they regularly trained together and the MCN-M OJTI controller was assigned as a permanent member of the MCN-M trainee controller's training team. The MCN-M OJTI controller stated that they felt that the training pairing worked well. The MCN-M controller trainee stated that they had a great relationship with the two trainers that were assigned to the training team. Additionally, it was stated that they had discussed together options available to guide the pilot of N210JT around the depicted weather.

5.4 Air Traffic Control Procedures

FAA Order JO 7110.65AA, *Air Traffic Control*, Chapter 2, *General Control*, part 2-1-2a NOTE, *Duty Priority*, stated in part:

Because there are many variables involved, it is virtually impossible to develop a standard list of duty priorities that would apply uniformly to every conceivable situation. Each set of circumstances must be evaluated on its own merit, and when more than one action is required, controllers must exercise their best judgment based on the facts and circumstances known to them. That action which is most critical from a safety standpoint is performed first.

FAA Order JO 7110.65AA, *Air Traffic Control*, Chapter 2, *General Control*, paragraph 2-6-2, *PIREP Solicitation and Dissemination*, stated in part:

Emphasis must be placed on the solicitation and dissemination of Urgent (UUA) and Routine (UA) PIREPs. Timely dissemination of PIREPs alerts pilots to weather conditions and provides information useful to forecasters in the development of aviation forecasts. PIREPs also provide information required by ATC in the provision of safe and efficient use of airspace. This includes reports of strong frontal activity, squall lines, thunderstorms, light to severe icing, wind shear and turbulence (including clear air turbulence) of moderate or greater intensity, braking action, volcanic eruptions and volcanic ash clouds, detection of sulfur gases in the cabin, and other conditions pertinent to flight safety. Controllers must provide the information in sufficient detail to assist pilots in making decisions pertinent to flight safety.

NOTE- Routine PIREPs indicating a lack of forecasted weather conditions, for example, a lack of icing or turbulence, are also valuable to aviation weather forecasters and pilots. This is especially true when adverse conditions are expected or forecasted but do not develop or no longer exist.

FAA Order JO 7110.65AA, *Air Traffic Control*, Chapter 2, section 6, paragraph 2–6–4a, Issuing Weather and Chaff Areas, provided procedures and guidance for controllers in prioritizing their duties and stated in part:

- a. *Controllers must issue pertinent information on observed/reported weather and chaff areas to potentially affected aircraft. Define the area of coverage in terms of:*
 1. *Azimuth (by referring to the 12–hour clock) and distance from the aircraft and/or*
 2. *The general width of the area and the area of coverage in terms of fixes or distance and direction from fixes.*

NOTE– Weather significant to the safety of aircraft includes conditions such as funnel cloud activity, lines of thunderstorms, embedded thunderstorms, large hail, wind shear, microbursts, moderate to extreme turbulence (including CAT), and light to severe icing.

PHRASEOLOGY– WEATHER/CHAFF AREA BETWEEN (number) O’CLOCK AND (number) O’CLOCK (number) MILES, and/or (number) MILE BAND OF WEATHER/CHAFF FROM (fix or number of miles and direction from fix) TO (fix or number of miles and direction from fix).

- b. *Inform any tower for which you provide approach control services of observed precipitation on radar which is likely to affect their operations.*
- c. *Use the term “precipitation” when describing radar–derived weather. Issue the precipitation intensity from the lowest descriptor (LIGHT) to the highest descriptor (EXTREME) when that information is available. Do not use the word “turbulence” in describing radar–derived weather.*

1. *LIGHT.*
2. *MODERATE.*
3. *HEAVY.*
4. *EXTREME.*

PHRASEOLOGY– AREA OF (Intensity) PRECIPITATION BETWEEN (number) O’CLOCK AND (number) O’CLOCK, (number) MILES, MOVING (direction) AT (number) KNOTS, TOPS (altitude). AREA IS (number) MILES IN DIAMETER.

FAA Order JO 7110.65AA, *Air Traffic Control*, Chapter 2, General Control, part 2-6-4h, *Issuing Weather and Chaff Areas*, stated in part:

If a pilot enters your area of jurisdiction already deviating for weather, advise the pilot of any additional weather which may affect the route. NOTE– When aircraft are deviating around weather and transitioning from sector to sector, unless

previously coordinated, the receiving controller should not assume that the transferring controller has issued weather affecting the aircraft's route of flight.

FAA Order JO 7110.65AA, *Air Traffic Control*, Chapter 2, *General Control*, part 2-6-4I, *Issuing Weather and Chaff Areas*, stated in part:

The supervisory traffic management coordinator-in-charge/operations supervisor/ controller-in-charge must verify the digitized radar weather information by the best means available (e.g., pilot reports, local tower personnel, etc.) if the weather data displayed by digitized radar is reported as questionable or erroneous.

FAA Order JO 7110.65AA, *Air Traffic Control*, Chapter 4, *IFR*, part 4-7-10a, *Approach Information*, stated in part:

Both en route and terminal approach control sectors must provide current approach information to aircraft destined to airports for which they provide approach control services. This information must be provided on initial contact or as soon as possible thereafter. Approach information contained in the ATIS broadcast may be omitted if the pilot states the appropriate ATIS code.

FAA Order JO 7110.65AA, *Air Traffic Control*, Chapter 10, *Air Traffic Control-Terminal*, part 10-3-1b, *Overdue Aircraft/Other Situations*, stated in part:

Consider an aircraft to be in an emergency status and initiate ALNOT procedures in this section immediately when there is an abnormal simultaneous loss of radar and communications with an IFR aircraft or VFR/SVFR aircraft receiving flight following services. This situation may be applicable to an aircraft operating in a non-radar environment and an unexpected/abnormal loss of communications occurs.

F. LIST OF ATTACHMENTS

Attachment 1: ATC Audio Partial Transcript
Attachment 2: ATC Audio Recordings
Attachment 3: ADS-B Data
Attachment 4: FAA Aircraft Accident Package
Attachment 5: Interview Transcripts

Submitted by:

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