



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

July 1, 2019

Group Chairman's Factual Report

OPERATIONAL FACTORS / HUMAN PERFORMANCE

ANC18FA053

A. ACCIDENT

Operator: Venture Travel, LLC, dba Taquan Air
Location: Hydaburg, Alaska
Date: July 10, 2018
Time: 0835 Alaska daylight time¹
Airplane: de Havilland DHC-3T, Registration Number: N3952B, Serial #: 225

B. OPERATIONS GROUP

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C. SUMMARY

On July 10, 2018, about 0835 Alaska daylight time, a single-engine, turbine-powered, float-equipped de Havilland DHC3T Otter airplane, N3952B, sustained substantial damage during an impact with rocky, mountainous, rising terrain about 9 miles east of Hydaburg, Alaska. The airplane was registered to Blue Aircraft, LLC and operated by Taquan Air as a visual flight rules (VFR) on-demand commercial flight under the provisions of 14 *Code of Federal Regulations* Part 135 when the accident occurred. Of the 11 occupants on board, the airline transport pilot was uninjured, four passengers sustained minor injuries, and six passengers sustained serious injuries. Marginal visual meteorological conditions prevailed, and company flight following procedures were in effect. The flight departed Steamboat Bay about 0747 destined for Ketchikan, Alaska.

At 0843, the United States Coast Guard (USCG) Sector Juneau received a report from the Alaska State Troopers (AST) that a float plane had crashed near Sulzer Portage on Prince of Wales Island. Two MH-60J Sea Hawk helicopters were launched from USCG Air Station Sitka, and AST activated the Ketchikan Volunteer Rescue Squad (KVRS) and other rescue personnel utilizing Temsco Helicopters, Inc. of Ketchikan. Five helicopters were dispatched from Temsco to the search area and a staging area was established near the believed to be accident site. One of the helicopter pilots stated that he was unable to search the upper levels of the mountainous area

¹ All times are Alaska daylight time (AKD) based on a 24-hour clock, unless otherwise noted. Actual time of accident is approximate.

due to a low cloud ceiling and poor visibility. After receiving word that the USCG was approaching the search area, he returned to the staging area. A "First Alert" was received from the accident airplane's onboard emergency locator transmitter (ELT) at 0911. About the same time, 911 dispatch in Ketchikan talked to a survivor who provided GPS position and elevation based on data from her iPhone. At 1047 both USCG helicopters arrived in the search area and one helicopter obtained a weak direction finding (DF) bearing from the ELT at the crash scene. The DF bearing, and the survivor's description of the accident area were used to direct search assets in close proximity to the accident site, so the survivors could hear the USCG helicopters. Two-way radio communications were established between the survivors and USCG by utilizing the accident airplane's radio. The USCG located the accident site at 1156. At 1308 all 11 survivors had been hoisted into the USCG's rescue helicopter and transferred to the staging area for transport back to Ketchikan by Temco Helicopters.

D. DETAILS OF THE INVESTIGATION

The NTSB Operations Group members convened in Ketchikan, Alaska, on August 13, 2018, to conduct interviews with personnel from Taquan Air.

On August 14, interviews were conducted with the operator's chief pilot, flight coordinator and two check airmen.

On August 15, interviews were conducted with the accident pilot, another company pilot flying along the same route on the day of the accident, a company ground instructor, the operator's director of operations and the owner of the company.

On October 10, an interview was conducted with the FAA principal operations inspector (POI) for Grant Aviation.

On October 11, interviews were conducted with the FAA frontline manager and office manager from the Juneau flight standards district office (FSDO).

On October 31, interviews were conducted with the FAA POI for Taquan prior to the accident and the POI for Taquan at the time of the accident.

On November 1, an interview was conducted with the FAA principal maintenance inspector.

E. FACTUAL INFORMATION

1.0 History of Flight

During an initial telephone interview with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on July 11, the accident pilot reported that while in level cruise flight at about 1,100 ft mean sea level (MSL), and as the flight progressed into an area known as Sulzer Portage, visibility decreased rapidly from about 3-5 miles to nil. In an attempt to turnaround and return to VFR conditions, he initiated a climbing right turn. Prior to completing the 180° right turn, he saw what he believed to be a body of water and he became momentarily disoriented, so he leveled the wings. Shortly thereafter, he realized that the airplane was approaching an area of

snow-covered mountainous terrain, so he applied full power and initiated a steep, emergency climb to avoid rising terrain ahead. As the steep emergency climb continued, the airspeed decayed, and the airplane subsequently collided with an area of rocky, rising terrain. During the initial impact, the airplane's floats were sheared off. The airplane wreckage came to rest in an area known as Jumbo Mountain

The closest weather reporting facility was Hydaburg Seaplane Base (PAHY), Hydaburg, Alaska, about 9 miles west of the accident site. At 0847, an METAR from PAHY was reporting, in part: wind from 110° at 13 knots; visibility, 5 statute miles in light rain and mist; clouds and sky condition, few clouds at 900 ft, overcast clouds at 1,700 ft; temperature, 57° F; dew point 55° F; altimeter, 30.16 inches of mercury.

See the Meteorology Group Chairman's report for additional weather information.

2.0 Flight Crew Information

2.1 The Pilot

The pilot, age 71, held an Airline Transport pilot certificate with an airplane single engine land and sea, multi-engine land and sea, and instrument ratings. A second-class airman medical certificate was issued on December 6, 2017 and contained limitations of “must wear corrective lenses. Not valid for any class after 12/31/2018.”

A review of Taquan Air's personnel records² indicated that the pilot completed recurrent company training on May 13, 2018.

2.1.1 The Pilot's Flight Times

The pilot's flight times, based on Taquan Air's personnel records dated May 11, 2018, and the addition of company flying through July 10, 2018, were as follows:

Total pilot flying time	26755 hours
Total year to date	137 hours
Total previous 7 days	19 hours
Total night cross country	2000 hours
Total cross country	23000 hours
Total Alaska time	2700 hours
Total Instrument	2300 hours
Actual Instrument	2000 hours
Total DHC-3T time	306 hours ³

2.1.2 Pilot Flight and Duty Times

Taquan Air Flight Crewmember Rest and Flight Time Records⁴ indicated an assigned duty time of 0600 to 2000. Since Taquan Air flights were crewed by only one pilot, a limitation of 8 hours of scheduled flight time per duty period existed per federal regulations.⁵

² See attachment 3: Company Personnel Records

³ Time in type not located in company records, but rather was provided by the accident pilot

⁴ See attachment 4: Flight and Duty Records

⁵ See 14 CFR 135.267(c): Flight time limitations and rest requirements: Unscheduled 1- and 2-pilot crews

In the month of June 2018, the pilot was on duty for 25 days and flew about 84 hours, with 5 days off. In July 2018, the pilot was on duty for 7 days, including the day of the accident, and flew about 28 hours, with 3 days off.

2.1.3 Pilot 72-Hour History

On Saturday, July 7, he flew 4.3 hours.

On Sunday, July 8, he was off from work.

On Monday, July 9, he flew tours to Misty Fjords totaling 5.3 flight hours. He went to bed about 2100 that night.

On Tuesday, July 10, he awoke about 0415. After he awoke, he checked weather and weather cameras on his computer. He received a ceiling report from dispatch after he arrived at work shortly before his show time of 0600 and departed to Steamboat with 4 passengers and some baggage about 0625. At Steamboat, he unloaded and reconfigured his aircraft to accommodate 10 passengers, loaded the passengers and departed back to Ketchikan about 0745. This was the accident flight

2.1.4 The Pilot's Personal Background

The pilot resided in Key West, Florida permanently and resided in Ketchikan during the summer months and had no major life changes in the 12 months before the accident. He did not have any problems sleeping and reported normally getting 6 hours of sleep and waking feeling rested. He woke feeling well rested on the morning of the accident after having gotten about 6 hours sleep nightly in the preceding 3 days. He considered himself more of a morning person.

The pilot was wearing bifocals at the time of the accident as required per his medical certificate. He characterized his general health as good and experienced a general decline of his hearing with age that did not impede his flying or conversing with passengers. The pilot was a nonsmoker and did not take any medication or drugs in the preceding 72 hours that would have affected his performance; he last consumed alcohol about 2-3 days before the accident.⁶

2.1.5 Pilot's Post-Accident Toxicological Testing

Post-accident drug and alcohol testing was accomplished on samples taken from the pilot on the day of the accident in accordance with FAA and DOT regulations. The tests were negative for alcohol and illicit drugs.

3.0 The Airplane

Manufacturer's Serial Number (MSN): 225

The de Havilland DHC-3 Otter is a single engine, propeller driven, single pilot, high wing, short take-off and landing (STOL) airplane originally designed in the early 1950's. The airplane was

⁶ See attachment 1: Company Interviews

equipped with a cruciform tail and either conventional landing gear or floats. The airplane was 45 feet, 10 inches long, 12 feet, 6.6 inches high at the tail and had a wing span of 58 feet. The original airplane was powered by a single reciprocating radial engine but could be converted to turbine engine power by Supplemental Type Certificate (STC). The accident airplane was powered by a Pratt & Whitney Canada PT6A turboprop engine in accordance with Vazar, Inc. STC SA3777NM and equipped with International Aeroproducts Model 8100 floats in accordance with Anew Sioux Enterprises, Ltd. STC SQ01825NY. The type certificate for the airplane is currently owned and maintained by Viking Air Limited, Sidney, British Columbia, Canada.

The pilot reported no mechanical malfunctions or anomalies that would have precluded normal operation. In an interview, when asked if he remembered any issues with the airplane, he replied "...the airplane was running great."

3.1.1 Weight and Balance

No record of a completed weight and balance calculation was located with the aircraft wreckage. Section 3 of the General Operations Manual under *Weight and Balance*, it stated that a weight and balance computation will be performed unless the pilot knows without a doubt that the particular loading condition is within the weight and CG limits of the airplane. No guidance or explanation of "without a doubt" could be located in the GOM.

Title 14 CFR 135.63(c) required only operators of multi-engine airplanes prepare and retain load manifests.

4.0 Company Overview

Taquan Air is a 14 CFR Part 135 air carrier that holds on-demand and commuter operations specifications.⁷ The air carrier is authorized to conduct business exclusively under the business names "Venture Capital, LLC" or "Taquan Air." The company headquarters is located in Ketchikan, Alaska. At the time of the accident, the president, chief pilot and director of maintenance all resided in Ketchikan, and the director of operations (DO) resided in Anchorage, Alaska. The company was operating 15 airplanes, of which 3 were DHC-3T Turbine Otters, and employed about 25 pilots, with most working on a seasonal basis.

According to the director of operations, Venture Capital LLC was operating about four trips per day per airplane, totaling about 60 operations per day.

4.1 Operations Management

The Venture Capital LLC General Operations Manual (GOM), section 1, described the company's organization, including its organizational chart, and the duties and responsibilities of managers. Two flow charts existed within the GOM; one titled *Taquan Air Management Flow Chart* and the other simply titled *Organizational Chart*.⁸

⁷ See attachment 5: Operations Specifications

⁸ See attachment 6: GOM Section 1

The management flow chart depicts pilots reporting to the chief pilot, who in turn reports to the DO. “Counter and tour help” reports to dispatch, who in turn reports directly to the DO. The director of safety position is not depicted on this chart.

The organizational chart depicts pilots reporting to check airman/training officers, who then report to the chief pilot, followed by the DO. This chart depicts a director of safety position that reports directly to the company president.

The GOM identified the DO, chief pilot and company president as individuals authorized to exercise operational control.

4.1.1 Director of Operations

The DO was hired for the position at Taquan in January, 2016. In October of 2017, he was hired as the chief pilot for Grant Aviation, a large scheduled Part 135 Air Carrier and promoted to DO in April, 2018. Although this new position was in Anchorage, Alaska, to which he moved in October of 2017, he continued to hold the DO position at Taquan. In addition to holding two Part 119 positions, he was also a contract simulator instructor for Alaska Airlines.

The GOM section 1 stated that the DO was responsible for “ensuring that both flight crews and operational control employees comply with the published policies and procedures with respect to both Taquan Air Ops Spec A008 and herein.” It also stated that the DO would routinely delegate the duty of Operational Control to the flight coordinator on duty. However, under the title *Duties and Responsibilities of Management Personnel*, Operational Control is not listed for the DO. This section states, among other duties, that the DO will have the authority and responsibility to perform the duty of safety officer for flight operations, as well as obtain and disseminate aeronautical weather data for the control of flight operations.

When asked to describe his roles and responsibilities as DO, he stated: “So, my primary role is the administrative side of our operating certificate and specifically, the first thing that I look at is I look at safety as my number one responsibility, just to keep the operation safe. The second part is to be compliant. Making sure that we’re following everything that our manual’s that we said, we told the FAA we would...Number three, I support the chief pilot and in that position what they’re doing. And also work with our director of safety and then I, auditing and I manage our Shield.”

When asked how he ensured the operation was compliant with what was in the manual, he stated that this was accomplished through observation first, then through the “director of maintenance, the chief pilot, to the senior pilots, to our senior pilots, to the flight coordinators and then talking to individual pilots.”

The flight coordinator said, at the time of her interview, that the last time she saw the DO was the previous month and “probably two months before that.” If needed, she could converse with him on the phone, but had not spoken with him since the previous month when he was in Ketchikan.

The DO stated that the visit for the NTSB interview was either his fourth or fifth trip in 2018 to Ketchikan and he visited “maybe” two times in 2017 after moving to Anchorage.

The chief pilot stated that when trying to prioritize tasks, the "...kind of things that get put off are typically the DO's job..." He said during the wintertime, "one guy can do everything. But once we expand in the season, then there's a lot more to do."

When the president of the company was asked how the absence of the DO had affected the operation, he stated that the reason the DO wasn't in Ketchikan was because he had moved to Anchorage to be with family and since they needed a DO, they used him on a part-time basis. He stated that the chief pilot had taken over "officer of the deck." He said he thought he came to Ketchikan once a month, but he could not remember if he called in often or not. He added:

"We're just basically using him for his recordkeeping, as we needed a, we need a DO. We've had a challenge finding [a new DO]. We looked internally and we've had some options, but we found one externally that, it wasn't an ideal situation, but it seemed to work."

4.1.2 Chief Pilot

The chief pilot was hired for the position of chief pilot at Taquan in September of 2014. Prior to Taquan, he was a line pilot and company instructor at Promech Air, Ketchikan, Alaska from May 2010 until September 2014. He had about 16,000 total flight hours, of which about 5,000 were accumulated in Alaska. He resided in Ketchikan.

The GOM listed the chief pilot duties as flight crew hiring and supervision, training supervision, training and flight crew records, check airman supervision, training schedule, flight crew scheduling, training manual maintenance, revision and distribution, anti-drug program supervisor and managing the controlled flight into terrain avoidance (CFIT-A) program.

In an interview, when asked to describe in his own words, his duties and responsibilities, he replied:

"My main duty, and it changes throughout the year, pilot staffing. So, I'm responsible for finding pilots, hiring pilots; maintaining schedule, pilot schedule and training schedule; maintaining the pilot records, scheduling check rides, check airman, scheduling training.

On a day-to-day basis, I take care of problems as they come up, making the decision whether to hold or go on a flight, which route to take. I'm all -- I'm part of that decision-making process. Also, just monitoring pilot performance and behavior. Things come up, we need to make corrections, we need to do some additional training. If there's a problem with our procedures, if something isn't going right, I'll issue a pilot memo to revise procedures as needed.

What else do I do? Everything. We're -- I've been doing a lot of the DO duties as well. He's not here on-site, so I've been handling some of the operational, what would you call that, updates."

He continued by explaining that the DO duties include GOM revisions, ensuring charts and current weight and balance data is in the aircraft, maintaining the Medallion program with audits and safety reports and ensuring those safety reports are forwarded to the correct party and following through to make sure they are being handled accordingly.

When asked about communication with the DO, he stated that he would speak, text or email with the DO several times per month, or more if needed. However, he said he has been able to handle most of the issues himself.

4.1.3 Flight Coordinator

The Taquan Air Management Flow Chart did not depict a job title of “Flight Coordinator,” but did list “Dispatch” which reported to the DO. The organizational chart, however, had a box labeled “Flight Coordinators/Dispatch” which it depicted as reporting to the station manager, who in-turn reported to the DO. The only other times the term “dispatch” is used is in section 3 of the GOM where it stated: “A current Alaska flight supplement will be in the control of dispatch for pilot reference” and “If the pilot in command finds a destination iced over and not suitable to operate from, the dispatch must be notified and an alternate plan worked out” as well as one reference to med-evac flights.

The GOM listed seven responsibilities for the flight coordinator position, none of which included operational control. Per the qualifications section in the GOM, the flight coordinator was not required to hold a FAA Dispatcher Certificate. The flight coordinator on duty at the time of the accident; however, held a FAA Dispatcher Certificate which was issued August 28, 1999.

In an interview, she described her daily duties as checking the weather, completing a risk assessment and tracking flights. She stated that she had no operational control, which was contrary to information provided by the chief pilot and DO in interviews; they both stated flight coordinators were given limited operational control.

When asked about the role of the flight coordinator, the DO described more of a planning role for flights. They would get passenger counts from cruise ships, cargo or freight for charter operations and develop the operational plan based upon that information. Prior to flights departing, they would check the weather and do their own risk assessment to give to the pilots. They then follow the progress of the flights to ensure they are progressing normally.

The chief pilot stated that dispatch was divided as a result of the absence of a full-time DO. He said the station manager was responsible for the flight coordinators as far as hiring was concerned, but there was confusion over the organizational management structure. Typically, the DO would have oversight and give direction to the flight coordinators, which is where the confusion was; with the DO being absent, it was unclear who told dispatch what needed to be done.

5.0 Company Operational Control Procedures

5.1 Operations Specifications Paragraph A008, Operational Control

FAA Order 8900.1, Volume 3, Chapter 25, Section 5, 3-2029, D, states, in part:

The system and procedures to maintain operational control used by an operator must be described or referenced in OpSpec A008. It is preferable to complete OpSpec A008 with references to an operator's manual or sections of an operator's manual that describe the system and/or procedures used by that operator. It is not necessary to control these references by date. The references should be changed only when a revision to the operator's manual makes the reference in the OpSpecs incorrect. In the case of a certificate holder issued a deviation from the manual requirements, (e.g., a certificate holder issued OpSpec A037, A038, A039, or A040) those procedures may be entered directly into OpSpec A008 itself.

1) Often, it may not be appropriate to use references in OpSpec A008. In these cases narrative descriptions may be necessary. When a narrative description is used, it should be brief but provide sufficient information so that the FAA and the operator have the same understanding about the system and/or procedures used by the operator.

2) The description of the systems and/or procedures for controlling flight movement as described in the operator's manual (which is referenced in OpSpec A008), or described in a narrative in OpSpec A008, must include the following information, as appropriate to the kind of operation:

- a) Methods and procedures for initiating, diverting, and terminating flights.*
- b) Persons or duty positions authorized to, and responsible for, exercise of operational control.*
- c) Facilities and location of facilities used by the operator in the exercise of operational control.*
- d) Communication systems and procedures used by the operator.*
- e) The methods and/or procedures used by the operator to ensure all authorized aircraft are Airworthy.*
- f) Emergency notification procedures.*
- g) Methods and procedures for ensuring that assigned crewmembers are qualified before and during all flight operations.*
- h) Methods and procedures to ensure the assigned PIC knows the certificate holder's responsibilities to exercise operational control.*

3) The POI, in coordination with the principal maintenance inspector (PMI) and principal avionics inspector (PAI), must evaluate and substantiate submitted information. If the POI does not concur with the operator's proposal, he or she will forward a letter to the operator denying the proposed system with an explanation of the reasons for denial. The operator should contact the POI to address the POI's concerns. If the POI concurs that the operational control system should be approved,

he or she will prepare and forward a letter to the operator accepting the proposed system.

Of the above required information, no reference could be located within the GOM or Operations Specifications Paragraph A008 that addresses subsection 2.a and 2.c-h. Additionally, a review of FAA surveillance records did not reveal any concerns by the FAA that the GOM did not contain the required information. Although this section of FAA Order 8900.1, change 500 was dated December 7, 2016 and the acceptance of GOM revision 11 was dated March 25, 2016, surveillance records indicate that the FAA did surveil operational control in 2017 and 2018. The flight coordinator on duty at the time of the accident stated that she had been observed by the FAA conducting flight coordinator duties and while she could not recall the exact date, she thought it occurred in April 2018.

Operations Specifications Paragraph A008 (Operational Control) was issued to Venture Travel LLC by the FAA on January 20, 2010, and stated in part:

See GOM Section 1-4, 1-5, 1-6, 1-7

The Taquan GOM sections referenced above did not explain the procedures utilized for the initiation or conduct of flight movements. The information contained in this section of the manual was a restatement of the certificate holder responsibilities listed on Operations Specifications Paragraph A008.

5.2 FAA Guidance for Inspectors for Operational Control

5.2.1 Two-Tiered Operational Control Concept

14 CFR 135.77 Responsibility for operational control states:

Each certificate holder is responsible for operational control and shall list, in the manual required by §135.21, the name and title of each person authorized by it to exercise operational control.

FAA Order 8900.1, Volume 3, Chapter 25, Section 5, 3-2029, G, states, in part:

The first tier is the assignment of flightcrew member(s) and aircraft for revenue service under the operating certificate. The assignment of crew and release of aircraft to revenue service is the responsibility of the certificate holder, and must be made by the management of the certificate holder or management delegates. In order to be delegated the authority to make these decisions, the management delegates must be trained, found competent, and designated by the certificate holder, be listed in the GOM (or in OpSpec A006, A039 or A040, if applicable), and be under management supervision. Management supervision means, for example, that the certificate holder tracks the actions of the management delegate or employee, samples the work of that employee (reviews a sample of the decisions made), and has the ability to enforce the certificate holder's standards through corrective actions such as retraining, requalification, or disciplinary actions such as disqualification, demotion, suspension, or termination. Because the certificate

holder is responsible for the conduct of its employees or agents, it must have the ability to monitor and control their performance.

The second tier of operational control is more tactical. This involves the decisions made by personnel (such as the PIC) in the day-to-day conduct of operations. This may include the initiation of flights upon the PIC receiving a request from the customer directly (often the case in on-demand operations being conducted under a dedicated service contract, such as offshore operations or emergency medical service (EMS)). This is acceptable if the PIC is authorized by the certificate holder to make those decisions on behalf of the certificate holder. To do so would require that the PIC be trained, found competent by the certificate holder, designated, be listed in the GOM (or in OpSpec A006, A039, or A040, if applicable), and be under management supervision. If maintaining a list of these personnel in the GOM is too cumbersome, a list of these personnel may be maintained at the air carrier's principal base of operations and referenced in the GOM. The method of maintaining and distributing this list to all affected parties must be described in OpSpec A008 or in the GOM.

The GOM (or other appropriate documentation) must contain guidance which describes the certificate holder's operational control system. The training program must provide the certificate holder's personnel with the knowledge and skills required to ensure that the operational control system is effective.

The GOM did not list anyone by name as having operational control other than the DO, chief pilot and president. The DO, chief pilot, flight coordinator, safety officer and check airmen all stated that operational control could be and was routinely delegated to senior pilots in the absence of the chief pilot. Operations Specification A008 did not mention the flight coordinators or senior pilots and A006 only listed the 14 CFR §119 management officials by name. The method of maintaining and distributing the list of operational control delegates was not described in the GOM or Operations Specification A008.

The GOM stated that the DO "routinely" delegated the duty of operational control to the Flight Coordinator on duty. However, when asked to define operational control, the flight coordinator on duty at the time of the accident stated that it was a person designated by the company "to help make flight operation decisions, whether we are going to fly or are we not going to fly, and based on that, weather conditions for the day and at that moment." She further stated that she had no operational control as she was "the flight follower" (not a term defined by the GOM). Through additional questioning, she stated that she did have the authority to cancel a flight for weather or profitability concerns. When asked if she could initiate a flight, she initially said "no, the pilots initiate the flight," but after being asked if people walk in and ask for a tour, could she arrange that, she replied "yes, with concurrence with the person that's in operational control."

When asked how operational control was performed at Taquan, the DO stated in an interview:

"All right, it starts with the director of operations position through to the chief pilot. We maintain the actual ability to dispatch flights and then we offer, have limited operational

control which we give to our flight coordinators under certain conditions. And we will, as an indicator -- let me be real simplistic for a second. We'll go out, we'll look at the weather, see what it's doing and then we'll say okay, we've checked, it looks good you have limited operational control. So, nothing changes, go forth."

The president of the company described operational control as "having someone ...that has the ability to check the weather." He stated that the person with operational control was there to assist the pilot and flight coordinator when trying to make a launch decision, whether for weight, pilot experience or weather concerns. When asked who had the ultimate authority for operational control, he said the DO did and added "but he's not here."

He stated that he could have operational control, but when asked if he was listed anywhere as having that authority, he was not sure. He stated that he was listed as the Agent for Service with the FAA and was qualified to hold the positions of chief pilot or DO.

5.2.2 FAA Order 8900.1 Summary of Operational Control

FAA Order 8900.1, Volume 3, Chapter 25, Section 5, 3-2029, K, states, in part:

Only approved persons may exercise operational control on the certificate holder's behalf.

The certificate holder must have adequate controls in place to ensure that officials in a position of authority over flights conducted under the certificate do so safely, and in compliance with the regulations, OpSpecs, GOM, as applicable, and accepted or approved procedures.

Management of operations should never be inattentive, distracted, or careless. Hands-off management is not a legitimate excuse for failing to maintain operational control.

5.3 Title 14 Code of Federal Regulations Part 119, Sec. 119.69

Title 14 CFR 119.69, Management personnel required for operations conducted under Part 135 states, in part:

That anyone in a position to exercise control over operations conducted under the operating certificate must be qualified through training, experience, and expertise, and to the extent of their responsibilities, have a full understanding of the following material with respect to the certificate holder's operation; aviation safety standards and safe operating practices; 14 CFR Chapter I (Federal Aviation Regulations); the certificate holder's operations specifications; all appropriate maintenance and airworthiness requirements of this chapter (e.g., parts 1, 21, 23, 25, 43, 45, 47, 65, 91, and 135 of this chapter); and the manual required by Sec. 135.21 of this chapter; and discharge their duties to meet applicable legal requirements and to maintain safe operations.

5.3.1 Flight Coordinator Training

The flight coordinator on duty at the time of the accident, stated in an interview that the training at Taquan mostly consisted of on-the-job training (OJT). She described it as “looking at weather, putting flights together, how the flights play. Looking at how all the flights go together” so they are profitable. Additionally, she stated: “It fully takes probably at least two years, I think, to train a dispatcher. A flight follower. We’re not dispatchers.” When asked if there was a classroom portion, she said that there was, and it was conducted with the pilots. It lasted one day, about 8 hours and recurrent training was conducted annually.

The chief pilot, when asked about flight coordinator training, stated that it was outlined in their Medallion program and that the DO did the training.

The DO stated that the ultimate responsibility for training the flight coordinators was with the DO. When asked if he came out to conduct the training with them, he said no, and he was also unaware of any hiring qualifications for flight coordinators. He stated that he was not involved in that process.

5.4 Taquan Risk Assessment Process

5.4.1 Risk Assessment Process Documentation

The Taquan Flight Operations Manual, Operations Specifications, and Training Manual did not include mention of a risk assessment process. Details on the risk assessment process was found in a document titled “Medallion Operational Risk Management (ORM) Implementation Manual.” Two electronic versions and one hard copy of the manual was provided to investigators to review. One file named “Operational Risk Management.pdf” was 4.2 MB in size. This file will be referenced in this document as ORM Implementation Manual X. The other electronic version with file name “Operational Control Program and Audit.pdf” was 7.6 MB in size. This file will be referenced in this document as ORM Implementation Manual Y. This version appeared to be kept in hard copy inside the DO office at Taquan headquarters. Many aspects of the two documents were similar, and ORM Implementation Manual X is used primarily in this section to detail Taquan’s risk assessment process.

According to ORM Implementation Manual X

“A program has been created to assess risks such as landing area, equipment, human nature, weather, and any other factors that can affect flight safety. After assessing information of each element, a numerical value is assigned accordingly. The information is then used to help establish criteria for the flight risk assessment form. Prior to a flight, the dispatcher will add the numerical values of risk and the sum will determine the assessed risk for the trip. If the pilot disagrees with the assessed risk because of knowledge that the flight coordinator does not have (i.e. his/her child is sick, death in family) he/she may add numerical value to the trip. If the value of assessment changes”

This page ended here with another section beginning the following page. While not apparent in ORM Implementation Manual X, ORM Implementation Manual Y completed the final sentence:

“If the value of assessment changes by 6 units, a manager must be alerted to watch for any trends.”

ORM Implementation Manual X stated the following regarding the risk assessment form shown in figure X:

“Taquan Air has provided a form to assess the total risk involved for each flight. Prior to any company flight dispatch, the risk assessment form must be filled out and include all pertinent signatures. The flight coordinator will gather information for each flight to fill out the risk assessment form. The flight coordinator and the PIC for that flight will each sign the form indicating that they are both aware of the information on the form and are equally responsible for the dispatching of that flight. In the event a flight will be made outside of normal business hours, the pilot shall gather all pertinent information, fill out a risk assessment form, sign it, and leave it in the dispatch office. If the risk number is above 10, he/she must contact management before proceeding with the flight...”

ORM Implementation Manual X also stated the following regarding the duties and training of the flight coordinator:

“The intent of this portion of the manual is to give flight coordinators shared responsibility, with the pilot, for pre takeoff decision-making.

The flight coordinator will gather information about the flight as to destination, weather, pilot, load, and other pertinent information. The information will be used to fill out the risk assessment paperwork. If the risk is a factor of 20 or less then the flight will be considered routine and the flight coordinator and the pilot will both sign the form to acknowledge the fact before the flight is released. In this case the form may be hand carried to the pilot on the dock by ramp personnel and there signed by the PIC. If the number falls between 21 and 35 the person in operational control will be notified, then the flight coordinator and the pilot will sign the form before the flight is released. In this case the pilot will be briefed by the flight coordinator as to the risks involved before the PIC signs the risk assessment form. If the number is between 36 and 45 the person in operational control must consider all information and make a go or no-go decision. If it is a go decision, he/she must also sign the risk factor paperwork in addition to the flight coordinator and the pilot before the flight is released. If the risk number is 46 or more the flight will be canceled. In any of the cases above the PIC may elect not to go, or the flight coordinator may elect not to release the flight. In either of these circumstances, the flight coordinator will make alternate plans.

All flight coordinators will attend Taquan Air Flight Coordinator recurrent training. The focus of this training is on the applicable duties of a flight coordinator. One on one training is approved. Approved instructors include Company Instructors, Check Airmen,”

The following page began with:

“make alternate plans. The ORM program manager must maintain these notifications to determine if there is a trend showing that the program needs to be re-evaluated and modified.

All company flight coordinators will attend our annual pilot recurrent training program. The training will take place each 12 calendar months. As new flight coordinators are hired, they attend initial pilot training as part of their training. Flight coordinators will be exempt from the portions of training that have to do with seat removal, use of fire extinguisher, use of emergency exit, use of flotation devises, survival in uninhabited areas, use of cargo restraints, and aircraft performance. However, fuel endurance, weight and balance, and flight maneuvers will be a required part of their training. In addition, the flight coordinators will also complete the elements listed in the flight coordinator's training manual.”

Taquan Air **FLIGHT RISK ASSESSMENT**

DATE: _____ AIRCRAFT: _____ DESTINATION: _____ Pilot: _____ Manifest#: _____

INSTRUCTIONS: Complete all sections during flight planning. Crews submit risk assessment worksheets to flight records with post flight paper work. Please write any suggestions on reverse side. Add all that apply.

EQUIPMENT		MANPOWER	
Short Notice / Change	2	End of Duty Day (After 10 hours)	2
Dawn / Dusk	2	More than 5 Hours Previous to this Flight	2
Instructor/ Ck Airman on Board	-2	Two Destinations. Add+1 for each Additional	2
Load > 1000 Lbs.	2	Unfamiliar Destination	3
Load Both Ways>80% Gross	2	Last Flight > 14 Days Ago	2
Landing Near Gross	2	Personal Commitment Following Flight	2
Winds Aloft 30Kts. or > at 3000	4	Recent Divorce	2
Surface Winds 30Kts. or greater	6	Recent Death in Family	2
No Weather within 10 Mi.	2	Illness in Family	1
More than 30 Minutes from Home Base	1	Less than 500 Hrs. in Type	2
More than One Hour from Home Base	2	Less than One Year with Company	2
		more than 5 days in a row. Add+2 for each add	2
		New to Area	2
Weather			
T/O VIS 2 - 4 Mi.	2	Cross Wind Component > 10 Knots	2
Snow Squalls	3	Precipitation	2
VFR Enroute <2000 - 5	3	Icing Possibility	4
Glassy Water	2	Turbulence Possibility	2
Sea More than 2 Feet	4	Temp/ Dewpoint < 3 Point Spread	2
Temp Below 30 Degrees	4	Gust Factor > 15 Knots	3
Temp Below 20 Degrees	6	Unreliable Weather Source	4
LANDING AREAS*		POINT TOTALS	
Restricted T/O Run	5	EQUIPMENT:	0
Rocky Beach	4	MANPOWER:	0
Reefs in Area	5	WEATHER:	0
Company Wind Chart	-2	*LANDING AREAS:	0
No Company Comm. from Beach (Remote area)	4	**OTHER FACTORS:	0
One Way APP / DEP	6	GRAND TOTAL:	0
*Landing areas - With multiple landing areas, use the highest airport risk factor. If an airport analysis exists, use the number for landing area - if not, use landing area chart on this form. Landing area with a minus (-) value, use "0" ** Other Factors- Can include anything relevant to a flights safety (high winds, Turb, Low Vis, etc.) value, use "5"			
RISK FACTOR	TOTAL	ACTION	
LOW	0 - 10	PILOT & Flight Coordinator CONCURRENCE	
CAUTION	11 - 25	PILOT, Flight Coordinator & MANAGEMENT NOTIFICATION	
Management that was Notified:		CP: _____	DO: _____ Pres: _____ FC: _____
MEDIUM	26 - 35	PILOT, Flight Coordinator & MANAGEMENT APPROVAL	
HIGH	36 or above	CANCEL FLIGHT	
CP: Chief Pilot DO: Director of Operations Pres: President FC: Flight Coordinator		Flight Coordinator In.: _____ Supervisor In.: _____ Pilot Signature: _____	
Weight & Balance Info.			
Aircraft Weight: _____	Index: _____		
Aircraft Weight: _____	Index: _____		
Aircraft Weight: _____	Index: _____		
Aircraft Weight: _____	Index: _____		

Revision III

Figure X: Example of Taquan Air Flight Risk Assessment Form

5.4.2 Operational Use of Risk Assessment Form

One pilot described the risk assessment form as: “highlighting areas of potential risk and then assigning a number and then the number corresponds with certain types of actions. Whether it involves a management persons signoff before you, before you fly” company pilots and the flight coordinator that was interviewed stated that the flight coordinator initially filled out the risk assessment form. The flight coordinator stated that flight coordinators typically filled out all of the sections on the form. Flight coordinators filled out the weather portion based on observations and reports from outlying stations or other aircraft. Flight coordinators also filled out the “Manpower” using the duty sheet, daily dispatch sheet, by asking the pilot various questions, and by getting information from the chief pilot. The DO stated that the flight coordinator only completed the first portion of the form and pilots filled out the “Manpower” section.

Regarding when he saw risk assessments, one pilot stated that he assumed it was printed a few minutes ahead of time or about the time he was ready to go. Line pilots, management, and flight coordinators all agreed that the pilot did have the authority to change, add, or update information to the form. While dispatch and management believed that pilots provided feedback to the assessment often, line pilots stated the contrary: that while they all had the authority to make changes, none could recall an instance where they had provided feedback to the risk assessment. One pilot viewed the form as “...just a piece of paper with some ink on it” and based go/no go decisions on his experience and research instead.

One pilot stated that he did not review the manpower section in big detail. Line pilots stated that they used the form by scanning the information, assessing whether it was consistent with their own assessment of the weather, and signing the form. One pilot stated that if there is a big number, he looks to see what was driving the risk. Another pilot described his duties regarding the risk assessment form: “My job is basically to review it and then sign” where higher numbers indicated where potential risks would be. The accident pilot described his interaction with flight coordinators typically: “If I have a question on it, I can truly ask them. And usually, they're coordinating with, say, the safety officer, ... and they're talking about the weather the whole time. And [the lead flight coordinator's] really good about that. She almost always says something about the weather and would even throw in some comments usually about you don't have to get in there, you know, if you want to turn around, no problem, you know, that kind of thing. So, there's quite a bit of give and take. Basically, more informal than, say, let's go over this risk assessment or anything like that.”

Above a certain total risk number, management (DO, CP, or designated senior pilot in operational control) approval or advisement was required for dispatch of a flight. When asked what he looked for when providing approval or advisement for dispatch, the chief pilot stated that he was looking at “the overall number. I'm looking at the pilot, who's the pilot, what's the mission, and what's their risk factor. If it's a high number, I want to know why. Why is it -- is it based on weight, is it based on conditions, and then weigh that.” He stated that numbers in the 20s, he would consider to be high and that they routinely see numbers in the teens. The flight coordinator stated that risk assessment numbers typically went into the teens or higher when there was a bad weather day or if there was a pilot new to the operation.

Pilots and management agreed that the form was adequate in its current form. None of the pilots interviewed recalled cases where they had encountered risks not accounted for on the form and had to cancel a flight, or cases where the information on the form was a surprise to them. The flight coordinator stated that it was common for pilots to come back to dispatch with new information on weather and that they had put flights on hold based on this information.

The chief pilot stated that they do a risk assessment in the morning and if the conditions remain the same, they did not fill out another form. The flight coordinator stated that she assessed the temperature dewpoint spread for every flight and updated that on the form if it was appropriate. The DO stated that “if you look in our manual, it will say we drive those numbers to the lowest common denominator. Such as an example, if we're going to fly a trip with multiple legs, the most restrictive leg in there becomes the controlling number for the entire mission. Or we may just opt to take it out of the equation and now the most restrictive one with that one gone drives the equation.”

5.4.3 Training on Use of Risk Assessment Form

The chief pilot stated that training on the risk assessment form was outlined in their Medallion program and the DO conducts the training. One of the line pilots stated that the chief pilot was the one conducting the training.

Pilots stated that they were trained on how to read the risk assessment form during basic indoctrination training and did not receive training on how to fill out the form. The flight coordinator who was interviewed stated that they went through risk assessment training with the pilots as well as with their station manager when they were hired.

When asked about guidance for the risk assessment training, investigators were pointed to the risk assessment form section of the “Operational Risk Management (ORM) Implementation Manual. This section excerpt is provided below:

RISK ASSESSMENT FORM

Taquan Air has provided a form to assess the total risk involved for each flight. Prior to any company flight dispatch, the risk assessment form must be filled out and include all pertinent signatures. The flight coordinator will gather information for each flight to fill out the risk assessment form. The flight coordinator and the PIC for that flight will each sign the form indicating that they are both aware of the information on the form and are equally responsible for the dispatching of that flight. One risk assessment for each destination per day is adequate unless conditions change as outlined.

The weather briefing provided by Operations Personnel prior to the first flight of the day will be sufficient for the remainder of that day or until a new terminal or area forecast is published that is significantly different from the previous or there is an unforecasted change in the weather. If the new forecast is significantly different, then operations will brief the pilot on the latest weather forecast or weather change prior to the next flight. In the event a flight will be made outside of normal business hours, the pilot shall gather all pertinent information, fill out a risk assessment form, sign it, and leave it in the dispatch office. If the risk number is above 20, he/she must contact management before proceeding with the flight. The pilot will then file a flight plan with the appropriate agency (flight service or the Forest Service) before departure.

The total risk value for the flight is determined by the sum of all risk values involved. The following scale determines change in authority to dispatch the trip:

20 or less: The trip will be considered routine where as only the pilot and dispatcher need to concur by signing the form.

21-30: There must be a management notification that is documented by flight coordinator initials in addition to the pilot and dispatcher concurrence. The appropriate manager must also be indicated on the form.

36-45: There must be a management approval and signature on the form indicating agreement in addition to the pilot and dispatcher concurrence. The appropriate manager must also be indicated on the form.

46 or higher: The trip should be canceled and rescheduled for a better time.

FIGURE 1: Excerpt from the hard copy of the “Operational Risk Management (ORM) Implementation Manual” at Taquan Headquarters

5.4.4 Accident Flight Risk Assessment.

Figure 2 depicts the risk assessment form for the accident flight. The total risk score was 13 driven by:

- Load >1000 lbs (2 points)
- Load Both Ways > 80% Gross (2 points)
- Landing Near Gross (2 points)
- More than 30 minutes from Home Base (1 point)
- Two destinations (2 points)
- No company Comm from Beach (Remote Area) (4 points)

The risk score of 13 fell into the CAUTION zone (scores from 11 to 25) which required management notification. Signatures of the flight coordinator, chief pilot, and pilot were apparent on the form.

Taquan Air
FLIGHT RISK ASSESSMENT

DATE: _____ AIRCRAFT: _____ DESTINATION: _____ Pilot: _____ Manifest#: _____

INSTRUCTIONS: Complete all sections during flight planning. Crews submit risk assessment worksheets to flight records with post flight paper work. Please write any suggestions on reverse side. Add all that apply.

EQUIPMENT		MANPOWER	
Short notice/change	2	End of Duty Day (After 10 hours)	2
Dawn / Dusk	2	More than 5 Hours Previous to this Flight	2
Instructor/ Ck Airman on Board	-2	Two Destinations. Add+1 for each Additional	2
Load > 1000 Lbs.	2	Unfamiliar Destination	3
Load Both Ways > 80% Gross	2	Last Flight > 14 Days Ago	2
Landing Near Gross	2	Personal Commitment Following Flight	2
Winds Aloft 30Kts. or > at 3000	4	Recent Divorce	2
Surface Winds 30Kts. or greater	6	Recent Death in Family	2
No Weather within 10 Mi.	2	Illness in Family	1
More than 30 Minutes from Home Base	1	Less than 500 Hrs. in Type	2
More than One Hour from Home Base	2	Less than One Year with Company	2
		more than 5 days in a row. Add+2 for each add	2
		New to Area	2
Weather			
T/O VIS 2 - 4 Mi.	2	Cross Wind Component > 10 Knots	2
Snow Squalls	3	Precipitation	2
VFR Enroute < 2000 - 5	3	Icing Possibility	4
Glassy Water	2	Turbulence Possibility	2
Sea More than 2 Feet	4	Temp/ Dewpoint < 3 Point Spread	2
Temp Below 30 Degrees	4	Gust Factor > 15 Knots	3
Temp Below 20 Degrees	6	Unreliable Weather Source	4
LANDING AREAS*		POINT TOTALS	
Restricted T/O Run	5	EQUIPMENT:	7
Rocky Beach	4	MANPOWER:	2
Reefs in Area	5	WEATHER:	0
Company Wind Chart	-2	*LANDING AREAS:	4
No Company Comm. from Beach (Remote area)	4	**OTHER FACTORS:	0
One Way APP / DEP	6	GRAND TOTAL:	13
*Landing areas - With multiple landing areas, use the highest airport risk factor. If an airport analysis exists, use the number for landing area - if not, use landing area chart on this form. Landing area with a minus (-) value, use "0" ** Other Factors - Can include anything relevant to a flights safety (high winds, Turb, Low Vis, etc.) value, use "5"			
RISK FACTOR	TOTAL	ACTION	
LOW	0 - 10	PILOT & Flight Coordinator CONCURRENCE	
CAUTION	11 - 25	PILOT, Flight Coordinator & MANAGEMENT NOTIFICATION	
Management that was Notified:		CP: <u> </u> DO: <u> </u> Pres: <u> </u>	
MEDIUM	26 - 35	PILOT, Flight Coordinator & MANAGEMENT APPROVAL	
HIGH	36 or above	CANCEL FLIGHT	
CP: Chief Pilot DO: Director of Operations		Flight Coordinator In: <u> </u> Supervisor In: <u> </u>	
Pres: President FC: Flight Coordinator		Pilot Signature: <u> </u>	
Weight & Balance Info			
Aircraft Weight: _____	Index: _____		
Aircraft Weight: _____	Index: _____		
Aircraft Weight: _____	Index: _____		
Aircraft Weight: _____	Index: _____		

When asked where observer reports of 500-800 ft ceilings at Steamboat with good weather enroute would fall on the risk profile, the chief pilot stated that "the pilot can make the decision if it -- if he can't maintain legal minimums, to divert" and that a 500 ft ceiling would not have significantly increased the risk given that "the weather was good enroute, we had reports better than 2,000 feet enroute"

Interviewers asked for clarification regarding the line item entitled “Unreliable weather source.” When asked what kind of weather source was available at Steamboat, he stated that they train their observers at Steamboat to look for landmarks and that they were not FAA trained observers.

Interviewers also asked for clarification regarding the line item “No weather within 10 miles.” The flight coordinator stated that this item would be included if there was not a source of reliable weather information within 10 miles. For steamboat, she stated that the closest source of reliable weather was Klawock.

6.0 Safety and Oversight Programs

Taquan’s safety program was outlined in its safety manual. Section 1 of the flight operations manual (FOM) stated the following company policy on safety:

“It is the policy of this company to provide the best in air travel safety and reliability. Well trained and professional employees are key to reaching this goal. To maintain the highest level of safety, all personnel must perform their duties in accordance with the procedures set forth in this manual, in compliance with Operations Specifications and the applicable FARs.”

According to Section 2 of the safety manual, safety related duties for management personnel, included the following:

“President

- Responsible for fostering a safety conscious climate
- Responsible for appointing a Director of Safety

Director of Operations

- Responsible for ensuring that dispatchers and deckhands are adhering to the policies and procedures in the Safety Manual and ORM Manual.
- Responsible for a safe working environment for deckhands that meets
- OSHA requirements.

Chief Pilot

- Responsible for ensuring that pilots are adhering to the policies and procedures in the Safety Manual and ORM Manual.

Director of Maintenance

- Responsible for ensuring that mechanics are adhering to the policies and procedures in the Safety Manual, Maintenance Manual and ORM Manual.
- Responsible for a safe working environment for mechanics and mechanic helpers that meets OSHA requirements.

Director of Safety

- Reports to the President.
- Submits safety recommendations/feedback to the President at least quarterly.
- Has responsibility for the Safety Program under the direction of the President.
- Responsible for the ERP manual and directs ERP exercises.
- Acts as the Safety Committee Chairman
- Responsible for maintaining an anonymous reporting and tracking system for
- safety issues.

- Reviews and revises the Safety Manual as necessary
- Provides advice and assistance on safety matters to managers at all levels
- Distributes safety information to all employees as necessary
- Maintains a safety information database and trend system

Station Manager

- Responsible for ensuring that dispatchers are adhering to the policies and procedures in the Safety Manual and ORM Manual.”

Section 3 of the FOM stated the following reporting responsibilities for pilots:

“Pilots are responsible to bring to the immediate attention of flight operations management, any practice or operating condition that could result in an unsafe situation or violation.

- Whenever a pilot encounters a potentially hazardous meteorological condition or an irregularity in a ground communication or navigational facility in flight, the knowledge of which the pilot considers essential to the safety of other flights, the pilot shall notify an appropriate ground radio station as soon as practicable”

The safety manual detailed various methods used to identify safety issues including employee safety reporting, internal audits, and occasional audits by outside entities such as the FAA, OSHA, EPA, and Medallion Foundation.

An employee safety reporting form (Form S-1) was contained within this manual.⁹ Names were considered optional on this form providing a method of anonymously reporting safety issues. The company provided a \$100 safety bonus at the end of each season for a recipient whose name was drawn from the list of those who filed safety reports. An additional bonus was available for an employee that “fixed” or solved a safety concern or hazard identified in a report, the recipient of which was also chosen by drawing. The director of operations stated that they averaged between 20-40 reports per year when he first started the job and the chief pilot stated that their goal now for forms was 100 per year. The chief pilot stated that the S-1 form was the most effective communication tool because it was written which enabled them to send them to the correct department and provided follow through, as well as track the reports. The safety manager stated that the S-1 forms typically went into an envelope that the chief pilot or director of operations emptied out. It was not a form available online. He stated that as safety manager, he didn’t have access to the safety reports or particularly resolve safety concerns mentioned within these reports. He described his role as being a backup to the chief pilot and director of operations with “household chores” related to safety. The chief pilot stated that managing the safety reports was one task typically handled by the director of operations, however in the DO’s absence, the chief pilot had been managing the reports and had put this task as a priority.

When asked to describe the company’s approach to managing safety, the director of operations stated that they stressed safety beginning with their interview process and repeatedly throughout training. They had new pilots fly only tours and had senior pilots ride along for observations. In

⁹ See attachment 7: safety reporting form S-1

addition, the flights flew in groups of aircraft – the pilot of one of which was someone more senior.

The safety manual detailed biannual safety meetings organized by the safety manager. The safety manager stated that safety meetings happen on average once every two months with pilots and are typically organized by the chief pilot. The latest safety meeting occurred immediately after the accident where CFIT avoidance procedures were emphasized to pilots.

Several pilots stated that a strength of the company's was their conservatism with regard to cancelling flights compared to other operators in the area. Pilots described a positive safety culture with good morale among the pilot group. The chief pilot did describe the lodge trips to be different from the tour trips they flew given that if they cancelled a lodge flight, the people in the lodges had nowhere to go. He stated that the lodges had come up with backup plans to get passengers back to Ketchikan if the Taquan flights could not be completed which alleviated some of the internal pilot pressure to complete the mission. Pilots described no external or company pressure to take flights they were uncomfortable with.

7.0 Terrain Awareness and Warning System

The accident airplane was equipped with two Chelton Flight Systems FlightLogic EFIS Integrated Display Units (IDU). The IDU units were identical part numbers and were configured to operate as primary flight displays (PFD) or multi-function displays (MFD). Using sensors, including solid state Air Data and Attitude Heading Reference System (ADAHRS), the PFD displayed aircraft parameter data including altitude, airspeed, attitude, vertical speed, and heading. The MFD displayed navigational information by way of a moving map. Additionally, the units in this accident included a terrain awareness and warning system (TAWS) that provided color-coded warnings of terrain on the MFD and, when enabled, aural alerts. As part of the TAWS system, the PFD was capable of providing a profile view of terrain ahead of the aircraft ("synthetic vision").

The FlightLogic EFIS IDU features integrated Class B TAWS or, optionally, Class A or C TAWS or Class A or B Helicopter TAWS (HTAWS). The IDU provided TSO-C151b TAWS functionality. Depending upon aircraft configuration settings and external sensors/switches, the system was configurable as a Class A, B or C TAWS or a Class A or B HTAWS.⁴

The accident airplane TAWS functionality was set to Class B specifications as required by 14 CFR 135.154 and Technical Standard Order (TSO) – C151. 14 CFR 135.154 (b) (2) states, "No person may operate a turbine-powered airplane configured with 6 to 9 passenger seats, excluding any pilot seat, after March 29, 2005, unless that airplane is equipped with an approved terrain awareness and warning system that meets as a minimum the requirements for Class B equipment in Technical Standard Order (TSO)-C151."

Functions provided by the Class B TAWS were:

1. Terrain Display: Display of terrain and obstacles on the PFD and MFD.

- A TAWS Inhibit Switch was used for manual inhibiting of TAWS alerting functions. The TAWS Inhibit Switch was of the latching type and gave an obvious indication of actuation (i.e., toggle / rocker or pushbutton with indicator light). The TAWS Inhibit Switch was connected directly to the EFIS IDU. The TAWS Inhibit Switch was activated when manual inhibiting of TAWS alerting functions was desired. The TAWS inhibit switch on the accident airplane was found in the “inhibit” mode following the accident.



Section IV of the Taquan CFIT Avoidance Training Manual, under the section titled *Inadvertent Flight into Instrument Meteorological Conditions*, stated “In the advent that inadvertent flight into IMC conditions cannot be avoided then the crewmember should immediately transition to flight solely by reference to the instruments. The corrective action the crewmember takes next will depend on where the aircraft is in reference to terrain. At this point, the TAWS switch will be enabled if the aircraft is equipped.”

8.0 Medallion Foundation

The Medallion Foundation Inc. is a federally funded, not-for-profit organization with an Internal Revenue Service (IRS) 501(c)(3) tax exemption status.

8.1.1 History

The Medallion Foundation Inc. was created in 2001 by the Alaska Air Carrier's Association with the goal of improving aviation safety in the state of Alaska, while also reducing the insurance rates for commercial air carriers. According to the Medallion history webpage, in 2002, the Medallion Foundation signed a grant agreement with the FAA "to launch a major statewide aviation safety program to establish safety standards that exceed regulatory requirements through the detection of safety trends or needs before actual accidents occur."

8.1.2 Shield Program

According to the Medallion Foundation Shield Program webpage, the purpose of the Shield Program was to create and maintain a higher level of safety through the use of system safety and safety management system principles. In order to obtain a Shield, an applicant would first need to earn a "star" in each of the following categories:

- CFIT Avoidance
- Operational Control
- Maintenance and Ground Service
- Safety
- Internal Evaluation

To earn a "star," an applicant organization must complete specific training classes, produce a required manual and undergo an external audit to determine if the company has incorporated the information into its corporate culture. Following the initial audit, annual independent audits were to be conducted.

According to the webpage, the benefits of being a Shield carrier "include reduced insurance rates, cross promotional marketing of Shield carriers and recognition by DOD, OGP and the FAA as an operator who incorporates higher standards of safety than required by regulations."

8.1.3 Taquan's Medallion Shield

According to the Taquan webpage, the Medallion Shield was earned in 2008. Following the accident, the Shield was placed in a "hold" status which the DO said would last until December 2018. After completion of an audit in December, the Shield would be restored.

8.1.4 Medallion CFIT Avoidance Manual

Taquan developed, in conjunction with their Medallion Shield, a CFIT Avoidance Training Manual. Section IV of the manual contains the following guidance for inadvertent flight into instrument meteorological conditions:

“In the advent of inadvertent flight into IMC the crewmember shall immediately initiate corrective action in the form of either a level 180 degree turn away from terrain, a level attitude descent straight ahead or when conditions will not safely allow for either of the preceding maneuvers a immediate climb straight ahead or in a holding pattern to a safe altitude that will allow for terrain clearance to be maintained, followed by a radio call to either flight service or center and request assistance for continued instrument flight until a safe let down can be accomplished, and a call to company to inform them of the situation.”

During interviews, multiple pilots stated that the company CFIT escape maneuver was to complete a 180 degree turn, enable TAWS, descend to 300ft and set up for a glassy water landing. The accident pilot said that after setting up for the landing, the procedure was to continue below 300ft “until you arrive at the water, or break out of the cloud, I assume.” When asked if there was a different procedure for flights over land versus over water, he replied “Not really.”

These policies and procedures were not contained in the FAA-accepted GOM or the FAA-approved training program. There was no regulatory requirement for compliance with the Medallion program manuals. The NTSB issued a safety recommendation to the Medallion Foundation in 2018 to require members to incorporate Medallion program materials into their FAA-approved and -accepted training programs and manuals. To date, Medallion has failed to respond to this recommendation.

8.1.5 Medallion Operational Control Program Star Audit

According to Medallion documentation “The purpose of these Operational Control Star audit points is to determine if the company has established documentation and an effective flight operations management system that identifies and considers all hazards and associated risks, and requires shared decisions for dispatching all flights with appropriate management involvement as risk levels increase.” All points were expected to be incorporated into company practices in order to achieve and retain a star or shield.

A copy of Taquan Air’s completed worksheet from an audit of the operational control star conducted on March 2, 2018 by the director of operations is provided in Attachment 8 for reference.

NTSB reviewed the audit worksheet and compared the references in the completed worksheet to company manuals. Discrepancies were noted between what was referenced in the worksheet and what was contained in company manuals for the first 42 audit points encompassing program management, operational control, unfamiliar airports, landing areas, and routes, flight coordination, and risk assessment.

Fourteen audit points noted the Taquan “Ops Manual” as the reference for specific audit points without specifying whether these points were found in the Flight Operations Manual or the Operational Control Implementation Manual. Upon review 11 of these audit points were found in

the Operational Control Implementation Manual, 1 of these points was found in the FOM, and 2 of these points were not found in either manual.¹⁰

Additionally, several points related to efforts to mitigate risk for pilots unfamiliar with the operation, location, airport, route, or landing area. While the completed worksheet suggested the company had policies in place accounting for this in the training manual or via briefing by management, no details were found in any of the company manuals regarding any company policy for unfamiliar or special operations, including special VFR or deviation from established VFR routes for 12 specific audit points.¹¹

9.0 FAA Oversight

9.1 Juneau Flight Standards District Office Personnel¹²

The Juneau Flight Standards District Office (JNU FSDO) was assigned oversight of 102 commercial certificates at the time of the accident.¹³ Of those, 48 were located on Kodiak Island and the Kenai Peninsula, Alaska and one operator who operated from Fairbanks, Alaska, and was based in Homer, Alaska.

The office manager stated in an interview that there was a total of 12 inspectors assigned to the JNU FSDO. Two of those 12 inspectors were operations inspectors and only one was based in JNU. The other was remotely sited in Kenai. He said as a FSDO, they were allocated 5 POI positions, but were unable to attract applicants for the positions.

The frontline manager to which the Taquan POI reported, stated in an interview that they had allocations for eight operations inspectors, but have been unable to hire, even though that had been actively trying to recruit and get people through the national hiring program. He said about half the people he had interfaced with and asked about working for them “laugh” as soon as they were told the pay grade.

9.1.1 Principal Operations Inspector

The Taquan POI at the time of the accident started flying in the 1990’s in Anchorage. He then instructed to build flight time prior to flying commercially in Alaska for Wings Airways and Wings of Alaska under 14 CFR Part 135. He was hired at the FAA in 2007 and became a POI around the middle of 2008.

¹⁰ Audit points 1, 4, 5, 9, 22, 23, 24, 25, 26, 28, and 39 were found within the Operational Control Implementation Manual. Audit point 3 was found in the flight operations manual. Audit points 19 and 21 were not found in either manual.

¹¹ Audit points 8, 13, 14, 16, 18, 19, 31, and 32, related to mitigating risk associated with unfamiliar operation and deviation from established routes. Audit points 17, 21, 32, and 35 related to Special VFR operation.

¹² See attachment 2: FAA interviews

¹³ When asked, the office manager thought the JNU FSDO had oversight of about 160 certificates and a frontline manager thought there were about 80 for which they exercised oversight. They both were unsure and said they would have to double check.

He became the Taquan POI in 2008 or 2009 for a short time. He stated he became the POI for Taquan again “somewhere near the end of March or the very beginning of April.”

9.1.2 Previous Principal Operations Inspector

The previous Taquan POI started flying in 2000 and earned his certified flight instructor, certified flight instructor – instrument and multiengine flight instructor certificates within a couple years. He then began flying corporate in Las Vegas before moving on to becoming a Part 121 pilot for a few years before returning to Alaska to work for a Part 135 medevac operation.

He was hired at the FAA in the middle of August, 2012. He stated he was the POI for Taquan from 2015 or 2016 until around March 20, 2018 when he left the FAA.

9.1.3 Principal Maintenance Inspector

The principal maintenance inspector was from Ketchikan, Alaska and had been a certificated aircraft mechanic for about 25 years. All of her work had been in general aviation. She joined the FAA in 2007 in the Oklahoma City FSDO, where she spent 3½ years as an avionics inspector. She was dual qualified to be an avionics inspector and maintenance inspector. After Oklahoma City, she spent three years at the regional office in the Southwest Region of the FAA in Ft. Worth. In 2013, she moved to the Seattle FSDO to become the assistant office manager, where she stayed for 3½ years. In April of 2017 she moved back to Ketchikan as a geographic inspector until January of 2018 when her position description was changed to principal maintenance inspector.

She had oversight responsibility for 12-15 certificates, with Taquan being one of those. She had been assigned to Taquan since January of 2018.

9.1.4 Frontline Manager

Before joining the FAA in 2009, the frontline manager had been a Part 135 helicopter pilot in southeast Alaska and Anchorage. He was originally hired in the Portland FSDO and after one year became a POI. He remained a POI until about April of 2017¹⁴ when he became a manager.

As a frontline manager in the JNU FSDO, he supervised 1 POI, 7 principal maintenance inspectors and 1 aviation safety assistant.

9.1.5 Office Manager

The JNU FSDO office manager started his aviation career in the US Army where he spent 21½ years in avionics. Following his separation, he worked at a repair station in Florida for 5 years. He joined the FAA in 2007 as an avionics inspector in Baton Rouge, Louisiana. After two years there, he moved to Columbia, South Carolina as an avionics inspector, where he remained for three years before returning to Baton Rouge for another two years. He then moved to the

¹⁴ At the time of his interview which took place October 11, 2018, he stated that he held a POI position “until a year and a half ago,” which coincides with April, 2017.

Fairbanks FSDO for about 18 months as a frontline manager before going to the Anchorage FSDO to become the assistant office manager for about 10 months. In August of 2017, he became the office manager of the Juneau FSDO.

9.2 Inspector Assignments and Workload

For oversight responsibilities of the 102 commercial certificates, the JNU FSDO had, according to the office manager, 12 total inspectors. Of those, 2 were principal operations inspectors, of which 1 was based in Juneau and the other in Kenai. The frontline manager stated there were a total of eight POI slots allotted to the JNU FSDO.

The POI stated in an interview that he was unsure of the exact number of certificates for which he was assigned oversight responsibilities, but he said “probably in the 40’s.” When asked how he would classify his workload, he replied “heavy” and when asked if he had the time that he needed to complete his oversight tasks, he said no. According to a work assignment letter, he was responsible for oversight of 24 Part 135 certificates, seven Part 133 certificates and two Part 137 certificates assigned to him.

When the previous POI was asked if he remembered how many certificates he oversaw when he was the Taquan POI, he stated “We would go anywhere from 20 to over 30, at times, roughly. I mean, and sometimes I didn’t know the—all the operators I had, it was changing so rapidly.” When asked if he received a work assignment letter, he said that sometimes they did and sometimes they did not.

When asked about his workload, the previous POI said he thought the last time he looked at his travel, he had traveled over 20 times within the previous 12 months. He said the FAA currency flying included a month a year out of his time and checkrides were an enormous part of his workload, which took place in the spring. When he was leaving the FAA, he was trying to do as many checkrides as possible to help the remaining POIs, which was on top of investigating pilot deviations, violations he had to write, and other responsibilities included in the air safety inspector job description.

9.2.1 Certificate Handoff Procedures

The previous POI resigned from the FAA around March 20, 2018. He stated in an interview that he did not know who took over the POI duties for Taquan and did not recall reviewing anything about the certificate with any other POI.

The POI at the time of the accident stated that he became the POI in late March/early April until very shortly after the accident. He said the change from the previous POI to him took place soon after the previous POI left the agency. There was “very little conversation” between the two of them concerning the transfer of operators.

When asked if the assignment of Taquan was an official assignment, he said it was listed in his SAS. He said he did not receive an assignment letter but was told he had Taquan.

When the POI was asked again if he received a work assignment letter, he stated the following:

“I remember picking up most of Brian's bigger ones. But I don't know -- I couldn't tell you how they were assigned at the time because there was -- our assignments were changing rapidly. And I think that's part of the reasons why we didn't get a letter, because they'd issue a letter, a new letter every week, because they were constantly trying to juggle our workload around and the complexity around. So, it was tough to know who you were keeping from week to week in that period.”

When the frontline manager was asked how the transfer between inspectors took place, he said that optimally, there would be a handoff between the old inspector and new inspector. He had seen it done from written form with areas to be concerned about to one inspector quitting and another just being assigned with no conversation. Ultimately, he would have liked to have a briefing and a good handoff between the two inspectors. He was unaware of any guidance to inspectors or checklists concerning what needed to be reviewed when transferring certificates between inspectors.

When asked about the transition between the Taquan POIs, he said he was ‘not really’ involved with any of those conversations. When asked how the transition worked, he said “I’m sure there was a lot of communication. Those two were very close and had cubes right next to each other and talked all the time...I think there was a good transition for that.”

9.2.2 Work Assignment Letter Inconsistencies

The NTSB requested a copy of the work assignment letter for the current POI from the FAA on October 17, 2018 following the completion of interviews with JNU FSDO personnel. The letter requested, was the most recent assignment letter for POI of Taquan at the time of the accident. The letter received was dated February 7, 2018 (about 41 days prior to when the previous POI left the FAA), saved under the file name Letter of assignment Jon Percy 6-20-18.pdf and was unsigned.¹⁵ The typed signature block contained the name of the frontline manager and no grid copy was available that would show initials and dates for when the letter was approved for issuance. Following an NTSB request to obtain a grid copy of the letter of assignment, the NTSB was informed that no grid copy existed.

9.3 Training Program Approval

Following the accident, a copy of the FAA approved training program was requested by the NTSB. The program provided by Taquan was stamped “FAA Initial Approval” and listed an effective date of February 9, 2016.¹⁶ Adjacent to the “Initial Approval Expires” text was the date February 9, 2018. When Taquan was asked to provide any documentation of an extension or final approval, none could be located. The JNU FSDO was then asked to provide any documentation, at which time it was discovered that neither an extension nor final approval was ever granted. The letter issued by the FAA to Taquan when initial approval was granted stated, in part:

“Initial approval of this curriculum shall remain in effect until February 9th, 2018 or upon granting of final approval, whichever occurs first. Taquan Air is requested to notify

¹⁵ See attachment 8: work assignment letter

¹⁶ See attachment 9: training program initial approval

this office at least 10 days in advance of any training to be conducted under this program so the FAA may evaluate the effectiveness of this program, in accordance with FAR 135.325 of the Federal Aviation Regulations.”

The FAA, upon discovering initial approval had expired, issued a letter to Taquan, extending the expired approval, citing “understaffing circumstances of the Certificate Holding District Office” as well as the fact Taquan did not receive a 30-day notification “as required in FAA Order 8900.1, Volume 3, Chapter 19, Section 2.” The letter concludes with “Any training conducted after May 15, 2019 will not comply with regulatory requirements.”¹⁷

The previous POI stated that he did not recall a specific time when he observed ground school and also did not recall providing final approval for the training program. When the chief pilot was asked if the FAA had ever sat through ground school, he said not since he had been at Taquan. The POI at the time of the accident said he was unaware Taquan was operating under initial approval.

The current POI stated that he last visited Taquan in March or April when he conducted check airmen observations. When asked if he reviewed their training program prior to conducting the observations, he said: “Well, all the training programs, and as far -- I don't know of anyone that goes above and beyond what's needed out of guidance and the regulation. So, if you're looking at somebody for the first time, I mean, you would know their training program, and this one it's single engine VFR, sea, day only. They're all pretty standard. So, I probably did not look at their training program before I went, knowing what is necessary for the ride.”

The frontline manager stated that available safeguards through SAS were not being utilized prior to finding out the program had expired. Those safeguards would have alerted principal inspectors of upcoming expiration dates. Following the discovery of the expired program, the office began utilizing the safeguards.

9.3.1 14 CFR 135.341: Pilot and Flight Attendant Crewmember Training Programs

§135.341 states in part:

“Each certificate holder, other than one who uses only one pilot in the certificate holder's operations, shall establish and maintain an approved pilot training program, and each certificate holder who uses a flight attendant crewmember shall establish and maintain an approved flight attendant training program, that is appropriate to the operations to which each pilot and flight attendant is to be assigned, and will ensure that they are adequately trained to meet the applicable knowledge and practical testing requirements of §§135.293 through 135.301. However, the Administrator may authorize a deviation from this section if the Administrator finds that, because of the limited size and scope of the operation, safety will allow a deviation from these requirements. This deviation authority does not extend to the training provided under §135.336.”

¹⁷ See attachment 10: training program extension letter

9.3.2 FAA Order 8900.1 Guidance

9.3.2.1 FAA Order 8900.1, Volume 3, Chapter 19, Section 2, Paragraph 3-1105 states:

When the POI determines that a training curriculum or curriculum segment should be initially approved, the POI must also determine an appropriate expiration date for the initial approval. The expiration date is important throughout phase four of the approval process. Sections 121.401(a)(1) and 135.323(a)(1) require the operator to obtain final approval of training curricula. The expiration date provides an incentive to the operator for refining all aspects of the program to assure that this regulatory requirement is met. The expiration date also provides the POI with a timeframe with which to plan evaluation activities for determining the effectiveness of the training. The expiration date assigned to an initially approved training curriculum must not exceed 24 months from the date of initial approval. The expiration date of initial approval may be reduced by the POI if it is apparent that a 24-month time frame will unnecessarily delay final approval. The POI should be aware that shortening the initial approval expiration date will commit him or her to completing the final approval phase within the shorter time period. The POI may grant final approval any time before the expiration date. Except when unforeseen circumstances preclude an adequate evaluation of training effectiveness, an extension to the initial approval expiration date should not be permitted. A new expiration date, however, may be established for a curriculum segment when there are significant revisions to an initially approved curriculum segment.

9.3.2.2 FAA Order 8900.1, Volume 3, Chapter 19, Section 2, Paragraph 3-1113 states:

A training curriculum granted initial approval has an expiration date. Usually, this date shall not be later than 24 months after the initial approval date. If the POI does not grant final approval before the expiration date, training under that curriculum must terminate as of that date. Therefore, the POI shall not allow an initially approved curriculum to expire due to the FAA's inability to administratively grant final approval. Final approval may not be granted to an operator's training curriculum for several reasons. One reason, for example, may be the operator's inability to achieve an acceptable level of training effectiveness during phase four of the approval process. Another example of a reason for not granting final approval is the discontinued use of the initially approved curriculum. When the POI decides not to grant final approval before the expiration date, he must notify the operator of this decision in writing, at least 30 days before the expiration date of the initially approved curriculum. An operator not so notified may mistakenly assume that the initial approval will continue in effect until receipt of notification of either final approval or termination. The notification letter should contain the reasons for allowing the curriculum to expire and should state that any further training under the expired curriculum will not be in compliance with regulatory requirements. A POI who fails to provide this 30-day notification must establish a new

expiration date so that appropriate notification can then be given to the operator.

9.4 14 CFR Part 119 Management Official Approval

9.4.1 Regulatory Requirements

14 CFR 119.71 states that to serve as a director of operations for a Part 135 certificate holder, the person must have at least three years supervisory or managerial experience within the last six years in a position that exercised operational control over any operations conducted under part 121 or part 135. If the person is becoming director of operations for the first time ever, they must have at least three years experience, within the past six years, as pilot in command of an aircraft operated under part 121 or part 135.

To serve as a chief pilot, a person must hold an appropriate pilot certificate with appropriate ratings and be qualified to serve as pilot in command in at least one aircraft used in the certificate holder's operation. If the person is becoming a chief pilot for the first time ever, they must have at least three years experience, within the past six year, as pilot in command of an aircraft operated under part 121 or part 135. If the person has previously held a chief pilot position, then they must have at least three years experience as pit in command of an aircraft operated under part 121 or part 135.

9.4.2 FAA Order 8900.1 Guidance

FAA Order 8900.1, Volume 2, Chapter 2, Section 3 Safety Assurance System: Evaluate Part 121/135 Management Personnel contained guidance and procedures for inspectors to use when determining if a management applicant was qualified to hold a Part 119 management position.

Paragraph 2-154 of the above referenced section stated that when a certificate holder submits an applicant for one of the part 119 required management positions, the principal inspector will check the applicant's FAA certificates for appropriate ratings and validity, check appropriate databases for compliance action, accident or incident history and violation history. Also, the inspector will verify employment history (resumé) to ensure that the applicant meets the necessary experience requirements; the applicant is not serving in a management position with another certificate holder, unless approval has been granted in accordance with paragraph 2-158; the applicant has not held a similar position and contributed materially to a certificate revocation; and prior work history conducted in another certificate holding district office indicates there have been no past performance issues. Following an interview of the applicant to determine their knowledge of sections of the certificate holder's manual, operations specifications and regulations, the inspector will inform the certificate holder/applicant of the results "in writing either via formal letter or email and keep a copy in the certificate holder's file."

The FAA was unable to provide any correspondence between Taquan and the JNU FSDO regarding the status of or any changes to Part 119 officials between January 1, 2017 and July 10, 2018.

Paragraph 2-158 as referenced above states:

2-158 MANAGEMENT PERSONNEL SERVING MULTIPLE CERTIFICATE HOLDERS.

A. The Difference Between §§ 119.65 and 119.69. Regulatory constraints in § 119.65 require that management personnel for part 121 certificate holders be full-time. This precludes any and all part 121 management personnel from holding any other part 119 management positions concurrently, including any part 135 management positions. Deviations for combined part 119 management positions operating under part 121 are approved in accordance with § 119.65(b) and paragraph 2-163.

B. Section 119.69 Criteria. Section 119.69 does not contain equivalent wording to § 119.65 requiring full-time management personnel for part 135 certificate holders. An individual who is fully qualified may serve as a management person for more than one part 135 certificate holder. Section 119.69(b) uses the following criteria in determining the positions and number of management personnel:

- 1) The kind of operation involved.*
- 2) The number and type of aircraft used.*
- 3) The area of operations.*

C. Multiple Certificate Holders. The PI should use the same criteria in approving or denying the same individual for multiple certificate holders. The PI ultimately is responsible to determine if the best interest of aviation safety is served by multiple certificate holders sharing one individual. The following norms should be considered when a determination is made whether part 119 management personnel can serve for more than one part 135 certificate holder:

- 1) Size. Multiple turbojet aircraft with international authorizations would be an example of a complex certificate holder and an unlikely situation to share management personnel. Certificate holders authorized one aircraft or a few single-engine visual flight rules (VFR) aircraft is an example of a situation where sharing management personnel could be acceptable.*
- 2) Location. Certificate holders not located in close proximity would also be a factor to consider and justification of a denial to share management personnel.*
- 3) Multiple CHDOs. Multiple CHDOs involved is another concern and should be avoided.*

D. Review Process. As part of the review process, the individual who meets regulatory requirements must be interviewed. The respective PIs must reach consensus that the individual meets the regulatory requirements and can perform the assigned duties for the certificate holder before approving. For individuals who do not meet the regulatory requirements, the certificate holder may request a qualification deviation by using the process described in paragraph 2-159. The PIs must agree that a deviation is appropriate and the CHDO manager must concur before forwarding to the Regional Office (RO) for approval.

NOTE: Headquarters (HQ) will not approve part 135 commuter operations or part 121 operations to share part 119 management personnel, as provided for in this paragraph.

9.4.3 Director of Operations

The Taquan DO at the time of the accident, was also the DO for Grant Aviation, a large part 135 air carrier that conducted commuter operations. While holding the DO position at Taquan, he applied for and accepted a position as chief pilot at Grant Aviation October 01, 2017. The DO stated he held that position until the beginning of April 2018, when he became the DO at Grant Aviation. As part of the new position as chief pilot, he moved his residence from Ketchikan to Anchorage in the fall of 2017.

When the DO applied for the position at Grant, he said he did an in-person interview with the POI. In addition, he said the Grant POI knew he was still at Taquan when the interview was conducted. He went on to say, everyone (Taquan POI and Grant POI) was fully aware and spoke to each other.

The Grant POI said he was unaware that the candidate was still the DO at Taquan. When asked if that would have factored into his decision for approving him as DO, he said they would have talked about it and did after he found out. The DO told him he was in the process of being replaced at Taquan and would be removed from the operations specifications by May of 2018. In a letter dated May 22, 2018, from Grant Aviation to the Grant POI, the Taquan DO, who was also holding the Grant chief pilot position, was being nominated for the position of DO at Grant. The resume attached to the letter listed him as the current DO and line pilot for Taquan.¹⁸ A letter dated May 30, 2018 from the Grant POI to Grant Aviation approved the DO nomination¹⁹, contrary to the note in FAA Order 8900.1 as included above that states “[h]eadquarters (HQ) will not approve part 135 commuter operations or part 121 operations to share part 119 management personnel...” At the time of the approval, both Taquan and Grant held operations specifications for commuter operations.

The Grant POI said that two days before the accident, he was told that the DO was still the DO at Taquan. When asked if that was acceptable for him, he replied: “Well, he was here working at Grant every day. So, I mean, he’s overseeing the operation that I oversee, so it wasn’t an issue for me.” As of August 15, 2018, he was still listed as the DO at Taquan and Grant.

The DO said he gave a 60-day notice of resignation in July of 2017 and said it was his intention to leave at the end of the season. He stated in an interview: “And then we had immediately started the process to obtain a replacement and that proved to be impossible. And so, as we approached the end of the season, I agreed to remain in my position and with, again talking to the FAA, our principal operations inspector and, I don't want to put words in their mouth, I'll just paraphrase. My understanding was, it's much better to have you in that position doing what you do rather than have nobody in that position. And that was the FAA's position.”

¹⁸ See attachment 11: resume package

¹⁹ See attachment 12: DO approval letter

The previous Taquan POI stated that he knew the DO was applying for the chief pilot position at Grant Aviation. The DO informed him prior to accepting the position. When asked if he contacted the Grant POI, he could not recall if he had. When asked if there was any understanding as far as how long the DO would remain at Taquan, he said: "He wasn't sure about -- yeah, we just talked about it, how I felt -- how we felt about him holding the position. He told me he was going to be moving on -- up north and actually moving up there, and he said they are actively interviewing people and trying to get a director of operations for Taquan. He talked about finding somebody who was qualified within Taquan to take the position or him remaining as the director of operations. I felt he was a very effective director of operations and felt I was fine with him remaining the director of operations until they found the right fit for the company." He said he could not recall if they had a conversation about how much time he was going to be spending in Ketchikan versus Anchorage. He said he was concerned with Taquan finding someone who just met the letter of the regulations and putting them in the DO position.

When the previous POI was asked if he knew how often the DO would make visits to Taquan following the acceptance of the chief pilot position and moving to Anchorage, he said he did not. When asked if he knew how often the DO was in contact with Taquan, he replied "I wouldn't know exactly." When asked if part of being a POI is knowing whether or not the people in part 119 positions are effective, he said yes through their observations. He was then asked, "without knowing how often he was there or any idea as far as how often he would contact or speak with the company, how can you definitively say whether or not he was effective as a 119?" to which he replied: "Well, I don't know exactly how often he was there, how often he did. But through my observations, he was frequently in contact with them. But to give you an exact number or percentage of his time, I would hesitate to do. I know any time I called and had any questions about Taquan, if he didn't answer immediately, he was in contact with me later that day and was able to provide accurate information for any question or concern I had." When asked if he felt a DO for a company like Taquan needed to be on site to do an effective job or if it could be handled remotely, he said that he thought it would be difficult for someone to do that is permanently off site. He thought a DO "would need to be hands on at some point" to see how the operation was doing. He said, "there is some time you need to spend at the operation."

The POI at the time of the accident stated that he did not believe there was a requirement for the DO to disclose to him that he was the DO for multiple companies. He said he would hope that he would be told but could not think of a requirement to do so. He also said he could not think of a requirement for the two POIs (old company and new company) to discuss the holding of multiple positions. The only interaction the POI could recall having with the DO prior to the accident was communication about a new DO candidate for Taquan. He stated that he was unaware prior to the accident that the DO was also the DO at Grant and until the NTSB interview, he was unaware of the DO also being a part-time simulator instructor for Alaska Airlines. Additionally, he said he thought at the time of the accident, the DO lived in Ketchikan and did not know about him living in Anchorage.

The Taquan POI at the time of the accident was given a scenario in which he found out after approval that a part 119 official was also a part 119 official on a certificate elsewhere. He was asked if he would contact the other POI. His response was "I think it would be more important to discuss it with the operator that he -- that we just found out about. So if he's working for here and

we found out about, it would be -- my responsibilities would lie with this certificate that I was assigned to and the certificate that he's the DO for. So my initial would be to discuss it with the company. And then I'd certainly be questioning why he didn't feel like he needed to tell me. And if it was a problem, we'd go through the amendment process of ops specs if it wasn't going to work out." When asked if, in his opinion, if he thought it would be possible for one person to do the job of both chief pilot and DO, he said it would not be allowed in Taquan's situation because they were a commuter and it was "explicitly not allowed." When asked why, he said that because they are a commuter, and in a commuter operation, the way the guidance was written, someone could not hold dual positions. A deviation would not be granted.

Although this information about the DO not being able to hold multiple positions was addressed in the guidance, no FAA inspector prohibited it from taking place at Taquan.

The PMI said in an interview that when she found out the DO had moved out of town, it concerned her. She said that during regular surveillance with the director of maintenance (DOM) between December of 2017 and February of 2018, she inquired as to why she was having difficulty setting up an appointment with the DO. That was when she was informed that he had moved back to Anchorage. She said at that time, knowing the size of the operation, she became concerned. She said the previous summer, he had been an integral part of the operation, so when she was told he had moved, it was that absence that caused her concern. When asked if she brought this concern up to her management, she said she did the following week. In her interview, she said the following:

"Yeah. So the following week -- you know, we have our office meetings every Monday, every Monday morning. And what I recall is letting them -- at the meeting on the phone, telling them that what I had learned, which was I understand the director of operations had moved out to Anchorage and that he was supposedly working for another company, although he was still the director of operations for Taquan as well. And they -- I remember being asked do you know who he's working for? And I said I do not; they did not share that information. And I remember the manager commenting that he would contact the Anchorage FSDO to see if they knew because they hold all the certificates up there as far as overseeing -- and I remember discussing my concern, which kind of led off the conversation. So I'm concerned because the director of operations is now not here; he's in Anchorage supposedly working for another company, don't know which one. I recall the conversation being like that.

...Let me see. Timing wise, the concern was they were in the process and had already told us, from what I remember, they were bringing on an additional two aircraft, two Otters, so we were looking at the size of the fleet growing as well. That's another 20 people being moved each round, so -- round of flights. So that's increased risk, increased operation, increased number of people. I think that was part of the conversation, if I remember right."

When asked if there was any follow-up from the office manager to her, she said she had never received any follow-up.

The FSDO manager said, upon finding out that the DO was holding another part 119 position, he was concerned about making sure there were enough people who had operational control. When asked if he took any actions regarding this information, he stated that he told the frontline managers to look into it. When asked how this was to be accomplished, he said by “checking with the principals to make sure there were no issues. When asked if he received any feedback on what was said or what the results were, he replied “The 8900 says that they can have it like that, and that they wanted to keep monitoring to see if it became an issue.” When asked what concerns were brought up by the PMI, he said she worried about the fact that the DO was physically located outside of Ketchikan and there might be problems reaching him for operational control issues when the other authorized people were not available.

Oversight responsibility of Taquan was assigned to the inspectors in the chain of command of the frontline manager around February of 2018. When asked how he learned that the DO was holding multiple positions, he said it was very informal and probably through “water cooler conversations with a couple of inspectors.” He stated he remembers that prior to joining the FAA he recalled smaller companies that may share a chief pilot. However, he stipulated “from the FAA’s perspective, my opinion, it’s not a good thing, but I don’t believe we have a regulation that prohibits it.” When asked what his concerns were, he said “from a safety perspective, I’m all about having 119 people be committed 100%...I just want them to have 100% concern over ...one certificate. And although they may be able to have oversight over multiples, I just think it’s suboptimal.”