

**NATIONAL TRANSPORTATION SAFETY BOARD
Office of Aviation Safety
Washington, DC 20594**

February 4, 2003

Group Chairman's Factual Report of Investigation

AIR TRAFFIC CONTROL

A. ACCIDENT

Aircraft: N41BE, Raytheon Beech King Air 100
Location: Eveleth, Minnesota
Date: October 25, 2002
Time: 1022 Central Daylight Time (CDT)
1522 Coordinated Universal Time (UTC)¹
NTSB No.: DCA03MA008

B. AIR TRAFFIC CONTROL GROUP

Chairman: Barbara Zimmermann, National Transportation Safety Board
Member: A. Wayne Pierce, Federal Aviation Administration, Office of Air Traffic
Investigation
Member: Michelle A. Wroblewski, National Air Traffic Controllers Association

C. SUMMARY

On October 25, 2002, at about 1022 CDT, a Beech King Air A100, N41BE, operated by Aviation Charter, Inc., crashed while on the VOR approach to runway 27 at Eveleth-Virginia Municipal Airport (EVM), Eveleth, Minnesota. The accident site was located approximately two miles southeast of the runway 27 approach end. The airplane was destroyed by impact forces and post-crash fire. Six passengers and two flight crewmembers were fatally injured. The airplane was being operated as a charter flight under 14 CFR Part 135 of the Federal Aviation Regulations. Instrument meteorological conditions existed at the time of the accident, and an instrument flight rules (IFR) flight plan had been filed.

D. DETAILS OF INVESTIGATION

1.0 Group Activities

¹ All times are expressed in local time except "History of Flight" which is expressed in UTC.

On October 25, 2002, the Air Traffic Control (ATC) group assembled at the Duluth Air Traffic Control Tower (DLH).

The group received an initial briefing on the accident by Mr. James Gardner, Acting Air Traffic Manager. The group reviewed preliminary data, which included a draft transcript, voice communications, personnel statements, facility logs, facility SOP², standard instrument approach procedure charts, controller training records and radar plot graphs. Radar data was taken from the Duluth ASR³-8 radar⁴. The group viewed the RAPTOR⁵ radar playback.

In addition, the group requested records of contacts between the flight crew and any Flight Service Station or weather service vendors. The group requested maintenance and performance records from the Federal Aviation Administration (FAA) Airways Facilities for the EVM VOR (see NAVAID Group Chairman's Study).

The group toured the radar room and tower cab, and began interviews later that afternoon.

The group completed the field portion of the investigation on October 28, 2002.

2.0 History of Flight

a. Preflight

At 1215:43, the Captain⁶ of N41BE contacted the Princeton Automated Flight Service Station (PNM AFSS) and requested weather conditions from the St. Paul Downtown Holman Field Airport, St. Paul, Minnesota (STP) to EVM. The PNM Preflight⁷ specialist advised an AIRMET⁷ (see section 3.0d) was current over the entire route for IFR and icing conditions. The specialist advised IFR conditions were reported throughout central and northern Minnesota. Cloud conditions in the vicinity of STP were reported between 800 feet to 1,000 feet broken and 1,300 feet to 1,600 feet overcast. The specialist reported the conditions at EVM as, "one thousand scattered with a ceiling of

² Standard Operating Procedures Manual, DLH 7110.9G

³ Automated Radar Terminal Systems

⁴ Any radar derived position, course, time and altitude used in this report is intended to illustrate the information available to ATC personnel for use as the basis of control instructions or advisories and is not intended to indicate actual vehicle performance.

⁵ Radar Audio Playback Terminal Operations Recording: a computer tool, which uses terminal continuous data recording extractions to approximate a replay of the ATC display.

⁶ The Operations Group analyzed the recorded voice communications and identified members of the flight crew who operated the radios.

⁷ FAA Pilot/Controller Glossary defines AIRMET as Airman's Meteorological Information, in-flight weather advisories issued only to amend the area forecast concerning weather phenomena which are of operational interest to all aircraft and potentially hazardous to aircraft having limited capability because of lack of equipment, instrumentation, or pilot qualifications. AIRMET's concern weather of less severity than that covered by SIGMET's or Convective SIGMET's. AIRMET's cover moderate icing, moderate turbulence, sustained winds of 30 knots or more at the surface, widespread areas of ceilings less than 1,000 feet and/or visibility less than 3 miles, and extensive mountain obscurement.

two thousand overcast four miles light snow temperature and dew point are minus two and minus three with calm winds.” The specialist stated between STP and EVM the cloud conditions were reported between 300 feet and 600 feet and visibility between 1 to 4 miles⁸ in light snow and mist. In addition, the specialist advised moderate rime and mixed icing in clouds or precipitation up to 20,000 feet existed over the entire route.

The Captain then requested freezing level conditions. The specialist advised, “AIRMET says freezing level from the surface to seven thousand feet northern portions of the area sloping to eight thousand to eleven thousand southern portions of the area and the area runs all the way from the Canada border down to Kentucky and Tennessee. I imagine over Minnesota with the temperatures you know either at or below freezing it’s probably much right on the surface.” The Captain then requested the DLH weather, which the specialist reported as, “five hundred foot overcast ceiling with two miles and light snow and mist and their terminal forecast this morning well looks for five hundred to nine hundred overcast ceilings and one to three miles in rain or snow.”

Upon completion of the briefing the Captain advised, “okay ah you know what I don’t think I’m going to take this flight.” The specialist acknowledged the transmission and the briefing was concluded at 1218:57.

At 1317:56, the Captain of N41BE contacted PNM AFSS again and requested the current weather for EVM. The PNM Preflight 11 specialist advised, “the twelve fifty four is the latest automated, winds calm, three miles and light snow, ceilings at nine hundred overcast and minus one.” The Captain responded, “okay that’s what I need at least it’s above my minimums.” The specialist advised light mixed icing at 7,000 feet to 10,000 feet was reported near Hibbing, Minnesota and also advised the AIRMET was still current. The Captain acknowledged the briefing then requested to file an IFR flight plan from STP to EVM with estimated departure time of 1420.

During the course of filing the flight plan the Captain requested the turbulence forecast. The specialist responded, “no just icing they’ve been collecting in the tops and it’s been running between ten and fifteen thousand at least out of Minneapolis.” The Captain requested 13,000 feet in route. The specialist completed filing the flight plan and the briefing was concluded at 1320:25.

b. Inflight

N41BE departed STP about 1435. ATC services provided by the Minneapolis Terminal Radar Approach Control (M98) and the Minneapolis Air Route Traffic Control Center (ZMP) were nominal. This section commences with the initial contact between the flight crew of N41BE and the DLH Approach Control South (R2) radar controller.

At 1501:08, the Second in Command (SIC) of N41BE contacted the R2 controller and reported level at 13,000 feet proceeding direct EVM. The R2 controller responded, “king

⁸ All references to miles are in nautical miles except those referring to visibility. References to visibility are in statute miles.

air four one bravo echo Duluth approach advise when you have Eveleth weather and what approach you want.” The R2 controller then stated, “had icing reports throughout the morning. The last report was from a Saab three forty descending into Duluth had light rime ice but earlier just about an hour ago a D C nine had moderate rime between nine thousand and one one thousand and I’ll be looking for updates on the latest conditions from you.” The SIC acknowledged the transmission.

At 1502:02, the R2 controller advised the flight crew, “king air four one bravo echo the icing reports existed from about five thousand feet up to the tops near one one thousand feet.” He then instructed the flight crew to descend at pilot’s discretion to maintain 4,000 feet. The SIC acknowledged the transmission.

At 1503:44, the SIC reported having the EVM weather⁹. The R2 controller asked the flight crew the type of approach they wanted and the SIC responded, “V O R runway two seven approach.” The radar controller advised the flight crew to “expect vectors for the approach.” The SIC acknowledged the transmission.

At 1506:49, the R2 controller stated, “king air one bravo echo what do you intend to do in the event of a missed approach at EVM.” The Captain responded, “Well let’s hope we don’t have that. If we do have a missed approach we’ll go up and circle and figure this out. I’ll hold at the V O R.” The R2 controller acknowledged the transmission. The published landing minimums for the VOR runway 27 approach require at least 500 feet cloud ceiling and 1 statute mile visibility (see attachment 3).

At 1507:37, the R2 controller instructed the flight crew to turn right 10 degrees. The SIC acknowledged the transmission.

At 1509:17, the SIC reported leaving 13,000 feet for 4,000 feet. Radar data indicated the airplane was approximately 34 miles south of EVM.

At 1512:16, the R2 controller instructed the flight crew to turn another 10 degrees to the right and descend at pilot’s discretion to 3,500 feet. The SIC acknowledged the transmission.

At 1515:17, the R2 controller instructed the flight crew to turn right heading 050 degrees and the SIC acknowledged the transmission.

At 1517:21, the R2 controller instructed the flight crew to turn left heading 360 degrees and the SIC acknowledged the transmission. Radar data indicated the airplane was approximately 10 miles southeast of EVM at an altitude of 3,700 feet with ground speed¹⁰ of 220 knots.

⁹ EVM at 1454 UTC: wind calm; visibility 2 ½ statute miles, light snow; cloud condition 400 feet scattered, 700 feet overcast; temperature 1 degree Celsius; dew point 0 degree Celsius; altimeter 30.07 (inches of mercury).

¹⁰ FAA Pilot/Controller Glossary defines ground speed as the speed of an aircraft relative to the surface of the earth.

At 1518:13, the R2 controller advised, “one zero miles from the V O R turn left heading three zero zero maintain three thousand five hundred till established on the final approach course cleared for the V O R runway two seven approach Eveleth.” The SIC acknowledged the clearance. Radar data indicated the airplane was approximately 9 miles southeast of EVM at an altitude of 3,500 feet with ground speed of 200 knots.

At 1519:12, the R2 controller stated, “king air one bravo echo change to advisory frequency approved advise cancellation of I F R with the Princeton Flight Service on the ground.” The SIC acknowledged the transmission. Radar data indicated the airplane was approximately 7 miles east of EVM at an altitude of 3,500 feet with ground speed of 180 knots.

No further transmissions were received from members of the flight crew.

The last radar return was received at 1520:23. Radar data indicated N41BE was 4 miles southeast of EVM at an altitude of 2,300 feet with ground speed of 160 knots.

At 1520:28, N41BE’s data block indicated the radar track entered “coast” status and the DLH computer system could no longer associate the flight plan information with the radar returns.

DLH personnel initiated search and rescue notification after the EVM airport manager advised N41BE had not landed as scheduled.

3.0 ATC Environment

a. Airport Environment

The Eveleth-Virginia Municipal Airport is located 3 miles southeast of the town of Eveleth, Minnesota. The airport is located in a rural area with relatively flat terrain. It is near the western shore of Lake Superior and bordered by dense forest to the east and west. It is located approximately 37 miles northwest of DLH (see attachment 4).

EVM is a non-towered airport served by VOR, VOR/DME, VOR/DME RNAV and GPS procedures. The airport has 3 runways, 5/23, 9/27 and 14/32. Airport elevation is 1,378 feet. Runway 27 is 4,215 feet long and 100 feet wide with no displaced threshold. The runway is equipped with medium intensity runway edge lights, runway end identifier lights and 4-lighted precision approach path indicator lights located on the left side of the runway. Runway lights may be activated by radio controls¹¹. Obstructions include trees

¹¹ Excerpt from FAA Aeronautical Information Manual, paragraph 2-1-7, Pilot Control of Airport Lighting states radio control of lighting is available at selected airports to provide airborne control of lights by keying the aircraft's microphone. Control of lighting systems is often available at locations without specified hours for lighting and where there is no control tower or FSS or when the tower or FSS is closed (locations with a part-time tower or FSS) or specified hours. All lighting systems, which are radio controlled at an airport, whether on a single runway or multiple runways, operate on the same radio frequency. The control system consists of a 3-step control responsive to 7, 5, and/or 3 microphone clicks.

2,550 feet from the end of the runway, 80 feet to the right and 64 feet above the runway surface. The VOR runway 27 approach extends from the airport east with an inbound course along a 276-degree bearing (see attachment 3). The VOR is located on the airport and is owned and maintained by the State of Minnesota with FAA oversight (see NAVAID Group Chairman's Study). The AWOS-3¹² frequency is 108.2 and provides the official weather observation for the airport. The common traffic advisory frequency is 122.7.

b. Facility Environment

The Duluth Air Traffic Control Tower is a Level 6 ATC facility, and is classified as a tower and radar approach control. The facility has 3 radar positions: Approach Control South (R2), Approach Control North (R3), and Approach Control Local (R4). The R2 and R3 workstations are located in the facility's radar room and the R4 workstation is located in the tower cab. At the time of the accident all radar positions were combined at the R2 workstation. In this type of configuration the R2 controller was responsible for airspace within a 30-mile radius of DLH from the surface to 12,000 feet excluding the airport traffic area. In addition, the R2 controller was also responsible for an extension of the DLH airspace extending 20 miles northwest of Hibbing, Minnesota, from the surface to 8,000 feet. EVM lies within this area of airspace (see attachment 5).

Discrete radio communications frequencies are available at the facility for Approach Control North (119.5/285.6), and Approach Control South (124.45/255.9). Approach Control Local does not have designated frequencies because it is always combined with another radar position. Emergency frequencies are (121.5/243.0) and are located at the R2 workstation.

c. Radar Operations

DLH provides approach control services to EVM. The airport is located in the northwestern portion of the airspace and the MVA¹³ is 3,100 feet (see attachment 6). The final approach course for the VOR runway 27 approach at EVM is depicted on the DLH video map 4, which was displayed at the R2 workstation at time of the accident (see attachment 7).

The area along N41BE's route of flight is Class E¹⁴ airspace (see attachment 4).

This 3-step control will turn on lighting facilities capable of either a 3-step, 2-step or 1-step operation. The 3-step and 2-step lighting facilities can be altered in intensity, while the 1-step cannot. All lighting is illuminated for a period of 15 minutes from the most recent time of activation and may not be extinguished prior to end of the 15-minute period (except for 1-step and 2-step REILs which may be turned off when desired by keying the mike 5 or 3 times respectively).

¹² Excerpt from FAA Order 7110.10, paragraph 7-1-12, Weather Observing Programs states AWOS-3 - Automated Weather Observing System -3 reports cloud/ceiling data, density altitude visibility, altimeter setting, wind data and usually temperature, dew point.

¹³ Minimum Vectoring Altitude

¹⁴ FAA Pilot/Controller Glossary defines Class E Airspace as the airspace that extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a

d. Weather Sequences

The following are sources of weather information for the area in the vicinity of N41BE's flight path:

AIRMET ZULU 0745 valid until 1400 UTC for all or a portion of South Dakota, Nebraska, Kansas, Minnesota, Iowa, Missouri, Wisconsin, Michigan, Illinois, Indiana, Kentucky, Arkansas and Tennessee; occasional moderate rime/mixed icing in clouds above freezing levels to 20,000 feet. Freezing levels from the surface to 7,000 feet exist in the northern portion sloping from 8,000 feet to 11,000 feet in the southern portions. Conditions continuing beyond 1400 UTC and ending southwest of a line between Pawnee City, Nebraska; Kansas City, Missouri; Saint Louis, Missouri; and Chattanooga, Tennessee. Elsewhere conditions are expected to continue through 2000 UTC. Freezing levels from the surface to 7,000 feet beginning north of a line from Gage, Oklahoma; Wichita, Kansas; Pawnee City, Nebraska; Bradford, Illinois; and Fort Wayne, Indiana sloping from 8,000 feet to 11,000 feet south of that line.

AIRMET SIERRA 0745 UTC valid until 1400 UTC: for all or a portion of North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, and Kentucky; occasional ceiling below 1,000 feet; visibility below 3 statute miles; precipitation continuing beyond 1400 UTC developing in southern Michigan after 1200 UTC; ending North Dakota, South Dakota, Nebraska, and western areas of Kansas between 1500 UTC and 1700 UTC; continuing elsewhere through 0200 UTC.

EVM METAR¹⁵ at 1454 UTC: wind calm; visibility 2 ½ statute miles, light snow; cloud condition 400 feet scattered, 700 feet overcast; temperature 1 degree Celsius; dew point 0 degree Celsius; altimeter 30.07 (inches of mercury).

EVM METAR at 1514 UTC: wind calm; visibility 3 statute miles, light snow; cloud condition 400 feet scattered, 700 feet overcast, temperature 1 degree Celsius; dew point 0 degree Celsius; altimeter 30.06 (inches of mercury).

DLH METAR at 1455 UTC: wind 110 at 4 knots; visibility 1 statute mile, light snow and mist, runway 9 visual range is 6,000 feet variable to greater than 6,000 feet; cloud condition 100 feet overcast; runway 9 visual range is 6,000 feet variable to greater than 6,000 feet; temperature 0 degree Celsius; dew point 0 degree Celsius; altimeter 30.07 (inches of mercury).

surface area, the airspace will be configured to contain all instrument procedures. Also in this class are Federal airways, airspace beginning at either 700 or 1,200 feet AGL used to transition to/from the terminal or enroute environment, enroute domestic, and offshore airspace areas designated below 18,000 feet MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 MSL over the United States, including that airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous States and Alaska, up to, but not including 18,000 feet MSL, and the airspace above FL 600.

¹⁵ Aviation Routine Weather Reports

DLH METAR at 1502 UTC Special Observation: wind 110 at 5 knots; visibility ½ statute mile, light snow and mist, runway 9 visual range is 6,000 feet variable to greater than 6,000 feet; cloud condition 100 feet overcast; temperature 0 degree Celsius; dew point 0 degree Celsius; altimeter 30.06.

4.0 Personnel Interviews

Ernest Joseph Swartz (Operating Initials “ES”)

DLH Flight Data

Mr. Swartz entered on duty with the FAA on May 9, 1982. He had been assigned to DLH since August 28, 1982. He achieved facility certification on January 4, 1985. Mr. Swartz’s medical certificate at the time of the accident was current with no waivers or restrictions.

Mr. Swartz was interviewed by the ATC Group on October 26, 2002. He named Mr. Brooke Lewis, as his representative. In response to questions Mr. Swartz provided the following information:

On the day of the accident Mr. Swartz arrived on duty at 0700 CDT for a scheduled 0700 –1500 shift, the fifth day of a five-day workweek. Saturday and Sunday were his regular days off.

Mr. Swartz first became aware of a problem with N41BE when the radar controller advised that he had not received an IFR flight plan cancellation as expected and requested he check to see what happened.

Mr. Swartz stated he contacted Taconite Aviation at EVM and requested information on the flight. He stated the caller heard a member of the flight crew make a 7 mile check on UNICOM¹⁶ and then clicking sounds to indicate the activation of the runway lights. He advised the lights turned on but the airplane had not landed. The caller advised that he would take his airplane up and take a look but Mr. Swartz stated that he requested he do a ramp search first. The caller said he would do a ramp search first.

Mr. Swartz stated he then continued in the notification process and contacted the EVM Fire Department. They advised they would get “something going.” A representative from Taconite Aviation then called back and advised they were unable to locate the airplane on the ramp but advised that he would take up his own airplane and look around. Mr. Swartz stated he contacted the EVM Police Department and the Chief of Police advised it was not his jurisdiction. He stated he then called the Saint Louis County Sheriff’s Office and was informed they were aware of the situation. He continued in the calling process and contacted the FAA Regional Operations Center and the DLH National Weather Service to initiate a weather observation.

¹⁶ FAA Pilot/Controller Glossary defines UNICOM as a frequency designed for the purpose of carrying out airport advisory practices while operating to or from an airport without an operating control tower.

Mr. Swartz stated when he began the notification process he immediately announced over the facility's public address system for the Acting Air Traffic Manager to come to the tower cab. He stated he later learned the manager was making notifications and he didn't want to duplicate the calls. He stopped the notification process and let the manager handle the situation.

He stated he learned about the accident approximately 40 minutes later.

David Francis Walpole (Operating Initials "DW")

DLH R2

Mr. Walpole entered on duty with the FAA on December 2, 1984. He had been assigned to DLH since March 21, 1985. He achieved facility certification on February 27, 1987. Mr. Walpole's medical certificate at the time of the accident was current with no waivers or restrictions.

Mr. Walpole was interviewed by the ATC Group on October 27, 2002. He named Mr. Scott Kenner, as his representative. In response to questions Mr. Walpole provided the following information:

During the interview Mr. Walpole was wearing corrective lenses and stated he was wearing them at the time of the accident. He held a private pilot's certificate but was not current.

On the day of the accident Mr. Walpole arrived on duty at 0915 CDT for a scheduled 1000-1800 shift, the first day of a five-day workweek. Wednesday and Thursday were his regular days off.

Mr. Walpole stated N41BE reported on the frequency and advised level at 13,000 feet. He stated he asked what approach the flight crew wanted at EVM and to advise when they had EVM weather. Mr. Walpole then issued the flight crew icing conditions for the area. He stated a pilot report from a Saab 340 reported light rime icing on arrival to DLH. Also, a DC-9 reported moderate rime icing between 9,000 feet and 11,000 feet and light rime icing between 9,000 feet and 5,000 feet inbound to DLH. Tops were reported at 11,000 feet.

Mr. Walpole stated he issued the flight crew a descent to 4,000 feet at pilot's discretion. He stated he based this decision on the icing conditions and that normally he would have issued a descent to 5,000 feet. He stated he wanted to provide an altitude to the pilot in order to descend below the reported icing conditions. Mr. Walpole stated he noted the airplane's radar track did not begin a descent right away and stayed at 13,000 feet for several miles.

Mr. Walpole then stated the flight crew reported having the EVM weather and requested the VOR Runway 27 Approach. He stated he advised the flight crew to expect vectors for the approach. He instructed the flight crew to turn right 10 degrees and then asked intentions in case of a missed approach. Mr. Walpole stated the reason he asked this

question is because he knew DLH had low visibility and cloud ceiling. He stated he wasn't very busy and just wanted to be prepared if there was a missed approach.

He stated the flight crew advised a missed approach was unlikely but if they had to do one they would circle over the VOR. Mr. Walpole was a bit surprised at the response and requested the EVM weather from the FDIO (Flight Data Input Output). After reading the weather he realized the conditions were not as bad as he thought and understood the flight crew's comment about "unlikely that they would miss."

Mr. Walpole stated at that time the flight crew reported leaving 13,000 feet. He then issued another 10 degrees to the right. He stated he remembered observing the descent and that the turn was not enough and issued a right turn heading 050 degrees. He instructed the flight crew to descend to 3,500 feet.

Mr. Walpole stated he issued a left turn heading 360 degrees "to box him around" for the turn to final. He remembered the target was 10 miles from the VOR when he issued the flight crew a left turn heading 300 degrees and then the approach clearance. He remembered observing the target intercepting the final approach course at 9 miles and remained on final until he approved a change to advisory frequency. He stated he remembered observing the Mode C readout and it was steady at 3,500 feet. He stated he thought the airplane's radar target was aligned correctly on the final approach course and was surprised to see the flight path on the radar replay.

He stated he did observe the airplane's Mode C maintain 3,500 feet on final approach and thinking "if ice was a problem then maintaining altitude would be a problem."

He stated N41BE was the only airplane he had along that route of flight from the time he started working the position so he had no reference to the effect winds aloft would have on an airplane's flight path. He stated radar coverage and radio communications are not consistent in the area near EVM below 2,500 feet. He was confident in maintaining both when assigning the flight crew 3,500 feet and that he believed it was an adequate altitude to begin the approach.

He stated that he instructed the flight crew to report cancellation of IFR with PNM AFSS. He stated he had a habit of annotating the time to expect the airplane to be on the ground on the flight progress strip. He crossed out the printed estimated time of arrival for N41BE and wrote an estimated time of landing. He stated about 15 minutes after the time he wrote on the strip he had not yet received a cancellation notification. He called the Flight Data controller via the interphone and asked to check the airport and see if N41BE had landed. He stated it was not uncommon to not receive an IFR cancellation.

Mr. Walpole stated the Flight Data controller advised him that the airplane was not at EVM. He asked if he had spoken to Taconite Aviation at EVM because on several occasions when calling Taconite Aviation the phone is answered at the Hibbing office and not at EVM. The Flight Data controller confirmed that he had spoken to someone at EVM. He stated that he then called ZMP and asked the controller if he observed anyone

on N41BE's beacon code. ZMP said negative. At that point he spoke to the Acting Air Traffic Manager and advised that search and rescue should start immediately.

He stated he thought the airplane's flight path appeared normal and not out of the ordinary. He stated he had good primary and secondary radar on the airplane and that the beacon slash and primary target were touching the final approach course depicted on the video display. He stated the range on the radar display was set at 60 nautical miles. Mr. Walpole stated he believed during the course of N41BE's flight that 2 different members of the flight crew operated the radios.

He did not recall if there had been any reports of problems with the EVM VOR. He stated the VOR runway 27 approach was the most commonly used approach at EVM. When asked about the facility NOTAM¹⁷ process Mr. Walpole explained the facility received NOTAMs from PNM AFSS. The NOTAM would be annotated in the facility daily log and on the system information area in the tower cab and radar room. If a controller received a pilot complaint about a navigational aid a second report would be solicited. If the reports were the same the information would be forwarded to the Flight Data controller and then to Mid States Operations Control Center for Airways Facilities.

Steven Thornton (Operating Initials "SN")

PNM AFSS Preflight 7

Mr. Thornton was interviewed by the ATC Group on October 28, 2002 via telephone. He named Mr. Scott Brandes as his representative. In response to questions he provided the following information:

Mr. Thornton entered on duty with the FAA in September 1974. He had been assigned to PNM AFSS since June 16, 1987. He had previously worked at Minneapolis FSS, Wausau FSS and Minneapolis ARTCC.

On the day of the accident Mr. Thornton arrived on duty at 0450 CDT for a scheduled shift of 0500-1500, the second day of a four-day workweek. Monday, Tuesday and Wednesday were his regular days off.

Mr. Thornton was working the Preflight 7 position when a member of the flight crew of N41BE called and requested an abbreviated weather briefing for a flight from STP to EVM. He stated he provided the current AIRMET for IFR and icing conditions and discussed further about the icing in the area. He stated he believed the caller was concerned about the icing.

The one item that stuck in his mind was at the end of the briefing when the caller stated he was not going to take the flight. He stated he believed the caller sounded confident at first but towards the end of the briefing the icing seemed important to the caller. He believed the weather was not what the caller wanted to be in. Mr. Thornton stated he recognized the airplane's call sign (N41BE), but not the voice.

¹⁷ Notice to Airmen

When asked if abbreviated briefings were common requests from callers, Mr. Thornton stated, “a lot of pilots do ask for an abbreviated briefing to fill in information they already have.” He stated it was not uncommon for “this company” to only file a flight plan or request an abbreviated weather briefing.

He stated he learned about the second briefing for N41BE when another specialist received a call from DLH on an overdue aircraft. He made a “DD” (filed departure point) request on the Model 1 Full Capacity computer extracting historical information about N41BE. He stated that is when he found out that a flight plan was filed by N41BE.

Mr. Thornton stated in his opinion the caller was adamant about not taking the flight. He listened to the recorded voice communication of the second call and believed the caller was more stressed and apprehensive about the flight. He personally was concerned that someone was putting pressure on him to take the flight.

Steven Calvin Szymanski (Operating Initials “ZZ”) PNM AFSS Preflight 11

Mr. Szymanski was interviewed by the ATC Group on October 28, 2002 via telephone. He named Mr. Scott Brandes as his representative. In response to questions he provided the following information:

Mr. Szymanski entered on duty with the FAA on February 28, 1986. He had been assigned to PNM AFSS since the summer/fall of 1990. He had previously worked at Quincy FSS and Sioux Falls ATCT. Mr. Szymanski held a commercial pilot’s certificate and was instrument and multi-engine rated. He was an Aviation Safety Counselor for the FAA.

On the day of the accident Mr. Szymanski arrived on duty at 0500 CDT for a scheduled shift of 0500-1500, the second day of a four-day workweek. Monday, Tuesday, and Wednesday were his regular days off.

Mr. Szymanski was working the Pre-Flight 11 position when a member of the flight crew of N41BE called and requested the current EVM weather and to file a flight plan. He stated he had a “funny feeling” about the briefing. In his opinion, the caller sounded distant and unemotional. He stated most other callers throughout the morning had expressed concern about the icing. This caller did not. Mr. Szymanski stated the caller was aware of the AIRMET for icing leading him to believe he had received a briefing earlier.

Mr. Szymanski stated he looked for the Hibbing Terminal Forecast. He issued a pilot report for the area to the caller. He stated he also searched for NOTAMs pertaining to the navigational aids for EVM and found none that would affect N41BE’s flight. He stated he reviewed weather graphics and advised the caller of the weather conditions in the local area.

When asked if he had listened to the earlier briefing for N41BE, he stated he had listened to the recording and believed that both calls were by the same person, but had a definite change in demeanor. He stated the aircraft call sign was familiar but the caller's voice was not. He stated it was odd the caller did not know the direction of flight for EVM or airport identification. He stated they serve many of the pilots from Executive Air and was aware they fly all over the state of Minnesota. He stated he felt that they are generally familiar with many of the airports in the state.

He learned of the earlier briefing when N41BE became overdue.

E. ATTACHMENTS

1. Transcript – PNM AFSS
2. Transcript – DLH ATCT
3. EVM VOR Runway 27 Approach Plate
4. Sectional Chart
5. DLH Airspace Chart
6. DLH MVA Chart
7. DLH Radar Video Map 4
8. Weather Sequences
9. Radar Extraction
10. Radar Graphics
11. DLH Daily Record of Facility Operation, FAA Form 7230-4
12. DLH Facility Accident/Incident Notification Record, FAA Form 8020-3
13. DLH Aircraft Accident/Incident Preliminary Notice, FAA Form 8020-9