

EXECUTIVE SUMMARY

COLLATERAL INVESTIGATION BOARD

CASA 212, N960BW

Bagram Airfield, Afghanistan

27 November 2004

On 27 November 2004, at approximately 0348Z, a CASA 212, N960BW, crashed into mountainous terrain at 14,650 feet MSL, approximately 10 nautical miles southwest of Bamian Airfield, Afghanistan. The mishap aircraft, a civil aircraft operated by Presidential Airways (PA), Inc., of Melbourne, Florida, was flying pursuant to an Air Mobility Command contract for Short Take-Off and Landing requirements. Three civilian crew members of the mishap aircraft and three active duty Army soldiers were fatally injured in the mishap. The aircraft was destroyed.

The mishap crew included a captain, a first officer and a flight mechanic employed by PA. All three members of the mishap crew were regarded as skilled professionals and were fully qualified to perform flight duties as defined in Federal Aviation Regulation (FAR) Part 135. The flight mechanic is not a required flight crew member on the CASA 212. The three passengers were active duty soldiers assigned to units subordinate to Combined Joint Task Force-76.

The mishap aircraft was delayed during taxi to board the third passenger. The flight then departed Bagram Airfield at approximately 0308Z executing a Joint Mission Request consisting of three legs. The destinations were Farah and Shindand, then a return to Bagram Airfield at 0915Z. The Presidential Airways Program Manager anticipated a southerly departure given the first destination of Farah.

The mishap crew initially requested a departure to the south and subsequently requested a westerly departure. Airport radar indicated the mishap aircraft actually departed to the north and entered the Bamian Valley for a westerly transit through the Bamian Valley. Approximately 30 minutes into the flight, the mishap aircraft made a southwest turn direct to Farah flying into a canyon of rapidly rising terrain. Approximately 40 minutes into the flight, the mishap pilot recognized the mishap aircraft would be unable to climb above the terrain and initiated a turn in an attempt to reverse flight direction. At that point in the canyon, the mishap aircraft did not have sufficient performance capability to successfully complete the maneuver and crashed.

Search and rescue efforts were initially delayed. Destination overdue aircraft notification procedures were not implemented. Confusion over departure direction, route of flight and limited flight following procedures left search and rescue forces focusing efforts

throughout southern and western Afghanistan. Additionally, snow, extreme winds, and turbulence hampered and delayed rescue efforts once the crash site was located.

On the third day following the accident, weather cleared and rescue forces ascended to the accident site. Six remains were recovered along with the cockpit voice recorder and a limited amount of personal effects.

Maintenance was not a factor in this accident. Review of aircraft maintenance records indicated that all inspections required by FAR Part 135 and OEM specifications were complete. A flight the previous day was flown without discrepancies. Both engines appear to have been operating given the altitude and location of the aircraft accident site.

Weather was not a factor in this accident. Observed and forecast weather indicated clear skies. Reported visibility was 10-15 miles and winds were light. Conditions were verified by another PA crew who had flown the same route 10 minutes prior.

Pilot experience in theater was limited. The pilots were relatively new to the Afghan theater. Together they had 66 hours of flight time in Afghanistan (33 hours each). Normal PA procedures included pairing a seasoned theater pilot with a new pilot. In this case, that happened for an initial orientation flight and then these pilots were paired together due to their familiarity with each other. Crew rest was not a factor in this mishap.

Incomplete flight planning may have been a factor in this mishap. Flight planning consisted of a review of the JMR, determining destinations, checking weather, and discussing alternate divert fields. Specific navigational waypoints were not identified and therefore, not available to the PA operations desk. The PA Program Manager's expectation of a southerly departure indicates a breakdown in understanding between the crew and the program manager concerning intended route of flight. Selection of a northerly departure was determined solely by the crew. This crew had not previously flown the route in this direction; however, they had flown this route once in the opposite direction of flight.

Poor navigation and decision making placed the aircraft in a situation exceeding performance capabilities. Late recognition of rising terrain resulted in a late decision to reverse direction. While in the turn, the aircraft impacted terrain resulting in the loss of life and destruction of the aircraft. Rescue forces found no evidence of external contributing factors, enemy actions, or use of oxygen equipment.

Three regulatory violations involving flight operations may have affected this accident or recovery efforts. Interruption during taxi (critical phase of flight) to load a passenger, lack of oxygen use at required altitudes, and not providing flight locating requirements are violations of FAR Part 135. No other violations of the AMC contract were noted but several board recommendations may necessitate modification of the contract.

SUMMARY OF FACTS

1. AUTHORITY, PURPOSE, CIRCUMSTANCES

a. Authority

On 1 December 2004, Major General Eric T. Olson, Commander, Combined Joint Task Force (CJTF)– 76, appointed Lieutenant Colonel John Lynch (USA) and Colonel Brian Kelly (USAF) to conduct an investigation, pursuant to Army Regulations (AR) 15-6 and 600-34, of the 27 November 2004 crash of a CASA 212 aircraft, serial number N960BW, southwest of Bamian Airfield, Afghanistan. Technical advisors were Major William Peris (USAF) and Major Brad Mitchell (USAF). The legal advisor was Major Suzanne Mitchem (USA). (Tab A-3). A supplemental Appointment Letter was issued making the following changes to the Board: Major Greg Friedland (USAF) replaced Colonel Brian Kelly as a member of the board. Brigadier General Bobby Wilkes (USAF), Lt Col (Dr.) Todd Burd (USAF), Lt Col Tom Roy (USAF), Captain Steve Ayre (USAF), Captain John Clark (USAF), Captain Damon Coon (USAF), and CW5 Brent Hohbach (USA) were made available as technical advisors to the Board. Major Brad Mitchell was removed as a technical advisor. (Tabs A-6, 7). The investigation took place at Bagram Airfield, Afghanistan from 2 December 2004 through 15 December 2004.

b. Purpose

This investigation was convened under Army Regulation 15-6, *Procedure for Investigating Officers and Boards of Officer*, 30 September 1996, and Army Regulation 600-34, *Fatal Training/Operational Accident Presentations to Next of Kin*, 2 January 2003. The primary function of any investigation or board of officers is to ascertain facts and to report them to the appointing authority. It is the duty of the investigating officer or board to ascertain and consider the evidence on all sides of each issue, thoroughly and impartially, and to make findings and recommendations that are warranted by the facts and that comply with the instructions of the appointing authority. (Tab H).

This investigation is separate and apart from any safety investigation and is convened for the purpose of gathering and preserving evidence for claims, litigation, and disciplinary and administrative actions. Portions of this report may be available for public dissemination under the Freedom of Information Act (5 United States Code (U.S.C.) Section 552), AR 340-17 and AFI 37-131.

c. Circumstances

The Board of Officers was convened to investigate the accident involving a CASA 212, N960BW, owned by Aviation Worldwide Services LLC, operated by Presidential Airways and operating under a contract with the Air Mobility Command of the United States Air Force, which crashed on 27 November 2004. (Tabs B-4, Q-3).

2. ACCIDENT SUMMARY

A CASA 212, N960BW, crashed in mountainous terrain southwest of Bamian Airfield, Afghanistan. The aircraft was owned by Aviation Worldwide Services, LLC and operated by Presidential Airways, Inc of Melbourne, Florida, in accordance with FAR Part 135. (Tabs B-4, Q-3). The crew was flying pursuant to an Air Mobility Command (AMC) contract for Short Take-Off and Landing (STOL) requirements within Afghanistan, Uzbekistan, and Pakistan. (Tab B-4). The captain of the aircraft, Mr. Noel English; the first officer, Mr. Loren Hammer; and the flight mechanic, Mr. Melvin Rowe were killed in the mishap. Three active duty Army soldiers, Lieutenant Colonel Michael McMahon, Chief Warrant Officer Two Travis Grogan, and Specialist Harley Miller were also killed in the mishap. (Tab J). The aircraft was destroyed. (Tab C-3). Due to remote location and weather conditions, collection of wreckage and debris at the mishap site remains incomplete. There is no indication of damage to private property on the ground. Initial news reports have covered the crash, recovery and memorial services.

3. BACKGROUND

Air Mobility Command contracted with Presidential Airways (PA) to conduct Short Takeoff and Landing (STOL) cargo and passenger transport missions. PA was specifically tasked to carry out the short range transport of troops and cargo. The PA CASA 212 flights consisted mainly of missions to small, austere airfields. (Tabs B, O-3).

PA executed six regular Scheduled Theater Airlift Routing (STAR) routes, flying one each day of the week except Saturday. STAR missions are routinely referred to as Channel missions. PA conducted additional missions in support of Joint Movement Requests (JMR). (Tab O-3).

For JMR missions, requests were forwarded through the Movement Control Teams (MCT) to the Movement Control Battalion (MCB). The requests were validated by the CENTCOM Deployment Distribution Operations Center (CDDOC) then forwarded to the Air Mobility Division (AMD) at Al Udeid Air Base, Qatar. The PA Program Manager receives final taskings from the Quality Assurance Personnel (QAP). (Tab O-32).

Both STAR and JMR missions were carried out using the CASA 212 aircraft, a twin-engine turboprop airframe with a maximum operating weight of 16,976 lbs. The Mishap Aircraft (MA) was operating at a gross takeoff weight of 15,664 lbs on 27 November 2004. (Tab K-11). The CASA 212 is well suited for operations on short, unimproved runways and the flights operate locally under the supervision of a PA Program Manager. (Tab O-3).

The two mishap pilots were experienced pilots with limited experience operating in the Afghanistan Theater of Operations. The mishap flight mechanic (MFM) was very qualified and had more experience in the region than either of the pilots. (Tab O-3).

4. SEQUENCE OF EVENTS

a. Mission

JMR mission number 16695 requested the PA crew to fly from Bagram Airfield to Farah. From Farah the MC intended to land at Shindand to get fuel and then return to Bagram Airfield (Tabs K-3, 4).

b. Planning

The PA Program Manager briefed the mishap crew on their mission the night prior to the flight. The mission briefing included the flight itinerary and cargo/passenger loading. (Tab O-3). The crew was familiar with the various destination airfields, but had no specific familiarization training on different routes of flight and did no additional route planning prior to the flight. Formal route study was not conducted prior to stepping to the aircraft, and no specific route of flight was planned. (Tabs O-3, 9, 12, 13, 21).

c. Preflight

On the morning of 27 November 2004, the mishap crew (MC) met for breakfast then proceeded to CJTF-76 Aviation Wings Task Force Pirate for an intelligence briefing, which indicated that there were no significant intelligence threats at their destinations or along their potential route of flight. (Tab O-3). The Program Manager received the weather briefing paperwork from the weather shop, and then met the MC and the crew of Blackwater 63 at their aircraft to give them a weather briefing. The MC was briefed on weather at Bagram and on the potential for winds over 20 knots enroute. They were also made aware of the possibility of winds gusting over 25 knots with reduced visibility due to blowing dust at their destinations. (Tabs F, O-3). The MC discussed divert options with the crew of Blackwater 63 and the Program Manager in the event that landing at either destination was not practical due to weather. The MC planned to divert to Kandahar if weather at Farah or Shindand prevented landing. (Tab O-3). The MC's initial contact with Bagram Ground Control included a request for departure routing of "170." This indicated a desired departure heading of 170 degrees (South-Southeast) from Bagram Airfield. (Tab N-4). The ground controller requested the MC to clarify their departure sector, to which the MC replied he was requesting a sector corresponding to a departure to the west-southwest. (Tab N-4). After taxiing several hundred yards, the MC stopped the aircraft because passenger terminal personnel had driven to meet the aircraft on the taxiway for the purpose of loading an additional passenger, LTC McMahon. (Tab N-4, O-3). After the passenger and an updated manifest were on board, the MC continued to taxi. (Tab O-3).

d. Flight

The MA took off at 0308Z and departed the Bagram area under a sector clearance indicating that they would depart between the 226 and the 270 radials. (Tabs M-3, N-4). There is a five-minute discrepancy between the takeoff time noted by the control tower (0308Z) and radar approach control (0313Z). (Tab N-4). From this point forward, the tower time will be used as baseline time. The MA route of flight was generally to the northwest. The MC's last known communication was with tower as they departed the tower controlled airspace. (Tab N-4). The MA was last positively tracked by approach control approximately 5 minutes (0313Z) after takeoff on radar at the Bagram 299 degree radial at 9.5 miles and 10,000 ft MSL on a heading of

266 degrees. (Tabs M-3, O-68, 69). This position corresponds with the entry to the Bamian Valley and a northern route across Afghanistan.

Search efforts were initially directed to the south along the most likely route as identified by the PA representative at 1134Z. (Tabs O-3, 51). After the mishap, the PA Program Manager and the crew of Blackwater 63 stated that they expected the MC to make a southern departure, which would have been the most direct route to their first destination, Farah. (Tab O-51). The actual last known point of the MA was not relayed to SAR forces until after 1600Z. (Tab L-4). The MC had only flown this route on one other occasion, but in the opposite direction. (Tab O-3, 9). The crew was following the terrain with clear visibility. In the vicinity of the Bamian Airfield, the MC deviated south from the Bamian Valley route to execute a ridgeline crossing to facilitate a direct flight to Farah. No mechanical failures of components or systems are suspected based upon review of maintenance records, the previous day's flight, and the altitude the MA achieved at the time of the mishap. (Tab D). Based upon the altitude and heading of the MA, it is safe to assume the MA entered a stall condition while executing a 180 degree turn upon recognizing that they were not in a position to climb above the rapidly rising terrain. The MA was due to arrive at Farah, its first destination, at 0525Z. (Tabs K-4, O-3). At approximately 0900Z, a scheduled passenger at Farah called the CJTF-76 CJ4 office to locate the aircraft. (Tab O-40). The CJ4 office, in turn, notified the Bagram Air Terminal Operations Center (ATOC) that the MA had not arrived at Farah. (Tab O-36). The ATOC conducted a search of likely destinations for the MA. (Tab O-32, 36). The ATOC then notified the 455 Air Expeditionary Wing (455 AEW) Command Post (CP) about the missing aircraft. (Tab O-32, 36). The 455 AEW CP initiated the overdue/missing aircraft checklist at 0935Z. (Tabs O-38, 57).

e. Impact

The MA impacted the ground on a north-easterly heading at approximately 14,650 feet elevation on the northern face of a 16,580 ft mountain. (Tabs I, O-58). Video and photographic evidence of the crash site indicate that the MA first impacted the ground at a fairly shallow flight path angle to the northeast. The MA was found with a 400-500 foot impact skid with the right wing and the right engine separated from the MA. (Tabs I, O-58). The fuselage of the MA came to rest facing southwest on its left side, folding the left wing underneath the fuselage into the terrain, breaking the fuselage forward of the main landing gear, and bending the empennage and tail to the left. The MA's cargo was scattered across the debris field, which covered an area several hundred feet wide by several hundred feet long. (Tabs I, O-58). The exact area of the debris field could not be determined due to fresh snow covering the area. (Tab O-58).

f. Life Support Equipment, Egress and Survival

The life support equipment on the plane did not appear to have been used. (Tabs I, O-58). Pictures and video from the crash scene showed no evidence of oxygen masks on or near either of the pilots. In addition to oxygen systems in the cockpit there was also a portable oxygen system found by the recovery team in the passenger compartment. The passenger oxygen masks had not been removed from the case. (Tab O-58). There were two fire extinguishers onboard the aircraft: one on the aft bulkhead and one on the right side forward of the cargo ramp and door. (Tab O-3). The aircraft had six exits to include the cargo ramp and door, one exit on each side of

the fuselage aft of the wing and forward of the cargo ramp, one exit on each side of the fuselage in the forward cargo section, and one overhead escape hatch. Evidence showed one passenger egressed the aircraft after the crash while the other five were killed on impact. (Tab O-57). The initial survivor likely egressed the aircraft through the aft cargo door, which was forced open by the impact. (Tab O-58). The initial survivor was able to egress the aircraft, but likely perished soon after the mishap as a result of injuries sustained during the crash combined with hypoxia and exposure. Crash scene evidence showed two urine spots outside the aircraft, one smoked cigarette, and two unrolled sleeping bags. (Tab O-58). The initial survivor was found lying in a prone position, with arms extended and elbows flexed above his head, in the aft portion of the aircraft. He was lying near, but not in, the sleeping bags and was wearing a DCU uniform and sneakers, but no hat, jacket, or other cold weather gear. (Tab O-58). The MA had survival equipment on board to include flares, signal mirrors, an Iridium satellite telephone, and sufficient survival and first aid kits. In addition, there was a case of bottled water and a case of Meals Ready to Eat (MRE). (Tab O-58). Evidence from the crash scene showed no indication that any survival gear was used (Tabs I, O-58). A half-full Camelback water bladder was found in the vicinity of the survivor, but there was no evidence he had opened or consumed any MREs, made use of the portable oxygen system noted in the passenger compartment, attempted to start a fire, or signal for help. (Tab O-58).

g. Search and Rescue

The MA was due to return to Bagram Airfield at 0915Z. (Tabs, K-3, 4, O-3). After the ATOC learned that the aircraft had not arrived at Farah as scheduled, ATOC personnel contacted the other destination and alternate bases to determine whether the MA had arrived. (Tabs O-32, 36). Upon learning that the MA had not arrived at any base, the ATOC notified the 455 AEW CP at 0930Z of the overdue aircraft, at which time the 455 AEW CP initiated the Overdue/Missing Aircraft Checklist. (Tabs O-38, 57). The CJTF-76 Rescue Coordination Center (RCC) posted information on the missing CASA 212 aircraft and requested Search and Rescue (SAR) at 1012Z. (Tab L). At 1127Z, the CJTF-76 Chief of Operations requests JSRC assistance. (Tab L). At 1128Z, JSRC formally accepted the rescue mission, over an hour after the initial CJTF-76 announcement. (Tab L). There was no flight route on file or flight following procedure in place, which resulted in confusion as to the MA's routing and caused significant delays in finding the crash site. Due to a lack of crew or passenger Evasion Plans of Action, search and rescue forces were not immediately aware of what equipment was onboard the aircraft. (Tab O-58). At 1134Z, Hog Ops (Bagram Airfield A-10 squadron operations) relayed to the JSRC a message from a PA representative that the search should focus along the anticipated route of flight of the MA, from Bagram Airfield southbound to N34°18' E068°18', then directly southwest to Farah. (Tab O-51). An HC-130 was alerted to search this southern route, and a flight of A-10s (Boar 05) were launched to search the same area at 1152Z but were later diverted for a Troops In Contact mission at 1212Z before returning to Bagram Airfield. (Tab L).

At 1252Z, the Global Hawk UAV was tasked to investigate possible transmissions on VHF Guard frequency at N34°29' E066°57'. (Tab L). At 1305Z national assets located an emergency beacon at the same position. (Tab L). At 1331Z, the Global Hawk detected an emergency beacon at N34°27' E066°29', later indicating that they heard muffled voices from refined coordinates at N34°30' E066°58'. (Tab L). Those voices were determined by national assets at 1542Z to be rescue forces on the HC-130 attempting radio contact with the MA on VHF Guard.

(Tab L). At 1414Z, Boar 05 reported sighting a possible aircraft fuselage at N34°26' E066°30', but Global Hawk later determined that this sighting was actually several buildings. (Tab L).

At some point before 1607Z, the JSRC controller learned from the CAOC airspace section that the last position the MA was tracked on radar was 9-12 miles north of Bagram AF, then westbound. (Tab L). The next A-10 mission, Boar 11, was assigned to search the northern route through the Bamian Valley at 1607Z. (Tab L). At 1721Z Bagram radar approach control relayed through Hog Ops that the MA had departed to the northwest and the last contact was at 10,000 MSL on a 266 heading on a 299 bearing from Bagram Airfield at 9.5 miles. (Tabs L, O-68). Boar 11 reported nothing located along that route. (Tab L). Throughout the night, numerous aircraft continued search attempts, but were unable to locate anything. (Tab L). JSRC launched a second HC-130 to continue search efforts the following morning. (Tab L).

On 28 November 2004, at 0027Z an HC-130 and A-10s heard an emergency locator transmitter (ELT). (Tab L). At 0345Z they identified a possible fuselage. (Tab L). The HC-130 discovered the fuselage just over 11 hours after the search was redirected along the northern route, and after only 1.5 hours searching that route in daylight. (Tab L). At 0438Z the HC-130 positively identified the crash site. (Tab L). High winds and low cloud ceilings prevented a helicopter rescue/recovery. (Tab L). A recovery team was launched at 1024Z from Bamian for a possible ground rescue. (Tab L). Search and Rescue personnel on board the HC-130 determined possible helicopter landing zones in the vicinity of the MA, but determined that high winds and severe turbulence would make landing impossible. (Tab L). During the course of the day, search and rescue forces consolidated the necessary high altitude and cold weather equipment to affect a rescue as soon as weather permitted. (Tab O-58).

On 29 November 2004, SAR efforts were initiated with a planned departure from Bagram Airfield at 0200Z, but weather at Bagram Airfield precluded launching. (Tabs F, O-51). Severely hampered by weather, the recovery team was slowed and made it within 8.1 miles of the crash site. At 1239Z, all rescue efforts were called off due to extreme weather over the crash site. (Tabs F, L, O-51).

On 30 November 2004, an HC-130 was launched at 0054Z and on scene at 0159Z. (Tab L). At 0252Z, three CH-47s were launched from Bagram to stage out of Bamian Airfield. (Tabs L, O-51, 58). The CH-47s arrived at Bamian at 0330Z and departed for the crash scene at 0412Z. (Tabs L, O-58). The first team arrived in a CH-47 at 0433Z, almost 49 hours past the initial crash scene discovery, having been delayed by a combination of misdirected search efforts, severe weather, and nighttime conditions. (Tabs L, O-51). The second team followed in a CH-47 at 0458Z. Six bodies and the cockpit voice recorder were recovered at 0619Z and all rescue aircraft recovered to Bagram Airfield at 0744Z. (Tabs L, O-58).

h. Recovery of Remains

The remains of the three crew members and the three passengers were recovered by the two recovery teams at the crash site. (Tabs L, O-58). Both pilots were ejected from the aircraft in the debris field along the apparent skid path of the aircraft. (Tab O-58). They were buried in snow and recovered approximately 150 feet in front of the cockpit wreckage. (Tab O-58). The flight mechanic was found buried in 6 to 8 inches of snow, just outside the aircraft near the forward

bulkhead. (Tabs I, O-58). Two passengers were found still strapped into their seats, one still in the cargo area and one underneath the left wing that had been bent underneath the fuselage. The one passenger who survived the initial crash was found lying on the floor of the cargo area just inside the tail area of the plane. Evidence showed that he had egressed the plane and eventually returned to the tail section where he was found. (Tab O-58). The remains were all recovered by the two recovery teams and airlifted by CH-47 back to Bagram Airfield. The bodies were then airlifted back to the Port Mortuary at Dover AFB, Delaware, for full autopsies conducted by the Armed Forces Institute of Pathology. (Tab J).

5. MAINTENANCE

a. Forms Documentation

A set of maintenance documents is kept on every Presidential Airways, Inc. aircraft at Bagram Airfield, Afghanistan; these documents record the entire maintenance history of that aircraft. (Tab D). The current and recent history records are kept in hard copy on Maintenance Discrepancy Report PAW MX1 series forms. In addition, records for each aircraft are sent weekly to be archived at Presidential Airways headquarters in Melbourne, Florida. Maintenance supervision also utilizes Excel Aircraft Status Report spreadsheets, updated daily, to track aircraft status, discrepancies, sortie lengths, total aircraft hours, supply requisitions and delivery status. Finally, maintenance supervision utilizes a Computerized Assisted Logistics Maintenance (CALM) database product. The CALM identifies all scheduled maintenance inspection timelines. Specifically, the CALM shows when periodic maintenance was last performed and due dates for next scheduled inspections. All existing PAW MX1, spreadsheet, and CALM forms were reviewed for accuracy and completeness. These forms were used to determine the condition of the MA, CASA 212-200 S/N N960BW, prior to the mishap. (Tab D).

The MA had flown 36 missions consisting of 117 sortie legs for 126.8 hours from 1 November 2004 to 27 November 2004 (mishap date). (Tab D). Of these sorties, 114 were Code 1 (no significant maintenance problems noted), 3 were Code 2 (aircraft has some degraded system performance, but is still flyable) and zero were Code 3 (significant problems that require repair before the aircraft can fly again). This information was compiled from the Aircraft Flight Logs. (Tab D).

At the time of the mishap, the total aircraft time was 21,498.6 hours, the #1 engine time was 11,089.3 hours and the #2 engine time was 7,326.1 hours. This information was retrieved from the Aircraft Flight Log, the flight immediately prior to mishap sortie, dated 26 November 2004. (Tab D).

There were no major maintenance discrepancies that would have prevented aircraft N960BW from accomplishing its tasked mission.

b. Inspections

The MA was on a continuous inspection cycle in accordance with (IAW) Blackwater Aviation General Maintenance Manual, OEM standards, and Federal Aviation Regulations (FAR) Part

135 standards. (Tab D). CASA inspection checklists are used for all step-by-step maintenance tasks and inspections. Routine inspections (1A) and servicing are conducted every 100 hours of operation. More detailed inspections (2A, 3A, 4A, and 5A) are conducted in conjunction with the 1A every additional 100 hours of operation. More thorough airframe inspections (1C-6C) are accomplished at 600-hour intervals. Additionally, major airframe inspections and servicing (1Y-8Y) are accomplished annually. Finally, all airworthiness directives (AD) put out by the FAA had been accomplished IAW FAR Part 135 regulations and follow-up inspections were up to date. The last scheduled inspections were a 1A (100-hour) and 2A (200-hour) completed on 25 November 2004 (Tab D). Finally, Mr. [REDACTED], Blackwater Aviation Maintenance Supervisor, declared that a pre-flight inspection was completed just prior to mishap flight on 27 November 2004. (Tab O-16) At the time of the mishap, all required inspections had been completed, and the corresponding inspection worksheets were annotated appropriately by qualified aircraft mechanics. (Tab D).

c. Maintenance Procedures

There were no abnormal or extraordinary procedures followed prior to the mishap. Maintenance conducted a 1A and 2A periodic inspection and completed AD 98-12-28, false spar inspection, on 25 November 2004. (Tab D). The MA was returned to service and flew uneventfully on 26 November 2004. This sortie was for 4.8 hours and landed with no maintenance discrepancies. (Tab D). Additionally, Mr. Ron Nobles said that the MA had a pre-flight inspection completed on 27 November 2004, just prior to mishap sortie and that the pre-flight documentation was on board the MA at time of mishap. (Tab O-15). The pre-flight documents were not recovered.

Analysis of the maintenance discrepancy reports (Tab D), revealed 6 open discrepancies. Two were for torn seals, the left brake was seeping fluid, the engines thermocouple clamps were loose, the #2 engine cowling required prying to open, and the standby inverter was inoperative. All are considered minor in nature and had parts on order. According to the CASA Minimum Equipment Listing (MEL), none of the open discrepancies degraded the MA from Code 1 status. (Tab D).

d. Maintenance Personnel and Supervision

Interviews conducted with maintenance supervision personnel indicated maintenance activities were conducted in accordance with FAR Part 135 and OEM standards. (Tab O-15). All preflight activities were normal and all personnel involved in the preflight and launch of the MA were experienced and qualified. (Tab O-3). There was no evidence indicating a lack of maintenance supervision before or during the MA's launch.

e. Fuel, Hydraulic and Oil Inspection Analysis

Fuel samples were taken from refueling vehicle that serviced MA. Oil samples were also taken two days prior to mishap date during the MA aircraft scheduled maintenance. Analysis results from fuel and oil samples confirm that fuel and oil were not factors in this mishap. (Tab D-71, 73). Due to mishap geographical location, MA was not recovered and no hydraulic sample could be taken.

f. Unscheduled Maintenance

No unscheduled maintenance was performed on the aircraft since the last scheduled preflight inspection. (Tab D).

There were no maintenance problems that may have contributed to the mishap.

6. AIRCRAFT AND AIRFRAME, MISSILE, OR SPACE VEHICLE SYSTEMS

a. Condition of Systems

A review of airframe and engine logs revealed the MA was well within limits on all time-before-overhaul (TBO) requirements. Prior to the mishap, the MA had a total of 21,489.6 flight hours on the airframe. Engine #1 had 11,089.3 total hours and engine #2 had 7,326.1 total hours. The MA had Honeywell TPE331-10R-511C engines installed which require a complete overhaul every 7,000 hours of operation. Engine #1 of the MA had its overhaul inspection performed at 10,723.7 hours on 21 April 2004 and engine #2 had its inspection completed at 6,418.8 hours on 02 November 2002. (Tab D).

b. Testing

Extreme conditions of the mishap location prevented recovery of the MA. The sole component recovered was the cockpit voice recorder (CVR). (Tab O-58).

1. Survivability systems

The CVR was shipped to the National Transportation Safety Board (NTSB) laboratory in Washington, D.C. External and internal examination revealed all components were in a serviceable state. Successful analysis was conducted by NTSB. However, data will not be released until a later date.

7. WEATHER

a. Forecast Weather

Forecast weather conditions for Bagram Airfield on the morning of 27 November 2004 were: few clouds at 8,000 ft, scattered clouds at 20,000 ft, visibility unrestricted, winds 160 at 7 knots, temperature 5 degrees Celsius at 0300Z. (Tab F-3). The enroute forecast for the route of flight included scattered clouds at 10,000 ft MSL, with no restrictions to visibility, no ceilings, and no other hazards. (Tab F-3).

b. Observed Weather

Observed weather at Bagram Airfield was recorded by US Air Force observers. Conditions were: winds variable at 4 knots, unrestricted visibility, sky - few clouds at 8,000 ft, scattered clouds at 20,000 ft, temperature 4 degrees Celsius, altimeter 30.05 in Hg. (Tab F-4). Sunrise was

0209Z. Observed conditions for the route of flight were reported by the crew of Blackwater 63 during interview. (Tab O-3). Conditions were: scattered clouds capping mountain tops, 200-500 ft thick, 10-15 miles visibility, with winds from the southwest. (Tab O-3).

c. Search, Rescue, and Recovery Weather

Weather did not significantly affect search and rescue efforts on 27 November 2004, the day of the mishap. (Tab F-5). After the MA was located on 28 November, the HC-130 that located the wreckage noted high winds and severe turbulence in the vicinity of the crash site. Weather updates provided by CJTF-76 indicated reduced visibility (as little as one mile) due to fog and snow showers with moderate to severe turbulence and light mixed icing from 14,000 ft MSL. (Tab F-5). These conditions hampered rescue and recovery efforts. On 29 November 2004, forecast conditions for the crash site included visibility of six miles with fog and moderate turbulence. (Tab F-6). The weather at Bagram Airfield was observed as visibility 4 miles with rainshowers and fog, cloud ceilings at 4,000 ft MSL. Later in the day, weather was clearer at Bagram Airfield, but conditions at the crash site deteriorated to 3 miles visibility with fog and blowing snow and winds gusting to 30 knots. (Tab F-7). Reported weather from rescue forces noted that skies were clear to the west of Bamian, but the crash site was completely obscured, with winds at 30 knots and temperature minus 16 degrees C. (Tab F-7). The rescue aircraft was unable to fly visually between Bamian and Bagram, and they estimated the cloud ceiling was 300 AGL or less at Bamian. (Tab F-7). On 30 November 2004, weather was relatively clear at both Bagram and the crash site, permitting recovery operations. (Tab F-8).

d. Conclusions

The mishap occurred in clear weather under day, visual meteorological conditions. Weather conditions were good, and the mission was performed within prescribed operational weather limitations. The actual weather had no adverse effect on the execution of the mission. Snow showers, high winds, low visibility and turbulence presented a safety hazard to rescue forces, preventing search and rescue attempts on 28 and 29 November 2004.

8. CREW QUALIFICATIONS

a. Mishap Pilot One, MP1

Mr. Noel B. English began employment with Presidential Airways Incorporated 1 October 2004. (Tab G-5). He arrived in country on 14 November 2004. Mr. English's airman's certificates included, Air Transport Pilot Multi-engine Land with type rating in CE-500, CA 212, and EMB 110 aircraft, and also a certificate for Commercial Privileges Airplane Single Engine Land and Sea, and FAA Class I Medical Certificate dated June 2004. (Tab G-6). Mr. English's previous employment experiences indicate he piloted several aircraft types and models. His most recent experience prior to his employment with Presidential Airways was flying for Village Air Cargo in Anchorage, Alaska where he was a Captain on a CASA 212 aircraft conducting extensive mountain flying. This company is also a 14 CFR FAR Part 135 operation consisting of cargo and passenger transport. (Tab G-5).

Mr. English's airman record indicates he had no Federal Aviation Regulations (FAR) violations filed against him or violations of the law relating to illegal substances or Driving Under the Influence (DUI) convictions. (Tab G). Witness statements indicate he had no family, social or financial problems. (Tab O-3) Mr. English completed the company training program as identified in the company's operating specification on 2 November 2004. (Tabs G-14 - 17).

Mr. English was considered an exceptionally skilled pilot by corporate management and fellow pilots. (Tab O-3).

Recent Hours Flown

PERIOD	HOURS
In country	33.2
90 Days	135
12 Months	557
6 Months Instrument	36
Total	5753 (est)

b. Mishap Pilot Two, MP2

Mr. Loren D. Hammer began employment with Presidential Airways Incorporated 1 October 2004. (Tab G-26). He arrived in country on 14 November 2004. Mr. Hammer's airman's certificates included Air Transport Pilot Multi-engine Land, Commercial Instrument Single Engine Land and FAA Class I Medical Certificate dated January 2004. (Tab G-35). Mr. Hammer's employment application with Presidential Airways indicated he possessed a Class II Medical Certificate expiring January 2005. The reason for the difference in the two documents is the Class I expires and becomes a Class II if the pilot does not see an Aviation Medical Examiner every six months. His most recent experience prior to employment with Presidential Airways was with Bighorn Airways Incorporated; this company is also a 14 CFR FAR Part 135 operation, where he performed First Officer duties in a CASA 212 conducting fire fighting smoke jumper missions. (Tab G-26).

Mr. Hammer's airman record indicates he had no Federal Aviation Regulations (FAR) violations filed against him or violations of the law relating to illegal substances or Driving Under the Influence (DUI) convictions. Mr. Hammer had one previous accident on 21 May 1999 in a Cessna 182, the aircraft was damaged and the NTSB investigated and found no violations. (Tab G-44). Witness interviews indicate he had no family, social or financial problems. (Tab O-3). Mr. Hammer completed the company training program as identified in the company's operating specification on 13 October 2004. (Tab G-39).

Mr. Hammer was considered a skilled pilot by his fellow pilots for his level of experience. (Tab O-3).

Recent Hours Flown

PERIOD	HOURS
In country	33.1

90 Days	93
12 Months	133
Instrument last 6 months	6
Total	2262(est.)

c. Mishap Flight Mechanic, MFM

Mr. Melvin Rowe began employment with Presidential Airways Incorporated 21 September 2004. (Tab G-45). He arrived in country on 4 October 2004. Mr. Rowe held an FAA Airframe and Power Plant repairman's certificate. (Tab G-52). Mr. Rowe also worked and supervised the mechanics in the company's FAR Part 145 repair station. His most recent experience prior to employment with Presidential Airways was with Turbine Standard from Holland, Ohio, where he performed A&P mechanic duties. (Tab G-50).

Mr. Rowe's FAA A & P certificate indicate he had no Federal Aviation Regulations (FAR) violations filed against him or violations of the law relating to illegal substances or Driving Under the Influence (DUI) convictions. Witness statements indicate he had no family, social or financial problems. (Tab O-3). Mr. Rowe completed the company training program as identified in the company's operating specification on 21 September 2004. (Tab G-47).

Mr. Rowe was considered a skilled mechanic and technician by management and his colleagues. (Tab O-3).

9. MEDICAL

a. Qualifications

The 37 year-old MP1, Noel English, had a current FAA Class I medical certificate dated 1 October 2004 with a limitation requiring corrective lenses for defective visual acuity. (Tab G-6). The 35 year-old MP2, Loren Hammer, had a current FAA Class II medical certificate, dated 28 January 2004, without limitations. (Tab G-35). The 43 year-old MFM, Melvin Rowe, had a current FAA Airframe and Powerplant repairman's certificate. (Tab G-52). There is no evidence that any specific form of medical certificate was required for his duties.

b. Health

Medical records for the mishap crew (all civilian contract employees) were not available to the Board due to privacy issues. The morning of the mishap, MP1 mentioned to several coworkers he woke with a "tickle" in his throat. (Tabs O-3, 17, 25). He had no cough, sneeze, or other symptoms, and had not taken any type of medication, but simply had commented that he hoped it didn't worsen (Tabs O-3, 17, 25). Subsequently, autopsies performed by pathologists from the Armed Forces Institute of Pathology (AFIP) revealed no evidence of significant chronic disease processes in any of the crew members. (Tab J).

c. Pathology

Post-mortem examinations of the three mishap crewmembers and three passengers were conducted at the Port Mortuary, Dover AFB, Delaware, by AFIP pathologists on 3 December 2004. Each of the 6 individuals were positively identified by antemortem and postmortem fingerprint comparisons. (Tab J). The autopsies revealed the following:

Noel English, MP1, sustained multiple blunt force injuries, including several injuries that were immediately fatal. No evidence of significant natural disease processes were noted, within the limitations of the examination. (Tab J).

Loren Hammer, MP2, sustained multiple blunt force injuries, including several injuries that were immediately fatal. No evidence of significant natural disease processes were noted, within the limitations of the examination. (Tab J).

Melvin Rowe, MC, sustained multiple blunt force injuries, including several injuries that were immediately fatal. No evidence of significant natural disease processes were noted, within the limitations of the examination. (Tab J).

LTC Michael McMahon sustained multiple blunt force injuries, including several injuries that were immediately fatal. No evidence of significant natural disease processes were noted, within the limitations of the examination. Incidentally noted were two surgically placed metallic screws in the right knee. (Tab J).

CW2 Travis Grogan sustained multiple blunt force injuries, including several injuries that were immediately fatal. No evidence of significant natural disease processes were noted, within the limitations of the examination. (Tab J).

SPC Harley Miller sustained multiple blunt force injuries. Although none were considered immediately fatal, significant internal bleeding was noted. There was no evidence of significant natural disease processes noted, within the limitations of the examination. (Tab J).

d. Lifestyle

There is no evidence that unusual habits, behavior, or stress on the part of the mishap crew or maintenance personnel contributed to the mishap. (Tabs O-3 – 31).

e. Crew Rest and Crew Duty Time

Coworkers and the site supervisor of the mishap crew related that crews always get a minimum of 10 hours crew rest. (Tab O-3). Crew duty days are 10 hours, and because their CASA 212 flying is limited to day VFR only, adequate crew rest is essentially assured. (Tab O-3). Crews generally go to bed at approximately 2000L, and coworkers specifically recall this as being the case for the mishap crew the night of 26 November 2004. (Tab O-3, 21). MP1 reported to coworkers the following morning that he had slept well (Tab O-3, 25). Mishap crew members awoke approximately 0430L and subsequently had breakfast prior to being picked up for preflight preparations at 0615L. (Tab O-3, 21).

10. OPERATIONS AND SUPERVISION

a. Operations

The contract was awarded to Presidential Airways, Inc. on 20 September 2004. (Tab B). Pilots and maintenance personnel began arriving at Bagram in October and November 2004. (Tab O-3). MP1 and MP2 arrived on 14 November 2004. (Tab O-9). There were no relevant units in country upon which to measure experience levels for the mishap crew.

b. Supervision

The supervision of the contract was performed by the Quality Assurance Personnel (QAP) located in the Air Terminal Operations Center (ATOC). Both the primary and the alternate QAP were supportive, aggressive, and eager. (Tab O-3).

13. GOVERNING DIRECTIVES AND PUBLICATIONS

a. Primary Operations Directives and Publications

Army Regulation 15-6, Procedure for Investigating Officers and Boards of Officers, 30 Sep 96

AR 600-34, Fatal Training/Operational Accident Presentations to Next of Kin, 2 Jan 03

Air Force Instruction 63-124, Performance-Based Service Contracts, 9 Feb 04

Title 14, Code of Federal Regulations, FAR Part 135

Afghanistan Aeronautical Information Publication (AIP)

b. Maintenance Directives and Publications

Title 14, Code of Federal Regulations, FAR Part 135, Subpart J

Blackwater Aviation General Maintenance Manual

14. NEWS MEDIA INVOLVEMENT

The Combined Forces Command – Afghanistan Public Affairs Office sent several news releases to the media that announced there was a missing aircraft and that six personnel had been recovered. Hundreds of media outlets ran stories on the accident and the American deaths. The media in Hawaii published the names of the three soldiers that were killed in the mishap, and the Hawaii news coverage focused on the human interest of the three fallen soldiers. No significant news media coverage has followed the initial articles.

15. FINDINGS AND RECOMMENDATIONS

FINDING 1: The mishap company's theater indoctrination program is inadequate.

Discussion: The contractor's indoctrination program is focused primarily on destination orientation with minimal concentration on specific route and navigation waypoint identification. High altitude procedures are not addressed. Climatology data is not included in the orientation program.

Normal practice for PA crews is to use the Garmin 296 GPS while flying. PA does not have a training program for use of this equipment. Due to the short time that the MC had been in country it is reasonable to assume that they were not familiar with this device.

Recommendation: Contract modification requiring the contractor to develop a comprehensive theater indoctrination program mandatory for all crewmembers operating in-theater to include initial and recurring training. Examples are high altitude training, GPS training, weather, and specific contract requirements.

FINDING 2: Crew selection and pairing violated company policy.

Discussion: The PA Program Manager's crew rotation policy was that crews would be paired based on theater experience. A pilot who has been in the theater less than 30 days would not be paired to fly with a pilot having less than 30 days theater flying experience. The mishap crew (MC) had less than one month experience in the theater and were paired together in violation of policy.

The MC had experience in the CASA 212 aircraft. With the exception of the flight mechanic the MC had little experience in the Afghanistan theater of operations. With the dangers and unique nature of the flying within the theater, the PA crew rotation practices resulted in an experience gap between the new crews and the ones already in country. Both of the Mishap Pilots (MP) lacked experience in Afghanistan theater local flying procedures potentially creating confusion as indicated by indecision in departure requests. The crew had not flown this route before in this direction thereby increasing the potential for loss of situational awareness and misorientation.

Recommendation: Implement appropriate Crew Resource Management procedures.

FINDING 3: The MC was not in compliance with FAR Part 135.79 Flight Locating Requirements.

Discussion: FAR Part 135.79 Flight locating requirements.

(a) Each certificate holder must have procedures established for locating each flight, for which an FAA flight plan is not filed, that—

(1) Provide the certificate holder with at least the information required to be included in a VFR flight plan;

(2) Provide for timely notification of an FAA facility or search and rescue facility, if an aircraft is overdue or missing; and

(3) Provide the certificate holder with the location, date, and estimated time for reestablishing radio or telephone communications, if the flight will operate in an area where communications cannot be maintained.

(b) Flight locating information shall be retained at the certificate holder's principal place of business, or at other places designated by the certificate holder in the flight locating procedures, until the completion of the flight.

(c) Each certificate holder shall furnish the representative of the Administrator assigned to it with a copy of its flight locating procedures and any changes or additions, unless those procedures are included in a manual required under this part.

VFR low altitude routing structure in Afghanistan is in existence, however, PA crews elected not to use that structure. Standard routes utilizing waypoints were not developed or used by PA. The crews stated that they did not want to fly predictable routes due to perceived threat concerns.

Recommendations: Comply with FAR Part 135.79. Using aircraft performance as a consideration, develop an en route waypoint structure for locating each flight.

FINDING 4: FAR Part 135.100 (Flight crewmember duties) was violated.

Discussion: FAR Part 135.100 Flight crewmember duties.

(a) No certificate holder shall require, nor may any flight crewmember perform, any duties during a critical phase of flight except those duties required for the safe operation of the aircraft.

Duties such as company required calls made for such nonsafety related purposes as ordering galley supplies and confirming passenger connections, announcements made to passengers promoting the air carrier or pointing out sights of interest, and filling out company payroll and related records are not required for the safe operation of the aircraft.

(b) No flight crewmember may engage in, nor may any pilot in command permit, any activity during a critical phase of flight which could distract any flight crewmember from the performance of his or her duties or which could interfere in any way with the proper conduct of those duties. Activities such as eating meals, engaging in nonessential conversations within the cockpit and nonessential communications between the cabin and cockpit crews, and reading publications not related to the proper conduct of the flight are not required for the safe operation of the aircraft.

(c) For the purposes of this section, critical phases of flight includes all ground operations involving taxi, takeoff and landing, and all other flight operations conducted below 10,000 feet, except cruise flight.

Note: Taxi is defined as "movement of an airplane under its own power on the surface of an airport."

Following taxi, the MC was stopped to load a third passenger. The uploading of additional passengers is not a duty required for the safe operation of the aircraft in a critical phase of flight (taxi). The ATOC/passenger services and PA Program Manager approached the plane with a third passenger and new manifest after the aircraft had taxied approximately 500 yards.

Recommendation: Contractor comply with FAR Part § 135.100 Flight crewmember duties. QAP verify compliance.

FINDING 5: The mishap company is not equipped with adequate flight following equipment for this theater.

Discussion: Reliable communication with crews outside of the terminal area did not exist. Aircraft are equipped with High Frequency radios but PA Operations does not have HF capability. There is no other onboard tracking capability. Currently the only method used by the crews for reporting mission information is by Iridium satellite phone to the Air Mobility Division (AMD). PA did not have the phone number for the Iridium satellite phone readily available.

Recommendation: Contract modification to install government furnished equipment tracking system in PA aircraft. Contractor provide a High Frequency radio installed at contractor's operations desk.

FINDING 6: Inadequate overdue aircraft procedures at remote sites serviced by STOL aircraft.

Discussion: Remote sites do not have reliable communications with the aircraft and are not tasked to provide arrival or departure information to any agency or command and control node. En route PRTs were unaware of any overdue STOL aircraft notification procedures. MC was overdue at its first destination by 3.5 hours before the first notification was made. First notification was from Farah passenger at approximately 0900Z to CJTF76 CJ4 who notified QAP. QAP conducted unsuccessful ramp search then notified 455th Expeditionary Wing Command Post who initiated the overdue/missing aircraft checklist at 0935Z. Contractor aircraft are not integrated into the overdue/missing aircraft notification procedures. The Command Post overdue/missing aircraft checklist was executed however, RAPCON states there was no request to review radar tapes for the last known position of BW 61 until RAPCON supervisor reviewed tapes sometime after sunset on his own initiative. Command Post overdue/missing aircraft checklist includes verifying the aircraft's last known position with RAPCON. This was not accomplished. The aircraft's last known position was relayed at 1721Z.

Recommendations: CJTF-76 develop an integrated aircraft arrival/departure reporting procedure throughout the theater. Establish remote site connection with appropriate command and control nodes via additional means such as telephone or SIPRnet. Review Command Post overdue/missing aircraft procedures.

FINDING 7: Lack of specific route and synchronization hampered search and rescue efforts.

Discussion: Search and rescue initially concentrated on a southern route to Farah based upon PA personnel advice. SAR forces had little information to indicate what survival equipment was on the aircraft to include signaling and communication devices. In addition, there was no means to verify identity of company personnel to be rescued. Command Post initiated overdue/missing aircraft checklist at 0935Z. The RCC notified the JSRC of missing aircraft at 1013Z. At 1127Z

CJTF-76 requested JSRC assistance and JSRC accepted the mission at 1128Z. In the 1+15 from RCC notification to JSRC accepting the mission, CJTF-76 operations coordinated assets available and began their planning cycle. At 1721Z Bagram RAPCON confirmed the last known position of BW 61. Rescue efforts from this point focused on the Bamian Valley and were delayed due to nighttime and weather restrictions. Several false beacons were investigated during the night. On 28 November 2004 at 0009Z both an HC-130 and A-10 heard an ELT. At 0334Z the HC-130 located crash site. Helicopters simultaneously involved in searching for the crash were unable to reach the elevation of the crash site due to performance capabilities. High winds and turbulence at the crash site throughout the day prevented pararescue and helicopter infiltration. Clouds and blowing snow obscured the crash site on 29 November 2004 preventing rescue attempts by air. A New Zealand Kiwi Provincial Reconstruction Team moved by land to within 8.1 miles of the crash site and prepared for deliberate foot infiltration. On 30 November 2004, CH-47 aircraft with a Special Forces mountain team and a pararescue team flew to the site and successfully recovered the remains, cockpit voice recorder and some personal gear. Theater SAR assets were not properly coordinated and synchronized through the RCC. This resulted in SAR units developing their own plan and bypassing the RCC, going direct to the JSRC.

Recommendations: Comply with FAR Part 135.79. Using aircraft performance as a consideration, develop an en route waypoint structure for locating each flight. Conduct theater SAR exercises at regular intervals to clarify roles and responsibilities and to synchronize response and employment of CSAR assets. Staff RCC with fully qualified SAR personnel as primary duty. Require STOL mission crew members file EPA/ISOPREP. CJTF-76 build a prepositioned high altitude rescue equipment capability. JSRC research AOR civilian capabilities for high altitude rescue.

FINDING 8: PA pilots violated FAR Part 135.89 Pilot oxygen requirements.

Discussion: FAR Part 135.89 Pilot requirements: Use of oxygen.

(a) Unpressurized aircraft. Each pilot of an unpressurized aircraft shall use oxygen continuously when flying—

(1) At altitudes above 10,000 feet through 12,000 feet MSL for that part of the flight at those altitudes that is of more than 30 minutes duration; and

(2) Above 12,000 feet MSL.

(b) Pressurized aircraft. (1) Whenever a pressurized aircraft is operated with the cabin pressure altitude more than 10,000 feet MSL, each pilot shall comply with paragraph (a) of this section.

(2) Whenever a pressurized aircraft is operated at altitudes above 25,000 feet through 35,000 feet MSL, unless each pilot has an approved quick-donning type oxygen mask—

(i) At least one pilot at the controls shall wear, secured and sealed, an oxygen mask that either supplies oxygen at all times or automatically supplies oxygen whenever the cabin pressure altitude exceeds 12,000 feet MSL; and

(ii) During that flight, each other pilot on flight deck duty shall have an oxygen mask, connected to an oxygen supply, located so as to allow immediate placing of the mask on the pilot's face sealed and secured for use.

(3) Whenever a pressurized aircraft is operated at altitudes above 35,000 feet MSL, at least one pilot at the controls shall wear, secured and sealed, an oxygen mask required by paragraph (b)(2)(i) of this section.

(4) If one pilot leaves a pilot duty station of an aircraft when operating at altitudes above 25,000 feet MSL, the remaining pilot at the controls shall put on and use an approved oxygen mask until the other pilot returns to the pilot duty station of the aircraft.

Statements from on site PA personnel indicated a lack of compliance with and knowledge of the oxygen requirements for unpressurized aircraft as dictated by the FAR 135.89. Flying at altitudes above 10,000 feet MSL without oxygen potentially leads to symptoms of hypoxia, loss of situational awareness, impaired judgment, reduced reaction time and disorientation.

Recommendations: Comply with FAR Part 135.89.

FINDING 9: The AMC contract did not adequately address requirements for this theater of operations.

Discussion: The Statement of Work did not provide for Evasion Plans of Action, ISOPREPs, SERE, SIPRnet connectivity, daily intelligence briefings, communications and flight tracking equipment for an underdeveloped theater of operations. The SOW paragraph requiring coordination of Airlift movements and routes with Regional Air Movement Control Center is insufficient. The contract requires the contractor to transport a maximum of 19 passengers; however the aircraft on site are not capable of transporting 19 passengers at a planning weight of 400lbs. each. The STOL mission is flying beyond the requirements of the statement of work. Current flight legs routinely exceed the 300 mile stage length as required in the SOW.

Recommendations: Modify Statement of Work to include Search and Rescue requirements. CJTF 76 provide SIPRnet connectivity and intelligence updates. Recommend contract modification to install government furnished equipment tracking system in PA aircraft. Change SOW Para. 1.1.3 Coordination of Airlift Movements to include coordination with the CJTF-76 and Al Udeid AMD. Recommend CJTF-76 appoint a coordinating authority. Recommend contractor provide a High Frequency radio installed at contractor's operations desk. Modify the SOW to accurately reflect the current mission requirements.

FINDING 10: The Service Delivery Summary is insufficient for proper contract oversight.

Discussion: The Service Delivery Summary (SDS) is not properly aligned with CJTF-76 business objectives. The SDS should focus on critical success factors in meeting performance objectives. Quality Assurance Personnel were not adequately trained in accordance with AFI 63-124, which requires QAP to receive both Phase 1 and Phase 2 Quality Assurance training prior to assuming QAP responsibilities. QAPs were not performing all oversight functions in accordance with the Quality Assurance Surveillance Plan (QASP) specifically, they did not develop a checklist to record contractor surveillance. The QASP requires the QAPs to perform aircraft scheduling functions. This is ordinarily not a QAP duty. The SOW paragraph requiring the contractor to provide Air Mobility Division (AMD) weekly and quarterly flight segment/hour reports is inadequate. The SOW requires the contractor to develop and implement a commercial quality control plan to ensure safe and reliable air transportation in accordance with FAR Part 135 and 32 CFR 861. Presidential Airway's Quality Control Plan has not been submitted or reviewed by AMC.

Recommendations: CJTF-76 and AMC modify the SDS to focus surveillance on a broader range of contractor performance. Recommend the QAPs arrive fully trained. QAP in concert with the Contracting Officer develop a surveillance activity checklist and surveillance schedule to record contractor surveillance. Change paragraph 2.3 of the QASP to focus QAP's duties on surveillance of contractor performance and verification of reimbursable expenses.

FINDING 11: Civil Aviation Review Board (CARB) has not inspected contractor flight operations in theater.

Discussion: QAP are not qualified nor mandated to perform functions of the CARB.

Recommendation: USTRANSCOM CARB inspects Presidential Airways Inc. in Afghanistan.

FINDING 12: The MC flew the MA into a box canyon and impacted the terrain at 14,650 feet MSL on the northern face of a 16,580 feet MSL ridgeline.

Discussion: This report constitutes the discussion of the accident.

Recommendation: Implement the recommendations of this board.