

**NATIONAL TRANSPORTATION SAFETY BOARD**  
Office of Aviation Safety, Western Pacific Region  
Gardena, CA

**OPERATIONS GROUP**

**CEN09MA019**

**Attachment 1**  
Interview Summaries

## INTERVIEW SUMMARIES & RECORDS OF CONVERSATION

---

Interview: Phil Huth  
Date: October 21, 2008  
Time: 0930 CDT  
Location: Air Angels, Bolingbrook, IL  
Present: Operations Group

---

During the interview, Mr Phil Huth provided the following information:

Mr Phil Huth is the Director of Air Operations and currently the Chief Pilot of Air Angeles. Also, sitting in on the discussion was Mr Jeff Meisenger, who is a Line Pilot for Air Angeles.

Mr Huth started flying in the Army as an OH-58 pilot from 1981 to 1986. After leaving the Army he flew Hughes 269's and 369's for Eagle Air Helicopters. Later, he flew a Bell 206 as a single pilot operator for Starship Inc. From 1989 to 1999 he flew with Omni Flight, a part 135 operation. In 2004 he came onboard with Air Angels, became the Chief Pilot in June or July 2004, and then the Director of Air Operations in July 2006. He has accumulated approximately 6,900 hours of flight time, and holds an ATP certificate.

Air Angels started operations in 1998 and holds a part 135 certificate. Air Angels, up to October 6<sup>th</sup>, operated with 4 pilots, and two helicopters (N990AA is the other helicopter). A third helicopter has been purchased and is in the process of being retrofitted for medical transport operations, N34NR, but is not on the operating certificate to date. The chief pilot, Glen Wenzel, left Air Angels on October 6<sup>th</sup> to take another job. That left Air Angels short one pilot. Mr Huth took over the chief pilot position. The accident pilot, Del Waugh, volunteered to take the first extra week of pilot duty to fill the gap that was left by the departure of the Chief Pilot. Mr Waugh's duty week was extended from 7 days to 14 days while staying on the night shift for the entire period. He was on his 9<sup>th</sup> day of his 14 day duty period when the accident occurred, and he was on the night shift the entire time. He had not flown the night before due to poor weather.

The accident pilot, Del Waugh lived out of town and would stay in the Air Angels pilot bunk room during his off time when on his week of duty. The pilot schedule was designed to have each pilot on one week and off one week, alternating a week of day shifts followed by a week of night shifts. The normal duty period was from 7am to 7pm for the day shift, and 7pm to 7am for the night shift. The duty week started on Tuesday morning. Mr Waugh was 69 years old, held a second class medical, in good physical condition, and usually good spirits. The accident pilot did not exhibit any unusual moods the 72 hours

prior to the accident. He had been involved in a divorce with in the last year and his son, who he'd had a rough relationship with, was living at his house. These situations were not new to Mr Waugh, and did not appear to affect his flying performance. When he was on his duty week, Mr Waugh would stay in the pilots bunk room during his off duty time. After the accident, Mr Waugh's personal cell phone (317.432.3957) was located in the duty bunk room. Mr Waugh son, Brad Waugh, collected all personal effects that remained in the bunk room after the accident.

Mr Waugh had flown helicopters in the Vietnam conflict. Following Vietnam he entered the civilian workforce as a businessman and continued service in the US Army Reserve. His activities in the Army Reserve do not indicate that he was in a flying status. His resume shows that his first civilian flying job was in 2004.

Mr Huth said that he was the in-house check airman, and he had given Mr Waugh his line check on September 25 last month. During the line check they received a call to fly an actual patient flight. During the flight Mr Huth observed that the pilot used the autopilot while en route. The helicopter was equipped with a Garmin GNS 430, which had a moving map display but did not have terrain warning or displayed obstacles. The GNS 430 was tied into the autopilot system. During the flight Mr Huth had the pilot perform an IMC recovery, in which the pilot will execute an instrument approach to the nearest available airport. This is practiced at least every 6 months, but this is not considered an instrument proficiency check. The pilots all hold instrument ratings but are not instrument current. The IMC recovery is considered a contingency procedure. The helicopters are IFR certified aircraft but are not maintained to the level required for use on an IFR flight. The pilots are encouraged to practice instrument approaches as long as there is a second pilot in the copilot's seat. Mr Huth thought that there is only one hospital that he could recall that had an instrument approach to its helo pad (University of Madison). Flying IFR flights does not help them get the patient to the hospital any faster, since IFR flights would mostly be from airport to airport, the patient would still have to be transferred from the airport to the hospital by ground.

Air Angels dispatch is done through a facility in Santa Rosa, CA. This took effect when Reach bought the company. They communicate through to the dispatch office via a dedicated radio in the helicopter that transmits to a repeater, which then routes the comms through a voip connection to the facility in Santa Rosa. They have not had problems with this style of communications and, in fact, it works better than the old radio only dispatch system they had used before. The Reach dispatch log is quite detailed listing the communication dialog between the dispatch and the hospital as to the patient details, logs the reported weight and balance, take off and arrival times, and the required 15 minute position reports. A report is generated for each flight and kept for 30 days. The pilots are required to make an "off call" (total take off weight, CG & CG range, destination, ETE, souls on board, and fuel (time)). Additionally, the pilots are required to make a position report every 15 minutes (lat, long, ETA, ground speed, and heading). The pilot is notified from dispatch using a Nextel cellular phone that he carries when on duty (630.659.4837). The pilot is responsible for checking the weather and NOTAM's. They usually use a system called "Weathermeister" which provides weather radar plot, METAR, and NOTAMs. The

Air Angels base reports their current operating area weather to dispatch as either green, yellow, or red. Dispatch will contact the pilot to determine if the flight can be conducted before they release any patient information to the medical personnel.

A typical flight is conducted as follows:

- Dispatch receives a request from a hospital
- Dispatch contacts the pilot, and the pilot checks and reports the weather as green, yellow, or red.
- Pilot prepares the aircraft while the paramedic and flight nurse get the patient details from dispatch.
- Pilot performs before takeoff check list
- Sterile cockpit is exercised from 'secure doors call' to 'gear up call'
- While en route to patient pickup, one of the medical personnel sit in the copilots seat.
  - The medical crew are trained in use and tuning of the radios
  - Calls out traffic or obstructions to the pilot using the 2-challenge rule
  - If the pilot is in the cockpit for more that 3-seconds he notifies the crew.
- Make a position report if required to flight guard (dispatch).
- Make a landing call to dispatch
- Makes a weight and balance calculation using the PDA
- Pilot makes an off call to dispatch
- Cruising altitudes are 1500 during the day, and 1500-1700 feet at night. 1800 feet will usually give you 1000 feet agl. Airspeed is usually between 125 and 130 knots (90% engine torque)
- The three radios are set up as follows:
  - Local ATC freq (on the Garmin GNS 430)
  - Dispatch (Kenwood radio)
  - 123.025 (helo air-to-air common)
- While en-route, pilot will make a position report to dispatch every 15 minutes, and make position calls in the blind on helo air-to-ari common.
- 5 minutes out the medical crew, on a separate radio (Technosonic) will call the hospital with a patient update and eta.
- Dispatch will also coordinate with the receiving hospital with the latest ETA.
- A new policy in effect within the last 30 days is to self announce circling and landing at the hospital on helo air-to-air common, and/or report landing assured to ATC if in controlled airspace.
- Upon landing at the hospital the pilot shuts down the helicopter after a 2-minute cool down, then assists with the patient egress. The hospital security also assists as ground crew at the hospital helo pad.
- When they are ready to leave, the pilot does a walk-around, and gives an off call to dispatch once they are ready to take off, returning to Clow Airport.

The radio tower that the accident pilot stuck was a well known as the tallest obstacle in the flying area.

Mr Huth flew the helicopter during the previous 7 days before the accident. There were no on-going discrepancies with the helicopter. No items were MEL'd (minimum equipment list). As a matter of procedure, if there is something wrong with the duty helicopter, the standby helicopter is brought into service.

Generally, the sending physician makes the determination if the patient requires air transport. Usually, the receiving physician will concur. Air Angels has a medical necessity form that the sending physician fills in and is kept as a record for the rationale behind the request for air transport.

---

Interview: Phil Huth  
Date: 11/7/2008  
Time: 1250  
Location: Telephone Interview

---

The following is a record of conversation with Mr Phil Huth, who is the Director of Air Operations and currently the Chief Pilot of Air Angeles. This discussion focused on the Air Angels Training Program and the Children's Hospital Landing Pad.

The Air Angels training manual outlines the topics that the pilot is required to know and the tasks that he is required to demonstrate. The ground portion of the training uses a computer based training program provided by Avstar Media. The Avstar computer base training modules cover the required general pilot training, such as, meteorology, navigation, air traffic control, concepts of instrument procedures, FARs, en route and terminal area planning, etc. Some modules are specific to the Bell 222, such as weight and balance, and helicopter performance. Company specific training is done on a one-on-one basis between the pilot and the instructor. Some topics covered in this manner, are duties and responsibilities, Operations Manual, Operating Certificate and Operations, company flight control, crew coordination and company communications. Knowledge was verified orally, usually as part of a check ride. Training that directly related to operating the helicopter, such as helicopter performance, emergency drills, aircraft ground training, testing and checking, were performed one-on-one with an instructor, and discussed orally. As part of a new pilot's initial training, familiarization with the most frequently used helicopter pads, flight routes, and local area orientation was performed. This was not incorporated in the recurrent training syllabus. There were no designated flight routes, designated altitudes, or similar local area 'rules' established by the company, nor was there a written exam associated with the local flying area knowledge.

Children's Memorial Hospital's helicopter pad was not optimal, in Mr Huth's opinion. The pad is tiny, and a large helicopter, like the Bell 222, a good portion of the tail boom hangs over the edge. The pad is 13 stories up. There is a large steeple that is an obstruction close to the pad to the northeast, and an elevator shaft is also close to the pad and can cause some concern. If the winds are from the SW, then the steeple is in the way and the approach to the pad must be steeper than normal. If winds are from the south then the approach is over the elevator shaft. If the winds are from the east or north then the approach is clear. The hospital is far enough away from other large buildings (being that it isn't directly downtown) that wind turbulence off of buildings is not an issue, and neither is wind speed. If the pilot does not like the situation, they can land at the WGN TV station landing pad. Air Angels has an agreement with WGN to use their pad if requested. When planning for Children's Hospital as the destination, the pilot would probably use the weather from Midway airport (8 miles away) or O'Hare Airport.

The pilot had not expressed any apprehension to Mr Huth about landing on elevated pads, but he has heard recently that at least one aircrew person mentioned apprehension when landing on elevated pads. The pilot had never expressed any apprehension about flying at night.

Mr Huth believes at some point, the pilot would have looked up the Children's Hospital landing pad in the Illinois Hospital Heliport Directory. When the pilot would have done this, he could not guess. It could have been at the hospital pad at Valley West (Sandwich, IL) or while en route to Children's. However, it would be a likely thing for the pilot to do, especially since this was an unfamiliar helo pad for him. The directory is 139 pages, and could take a little time to find the correct page.

---

Interview: Jeff Meisenger, Line Pilot  
Date: October 21, 2008  
Time: 0930 CDT  
Location: Air Angels, Bolingbrook, IL  
Present: Operations Group

---

During the interview, Mr Jeff Meisenger provided the following information:

Mr Jeff Meisenger is a line pilot for Air Angels. Mr Meisenger entered flight school in 1999 and flew AH-1 Cobras for the Marine Corps. From June 2006 to Sept 2007 he flew as a news pilot in Chicago, and in Oct 2007 he was hired on at Air Angels. He has accumulated approximately 3000 flight hours and has a commercial certificate and instrument rating.

Mr Meisenger said that he was off duty the week before the accident. He came on duty Tuesday, Oct 14<sup>th</sup> on the day shift. Mr Waugh had the night shift. He saw Mr Waugh at 0730, and they joked how long he that morning. Mr Waugh appeared to be in his normal good spirits. Mr Waugh had a flight on Monday night that lasted 0.9 hours returning to base at 0023. Mr Waugh stayed in the pilots bunk room in his off time.

On Wednesday morning at 0700 he turned over the duty with Mr Waugh and ate breakfast with him around 0900. Mr Waugh had not flown Tuesday night, and they joked about how much sleep he was getting on the night shift. Again, Mr Waugh stayed in the pilot bunk room during the day to sleep. At 2100 Mr Waugh called him on the phone, he was looking for the aircraft logbook. He directed him to the logbook, which had been misplaced. Mr Waugh seemed to be in his normal good spirits and well rested. He believes that this is the first time the accident pilot had flown the route from Valley West Community Hospital, Sandwich, IL to Children's Memorial Hospital, Chicago, IL.

---

Interview: Liz Stapay, Communications Specialist  
Date: October 21, 2008  
Time: 1100 CDT  
Location: Air Angels, Bolingbrook, IL  
Present: Operations Group

---

During the interview, Ms Liz Stapay provided the following information:

Ms Liz Stapay is a communications specialist with Reach Air Medical Services. Ms Stapay was the dispatcher working with N992AA at the time of the accident. She works 12 hour shifts, 0600-1800, 4 days on 3 days off, then 3 days on 4 days off cycle. She worked as a ambulance dispatcher starting in 2001, she was a 911 dispatcher from 2003 to 2004, became a paramedic, in 2006 started with Air Angels as their dispatcher, and in June 2008 moved to Santa Rose to be a dispatcher for Reach. She does not provide flight crews with a weather brief or NOTAM information, she coordinates the patient transport and assists with communications between the involved parties.

Ms Stapay said the crew was on standby for 1.5 hours while she tried to locate a hospital that could accept the patient. She confirmed the crew/patient manifest and off call (off call was actually received by another dispatcher). After 15 minutes had passed the computer alerted her to request a position report from the helicopter. She received no response from the helicopter to her transmissions and she started to initiate the missing aircraft procedure when she received a call from the Aurora Police Dept asking if they had a helo in the area, and that they were responding to a helicopter crash.

---

Interview: Chris Heiter, Director of Maintenance  
Date: October 21, 2008  
Time: 1200 CDT  
Location: Air Angels, Bolingbrook, IL  
Present: Operations Group Chairman

---

During the interview, Mr Chris Heiter provided the following information:

Mr Chris Heiter is the Director of Maintenance at Air Angels. He comes from an aviation family. He received his A&P in 2000. Worked at Michiana Air Services at South Bend for 1 year and was hired by Air Angels in August 2001. Also in the room at the time of this discussion was Robert Romano, who is a line mechanic for Air Angels, worked for Delta Airlines for 27 years, and was hired by Air Angels full time in April 2006.

Mr Heiter said that there was another mechanic that worked in the Air Angels shop, and his name is Patrick Morris. In all, there are 3 full time mechanics in the maintenance department, and one part time mechanic (Robert Elzer). They work 0730-1630 Monday – Friday, and then one of them is on-call at all other times (including weekends).

N992AA had a roof beam crack that put the aircraft out of service. Time on the airframe was about 4,800 hours. At the time the company did not have the funds to repair it, so the helicopter sat for about a year. In July or August of 2007 the repair was made, and Reach provided money to overhaul the helicopter with all new bearings, and all AD's complied with. The #1 engine turbine seal was repaired in Jan 08, and #2 engine was rebuilt in 2004. The helicopter was put back into service January 2008. Since January, the helicopter has had to cancel a flight due to maintenance less than 4 times. No patient transport missions were jeopardized, because the backup helicopter was always available to pick up the flight if the primary helo went down for maintenance. The only maintenance issues Mr Heiter could remember regarding the accident helo was an oil pressure light, and a starter/generator failure.

Since Reach bought the company money for maintenance has been very good. They have both helicopters flying and if one needs maintenance the other is available to take the flights. Money is available for whatever the helicopter needs from major components to paint and interior plastic molding. This has significantly reduced the pressure on the maintenance department. They can now work on the helicopter with out being under major time pressure, so, the work is going smoother, and they have not needed to work much overtime over the last year.

None of the flight nurses or paramedics had expressed concern about the helicopters mechanical condition nor about how the pilots fly the helicopters.

---

Interview: Craig Rundle, Director of Operations  
Date: October 21, 2008  
Time: 1245 CDT  
Location: Air Angels, Bolingbrook, IL  
Present: Operations Group Chairman

---

During the interview, Mr Craig Rundle provided the following information:

Mr Craig Rundle is the Director of Operations at Air Angels. He directs all operations at the Air Angels facility, ground transport, and medical crew.

Mr Rundle said that he has 23 years of EMS experience and 18 years in EMS management. He was a flight paramedic with rotary wing aircraft. He's been with Air Angels for 8 years and has been in the management position for 4 years.

He oversees 10-12 full time medical crew members. The flight crews consist of a flight nurse and a paramedic. Both positions are trained at the same level as flight crew positions, and their responsibilities in the helicopter and for the patient are the same. The medical flight crew are on 24 hour shifts. He runs 3 teams, black, gold, & red. Each member is scheduled for a 24 hour period and then gets 2 days (48 hours) off. Usually each member gets at least one of the two weekend days off if they are scheduled on a weekend.

None of the medical personnel have expressed to him concerns about the maintenance of the helicopters or the actions of the pilots while flying.

He is not usually in the decision loop concerning the air operations. The only time he gets involved is if the flight request would take it beyond 100 miles radius from its base. At that point his main concern is if the weather is good enough to complete the flight, meaning the flight ends when the helicopter is back at home base.

The new owners of the company, Reach, have been good for the company. He doesn't feel any pressure to cut corners or make due with less.

---

Interview: Jill Waugh  
Date: 10/29/2008  
Time: 1230  
Location: Telephone Interview

---

The following is a summary of conversation with Ms Jill Waugh, who had been married to the pilot for 19 years.

She had work for and with the pilot in a software company between April 1982 and 2005 (3 years ago). They would have had their 19<sup>th</sup> wedding anniversary on November 4<sup>th</sup>, however, their divorce was final on April 1, 2008. They had an amicable separation and still communicated with each other regularly

The last communication she had from him was an email on Oct 14<sup>th</sup>. The email subject was mainly that he was picking up an extra week of nights because the chief pilot had left and that they call him Capt Midnight.

She did not know of any concerns he had with Air Angels. He was very happy with the helicopter, the crew, and the maintenance. He loved to fly, and always volunteered for duty on the holidays. He was rarely home. She was not aware of any medical issues he might have had, he was always very healthy. He had not exhibited any signs of color blindness, sometime he had a tough time determining the difference between black and blue socks (as a lot of people do). But recognizing red was not a problem, in fact red was one of his favorite colors. Until recently he had 20/15 vision.

He didn't have any out of the ordinary financial concerns.

He enjoyed night flying in Chicago.

He handled stress better than most human beings she knew of. After being shot down in Vietnam 7 times, most situations did not cause him much stress.

No concerns about the helo pads/LZ's he was landing on, other than the general complaint that most pads are an after thought and are not positioned very well.

He was a wonderful pilot and all the pilots that knew him respected his judgment implicitly.

---

Interview: Craig Decker  
Date: 11/25/2008  
Time: 1050  
Location: Telephone Interview

---

The following is a summary of conversation with Mr Craig Decker, who is the FAA Principal Operations Inspector assigned as FAA oversight for Air Angels.

Mr Decker has been employed by the FAA for 3 years. He took over as the POI for Air Angels around May 2008. The previous POI was Dave Bear. He had made two visits to Air Angels since May and most of the activity listed in the PTRS was associated with those visits. His observation of Air Angels is that they are a very proactive, conscientious, and safety oriented; a real first class operation. He had worked with the Air Angels chief pilot before he left the company. The chief pilot was extremely experienced and competent. Mr Decker had observed the chief pilot take his oral exam and was impressed. The Air Angels training program is very rigorous and demanding. Air Angels takes their mission and safety very seriously. He would not have expected this type of accident happen to this company.

Mr Decker said that his work load was light compared to others in the office. He is POI for 11 Part 135 operations, 4 Part 137 operations, 10 Part 91 operations, and 2 parachute operations.

Donald "Chip" Wood from another FAA area used to perform all the helicopter check rides because helicopter check airmen are a rare commodity.

---

Interview: Dave Bond  
Date: 10/28/2008  
Time: 0855  
Location: Telephone Interview

---

The following is a summary of conversation with Mr Dave Bond, who works as a paramedic for Air Angels, and helped the accident crew prepare for their flight.

Mr Bond said that he is a flight paramedic. Air Angels is his third air medical company that he has worked for. He has previous rotary wing experience with the Forest Service as a crewman for the heli-attack mission. He started working for Air Angels in Feb 06, left in Dec 06 to work for another air medical company. That employment did not work out. He came back to Air Angels in June 2008 and is presently employed there. His job is essentially patient care. His schedule is 24 hours shifts, 1 week on and 1 week off, and he typically does two shifts on the air side, and two shifts on the ground side (ambulance). Typically, when flying he will sit in the left seat (copilots seat) when they are flying to a patient pick up. Although both the paramedic and flight nurse are trained to the same standard as aircrew, the paramedic will often sit with the pilot and handle the radio communication with the hospital or on-scene EMS units. This is because the paramedic usually has had more experience with EMS radio communications. When he is working the ground ambulance shift, he'll help the helicopter crew prepare the helicopter for a flight if he's available. The night of the accident he had assisted with the initial start of the helicopter by manning the start cart (external power unit).

The day of the accident he started his duty at 0700, and he was assigned to the ground unit. He was back at base by 2100 and talked to the nurse and pilot in the hanger. They said they were on standby. They joked around and talked; the pilot was in his typical good spirits. The pilot went to get a cup of coffee when the pager went off for a flight. When the pilot returned his demeanor had changed, he appeared humorless and nervous. Mr Bond had flown with the pilot before and said the pilot doesn't usually get this serious before a flight. He asked the pilot if he had been to the helo pad at Children's Hospital? The pilot said 'no', and Mr Bond volunteered the information that there was a church steeple to the north-northeast of the pad. He tried to liven up the mood by saying that there were some good looking nurses at Children's, but that got no response. The pilot seemed nervous and cautious. He wing walked the left stub-wing while the pilot used the tow cart on the nose wheel to move the helicopter out to the pad. He hooked up the external power cart while the pilot started up #1 engine then the #2 engine. He disconnected the cart, checked the helicopters door handles (closed & latched) and moved over to where the ambulances were parked. It took longer than usual for the helicopter to take off. He waited about 4 minutes and was about to approach the helicopter to see if there was something wrong when the position lights went bright and the helicopter took off, eventually moving to the

southwest.

He noted that the helo pad at Children's Hospital is an elevated pad and can get tricky when winds are involved. He had flown with the pilot at night before. Over the last few months he has gained the impression that the pilot does not feel comfortable making landings on elevated pads. His approaches are very slow and methodical and are different than his normal landings to the pad. Although, he had never had a conversation with the pilot about this topic.

The pilots kept a helipad facilities directory book between the pilot and copilot seats. This book had information about the helicopter landing pads. Often, as a normal practice, the pilot would get the directory out and review the helicopter pad information when they were about 10 minutes out from landing, and before they entered any controlled airspace.

---

Interview:           Bradly Waugh  
Date:                10/29/2008  
Time:                1000  
Location:            Telephone interview

---

The following is a summary of conversation with Mr Bradly Waugh, who is the son of the accident pilot. Mr Waugh is 31 years old, and works as an automobile mechanic. He has been living with his father since January 2008.

Mr Waugh said that since they were both divorced that he'd been living at his father's house and they were basically living the bachelor life together. His father worked one week on and one week off. When his father was home they would do most things together, work on cars, yard work, making meals, dining out. His father was his best friend, they were very close.

His father would talk about flying all the time. He was concerned about accidents. There was one accident that happened recently where the helo had crashed and burned on the helo pad recently and it involved some radio towers. This accident had him concerned. But generally he felt safe and secure in what he did. His favorite time to fly was at night, he liked the Chicago lights. His nickname at Air Angels was Captain Midnight. He never mentioned any concerns about any particular hospital or landing pad. He felt Air Angels was the safest outfit in the area.

The pilot had no medical concerns that were ever mentioned. He seemed very healthy. Their family physician is Dr Terry Henderson, 317.846.4366. The pilots FAA Flight Surgeon's office is on Meridian St in Minneapolis. No known color blindness.

His finances were of not too much concern. He had some debt left over from his previous companies but nothing unusual.

He didn't have any emotional concerns and was in good spirits most of the time.

He had talked to his father the day before the accident, on Tuesday. He asked how Brad was doing and how his grandchildren were doing, and how the house was. Nothing out of the ordinary was mentioned.

He did pick up his fathers personal effects from Air Angels after the accident. The pilots personal cell phone was one of the items collected.

---

Interview: Dave Krant  
Date: 10/22/2008  
Time: 1100  
Location: Telephone Interview

---

The following is a summary of conversation with Mr Dave Krant, the service manager of JA Air Service, Du Page, IL.

Mr Krant said that Air Angels sent in two Garmin GNS 430 units for updating on January 9, 2008.

Both were part number: 011-00280-00  
SN: 96314714  
SN: 96300309

The main software was updated to version 4.04, and the GPS software was updated to version 3.03

Mr Krant said the GNS 430 was capable of displaying terrain and obstacle information. The GNS 430 has slots for two SD cards. One card holds the aviation database, and the other card would hold the terrain and obstacle information.

---

Interview: Debora Snyder  
Date: 11/19/2008  
Time: 1100  
Location: Telephone Interview

---

The following is a record of conversation with Ms Debra Snyder, who is the Emergency Room Manager at West Valley Hospital, Sandwich, IL.

Ms Snyder said that the attending nurse (Colette Baker) for the patient that was being transported by Air Angels on Oct 15<sup>th</sup> was no longer employed by the hospital. The attending physician, Dr Fedinec, would be the best source of information about the patient transfer that night.

The day after the accident Ms Snyder did talk to the nurse, and she said that the approach landing and takeoff all appeared normal to her. The whole event was routine.

Ms Snyder said that she had worked with Del Waugh often over the years and had great confidence in him as a pilot. His normal routine would be to shut down the helicopter, come in, collect the medical records, wait, then load the patient, and take off.

---

Interview: Joseph Diliberto  
Date: 10/31/2008  
Time: 1350  
Location: Telephone Interview

---

The following is a summary of conversation with Mr Joseph Diliberto, who is a paramedic employed by Air Angels and flew with the pilot the flight prior to the accident flight.

Mr Diliberto said that he was hired by Air Angeles in 2005 as an ambulance driver. He worked as a driver and dispatch, and eventually became a paramedic in 2007. He had worked with the pilot ever since the pilot started working at Air Angels.

The flight Monday night (13 Oct) consisted of a transport of a pediatric case from Mercy Hospital, Aurora, to Lutheran General. They took off at 2356, were en-route to the delivery hospital at 0147, and landed at 0205. At the hospital they performed a cold off load, per normal procedures. The pilot did assist with the patient off load after the helicopter had been shut down and secured. Lutheran has a roof top landing pad. The pilot did not exhibit any anxiety about flying at night or to elevated helo pads. He always was calm and collected, made a controlled slow approaches to the landing pads. Mr Diliberto said that he could recall only one time when the pilot referenced the Helicopter Facilities Guide, and that time he was in the left seat and the pilot asked him to look up the approach direction for a particular hospital pad.

In general, the pilots would usually assist with the patient off load. The only time he recalls that they don't is when they are doing a hot off load, where the helo is still operating. That is normally only done when in a field LZ, or the patient was in a near death situation.

Generally, he had not experienced any problems or concerns with the helicopters physical conditions, the pilots flying, or management issues.

---

Interview: Janice Racine  
Date: 10/29/2008  
Time: 0900  
Location: Telephone Interview

---

The following is a summary of conversation with Ms Janice Racine, who is employed as a flight nurse with Air Angels. She has 30 years of experience as a nurse (BSN), 22 years as an ER nurse, 22 years of medical transport experience, and 8 years as an EMS nurse. She was flight nurse certified in Nov 07, and has been working at Air Angels since August 2005. She was flight crew for the previous flight the pilot flew before the accident, which was Monday Oct 13<sup>th</sup>.

She is on a 24 hour shift, and arrived on Monday at 0650. She encountered the pilot that morning. He is usually there and greets the on-coming crew, has coffee, and breakfast with them.

What she remembers about the Monday night flight was that it occurred around 2300. She operated the cart for the cart-start in the dark. The pilot had some sniffles, and she asked him if he was ok to fly. He said yes. There were no problems with the flight. They were transporting a very sick patient, she thinks to Lutheran General.

Her general recollection of the pilot was that he was cautious and methodical. His motto was "Low & Slow." His approaches to most helo pads was slower and his landing were slower than the other pilots. He said this was to improve his awareness of the area, and look for obstructions. This seemed to be his style, and maybe was from his Vietnam experience. He would take longer than the other pilots to take off also. He never mentioned concerns about flying at night or landing on elevated helo pads. In fact he landed one time with her, at Peoria, at night in a thunderstorm and did a very good job. Most of his communications with the crew was procedural in nature. If he was going to a hospital he'd never been to he might ask them to look up the arrival in the book that was in the helicopter or ask what they know about a particular pad. Once the patient was onboard he would not have normally talked with the crew about such things unless it was a safety of flight or sterile cockpit issue. Most pilots, if they are going to an unfamiliar pad, they would not assist with the patient transfer (which they normally do) and instead would review their charts and pubs in preparation for the flight while on the ground waiting.

The pilots demeanor never really changed. He always wanted to fly, and was eager to fly. The only time she noticed a change in his demeanor was when he was going through a divorce 92-3 years ago) but this didn't affect his flying

demeanor.

She had heard that the pilot was very nervous about going to Children's Hospital. There had been accidents there before and he'd never been to that hospital before.