Docket No. SA-533

Exhibit No. 3-A

NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

Air Traffic Control Group Chairman's Factual Report

by

Scott Dunham

(9 Pages)

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

March 27, 2009

ATC GROUP CHAIRMAN'S FACTUAL REPORT

CEN09MA142

A. AIRCRAFT ACCIDENT

Location: Lubbock, Texas

Date: January 27, 2009

Time: 0436 Central standard time

Aircraft: N902FX, Aerospatiale ATR-42, operating as Empire Airlines flight 8284 (CFS8284)

B. AIR TRAFFIC CONTROL GROUP

Mr. Scott J. Dunham
National Transportation Safety Board
Washington, D.C.

Mr. Dan Strawbridge
Federal Aviation Administration
Washington, D.C.

C. SUMMARY

On January 27, 2009, at approximately 0437 central standard time (CST), N902FX, an Aerospatiale Alenia ATR-42-320, operating as Empire flight 8284, sustained substantial damage when it collided with terrain short of the runway while executing the Instrument Landing System (ILS) RWY 17R approach at Lubbock Preston Smith International Airport (LBB), Lubbock, Texas. The airplane was registered to Federal Express Corporation, Memphis, Tennessee, and operated by Empire Airlines, Hayden, Idaho. The airline transport pilot rated captain was seriously injured and the commercial rated first officer sustained minor injuries. An instrument flight rules flight plan was filed for the flight that departed Fort Worth Alliance Airport (AFW), Fort Worth, Texas, at approximately 0319 CST. Instrument meteorological conditions prevailed for the supplemental cargo flight operated under 14 Code of Federal Regulations Part 121.

D. DETAILS OF THE INVESTIGATION

The air traffic control aspects of this accident were investigated via information collected from the Federal Aviation Administration and telephone interviews with the two controllers on duty at Lubbock Tower at the time of the accident. There was no on-scene air traffic control investigation.

1. History of Flight[1]

CFS8284 was a scheduled cargo flight operating under Code of Federal Regulations Part 121 between Fort Worth Alliance Airport (AFW), Fort Worth, Texas, and Lubbock Preston Smith International Airport (LBB), Lubbock, Texas. The flight from AFW to LBB was generally uneventful. After leaving the AFW area, the flight was under control of Fort Worth Air Route Traffic Control Center (ZFW). The pilot requested and received initial clearance to flight level 180. At 0402, the crew reported encountering moderate rime icing at FL180, and requested descent to 14,000 feet, which was approved. At 0407, the controller inquired about the icing conditions. The crew reported that the ice had stopped building, and that most of the earlier accretion had been shed. CFS8284 was handed off to another ZFW sector, and upon checking in with the new controller reported that they were no longer picking up icing. The crew advised that conditions had improved as they descended through approximately 16,000 feet. At 0410, the crew requested the approach in use at Lubbock, and after coordinating with LBB approach, the ZFW controller advised that any approach except the backcourse approaches would be available, winds were from the north, and that runway 8/26 was closed. At 0418, CFS8284 reported leaving 14,000 for 8,000. At 0422, the crew was instructed to contact LBB approach control.

The crew first contacted LBB at 0422:20, descending from 10,000 feet to 8,000 feet. Automated Terminal Information Service information "Papa" was current at the time, and advised pilots that, because of rapidly changing weather conditions, weather and airport information would be provided by the approach and tower controllers. The approach controller acknowledged the initial contact, cleared CFS8284 to descend to 6,000 feet, and advised the pilot that he did not have any icing reports. The controller provided a special METAR for LBB taken at 0408, reporting the weather as wind 350 at 10 knots, visibility 2, light freezing drizzle and mist, ceiling 500 overcast, temperature -8, dew point -9, altimeter 30.12, braking action advisories in effect. He also stated that runway 8/26 was closed, and asked which approach the pilot wanted. The pilot requested runway 17R, and the controller instructed them to expect the instrument landing system (ILS) approach to runway 17R.

At 0423:35, the controller advised the pilot that the mu readings for runway 35L were touchdown 24, midpoint 25, rollout 23. At 0423:59, the controller instructed the crew to

---

[1] An equipment fault at Lubbock ATCT caused the timestamp on recorded ATC audio and the official LBB ATC transcript to be 6 minutes and 25 seconds slow. Times in this report have been corrected to account for the error, which was confirmed by comparing the Lubbock and Fort Worth Center timestamps on a coordination call between the two facilities that was recorded at both ends.

fly heading 290 for vectors to the ILS. The pilot requested a repeat of the earlier information, mistakenly referring to it as runway visual range data. The controller responded that the RVR was over 6000 feet, and repeated the mu readings. The pilot acknowledged.

At 0429:36, the controller cleared CFS8284 to descend to 5,000 feet, and at 0430:35 told the pilot to fly heading 260. At 0431:25, the controller amended the heading to 280, and noted the wind seemed to have changed substantially between 6,000 and 5,000 feet.

At 0433:04, the controller transmitted, "Empire 8284, 7 miles from the outer marker, turn left heading 210, maintain 5,000 until established on the localizer, cleared ILS runway 17R approach." The pilot replied, "5,000, 210 until established and cleared for the ILS, Empire 8284." The approach controller instructed the crew to call the tower at 0433:53.

At 0434:02, CFS8284 transmitted, "Empire 8284 checking in nine out on the localizer inbound." The tower controller responded, "Empire 8284, Lubbock Tower, cleared to land, wind 010 at 8." The pilot acknowledged. At 0435:41, the tower controller broadcast a wind check, still 010 at 8 knots.

At 0436:41, an unidentified source (likely an airport operations vehicle) transmitted, "Lubbock ground, uh, what is that fire there at the end of the runway?" The tower controller responded, "Say again?" The unidentified source again asked, "...That fire at the end of the runway – what is it?" The tower controller responded, "It's an airplane."

At 0437:45, Maintenance 26 asked, "You got the fire department out?" The tower controller responded, "We're trying to get them." At 0438:08, the tower controller transmitted, "Operations 16, we cannot get hold of the fire department." Maintenance 26 transmitted, "Ground, Maintenance 26, can I make uh, can I go get them myself? I can go out of the shop and pick them up." At 0438:30, Maintenance 26 transmitted, "OK, I see them coming out."

At 0438:36, Rescue 2 called ground control, and was advised that the aircraft crash was at the approach end of runway 17R. Rescue 2 responded that they were responding to the accident via taxiway J. Rescue 2 asked for the size of the aircraft and the number of persons on board. The tower controller responded, "It's an ATR-43, unknown souls on board, they had no indication of ah anything on final I gave them a wind check and then we saw the fire."

2. Radar Data

Radar data for this accident was obtained from the Lubbock ASR-9, located at 33:40:05.75N / 101:51:11.99W. Figure 1 shows an overview of the aircraft's approach. Figure 2 shows a closer view of the final approach segment, and figure 3 shows a profile view of the approach path compared to the computed glideslope.

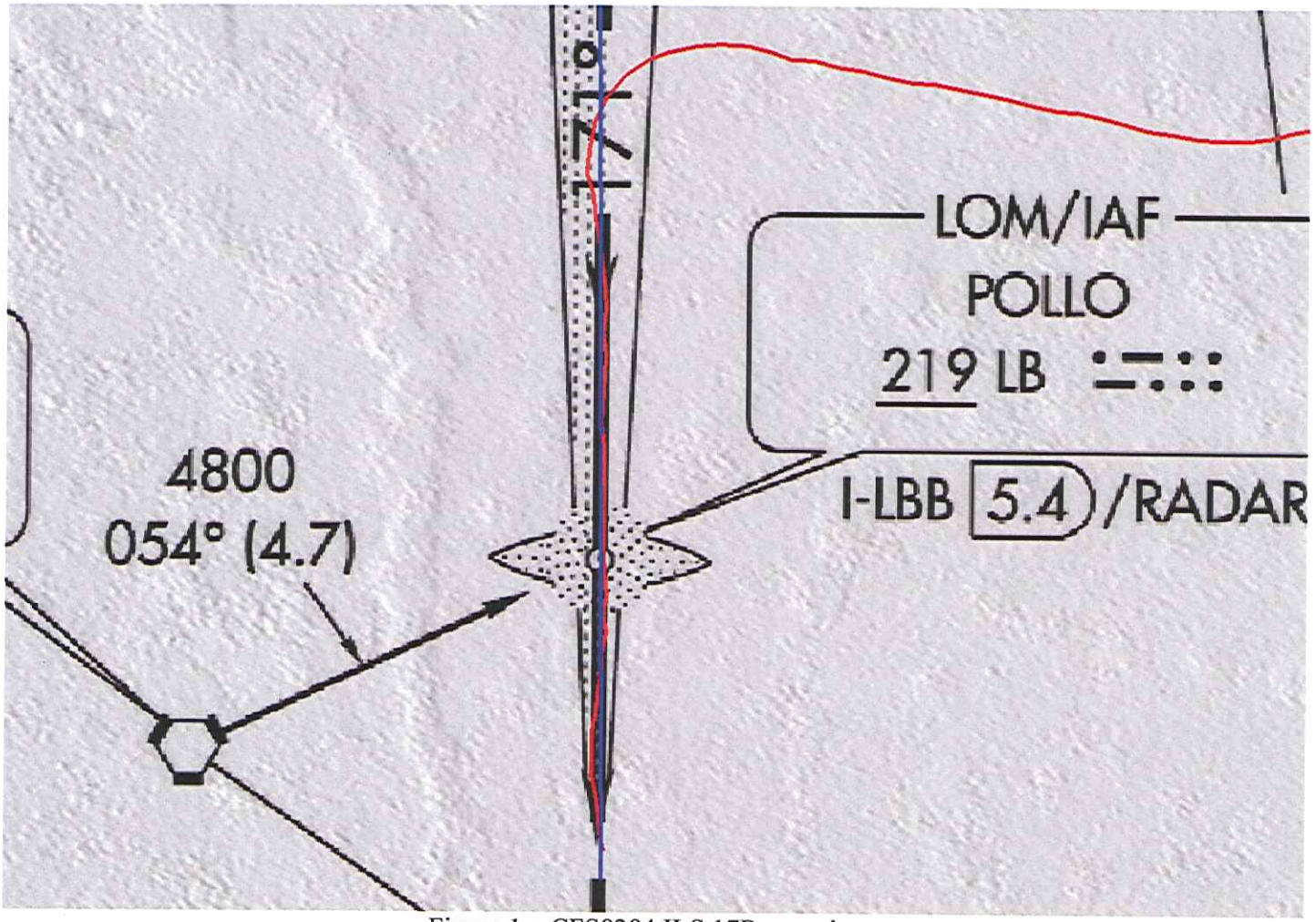

Figure 1 – CFS8284 ILS 17R overview.

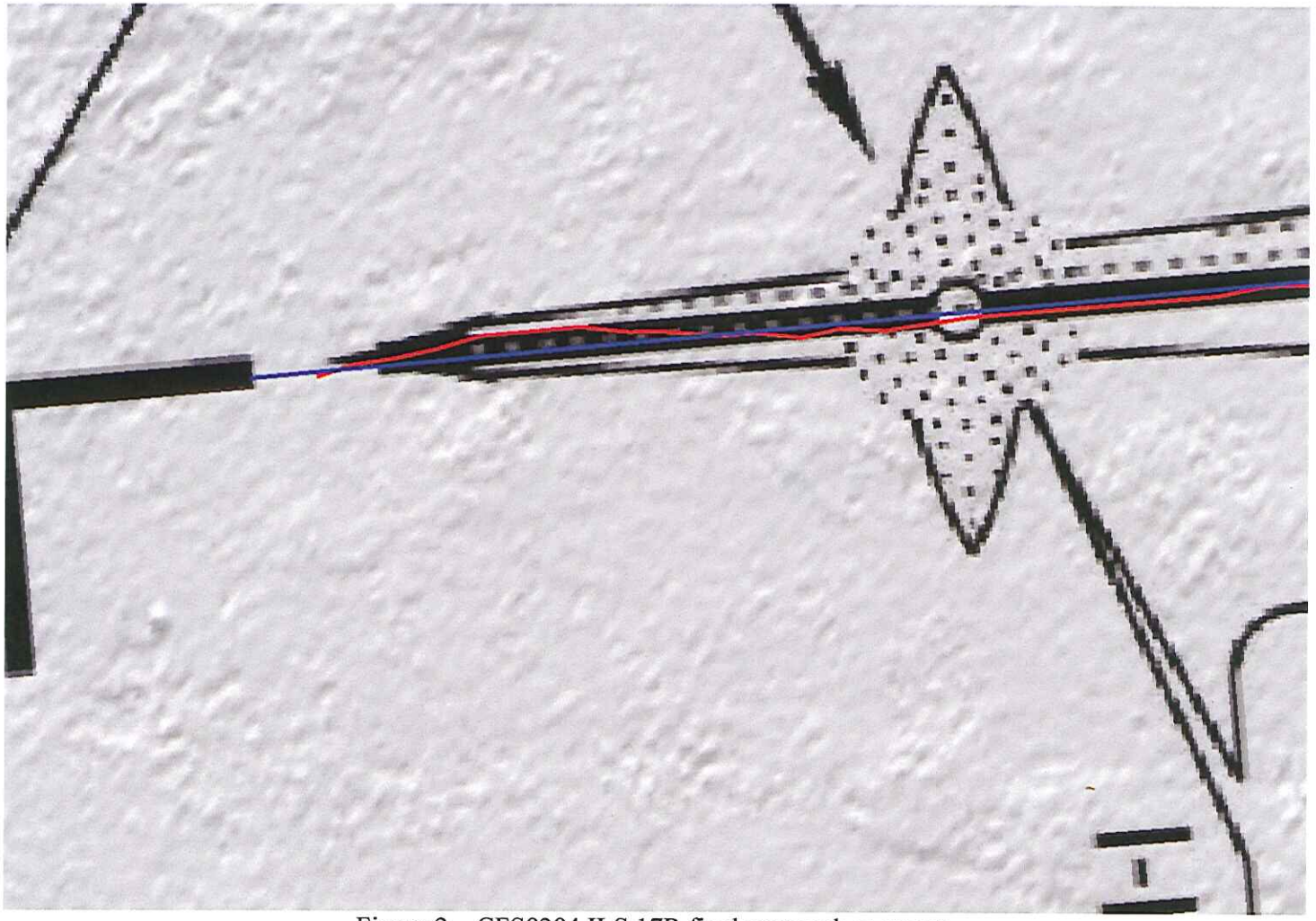

Figure 2 – CFS8284 ILS 17R final approach segment.

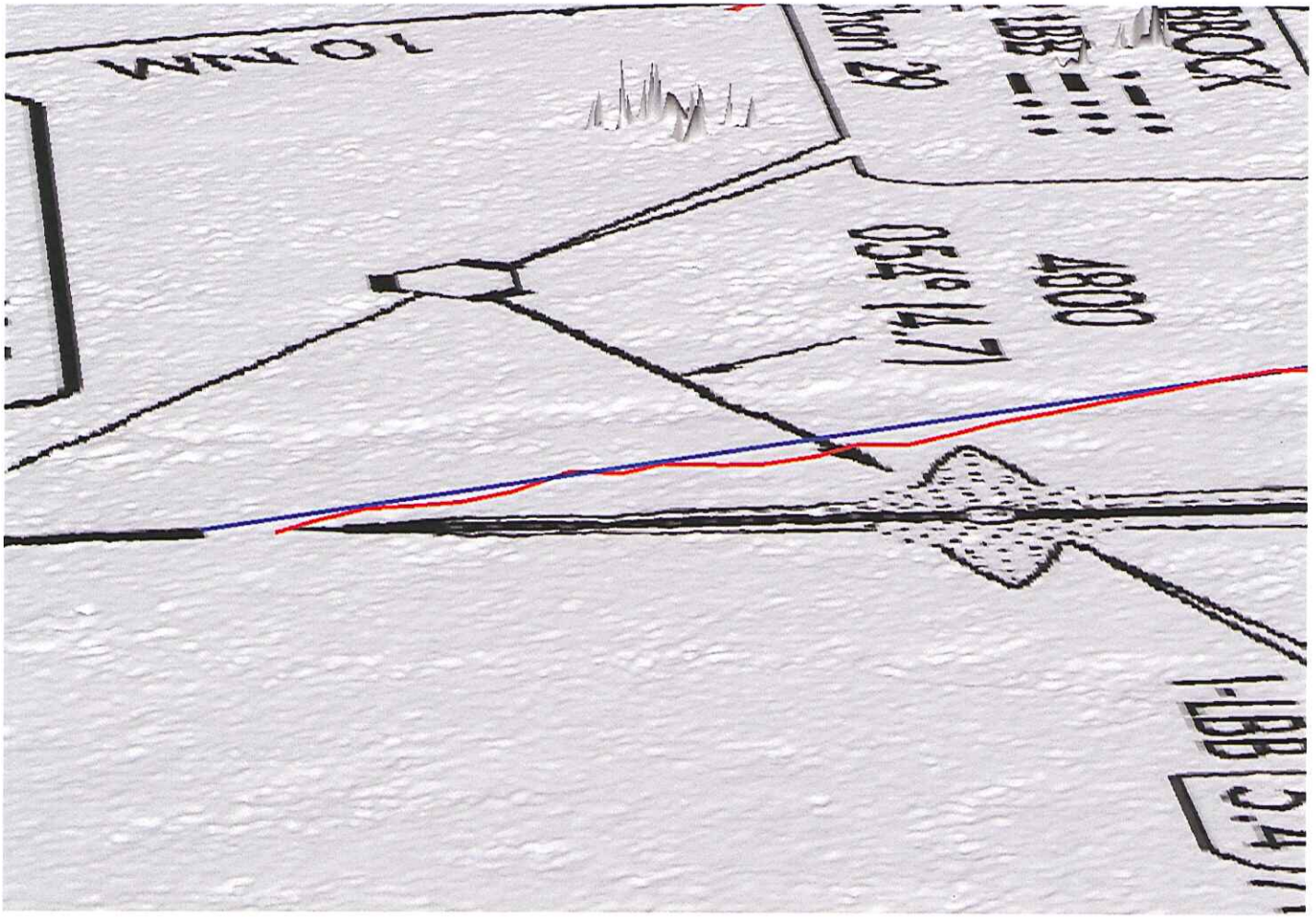

Figure 3 – Profile view of CFS8284 ILS 17R approach.

3. Personnel Interviews

Timothy Presley **LBB Approach Controller**

Mr. Presley entered on duty with the FAA in October 1986. He worked approximately two years at a VFR tower in Decatur, Illinois, and two years at the approach control in Champaign, Illinois, before transferring to LBB in 1991. He was a quality assurance staff specialist at LBB for about 18 months, and had a private pilot license with about 2,000 hours of flight time.

On the night of the accident, he went to work at 2200. The only unusual conditions affecting operations were the weather. It was icy, and the airport crews were working on the runway surfaces, spreading chemicals and taking friction readings. There were two air carrier arrivals between the beginning of the shift and approximately 0030, with no other operations until CFS8284 came into the area about four hours later. Mr. Presley was working the approach control position, using the STARS display to watch out to about 54 miles from the airport. LBB's delegated airspace extended to about 38 to 40 miles from the airport. The weather at the airport was still not very good, but the runway visual range was in excess of 6000 feet. The arrival handling for CFS8284 was routine. He vectored the aircraft for the ILS approach, and noticed nothing unusual while doing so.

After the aircraft was cleared for approach and transferred to local control, Mr. Presley stated that he was watching the final with binoculars in order to observe when CFS8284 broke out and use that observation to confirm the reported ceiling. When he first saw the aircraft come out of the clouds, it was in a 45 degree bank. The aircraft then rolled into a 45 degree bank in the opposite direction. He initially thought that the pilot was correcting back to the runway, but then realized that the aircraft was out of control. The aircraft hit the ground short of the runway, ignited, and left a trail of fire behind it until it stopped and continued burning in a large fireball. The last speed he recalled seeing on the radar was 170 knots at about two-mile final. Mr. Presley said that he was able to see the aircraft clearly, that the reported two mile visibility was about right, and that the drizzle wasn't significantly affecting his ability to see the aircraft. Some of the airport vehicles were in the vicinity of the accident site when it occurred, but Mr. Presley could not specifically recall which ones.

Mr. Presley immediately notified the airport rescue and firefighting (ARFF) service of the accident. He stated that the process to notify ARFF required the controller to press a button that sets off alarms at the airport fire station as well as the airport operations office and Lubbock fire dispatch in the city. The controller then announces the type of incident, which is broadcast on speakers in the ARFF station. The firefighters do not respond to the announcement directly. They report to their vehicles, exit the station, and contact the tower via radio for further details. Mr. Presley could see the fire station and the lights of the fire vehicles, so he knew they were responding. He also called 911 just in case the aircraft had crashed off airport, advising them that there had been an accident northwest

of runway 17R. He was uncertain whether the aircraft had stopped inside the fence, and wanted to make sure that the city fire units responded as well as the airport units.

Mr. Presley stated that he then began helping the local controller deal with the situation. He did not specifically watch the ARFF response once the trucks had left the station, but he noted that they responded in a timely manner and proceeded directly to the crash site without delay. He was unable to explain the local controller's radio comment that the controllers were having difficulty contacting ARFF.

The ARFF contact system was tested once a day, and the test was part of the daily checklist. During tests, the ARFF station, airport ops, and the city fire dispatch center all respond verbally to the test transmission in order to confirm receipt.

Mr. Presley stated that braking action advisories were required once reported mu values reached a certain level, but could not recall exactly what that value was.

Ann Caldwell **LBB Local Controller**

Ms. Caldwell began working for the FAA in September 2001 after after five years as a US Navy controller and a year as a contract tower controller in Brownsville, Texas. She had some flight training, but was not a licensed pilot.

On the night of the accident, Ms. Caldwell reported to work at 2200. The weather was not very good, even by winter standards, but she recalled no other unusual circumstances affecting operations. During the shift there were two flight operations before CFS8284, both around midnight, but there was vehicular traffic on the airport all night because airport operations was working to deice the runways and make friction measurements.

Ms. Caldwell first saw CFS8284 when the aircraft came out of the clouds on final. She was unable to tell what the aircraft's attitude was, but it appeared to be slightly left of the centerline. It then hit the ground, but she was unable to say how long it was between sighting the aircraft and the impact. The aircraft skidded on its belly with the left wing in the air. After it stopped, there was a large explosion. She heard the approach controller using the crash phone to advise ARFF that there was an "Alert 3" on the airport. Shortly after that, a ground vehicle asked about the fire, but Ms. Caldwell was uncertain how long it was between impact and the vehicle operator's question.

After the accident, Ms. Caldwell was engaged in managing the vehicular traffic on the airport and answering numerous phone calls regarding the accident. One of the calls was from a supervisor at Fort Worth Center, likely in reaction to the approach controller advising them that the airport was closed. Ms. Caldwell was unable to explain why she stated on the radio that the controllers were having trouble contacting ARFF, except that she may have misconstrued some of the statements the approach controller was making on the ARFF notification system as indicating that he was having trouble getting the ARFF units out. However, she noted that there was actually no delay in the response,

and the ARFF units went directly to the crash. There was a "big fire" so they had no trouble locating the aircraft.

Ms. Caldwell's recollection was that the runway lights were on step 5, the highest intensity, and that the sequenced flashing lights were operating as well. She was unable to say whether the crash phone was recorded. The ILS monitor panel was located in the tower, and none of the systems were in an alarm condition. The tower runway visual range display was on, but she did not see any values below 6000 feet during the shift. When the accident occurred, operations vehicles 24, 26, and 16 were in the vicinity of the crash site.

Ms. Caldwell stated that when the crash phone is tested, the controller depresses a button on the system, makes a test announcement, and then waits for responses from the ARFF station, airport operations, and the city fire department dispatch center.

Scott Dunham
ATC Investigator
AS-30