NATIONAL TRANSPORTATION SAFETY BOARD
Office of Aviation Safety
Washington, D.C. 20594

February 2, 2011

OPERATIONS GROUP FACTUAL REPORT

ADDENDUM 2: ADDITIONAL INTERVIEW AND FOLLOW-UP INFORMATION

A. ACCIDENT

Location:	Aleknagik, Alaska
Date:	August 9, 2010
Time:	About 1442 Alaska daylight time (ADT)[1]
Airplane:	de Havilland DHC-3T airplane, N455A
NTSB Number:	ANC10MA068

B. OPERATIONS GROUP MEMBER

Malcolm Brenner, Ph.D.
Human Performance Investigator
National Transportation Safety Board

C. SUMMARY

On August 9, 2010, about 1442 Alaska daylight time (ADT), a single engine, turbine-powered, amphibious float-equipped de Havilland DHC-3T airplane, N455A, impacted mountainous tree-covered terrain about 10 miles northeast of Aleknagik, Alaska. Of the nine people aboard, the airline transport pilot and four passengers died at the scene, and four passengers sustained

[1] All times are Alaska Daylight Time based on a 24-hour clock, unless otherwise noted. Actual time of accident is approximate.

serious injuries. The airplane sustained substantial damage. The flight was operated by General Communication, Incorporated (GCI), Anchorage, Alaska, under the provisions of 14 *Code of Federal Regulations* (CFR) Part 91. The flight originated at a GCI-owned remote fishing lodge on the southwest shoreline of Lake Nerka about 1427 and was en route to a remote sport fishing camp on the banks of the Nushagak River, about 52 miles southeast of the GCI lodge. At the time of the accident, marginal visual meteorological conditions were reported at the Dillingham Airport, about 18 miles south of the accident site; however, the weather conditions at the accident site at that time are not known. No flight plan was filed.

D. DETAILS OF THE INVESTIGATION

The Operations Group conducted interviews with witnesses Bill Behnke and Ernest Mitchell to amplify on issues in the investigation. Interview summaries follow.

Ms. Terri Smith, the pilot's wife, provided answers to four written questions posed by the Safety Board. Her responses follow as the third attachment.

FIRST INTERVIEW SUMMARY

Interview:	Bill Behnke Senior Vice-President GCI
Represented By:	Self
Date:	January 12, 2011
Time:	Noon EST
Location:	NTSB Headquarters, Washington DC
Present:	Malcolm Brenner, Tom Little, NTSB Robin Broomfield, FAA

Mr. Behnke provided the following information to supplement his earlier interview:

Pilots on the Otter flights operated by GCI would normally keep the log sheet in one of three places during flight:

- on the floor between the pilot and co-pilot seats;
- on the dash;
- in the pilot's door pouch.

SECOND INTERVIEW SUMMARY

Interview:	Ernest C. ("Mitch") Mitchell Chief of Maintenance Alaska Aviation Museum
Represented by	Self
Date:	January 19, 2011
Time:	1400 EST
Location:	Telephone interview
Present:	Malcolm Brenner, Tom Little, NTSB

Mr. Mitchell provided the following information:

He was a fully retired aircraft mechanic who had been around airplanes since he was fifteen years old. He served for twenty years as a mechanic in the U.S. Air Force until his retirement in 1978. He then worked for the U.S. Department of the Interior, first as mechanic, then as contract inspector, and finally as Chief of Maintenance responsible for the airworthiness of 47 airplanes. He had been a volunteer at the Alaska Aviation Museum for the past ten years, although he had been cutting back more on these activities, and served as Chief of Maintenance restoring and maintaining vintage aircraft. He was currently restoring a 1931 Fairchild Pilgrim. He held an A+P license, which he had since he was a young man. He also held a private pilot license, which was required for his work as a mechanic, but had not flown as pilot in more than 20 years.

He and Terry Smith ("Terry") had known each other for a long time. Terry's father was a legend in Alaska aviation who headed the Alaska Fish and Wildlife office in the 1940's-50's (subsequently consolidated into the Department of the Interior). Terry flew the Grumman Widgeon airplane as a child. He was Anchorage Chief Pilot at Alaska Airlines for years. Terry was a legend around Alaska.

Terry regularly brought and gave demonstrations in his Mallard airplane at the July 4th fundraising programs of the Alaska Aviation Museum. This year, Terry volunteered to fly fundraising flights on the Widgeon airplane owned by the museum in the absence of one of the regular Widgeon pilots. Terry flew a familiarization flight in the airplane on Friday, July 3rd, consistent with museum policy.

On July 4th, Terry was scheduled to fly an afternoon demonstration flight in the Widgeon. Another volunteer, very eager, loaded four or five passengers in the airplane with a step ladder. He gave Terry a high sign to start the engines, but nothing happened. Mr. Mitchell was standing at the back of the airplane and the other volunteer asked Mr. Mitchell to walk up to assist Terry.

When Mr. Mitchell came forward and looked in the cockpit, he saw Terry just staring forward and not looking for switches. It did not appear that Terry was doing much. He was just staring off into space. When Mr. Mitchell arrived at the cockpit, Terry looked at him without speaking. Mr. Mitchell asked what was wrong, and Terry stated that he could not get hydraulic pressure. Terry indicated that this airplane was unlike the one he flew. Mr. Mitchell told him the hydraulic system was electric and suggested that he recycle the center fuel switch since it might be stuck. Terry looked down and said "OK." He followed the direction and was able to start the airplane.

Terry was normally very professional, very calm and laid back. He liked to tell war stories. He actively talked with others. Terry was always in charge. On this day, however, he uncharacteristically did not want to communicate. He only responded when asked.

Terry looked normal. He did not appear to be drugged. But he was much quieter than normal. He acted as though he were embarrassed and did not initiate any conversation or volunteer any information. Mr. Mitchell had to ask him what the problem was. It reminded Mr. Mitchell of his cousin, who suffered from Alzheimer's disease. If Mr. Mitchell had not known about Terry's stroke, he would have suspected alcohol.

Mr. Mitchell watched as Terry taxied out, thinking "that wasn't Terry." After Terry took off, as the airplane was going out of sight, Mr. Mitchell spoke to the museum director Norman Lagasse ("Norm") and expressed his concerns that "something was not right with Terry."

As far as Mr. Mitchell knew, Terry flew the rest of the flight OK. Terry departed straight and level out of the pattern, put the gear up properly, and performed a normal departure. Each demonstration flight lasted about 30 minutes. The Widgeon would have departed across the lake, flown sightseeing around a nearby valley, and made a water landing on the return. Mr. Mitchell was very relieved when the Widgeon got back.

After the flight, Terry got out of the airplane. He asked whether there would be any more flights, and Mr. Mitchell told him there would not be because there were no more paying passengers. Terry wandered off. After Terry's flight, the crowds were starting to thin out and there were fewer people available who were willing to pay higher prices for demonstration flights. But there was also a concern with Terry and his fitness that was reflected in the museum's decision to

not sponsor further flights in the Widgeon. The museum could have sponsored two or three more flights. After the flight, Mr Mitchell wanted to just make sure that Terry was alright. He thought that Terry said the airplane was OK.

The day before, Terry flew in the same airplane as on July 4th. During hangar talk that followed the July 4th flight, Mr. Mitchell learned for the first time from another pilot ("George") that Terry took off on July 3rd without first putting down the wing floats (which are hydraulic). This error can be disastrous.

On July 5th, museum personnel found that the battery in the Widgeon was dead, suggesting that Terry forgot to turn off the master at the end of the flight. Normally, Mr. Mitchell or another volunteer checks an airplane after the pilot leaves, but they do not do this with someone as experienced as Terry.

Mr. Mitchell and Norm decided they would have a discussion before they allowed Terry to fly again in a museum airplane.

Mr. Mitchell thought that Terry was impaired on July 4th. Terry was not tracking like he should have been. He was not really paying attention and his responses were not right. He could not find a way to engage the hydraulic system. There are not that many switches in the airplane for troubleshooting, and in five minutes a pilot should figure it out. Terry just was not himself. In hindsight, Mr. Mitchell thought that he should have stopped the flight in view of Terry's condition, telling Terry that the airplane needed to be shut down for repairs.

There was no operational explanation for Terry's difficulty understanding the hydraulic system. It was very similar to a lot of other Widgeons and Terry had high Widgeon time. Terry had owned several airplanes with the same system. Terry had a Widgeon of his own, and Mr. Mitchell believed that it used a very similar hydraulic system. Plus, Terry had flown the same airplane one day before and, at some point, found the hydraulic system.

There are only two systems used in the Widgeon for hydraulics. Electric hydraulic systems were cheaper than engine-driven and were easier to maintain. Even with a different model Widgeon, however, you start the engine first and then discover that there are no hydraulics. Terry was not troubleshooting for either system.

The museum provides a laminated checklist for the Widgeon which hangs on a chain next to the pilot's seat. Mr. Mitchell did not know whether Terry was using the checklist. The checklist would have prevented the problem with the hydraulic system.

Several members of Mr. Mitchell's family suffered from Alzheimer disease, including his mother-in-law, uncle, and cousin. Terry's behavior resembled the early stages of Alzheimer's disease. In the early stages of Alzheimer's disease,

people can still perform well if they still remember what to do. His mother suffered from dementia/Alzheimer's and she sometimes acted normal. His uncle degraded slowly over years. The degradation was obvious to Mr. Mitchell, who saw his uncle infrequently, but the uncle's immediate family did not recognize the slow degradation at first. The uncle walked to the post office every day. One day, he stood on a street corner and did not know what he was doing.

Terry's behavior was similar to behavior in the early stages of Alzheimer's disease, but Mr. Mitchell thought it was due to the stroke. Terry probably was unaware that he was performing at less than 100%.

Everybody knew that Terry had suffered a stroke. Nobody else reported impairment. Maybe others who saw Terry were not as aware of the degradation in Terry's behavior that Mr. Mitchell observed.

Mr. Mitchell normally saw Terry two or three times per year, at trade shows and other functions. They would talk about his airplanes. Terry sometimes came by the museum just to visit and tell war stories along with other old timers. Mr. Mitchell and Terry did not share the same circle of friends but would connect at parties or receptions, or memorial services. Mr. Mitchell did not attend pilot meetings.

Mr. Mitchell had last seen Terry in early May at a trade show. They talked about Terry's Mallard airplane. Terry and his wife had just taken a trip in it, perhaps to Russia. Terry seemed like his normal self at that time.

Asked whether he considered calling the FAA hotline to report his observations of Terry's behavior, Mr. Mitchell indicated that there was a terrible stigma about filing against a pilot and that this involved egos and careers. He would have gone to the pilot's spouse first before calling the FAA line. Mr. Mitchell knew Terry's wife to say hello.

Mr. Mitchell was reluctant to put a stain on Terry's reputation.

When Terry's father was a manager at Fish and Wildlife, he upgraded a Grumman Goose with turbine engines. He initiated, authorized it, and was instrumental in the design and modification of the upgrade. The airplane was still flying and had a 10-hour range. The father also upgraded a Beaver. Mr. Mitchell never met Terry's father, who retired in the early 70's, but knew about Terry's father by reputation. Mr. Mitchell served as Chief of Maintenance for the Department of the Interior and maintained both airplanes upgraded by Terry's father.

Terry knew Alaska. Five years ago, before the stroke, the accident would not have happened to Terry.

The museum airplanes only fly one or two times per year, but especially during the membership drive on July 4th.

The museum staff knew about one week in advance that Terry would fly the July 4th flight.

Medical issues will normally pull your ticket, and Mr. Mitchell was surprised that Terry was able to return to flying so soon after his stroke.

Terry visited the museum for a memorial service about one year before, soon after he returned to flying following his stroke. Mr. Mitchell asked him how things were going and Terry said they were fine. Terry seemed to be fine at that time.

Asked whether Terry had a history of inadvertently falling asleep, Mr. Mitchell stated that he had never observed this. Terry was always alert whenever Mr. Mitchell saw him, always upright and moving.

Terry was always in charge. His reputation was legend.

Terry flew a Grumman for the Department of the Interior back in the 70's.

Mr. Mitchell felt that he should just have stopped the flight when he observed Terry's behavior.

FOLLOW-UP INFORMATION

Witness: Terri Smith
Wife of pilot
Date Received: February 1, 2011

Ms. Terri Smith, the pilot's wife, provided the following responses to four written questions posed by the Safety Board:

1) What type of glasses did Terry wear for flying (e.g. distance only, bifocals, trifocals, or progressive lenses)?

Terry wore progressive lenses at all times. He owned a pair of clear progressive lenses and an identical pair of shaded progressive lenses. He always carried both pairs while flying and was very methodical about placing the pair that he was not wearing into his glasses case.

2) What type of flying did Terry do in New Zealand? Did he serve as PIC? Were you also licensed to fly in New Zealand?

Terry flew as a private pilot, single engine for pleasure. One or the other of us would serve as pilot in command. I am licensed to fly as private pilot, single engine in New Zealand.

3) Can you provide more details about the highway incident in which Terry was pulled over by a police officer soon after the stroke? What caught the officer's attention, and what did the officer say and do? Do you know when this happened and what agency the officer represented (State Police, Highway Patrol, City police department)?

This situation took place off of the main highway, on a back road in Eagle River, Alaska. Terry and I were driving separate vehicles to our grandson's baseball game, at a park that was new to us. An officer noticed that Terry was driving very slowly and had him pull to the side of the road. Terry was not issued a warning or citation, and proceeded to his destination. This would have been within a few months after Terry's stroke in March of 1996. I do not know what agency the officer represented.

4) Can you provide more details about calling the DMV? What did they say and do? Do you know when this happened and what office you called?

Subsequent to Terry's stroke and prior to Terry driving, I placed a call to DMV to determine what if any requirements needed to be fulfilled prior to Terry's operating a vehicle. The representative from DMV informed me that Terry's license was still valid, and as long as he was not taking any medication that would preclude his operating a motorized vehicle he was legal to drive. Terry was not on any medication and after receiving authorization from his physician he proceeded to drive. He resumed driving approximately 3 weeks following his stroke.