National Transportation Safety Board
Office of Aviation Safety – Central Region

Tour Summary: Tour of PHI EOC Facilities – DEN08FA101

Date: July 10 and August 27, 2008

Location: Lafayette, LA and Phoenix, AZ

Interviewers: Jennifer Kaiser NTSB CRA, Denver, Colorado

Interviewees: PHI EOC Staff

During the tour, the following observations and statements were made:

PHI operates two main Enhanced Operational Control (EOC) centers and five satellite bases. The two main centers are located in Lafayette, Louisiana, and Phoenix, Arizona; Phoenix being home to the Emergency Medical Services (EMS) portion of the EOC. These stations all have remote capabilities in the event of fire, storms, or bad weather.

Each EOC is manned by multiple dispatchers; five in Arizona and nine in Louisiana. These dispatchers are not FAA certified dispatchers; however, the Louisiana EOC dispatchers are trained weather observers, and the Arizona dispatchers are trained in emergency response. Each dispatcher works a 12 hour shift and experiences an average of 275 contacts per day, including voice and electronic communications. They have the capability to work up to 15 aircraft at one time. EMS operations are 24/7 operations whereas Gulf operations take place during daylight hours only.

Each EOC also has a lead on duty at all times. This individual monitors weather conditions throughout the area of operations and ensures station status as shifts change throughout the day. These individuals are all pilots and are available to each flight crew to "provide support when decisions are tough."

Each dispatch station is equipped with a computer, one or two monitors, a telephone, and radio. Each computer is equipped with software designed to provide updated weather information, satellite tracking of all active operations, current maps, flight details, and flight timers. Programs and software include Outerlink, Golden Hour, Meteorologics, and Delorme Topo USA. Each conversation is recorded and retained for training and debriefs and are kept for 60 days.

All calls for dispatch are made to the EOC. The dispatcher will determine which aircraft is best positioned for the mission, including a review of base status, and will notify the crew by page/radio/telephone. Base status is determined at crew change and with changes in weather and crew conditions as the shift progresses. A green status indicates the crew is flyable and the mission will be accepted without issues. A yellow status indicates that

some form of dynamic safety concern exists that requires EOC. Red status indicates that flight safety cannot be maintained and the flight will never be dispatched.

The dispatcher will enter all applicable flight/patient information into various programs and as soon as the aircraft powers up, the Outerlink tracking is activated. Outerlink provides satellite tracking capabilities and can provide GPS coordinates, ground speed, a pictorial depiction of aircraft location, and text communications between the aircraft and dispatch. Position reports are made by the pilot every 15 minutes. If a position report is not recorded in Outerlink and Golden Hour, an alarm will sound, alerting the dispatcher and prompting them to follow-up with the flight status of the aircraft. Normally, the Outerlink records positions every 30 seconds; if an emergency is declared, the system starts recording position and information every ten seconds. Once the flight has landed uneventfully, the flight record is closed out by the dispatcher.

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Interview Summary: Chief Pilot – DEN08FA101

Date: July 9, 2008

Location: PHI – Lafayette, Louisiana

Interviewers: Jennifer Kaiser NTSB CRA, Denver, Colorado

Interviewee: Michael Hurst

During the Interview, Mr. Hurst stated the following:

Mr. Hurst has been with PHI for 34 years and is currently the chief pilot. He has held this position for 13 years. Prior to this position, he worked as the director of training, an instructor, a check airman, field manager, and line pilot. As a line pilot he flew in a dual pilot, instrument flight rules environment in the S 76. Prior to his employment with PHI, he flew for the U.S. Army, and owned a Montgomery Wards store. He currently holds an airline transport pilot certificate with a helicopter rating and a commercial pilot certificate with airplane single engine ratings. He also holds a certified flight instructor certificate with helicopter, instrument, and advanced ground instructor ratings. He has logged 10,000 hours total time.

He characterized the area and terrain of operations as diverse and world wide. The EMS operations operate primarily in VFR conditions with their lighting operations divided evenly between day and night operations. The company currently flies between 12,000 and 13,000 hours a month; 2,000 of which is in EMS operations. They employ between 650 and 660 pilots and operate 235 aircraft.

Hiring minimums depend on the area of operations for the pilot; EMS and various Oil and Gas customers have varying requirements. The EMS pilots must meet the CAMTS standards in addition to having 2,000 hours pilot in command time with a commercial pilot certificate with an instrument rating.

The weather minimums for operations vary on the leg length and time of day, the terrain, and lighting environment and the individual's experience. If the pilot is qualified and current they can dispatch under IFR conditions. IFR flight is not always beneficial to the passenger and therefore not used unless absolutely necessary. Obstacle clearance during cruise flight is 300 feet; however, for noise abatement and safe forced landing options, a minimum of 1,000 feet above ground level is recommended. Adherence to these policies and procedures is ensured through a quality assurance check starting with field management and dispatch and moving up the management structure to the director of operations or chief pilot.

The safety office reports directly to the CEO of the company. He is responsible for monitoring the safety management system (SMS), the hazards, close calls, and occurrences reports and has no issues bring safety concerns directly to management.

The EOC staff in Phoenix is responsible for contacting the crew once a passenger transport is possible. The staff members in Phoenix are trained in EMS operations and are not dispatchers by education or design. They will assist the pilot in finding information and help track the flight through the use of the Outerlink satellite system. The ultimate go/no-go decision lies with pilot. The pilot will call in with a risk assessment number and if it is above a certain level, the EOC manager can decide not to dispatch the flight. High numbers require a consultation the EOC manager before a flight will be dispatched.

With regards to the FAA, a continual presence is noted at PHI. The FAA provides a dedicated POI, PMI, and PAI and they are all seen on a regular basis at PHI. The relationship is described as a mutual respect and visits are noted on a weekly basis in some regard or another.

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Interview Summary: Director of Operations – DEN08FA101

Date: July 9, 2008

Location: PHI – Lafayette, Louisiana

Interviewers: Jennifer Kaiser NTSB CRA, Denver, Colorado

Interviewee: Carlin Craig

During the Interview, Mr. Craig stated the following:

Mr. Carlin has worked for PHI for 30 years. He started as a line pilot and has held every operational supervisory position. He is currently the director of operations and has held that position since January of 2001. His responsibilities include matching pilots and aircraft for scheduling, managing the scheduling department, and addressing customer requirements. He has limited EMS experience as a manager and no line experience.

Prior to PHI, he owned an IHOP franchise and served in the United States military as a helicopter pilot. He has two years of college education in accounting, an airline transport pilot certificate with a helicopter rating, and a commercial pilot certificate with airplane single and multiengine ratings. He has logged between 6,000 and 7,000 hours.

PHI operates on a global basis in nearly every environment and terrain condition possible. Weather concerns vary from thunderstorms and tropical storms to blizzard, white out, and brown out conditions. The oil and gas is a day only operation and the EMS is an operation available at a moments notice 24 hours a day, seven days a week.

PHI operates approximately 13,000 hours a month, 3,000 of which are in EMS operations. Operations are conducted in 12 different make and model of helicopters including Bell, Sikorsky, Aerospecial, and Euro Copter. Flight tracking of these operations is conducted by two communications centers stationed in Lafayette, Louisiana, (Oil and Gas), and Phoenix, Arizona (EMS).

PHI currently employs between 600 and 650 pilots; 300 of which are exclusively in EMS operations. Hiring requirements start at 1,500 hours total time; 1,000 of which is encouraged to be pilot-in-command time. Other qualifications such as multi-engine experience and turbine engine time are desired. Second-in-command positions require fewer hours.

Weather requirements for each flight depend on the time of day, flight distance, and terrain in the vicinity of the operations. Hostile terrain is defined as low lit, mountainous,

or hilly terrain, or terrain in which a forced landing success could be in question. Aided flight is flight done with Night Vision Goggles. The requirements for each area of operations are outlined in the General Operations Manual. Very few single pilot instrument flight rules (IFR) operations take place in the EMS operations. Pilots are encouraged to operate under IFR if they are properly trained and current; however, IFR operations are not always beneficial or favorable to EMS operations due to weather reporting capabilities and off airport landing zones.

Final authority to the operation of the flight lies with the pilot in command. Assistance is provided with regards to weather, circumstances surround the operation, and decision making; however, the final decision lies with the pilot. It is not the communications center's position to tell a pilot not to take a flight; however, if a pilot is departing under questionable conditions, that information is passed onto to management immediately. To his knowledge, no one has ever lost their job for not taking a flight.

With regards to the FAA, there is an every day presence at PHI from either the operational or maintenance aspect of inspection. The relationship with the FAA was characterized as a good working relationship with the FAA being responsive to any issues or requests for improvement in operations.

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Interview Summary: Director of Safety – PHI – DEN08FA101

Date: July 9, 2008

Location: PHI – Lafayette, Louisiana

Interviewers: Jennifer Kaiser NTSB CRA, Denver, Colorado

Interviewee: Robert Bouillion - CSP

During the Interview, Mr. Bouillion stated the following:

Mr. Bouillion has been with PHI for 19 years and currently holds the position of Director of Safety, Environmental, and Auditing. Prior to this position, he was an industrial safety manager, and purchasing agent, all with PHI. He has not previous Air Ambulance experience aside from PHI. He has an associate's degree in industrial technology and is certified by the Board of Certified Safety Professionals as a Certified Safety Processional since December of 2001.

His position is considered one of eight direct report positions who report directly to the CEO of the company. He is responsible for addressing safety issues within all aspects of operations at PHI. He monitors safety reports, provides suggestions, reviews issues, and chairs the safety review committee.

The risk assessment for all operations was initially designed to address weather conditions prior to flight. Currently the risk assessment addresses the pilot, aircraft, pilot experience, and weather. The restrictions on the flight are based upon the final score of the risk assessment. The assessment is performed by the pilot as soon as they come on shift. If conditions change, the assessment is updated and the results reported to the communications center. Trends within the EMS operations are monitored by the EOC in Phoenix.

PHI currently has a safety communications form available to all employees on the company intranet. Although the forms can be submitted anonymously, it is very rarely done in such a manner. Once submitted, the report goes to the individual's supervisor, the safety office, and several other predetermined individuals on the distribution list. The reports include a hazard report, close call report, safety suggestion, and flight debrief. Their purpose is as follows:

Hazard Report: Communicate a condition to management that concerns equipment, pilot, personnel, or location which is perceived as a hazard to safe operations.

Close Call: Communicate an event that took place with good outcomes that could have ended otherwise.

Safety Suggestion: Communicate an improvement in equipment, change of procedure, PHI operations, or facilities environment

Flight Debrief: Performed with the EMS operations only, this report communicates a formal debriefing when something has gone wrong with operations, maintenance, or medical wise during the flight.

With regards to the accident pilot, there were no issues or occurrences involving the pilot prior to the accident other than routine occurrence reporting. He had the opportunity to visit with the pilot approximately two weeks prior to the accident and had “warm fuzzy feelings’ during their visit which took place at the pilot’s assigned base.

With regards to the FAA, he felt that the FAA is instrumental in assisting PHI improve and be a safe operator. He characterized their relationship with the FAA as good and noted that there is FAA presence in the facility on a daily basis.

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Interview Summary: Check Airman – DEN08FA101

Date: July 9, 2008

Location: PHI – Lafayette, Louisiana

Interviewer: Jennifer Kaiser NTSB CRA, Denver, Colorado

Interviewee: Kevin Avery

During the Interview, Mr. Avery stated the following:

Mr. Avery has been employed with PHI for 11.5 years. He currently holds the position of check airman, and has occupied this position for three years. Prior to his current position, he was a line pilot in the Gulf of Mexico, also with PHI. He does not have any EMS experience. As a check airman, he is responsible for ground and flight instruction (both in a flight training device (FTD) and the actual aircraft). Prior to his employment with PHI, he worked with the Florida Air National Guard and as a graduate research assistance with West Florida University. He currently holds an airline transport pilot certificate in rotorcraft and 8,000 total flight hours. He has a Bachelors of Science in Business Administration – Economics and is working on his certified flight instructor certificate.

According to company records, the annual checkride with the accident pilot was conducted in November of 2007. Mr. Avery conducts multiple checkrides on a daily basis and does not recall the particular check flight or the pilot. He commented that with most checkrides, the pilots are proficient and they move on. Nothing stands out with most check flights. He stated that the pilots and flights he remembers are those where the pilot is not proficient and this happens very rarely.

Generally the pilots travel to PHI headquarters for their annual checkrides; however, on occasion, they will be conducted in Phoenix and Indiana. The pilot will receive ground school and FTD prior to the checkride. During this time they take a written test and spend several hours in the FTD with focus on emergency procedures and instrument meteorological conditions. Usually 1.5 to 2 hours are spent in the FTD and the break-up of focus is dependant on the pilot's proficiency.

The checkride starts with a review of the pilot's flight and medical certificates. The check airmen asks four questions with regards to Operations Specifications, Settling with Power, Dynamic Rollover, and Loss of Tail Rotor Effectiveness, and continues with a safety briefing, clarification of throttle operations during simulated emergency procedures, and route of flight review.

After a thorough preflight inspection, standard departures, highway departures, maneuvers, and power trend monitoring are conducted. Weather deterioration is simulated and instrument flight and unusual attitudes are practiced. Simulated engine failures, simulated aircraft systems failures, pinnacle approaches, confined approaches, steep approaches, slope landings, hovering autorotations, autorotations, and aborted takeoffs are demonstrated.

Night training with EMS pilots takes place when they are initially hired or transfer from Gulf operations. Only pilots trained with Night Vision Goggles received night checkrides on an annual basis.

The standards for pilot performance are based upon the General Operations Manual or the FAA Practical Test Standards, whichever is stricter. Unsatisfactory maneuvers are treated in one of three ways:
1. The pilot is immediately retrained and rechecked on the unsatisfactory maneuver before proceeding with the next checkride maneuver.
2. The pilot is retrained and rechecked on the unsatisfactory maneuvers at the end of the checkride after all other required maneuvers are performed.
3. The checked ride is terminated and the pilot attends comprehensive training at a later time.
He commented that this has never happened while he has been a check airman.

With regards to safety issues within the company, he felt management was very responsive to any issues that are raised. He was extremely pleased with the maintenance on the helicopters and the management support of safe operations.

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Interview Summary: FAA POI to PHI – DEN08FA101

Date: July 9, 2008

Location: PHI – Lafayette, Louisiana

Interviewers: Jennifer Kaiser NTSB CRA, Denver, Colorado

Interviewee: Wilbur Keith

During the Interview, Mr. Keith stated the following:

Mr. Keith has been with the Federal Aviation Administration for 16 years. He currently holds the position of air safety inspector and is the principal operations inspector for PHI. He has held that responsibility for 4.5 years. He is responsible for the Oil and Gas and EMS operations and has no assistance for his oversight. In addition he is tasked with accident duty, telephone standby, and normal office duties.

He holds an airline transport pilot certificate with airplane single engine land, sea, multiengine land, and rotorcraft ratings. In addition he holds a certified flight instructor certificate and instrument instructor certificate for airplane and helicopters. He holds two type ratings; one in the SK-70 Blackhawk and on in the SK-92. He has logged between 6,000 and 7,000 hours and earned a Bachelors of Science Degree in Aviation from Embry Riddle Aeronautical University.

PHI currently employs 600 pilots and operates 230 aircraft. PHI currently has 69 bases or locations of operations. He attempts to travel to each base as much as funding will allow. He is able to visit 7 locations within a 3 day period when the schedule allows. On going daily inspections take place at PHI headquarters from both the operations and maintenance end of inspections.

Checkrides are conducted as often as time will allow. He flies with all of the check airmen with PHI and line pilots as time will permit. He conducts en route observation flights and participates in the morning weather and safety brief as often as possible.

He did not have the opportunity to fly with the accident pilot; however, he had met the pilot shortly after he arrived at the Bryan base in Texas. He was generally impressed with the pilot – he remarked that the pilot had a lot of experience but not much in EMS operations.

His last visit to the Bryan base was conducted in January or February of 2007. His only concern with the EMS operations dealt with the company's flight following procedures.

His concerns were reduced after observing the operations and tracking following the accident.

He stated that if something needs to be addressed, PHI is very responsive. They practice self disclosure and do so on a frequent basis.