

**Submission to the**  
**National Transportation Safety Board**  
for the  
accident investigation and public hearing regarding  
**Ravn Connect Flight 3153**  
**Hageland Aviation Services, Inc.**  
**Cessna 208B Grand Caravan Airplane N208SD**  
**Togiak, Alaska; October 2, 2016**



**Medallion Foundation**



September 29, 2017

Mr. Shawn Williams  
Investigator-in-Charge  
National Transportation Safety Board  
222 West 7<sup>th</sup> Ave., Rm 2016, Box 11  
Anchorage, AK 99513

RE: Medallion Foundation Submission for *Ravn Connect Flight 3153* Accident Investigation

Dear Mr. Williams,

As requested during the NTSB Public Hearing on August 17, 2017, please find the attached submission on the subject accident. Per your request, we are sending this electronic version to your attention for distribution within the NTSB.

This submission was developed by the Medallion Foundation. The statements made in this submission are intended to educate the NTSB Board members and other interested parties as to the role and responsibilities of the Medallion Foundation in regard to any air carrier or air operator who choose to be a participating member of the Medallion Foundation.

The findings that are presented in the attached submission are based on factual information as presented in the NTSB public docket relative to the applicable Medallion audit points. These findings are presented in a concise manner to convey our views

We would like to thank the NTSB for giving the Medallion Foundation the opportunity to make this submission. Should you have any questions or concerns related to this matter, please contact me at [REDACTED], or email at [REDACTED]

Sincerely yours for

**MEDALLION FOUNDATION**

  
[REDACTED]  
Gerard Rock  
Executive Director

Medallion Foundation  
Submission to the National Transportation Safety Board  
For the accident investigation and public hearing of  
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Hageland Aviation Services, Inc.  
Cessna 206B Grand Caravan, N208SD  
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## Submission to the NTSB by the Medallion Foundation

NTSB Aircraft Accident Investigation Case No. ANC17MA001  
*Ravn Connect Flight 3153; Togiak, Alaska; October 2, 2016*

### 1.0 Introduction

On October 2, 2016, about 1154 Alaska daylight time, a turbine-powered Cessna 208B Grand Caravan airplane, N208SD, sustained substantial damage after impacting steep, mountainous, rocky terrain about 12 miles northwest of Togiak, Alaska. The airplane was being operated as flight 3153 by Hageland Aviation Services, Inc., dba Ravn Connect, Anchorage, Alaska, as a scheduled commuter flight under the provisions of 14 Code of Federal Regulations (CFR) Part 135 and visual flight rules (VFR). All three people on board (two commercial pilots and one passenger) sustained fatal injuries.

The investigation into the accident is being led by the National Transportation Safety Board (NTSB). The Medallion Foundation was invited by the NTSB – and Medallion agreed – to provide sworn testimony as a party to an investigative public hearing held in Anchorage, Alaska, on August 17, 2017. As a party to the hearing, Medallion appreciates the opportunity to provide this submission to the NTSB in accordance with 14 Code of Federal Regulations (CFR) Part 845.13.<sup>1</sup>

This tragic accident highlights the nature of Controlled Flight into Terrain (CFIT) accidents and the efforts from multiple agencies and operators that have been ongoing to introduce various intervention strategies to prevent these accidents from occurring in Alaska. With over 7900 active pilots, 2800 mechanics, 9300 aircraft, 400 public use airports and over 740 recorded landing areas (not including gravel bars and thousands of lakes), and 306 certified air carriers, Alaska represents the single most aviation active state in the United States.<sup>2</sup> With a limited number of roads, Alaska is heavily dependent on aviation to deliver goods and services to her population. The Medallion Foundation has been committed to preventing CFIT accidents so that the state's dependency on aviation is not deterred.

In 1998, when the “Safer Skies” joint government and industry aviation safety initiative was established, the promise to the public was to conduct an effort to reduce the fatal accident rate in aviation by 80 percent by 2008. Without going into all the detailed history of the Commercial Aviation Safety Team (CAST) and identification of all the representatives that ultimately became members of the Joint Safety Analysis Teams (JSATs) as technical experts, intervention strategies were identified. From these, the Joint Safety Implementation Teams (JSITs) became responsible for assessing the feasibility of the JSAT recommendations and developing any appropriate implementation plans.

All interventions required the active participation of regulatory authorities. Of the CFIT JSAT top 10 recommended intervention strategies, the Medallion Foundation, with financial assistance from the FAA, has been actively engaged in addressing five of them (in no particular order) –

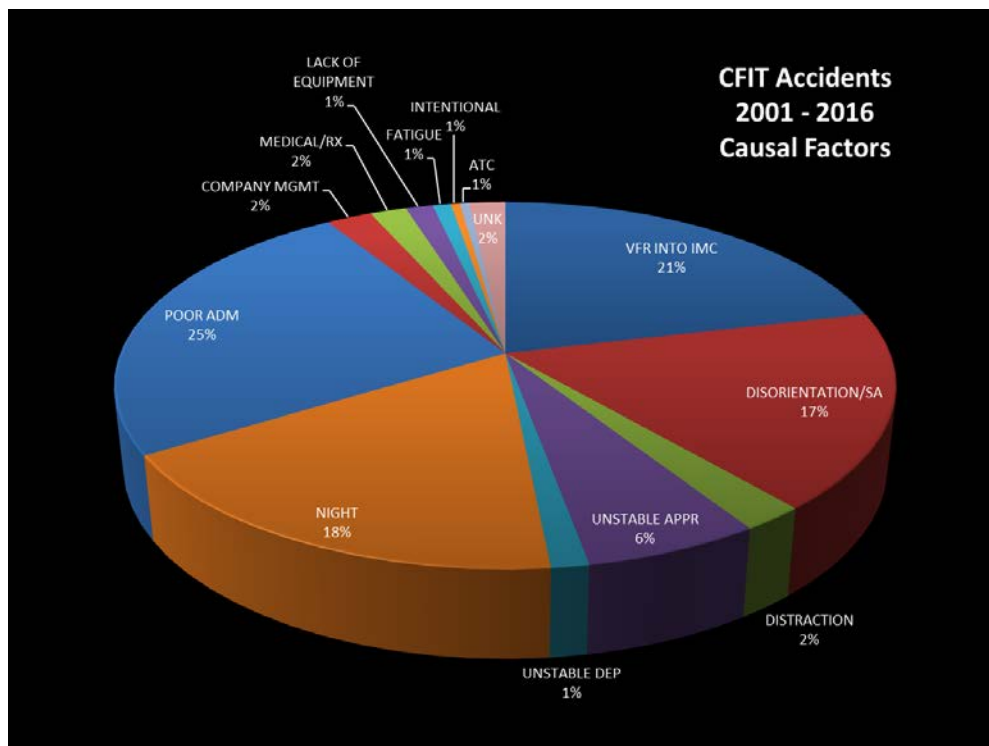
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<sup>1</sup> 49 CFR Part 845.13 states: “Following the investigative hearing, any party to the hearing may submit proposed findings to be drawn from the testimony and exhibits, a proposed probable cause, and proposed safety recommendations designed to prevent future accidents or incidents. The proposals shall be submitted within the time specified by the investigative hearing officer at the close of the hearing, and shall be made a part of the public docket. Parties to the investigative hearing shall serve copies of their proposals on all other parties to the hearing.”

<sup>2</sup> Federal Aviation Administration, Alaskan Region Aviation Fact Sheet, January 2016.

- Increase pilot awareness on accident causes
- Improve weather briefings
- Improve safety culture within the aviation community
- Improve pilot training
- Eliminate the pressure to complete the flight where continuing may compromise safety<sup>3</sup>

Data from CFIT accidents since 2001 indicate that continued focus intervention strategies to reduce and prevent CFIT accidents needs to continue.

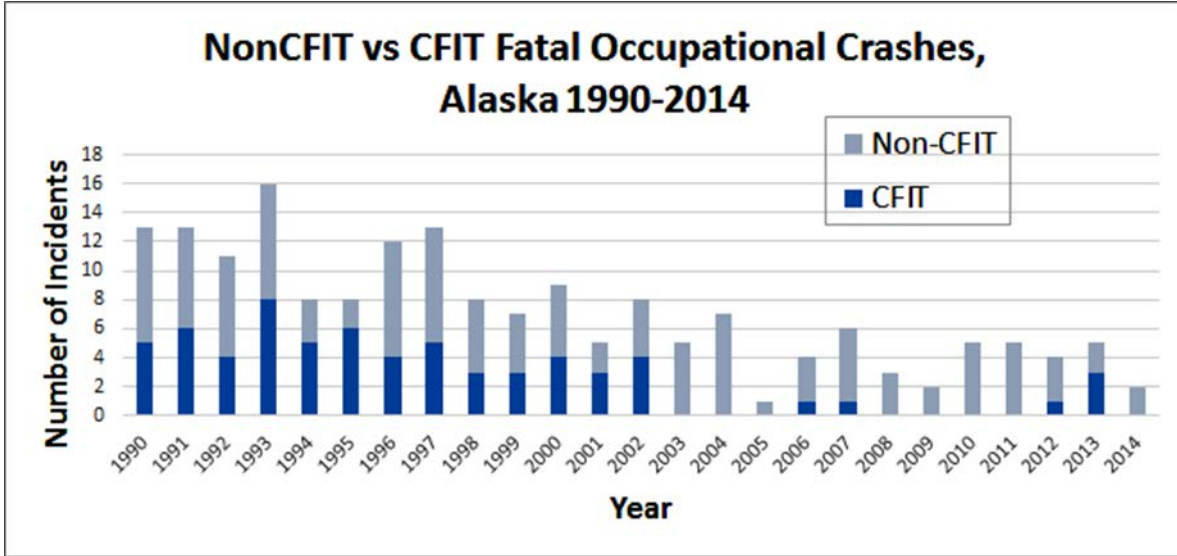


Source: NTSB Aviation Accident Database. Synopsis Reports all accidents 1/1/2001 – 12/31/2016, US, “controlled flight into terrain”.

## 2.0 History of the Medallion Foundation

In the 1990’s, the aviation industry as well as their customers was appalled by the number of fatal commercial aircraft accidents. Being an Alaska pilot was listed as the most hazardous occupation in the United States. An average of ten commercial pilots were killed each year in CFIT-related accidents.

<sup>3</sup> General Aviation Controlled Flight into Terrain Joint Safety Implementation Team (JSIT) Final Report, January 2000.



Source: NIOSH. *American Journal of Industrial Medicine*, Vol 55:176-186, February 2012. “A multifaceted public health approach to statewide aviation safety”, Mode et al.

In an effort to reverse this tragic legacy, the Alaska Air Carriers Association formed the Medallion Foundation in 2001 to establish safety standards that exceed FAA requirements.

Today, the Medallion Foundation remains true to its mission to promote aviation safety through system enhancements by providing management and the aviation community with resources, training and support. We are working diligently to take our message and mission outside the Alaska aviation community, into the Pacific Northwest and Hawaii.

Working closely with commercial air carriers, these carriers voluntarily participate in the safety program standards we have set. We work at providing a foundation in Safety Management System (SMS) principles which fosters a positive change in each corporate safety culture.

Although we cannot count the number of accidents that have been prevented because of Medallion’s efforts, we can count the support and gratitude from our carriers and others in the industry that see, appreciate and stand by the standards we have set. Medallion’s efforts have not been accomplished singly or alone. Numerous other safety initiatives set forth in the early part of the decade have all contributed to part of the bigger picture of increasing aviation safety awareness, practices and technology: ADS-B In and Out; Alaska Aviation Weather Unit Weather Cameras (over 250 strong); improved LNAV, RNAV and GPS navigation equipment and infrastructure; system safety enhancements among carriers; ASAP voluntary reporting; community education and outreach efforts by Medallion and the FAASTeam.

### 3.0 The Safety Benefits of Medallion Membership

#### 3.1 Overview

Although there are many aviation safety consulting companies available around the world, Medallion is unique. Medallion requirements are not a “plug-and-play” solution to system safety. Nor do we provide or write an operator’s manuals. Our services are not expensive, requiring only a nominal annual membership fee.

We provide a set of requirements based on System Safety and Safety Management System principles that guide the carrier through developing specific programs. Each program requires development of company policies, procedures, and training, as well as regular auditing and reviews to ensure the program works for the company as intended.

A Medallion staff member – assigned as the “program manager – mentors the carrier through these requirements and assists in facilitating industry best practices that can be used as examples on how to perform or operate better. The program manager ensures that what the carrier develops meets Medallion requirements. Medallion can provide any carrier with an assortment of job aids, tools, and other basic forms in which to further develop their program.

We task an independent auditor to determine whether or not that carrier is successful, and we do this on a regular basis to ensure the standards and expectations the carrier has set are still being maintained. Only when the carrier is successful with the development and implementation of each program, can they be recognized by Medallion through the Shield program.

Gradually, through continued participation with Medallion and management of their own programs, the carrier’s safety culture changes, department by department, until a positive safety culture becomes part of the company’s everyday management of safety.

With over 15 years of experience, through carriers of all sizes and types of operation, Medallion consistently provides a valued resource to our members, as well as adding value to the carriers’ daily operating practices and overall corporate safety goals. Time and time again we are reminded of the financial benefits that have been an indirect result of participating with Medallion.

Medallion is arguably the most impactful voluntary safety effort in aviation, particularly in Alaska. And it comes at a minimal financial cost to the carriers who participate compared to other well-known safety consulting organizations.

### **3.2 Not Just a Compliance and Auditing Organization**

While there is much discussion about the aviation safety consulting services Medallion offers, it should not go unnoticed the many other activities Medallion organizes, manages, participates in and promotes to educate not only commercial aviation companies and staff, but the general flying public. For example, Medallion is active in the following:

- Provides support in producing public service announcements and ad campaigns promoting good operating practices, good decision making, use of angle of attack devices, and use of safety equipment to reduce serious and fatal injuries in the event of an accident. In partnership with the FAA, the “Circle of Safety” program encourages passenger awareness and preparedness when booking flight seeing tours, chartering aircraft for hunting and fishing, and various other activities where they will find themselves aboard a small aircraft.
- Since inception, Medallion has provided a wide variety of professional aviation courses which include aviation management, human factors, system safety, accident investigation and root cause analysis, and operational risk management, just to name a few. Approximately 3200 students have taken 55 different classes, providing over 40,000 hours of instruction given to the Alaska aviation community. These classes were provided either free or at minimal cost to the student, giving them an opportunity to attend that in any other case would be cost prohibitive.
- With 22 aircraft training devices scattered throughout Alaska and one full motion simulator, student pilots, certificated pilots, instructors and others are provided opportunities to

practice procedures, flows, enhanced situational awareness and decision making skills at little to no cost to the user. Over the past three years, we estimate that over 26,000 hours of time have been spent in these devices. By the end of July of this year (2017), there has been a 40 percent usage increase indicating pilots are spending more time in the ATDs per session than ever before.

- Medallion reaches out to its members seeking the best practices in the industry to share among its members, aiming to improve or enhance existing operational capabilities.
- Provide assistance and resources in creation and publication of various FAA information booklets, such as the Off-Airport Guide, Seaplane Operations Guide, and the Alaska Biennial Flight Review Guide. These are distributed to GA pilots by the FAASTeam at public outreach events and personally whenever the opportunity arises.
- Medallion administers a voluntary reporting program through ASAP and shares the information across all participants. Over 1500 Alaska pilots, mechanics, flight attendants, and ground staff have the ability to report safety concerns and potential unintentional violations of regulations and company policies through this non-punitive method. Most of the Alaska small part 135 operators would not be able to do this on their own. The voluntary safety reporting has resulted in positive changes and improvements to operators' manuals, training and procedures that would not have otherwise occurred.
- Last year, Medallion's small staff expended nearly 8000 hours of effort into working with operators, auditing, and training their employees to develop better decision making practices.
- Medallion staff and volunteers participate in public outreach at aviation safety events such as the Palmer Pancake Breakfast, Seaplane Operators Symposium, Talkeetna Hudson Memorial Fly-in, the Alaska Sportsman Show, The Great Alaska Aviation Gathering, and the Alaska State Fair with the PA-18 full motion simulator.

### **3.3 What Medallion is Not**

Medallion is not an enforcement body or agency. Nor are we a reporting conduit to the FAA.

Medallion was not designed to actively oversee a member carrier's operations. Ultimately, our member carriers' must take responsibility for implementing, managing and overseeing the programs we help them develop and adopt.

Medallion requirements are generic in nature, allowing for flexibility and scalability among the carriers. It does not specify the use of particular equipment, or set specific limitations because we do not want any of our requirements to be limiting factors for any carrier's participation.

We cannot create a requirement for all carriers to install Flight Data Monitoring equipment, to always file IFR or to have two crewmembers on every flight. Our carriers cannot be subjected, nor will the Medallion Board of Directors allow, concepts that just are not feasible for their fleets, supported by the infrastructure, or are cost prohibitive.

Medallion is successful not only because of these programs, but because our operating partners trust us. They trust us with their confidential information and that we are working in their best interests alone.

This element of trust is the foundation of our success and the success of our partners.



## **4.0 The Medallion Shield Process**

### **4.1 Overview**

The Medallion Shield Program is the foundation for improving safety practices in aviation. Each operational area of the program, described as “Stars”, defines areas where Medallion has determined participating operators can be improved by defining policies and procedures beyond what the Federal Aviation Regulations require. Although this focuses primarily on 14 CFR 135 carriers, part 121 carriers benefitted early on with Medallion’s efforts to provide structure in which to begin developing the framework for safety management system and safety assurance.

Rather than requiring a company to implement standards across all company lines, Medallion provides guidance for one operational area at a time: Flight Training, Flight Operations, Maintenance and Ground Service, and Safety.

When a carrier first engages with Medallion, the Executive Director meets with the carrier’s Accountable Executive to discuss the program, Medallion’s expectations and the expected resources needed to be successful. Without full support by the Accountable Executive, the likelihood of a carrier being successful is small.

Medallion assigns a program manager to work with the carrier. The carrier determines how they will proceed; who will be the main points of contact (Star Manager), and sets their own timelines for success. The Medallion Program Manger reviews the audit points with the carrier’s Star Manager, discusses what may already be in place, provides whatever tools and resources that might be helpful to the carrier in developing their program, and generally is a sounding board during the development phase. The Medallion Program Manager does not write the carrier’s program. Their job is to provide guidance, and advice on whether or not what the carrier develops meets the Medallion standards. When the Medallion Program Manager is satisfied that, to the best of their ability and knowledge, that the carrier has written documentation to meet Medallion standards, they recommend the carrier for an audit.

Medallion Auditors are independent, remaining separate from the regular contact the Program Manager has with the carrier. Their responsibility is to provide an unbiased evaluation of how a carrier’s programs are designed and performing at the time of the audit. Through records checks and interviews, the auditor determines whether or not the carrier is upholding their own program criteria, based on the Medallion requirements. The audit results can either be successful, successful with conditions, or unsuccessful. The only record Medallion retains is a one-page Audit Results Form, which is retained until the next audit.

In general, findings are resolved between the auditor and the carrier. Difficult issues are discussed with the Executive Director, and sometimes with the Program Manager.

### **4.2 Expectations for Success**

Not all carriers who start the process toward achieving a Star or Shield are successful; nor do all carriers continue to maintain their programs once a Star or Shield has been achieved. The reasons vary, but the core of most failures is lack of management support.

The second predominate failing we see of maintaining a Star or Shield resides in the fact that most carriers develop these programs to stand apart from their standard operating procedures documents, typically the General Operations Manual, Maintenance Manual, and the Training Program. These documents typically fall under regulatory oversight, and must be either accepted or approved by the FAA.

Carriers are reluctant to include the policies and procedures that support Medallion requirements into these manuals for a variety of reasons:

- FAA has no guidance for oversight of these standards
- Carriers believe that if they are not upholding their described standards, that this be interpreted as a regulatory infraction (although the FAA compliance philosophy would imply that this would not necessarily be the case)
- Early Medallion recommendations not to include these standards into FAA required documents

The failings we see in this regard occur when the operator's management changes and the new managers are not familiar with - or it is not imparted to them - the importance of these SOPs. The new incoming management will typically focus on the company expectations of their role within the regulatory guidance they have set forth in their company manuals. Only when it is time for a Medallion audit, does this standard come to their attention. And usually by that time, the programs have not been maintained by the operator in a healthy manner.

Managing change, treating the annual review as an opportunity to discuss whether the programs meet the company goals, and support in terms of time and resources are all areas that truly make these programs successful and keep them alive.

We want our members to succeed. We want to work with them when they have problems maintaining their programs. Therefore, when there appear to be issues, we work with the carriers to establish resolutions, timelines for completion and other opportunity to help them be successful. Even if they fail to move forward, the carrier is provided with the opportunity to voluntarily surrender the Stars or Shield they previously achieved. Removal or suspension from the Medallion program is the last resort.

### **4.3 Culmination of Many Parts**

*Training.* Medallion requires and provides specific training for carrier Star Managers in order to help them understand the premise behind the Medallion Shield Program and Audit Points. This training includes a two-day Safety Management System course (formerly System Safety). We have specific time-frames in which a new Star Manager must complete this training, but we do provide leeway if the training is not provided.

Each carrier is expected to have one to two people, at a minimum, to be trained in TapRoot® Root Cause Analysis. The Operational Control Star Manager must also be trained in Flight Risk Management.

In addition to required training, since inception Medallion has brought up internationally recognized instructors and courses to the Alaska community at no cost to the attendees. Over 55 professional courses providing the aviation industry with further knowledge to develop their programs and experience, and creating a network environment of individuals that to this day still reach out to each other for help and support in improving their practices.

*One-on-one mentoring.* Unique to the industry, each carrier has an experienced Program Manager to work with and guide them in developing their own set of policies, procedures, and training to support each program. The Program Manager has access to other Medallion carriers and provides assisting in connecting carriers in develop some of the best industry practices around.

*Independent auditing.* Many aviation safety companies offer auditors to evaluate a company's compliance with set standards, such as IOSA, IATA, IS-BAO, and TOPS, to name a few. Medallion is

no different in that respect. What we do bring to the table is the valued expertise and backgrounds these auditors have in aviation, compliance, operational and geographical experience. The auditors also provide the value added of seeing and experiencing some of the best practices in the industry and the ability to share these among the participating carriers.

*Carrier success.* Carrier success relies in the carrier developing, implementing, sustaining and reviewing programs they create. There must be management buy-in to sustain company policies and procedures that are above regulatory requirements and our carriers have successfully been continuing and improving on this since 2005. Many have developed such robust programs that the best value we can provide is an independent set of eyes and ears to provide feedback on the health of their systems and the health of their safety culture.

*Safety culture analysis.* Every year, employees from each of our Shield carriers are interviewed about their knowledge and understanding of the company safety program, the expectations and training of employees, reporting and general open ended questions about suggested improvements, hazard exposure and concerns. The results of these interviews are de-identified, cumulated and presented to upper management.

#### **4.4 Development and Implementation of Safety Program**

The formulaic natures of System Safety and Safety Management System provides the foundation of the Medallion Shield Program, evident through each of the operational area Stars. No carrier is asked to develop each area at the same time. Rather the intent is to focus on one area or Star at a time.

Our typical carrier operates under 14 CFR Part 135, does not have the resources to hire additional staff to serve as technical writer, safety manager or internal auditor for the company. Working one operational area at a time allows a carrier to get comfortable with the design requirements, slowly build the programs to meet their own expectations and needs, and gradually build up staff experience to successfully accomplish each Star and ultimately the Shield.

Each operational area (CFIT-Avoidance, Operational Control, Maintenance/Ground Service, Safety and Internal Evaluation Program) requires an operator to design a program in accordance with the following basic criteria:

- *Policies and Procedures.* The operator defines what their policy/policies and various procedures are to support the program.
- *Responsibility and Authority.* The operator clearly establishes the individual who has responsibility for the program, as the well as the individual (and alternates) who have authority for the program. They can also further define what their duties are, required qualifications and training.
- *Safety Risk Management.* Medallion has identified some typical hazards affecting many part 135 operators and established the Shield requirements to guide an operator into mitigating the risks associated with those hazards. As a result, there are specific requirements Medallion asks for in terms of pilot training; shared decision making for flight releases; company parameters for releasing a flight; management of potential employee injury through ground service equipment and facility inspections and maintenance; employee training; and, safety reporting and trend analysis.
- *Safety Assurance.* Each Star has an audit and review section built into it requiring the operator to annually audit their own program, perform an overall analysis and review of the

program and review it with upper management. While Medallion performs an external audit to ensure the company is implementing and managing the program adequately.

- *Training and Promotion.* All Stars require training of some sort, whether for the Star Manager or for the employees affected by the program. The Safety Program emphasizes the promotion piece, similar to SMS, which includes safety meetings, committees, distribution of safety information throughout the company, and so forth.

## 5.0 Hageland Operational Control and Controlled Flight into Terrain Avoidance (CFIT-A) Programs

### 5.1 Operational Control Program Findings

- 5.1.1 The Hageland Aviation Risk Assessment contains four categories ranging from RA1 being the lowest risk to RA4 being the highest risk. Risk values of RA1 and RA2 permit release by the Operational Control Agent (OCA), while RA3 and above require approval from the OCA and a designated RA3 Company Manager.<sup>4</sup>

Medallion requires that the “flight risk assessment process requires increasing levels of management involvement as risk levels increase...”<sup>5</sup>. Medallion further defines Senior Management as Chief Pilot or higher.<sup>6</sup>

***Finding*** – *The Operational Control Agent is not considered by Medallion to represent an operator’s increasing level of management, as required. RA2 values do not have an appropriate release authorization.*

- 5.1.2 Hageland does not define a “flight”, nor do they take into account multiple flights to the same destination(s). Hageland indicated that the practice at the carrier was to assign a single flight number and complete a single risk assessment for an airplane that may depart its base and make stops at several other airports before returning to the base.<sup>7</sup> The Hageland Risk Assessment does not take into consideration a flight with multiple legs conducted over a period of time in which weather forecasts indicate a change, or that marginal weather may require inflight decision making that would take the flight into or through mountainous terrain.

Medallion requires a policy and associated procedures for a consolidated risk assessment covering multiple flights to the same destination(s). Included in this standard a designated individual must regularly check that the limits are not being exceeded and document that check. If the flight is airborne and defined limits are exceeded, the pilot and/or flight coordinator will take predefined action and alert the other party. Consolidated risk assessments can only be utilized if senior management has approved the limiting conditions.<sup>8</sup>

<sup>4</sup> Hageland Aviation Part 135 General Operations Manual, Rev 6, 07/02/15, (GOM) Operation Control, page 2.1.9, D.

<sup>5</sup> NTSB Investigative Hearing August 17, 2017, Exhibit 2Q Medallion Operational Control Program (OC), Rev 13, 02/10/2016.

<sup>6</sup> Medallion OC, ibid, Note 2, page 2.

<sup>7</sup> NTSB Investigative Hearing August 17, 2017, Exhibit 2A Operational Factors Factual Report, Para. 10.1.2, page 28.

<sup>8</sup> Medallion OC, ibid, 1.37.

***Finding** – Hageland Aviation Flight Risk Assessment did not take into account the multiple hazards and factors relevant to a flight or series of flights with multiple legs, weather trending and forecasts and terrain (environmental) factors.*

## 5.2 CFIT-A Program Findings

5.2.1 The Second-in-Command (SIC) of the accident flight completed initial CFIT ground training between July 18-19, 2016. There is no documentation showing completion of ATD/Simulator training.<sup>9</sup>

Medallion requires that all pilots receive initial and annual (recurrent) CFIT-A training, which includes ground subjects and ATD/Simulator training. New hire and returning seasonal pilots must receive all CFIT-A training prior to being assigned revenue or flight duties. Training must be appropriately documented.<sup>10</sup>

***Finding** – Hageland Aviation did not ensure all pilots receive all CFIT-A training prior to being assigned a revenue flight or flight duties.*

5.2.2 The SIC of the accident flight had no documentation showing completion of ATD/Simulator training.<sup>11</sup>

Medallion requires that the carrier CFIT-A training program be audited on a regular basis, and that the audit be documented and retained.<sup>12</sup>

***Finding** – The Hageland audit of the CFIT-A training records did not identify training lapses in CFIT-A Training. An audit finding would require a corrective action, such as developing a process to ensure no pilot is released to conduct a flight until all training is completed.*

5.2.3 Hageland Operations Training Manual, CFIT Avoidance Airmen General Subjects Module #7, lists as a training element Deteriorating Visibility.<sup>13</sup>

Medallion requires practice estimating in-flight visibility<sup>14</sup>.

Hageland CFIT-A policy describes “inflight visibility can be estimated by using the GPS and ADS-B to identify reference points on the surface” or by “using the nose cutoff angle method”.<sup>15</sup> (The ADS-B was a MEL deferred item)

Hageland Simulator/FTD Training Flight Lesson 1 includes a discussion of visibility estimation as part of the Post Flight.<sup>16</sup>

<sup>9</sup> NTSB Investigative Hearing docket, August 17, 2017. Human Performance Factual Report, Para. 4.1.2, pg. 8.

<sup>10</sup> NTSB Investigative Hearing docket, Exhibit 2R Medallion CFIT Avoidance Program (CFIT-A), Rev. 14a, 02/10/2016, 1.8, 1.30-1.38.

<sup>11</sup> Human Performance Factual Report, *ibid*.

<sup>12</sup> Medallion CFIT-A, *ibid*, 1.8, 1.71-1.74.

<sup>13</sup> Hageland Operations Training Manual, Rev 2, 10/12/15, Section/Page C-14.

<sup>14</sup> Medallion CFIT-A, *ibid*, 1-62.

<sup>15</sup> Hageland Aviation Services CFIT-Avoidance Training Manual, Rev Original, 04 Nov 14, pg 5.

<sup>16</sup> Hageland CFIT-A Training, *ibid*, Pg SIM-1.

*Finding – Hageland did not provide practice in estimating in-flight visibility during ATD/Simulator training.*

## 6.0 The “Illusion of Safety” Fallacy

The questioning of Medallion by the NTSB at the public hearing, the NTSB’s selection of interviewees prior to the hearing as part of the investigation, and the selection of items placed in the hearing’s public docket indicate a suspicion by the NTSB that Medallion only provides the “illusion of safety” to its members. The Medallion Foundation finds this veiled allegation as offensive and without merit.<sup>17</sup>

In a concurring statement for a recent NTSB accident report<sup>18</sup> regarding a business jet that crashed on approach into an apartment building in poor weather, then Member Robert Sumwalt (now Chairman) stated the following on October 25, 2016:

*“I’m concerned that an organization that had so many safety-related issues could have an ARGUS Gold rating and be Wyvern Registered. Discriminating customers look to, and trust, such “seals of approval” when selecting their air travel provider. This is not the first time the NTSB has seen an organization pass an industry audit, only to find after an accident that there was an illusion of safety.”*

Member Sumwalt then cited a June 2007 accident in this same concurring statement that involved a chartered Cessna 550 business jet that crashed into Lake Michigan.<sup>19</sup> The NTSB found egregious safety violations and deficiencies with the operator, including falsified training records. The operator possessed an ARGUS Gold rating. Member Sumwalt also cited similar concerns in yet another NTSB case involving a business jet that crashed during landing at Owatonna, Minnesota<sup>20</sup> in which the operator held an ARGUS platinum rating. He wrote that he was: “... very concerned these industry audits did not detect serious safety deficiencies. Customers rely on them to make their travel choices, and when audits fail to detect the very things they are designed to catch; it further bolsters an illusion of safety.”

As discussed previously in Section 3.2 above, Medallion is not just another compliance and auditing organization like the ones cited above. And Ravn Connect flight 3153 bears no resemblance to the accidents cited.

Additionally, air carrier operators at all levels of certification want to show their willingness to go beyond basic FAA requirements to ensure not only safe flight, but safety in all aspects of their operations. They do so by presenting themselves to various audit programs as a way to be proactive

<sup>17</sup> NTSB Public hearing transcript, *Hageland Aviation Services Flight 3153 Investigative Hearing*; Accident No. ANC17MA001, Docket No. SA-540, August 17, 2017; Anchorage, AK; page 239. Mr. DeLisi posing to Mr. Rock “We have investigated accidents for a number of operators that have participated in audit programs, the IOSA program, ISBAO. Folks have Wyvern audits, ARGUS audits.... We sometimes hear people say that safety is what takes place in the cockpit, that an audit program just creates the illusion of safety, the paperwork is there for safety. How would you react to this concept that an audit program just gives you the illusion of safety?”

<sup>18</sup> NTSB. Aircraft Accident Report. 2006. *Crash During Nonprecision Instrument Approach to Landing, Execufly Flight 1526, British Aerospace HS 125-700A, N237WR, Akron, Ohio, November 10, 2015*. Aircraft Accident Report NTSB/AAR-16/03. Washington, DC. P. 75-78

<sup>19</sup>NTSB. Aircraft Accident Report. 2009. *Loss of Control and Crash, Marlin Air Cessna Citation 550, N550BP, Milwaukee, Wisconsin, June 4, 2007*. Aircraft Accident Report NTSB/AAR-09/06. Washington, DC.

<sup>20</sup> NTSB. (2011). *Aircraft accident report: Crash during attempted go-around after landing, East Coast Jets Flight 81, Hawker Beechcraft Corporation 125-800A, N818MV, Owatonna, Minnesota, July 31, 2008*. (NTSB Report No. NTSB/AAR/11-01). Washington, DC: Author.

rather than reactive – to get an outside look at operations, to identify hazards or areas of risk all in order to improve.

Those involved in aviation operations knows that third-party audits are a very small component of the overall safety profile. Internal programs like Flight Operations Quality Assurance (FOQA), Line Oriented Safety Audit (LOSA), Aviation Safety Action Program (ASAP), Internal Evaluation Program and safety training along with senior management buy-in are all far more critical to developing a positive safety culture.

**Finding:** Audits are typically spot checks. While audit performance provides a strong indication of overall compliance and commitment, there is no cause-and-effect relationship between completing a safety audit and not having an accident.

About four months ago, as part of his confirmation hearing process to following his nomination to be the NTSB Chairman, then-Member Sumwalt provided this statement (in response to a question for the record)<sup>21</sup> that the Medallion Foundation believes is spot on.

*“I am familiar with the Medallion Foundation and appreciate the work they have done to improve safety in Alaska. I believe in order for the Medallion Foundation to be effective, a partnership with the regulator (FAA) is essential. As the regulator, the FAA has the ability to encourage such programs, and in my opinion, programs such as the Medallion Foundation should be part of the FAA’s “safety tool box.”*

## 7.0 Suggestions for Improvements

Our challenge today is how to keep the Shield Program current and relevant. We have rewritten the program to more closely align with 14 CFR Part 5 Safety Management System. Our role is not to provide oversight, but to identify areas to improve their risk management. Our future with our 121 carriers, and eventually the 135 carriers is to select from the annual hazard and risk lists provided by the NTSB, CAST and through our own ASAP trending, a selection of topics for these carriers to analyze through their SRM (Safety Risk Management) processes. The idea is to further identify and proactively manage potential hazards.

Due to the scalable nature of the Shield Program, we strongly believe small 135 operators can develop Safety Management Systems into their organization. Our participating 135 operators already have produced steps in that direction by earning recognition by Medallion and the FAA for their Medallion achievements.

Our additional challenge lies in motivating the operator to incorporate the product they produce to meet Medallion requirements into their FAA accepted and approved manuals. Carriers are reluctant, due to the nature of revision acceptance and approval processes. FAA inspectors are reluctant because they do not have any guidance on how to deal with the incorporation of non-regulatory policies, procedures and training into company manuals.

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<sup>21</sup> Questions for the Record posed by Senator Dan Sullivan; Senate Commerce Committee on Commerce, Science, and Transportation; Nominations Hearing, June 8, 2017.

## 8.0 NIOSH Data And Future Study

NIOSH researchers identified the risk factors associated with CFIT among air taxi and commuter pilots in Alaska during 1990-1998. Based on this and other research, the US Congress funded the Alaska Interagency Aviation Safety Initiative in 2000 to focus on improving safety in air taxi operations. This initiative used a multi-faceted approach to improve infrastructure, employ technology, provide education to pilots and passengers, and to encourage voluntary changes to improve safety and reduce the incidence of aircraft crashed in Alaska. Intervention strategies that were part of this initiative included the Medallion Program, Capstone Program, FAA's Circle of Safety education program, weather cameras and the "Mike-in-Hand" Program.

NIOSH researchers compared the number and rates of crashes before and after the start of the safety initiative. Of the 568 AT crashes in Alaska during 1990–2009, there was an average of 35 per year during 1990–1999 and 21 per year during 2000–2009. The number of CFIT accidents decreased from 5 per year during 1990–1999 to less than 2 per year during 2000–2009. However, CFIT crashes were almost ten times more likely to have resulted in a fatality than a non-CFIT crash.<sup>22</sup>

This coordinated effort was successful in reducing crashes in the Alaskan Air Taxi industry.

Although the interventions were successful in reducing the number of commercial pilot deaths by 50%, the evaluation could not pinpoint how much any one intervention strategy contributed to the overall success of the initiative.

This year, NIOSH is proposing to conduct a retrospective case-control study to determine the overall effectiveness of the Medallion Foundation and its program (Appendix A). Using the NTSB aviation accident database will be used to identify aircraft accidents in Alaska that occurred after 2001. Carrier status and whether they held a Star or Shield at the time of the accident, verified against Medallion records and other factors will be used to determine the protective effect of the Medallion Stars and participation in the Shield program.

Research may be used to refine and reinforce the existing Shield program.

## 9.0 Conclusion

No single intervention strategy will eliminate CFIT accidents. The Medallion Foundation is successful because we provide a valuable service to our members and the aviation community as a whole.

It is more than a membership; it is a partnership that is intended to be long term.

Our success is continuing to attract interest from other commercial aviation operations in other states.

We encourage you to talk to your members. Ask them if they feel the Medallion Foundation is making a difference in their operations. Read their letters in the Appendix B.

We believe we are making a difference every day. Our weather is extreme; our aviation infrastructure is a challenge and the seasonal nature of some of our carrier's operations makes it difficult to reach out to all their employees. However, because air travel is so essential for so many Alaskans, we know that safety would suffer if we did not provide our services.

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<sup>22</sup> American Journal of Industrial Medicine, Vol 55:176-186, February 2012. "A multifaceted public health approach to statewide aviation safety", Mode et al.



**APPENDIX A**  
NIOSH STUDY PROPOSAL

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Center for Disease Control and Prevention (CDC)  
National Institute for Occupational Safety and Health  
Western States Division  
4230 University Drive, #310  
Anchorage, AK 99508

September 22, 2017

Mr. Jerry Rock, Executive Director  
Medallion Foundation  
1520 North Post Rd  
Anchorage, AK 99501

Dear Mr. Rock,

As you well know, during the 1990s, Alaskan pilots had one of the most hazardous occupations in the U.S. Commercial pilots in Alaska had an occupational fatality rate of 410 deaths per 100,000 workers, which was five times greater than the rate for all U.S. pilots and nearly 100 times greater than the rate for all U.S. workers. One of the strategies that was employed to improve aviation safety was the creation of your organization, the Medallion Foundation (MF). In cooperation with the Federal Aviation Administration, the MF works to enhance safety cultures and provide a structure for air carriers to exceed regulatory requirements and enhance safety guidelines.

In addition, the MF offers a voluntary safety program. The Medallion Shield program is comprised of five stars, each represents a cornerstone of the Medallion Shield. These stars include controlled flight into terrain avoidance, operational control, maintenance and ground service, safety, and internal evaluation. To obtain a star, a carrier must develop program and process guidelines, complete training and undergo audits by MF independent auditors. After the five stars are obtained, carriers are eligible for the Shield program. A final audit is conducted and then annual audits are conducted by MF independent auditors to ensure that required standards are maintained. Participation in the Shield program can benefit carriers by a reduction in insurance rates, promotion of participating carriers and recognition by industry of those carriers that exceed required safety standards.

An assessment of this program has never been completed. Previous research by the National Institute for Occupational Safety and Health (A multifaceted public health approach to statewide aviation safety, Mode et al.) evaluated the effectiveness of a multifaceted approach to aviation safety in Alaska where several interventions were part of an aviation safety initiative. The MF was one component in the initiative, along with five other interventions. Although the interventions were successful in reducing the number of commercial pilot deaths by 50%, the evaluation could not pinpoint how much any one-intervention strategy contributed to the overall success of the initiative.

In an effort to determine the overall effectiveness of the MF organization and its programs, the National Institute for Occupational Safety and Health proposes to conduct a retrospective case-control study. The National Transportation Safety Board aviation accident database will be used to identify aircraft accidents in Alaska that occurred after 2001 when the MF was founded. Carrier status and whether they held a Star or a Shield at the time of the accident will be verified by MF records. Accidents that occurred to carriers that held MF Stars or Shields (cases) will be compared with non-MF carriers (controls) and odds ratios will be calculated for MF Star or Shield carriers vs. non-MF Star or Shield carriers for fatalities, controlled flight into terrain, probable cause, type of operation, and other risk factors. Other cornerstones will be evaluated by comparison of NTSB findings and probable cause(s) in fatal aircraft



Center for Disease Control and Prevention (CDC)  
National Institute for Occupational Safety and Health  
Western States Division  
4230 University Drive, #310  
Anchorage, AK 99508

accidents and the MF Star or Shield status of the carrier. The protective effect of the MF Stars and participation in the Shield program will be evaluated by statistical analysis.

Research findings may be used to refine and reinforce the existing MF Star and Shield program, and may potentially demonstrate gaps in existing program areas. Research findings may also be used as rationale to provide targeted efforts to a recognized hazard, expand the MF program, or create similar programs in other areas or industries. We believe research findings could be used to further improve aviation safety in Alaska.


We appreciate your efforts and the work that MF has done in the area of aviation safety and your willingness to work with us on this important area of research. We look forward to collaborating and working with you and your staff.

Please let me know if you have any questions or concerns.

Respectfully,

A handwritten signature in blue ink, appearing to read "Mary O'Connor", is written over a black redaction box.

Mary O'Connor

Manager, Aviation Safety Research Program  
CDC/NIOSH/WSD  
4230 University Drive, Suite 310  
Anchorage, AK 99508  
Phone: 

## APPENDIX B

### LETTERS OF SUPPORT FOR MEDALLION

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Michael McCrary

Director of Operations, **70 North**

Tom Nunn

Vice President, Safety, **Alaska Airlines**

Dan Owen

Owner/Operator, **Alaska Air Transit**

Mike Stedman

Co-Owner, **Alaska Seaplanes**

Andrew Angstman

Director of Safety, **Ryan Air**

Bruce LaLonde

**Medallion Foundation Board Member**

Christine Klein

Former Deputy Commissioner, **Alaska Department of Transportation**

Bob Hajdukovich

CEO, **Ravn Air Group**

Robert Everts

President/CEO, **Tatonduk Outfitters Limited**

S. Kirby Day, III

Manager/Port Operations, **Holland America Group**

Lyle Wilder

Chief Pilot, **Lake and Peninsula Airlines**

Brian Bruxvoort

Chief Pilot, **Missionary Aviation Repair Center (MARC)**

Mia Costello

Co-Chair, **Alaska State Legislature Pilot Caucus**

Additional Signatories: Representative Lance Pruitt; Representative Neal Foster, Co-Chair;

Representative Dan Saddler; Representative Gary Knopp; Senator Natasha von Imhof; Senator

Donald Olson

David Doyon

Vice President/Secretary, **Misty Fjords Air & Outfitting, Inc.**

Danny Seybert

CEO, **PenAir**

Captain Sean J. Ellis

**Alaska Airlines**

George W. Curtis

Director of Operations, **Taquan Air**

Daniel Corson

Director of Operations, **Wings Airways**



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operations@seventynorth.com

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

July 26, 2017

Re: August 17 Alaska Field Hearing

Dear Member Weener;

The Foundation's programs have been extraordinarily useful in helping us to improve our safety procedures. They provide the resources to help develop training programs and to document safety procedures that provide consistency across all levels of our organization. It would be difficult to overstate the value of the Medallion Foundation to our organization; we have utilized many of the training resources. Employees have completed Tap Root, SMS Basics and Safety Management Systems, ERC Training – the Aviation Safety Action Program and training in Human Factors and Decision Making.

Since completing these safety courses our company has experienced a much greater awareness and an enhanced competency regarding our flight safety program. We now have documented safety and training procedures available to all employees.

For a small company like ours, formal safety training can often be expensive or require travel, medallion offers quality training resources locally at a reasonable expense. Aviation in Alaska particularly in our area of operations – the Arctic North Slope – is a dangerous and risk intensive environment. Having the support of the Medallion Foundation has been a significant asset for our operation.

Sincerely,



Michael McCrary  
Director of Operations  
70 North



July 24, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener;

The 1990s were a dangerous time for Alaska pilots –192 commercial pilots were lost during the decade and the US Department of Labor stated that being an Alaska pilot was rated as one of the most hazardous occupations in the United States.

To address this issue, the Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The Foundation created a series of programs that specifically addresses the unique challenges of flying in Alaska.

Now a certified 501(c)(3) non-profit organization, the Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The National Institute for Occupational Safety credited the Foundation for reducing the number of controlled flights in to terrain (CFIT) accident by 57 percent.

The Foundation's programs have been extraordinarily useful in helping to improve safety procedures. They provide the resources to help develop training programs and to document safety procedures that provide consistency for many operators in the state.

Completing the safety courses and obtaining the Medallion Shield have been the catalyst for many Alaska carriers to improve their safety records. I completely support the efforts and results that the Foundation and their programs have produced, without these valuable resources the safety of Alaska aviation would be reduced.

Sincerely,

  
Tom Nunn  
Vice President, Safety





2301 Merrill Field Drive, Anchorage AK 99501  
907-276-5422  
Dan@flyAAT.com

July 24, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Dr. Weener,

This letter is to share the perspective of a former major airline and military aviator on the Medallion Foundation's important role in Part 135 aviation safety in Alaska. And, since the Alaska Field Hearing is centered around CFIT accidents, I will raise the issue of IFR infrastructure in Alaska.

Before entering the Alaska Part 135 industry thirteen years ago, my aviation background included twenty years as a pilot for one of the world's largest airlines, and fifteen years of combined regular and reserve service as a Naval Aviator. I have logged nearly 400 carrier landings in the F-14 Tomcat, and I am type rated on the B737N, 757, 767, 777, and MD-11.

In these former roles, I benefited from established safety cultures and well conceived safety systems. I held key safety related positions, such as squadron NATOPS officer, responsible for the recurring standards training and evaluation of squadron airmen, and Landing Signal Officer (LSO), responsible for training and certifying pilots in safe carrier operations.

When my airline employer terminated its pilot pension plan, I started over as an owner/operator of a small Alaskan Part 135 company. However, I naively assumed that well established safety cultures and safety systems would exist in all Part 135 operations. After all, they are FAA regulated. Instead, I found a discomfoting void.

I learned about the Medallion Foundation and enrolled immediately. I wanted safety systems for our small company, and the Medallion Foundation provided the resources that we needed to build them. And, since we developed the programs instead of adopting programs developed by someone else, we tailored them to suit our operations.

Knowing that CFIT was the number one killer in Alaskan aviation, we chose to tackle the Medallion CFIT Prevention "Star" program first.

Medallion provided the training, such as system safety, risk management, and root cause analysis, along with mentoring by program managers, that we needed to complete the requirements of Medallion's CFIT Prevention "Star" audit points. We subsequently developed a Medallion audited Operational Control program, and are now developing an SMS program.

I can say with absolute certainty that my company's level of safety has improved. The improvement can't directly be measured as a percentage reduction in accidents, since we've never had an injury or fatal accident. But, as a mature aviator with an extensive background built around a core of flight safety, I know it when I see it.

Our company now have a developing safety culture where none existed before. I know this when I see employees making use of our hazard and incident reporting system, or when I see that the safety standards that we have established are now habit, not only for our pilots, but for all of our staff. The right things are being done, even when employees are unaware that anyone is paying attention.

I fully support the Medallion Foundation and believe in its mission. This is why, for the past twelve years, I have volunteered my time as a Medallion board member, committing valuable time to this unpaid position that has no perks.

It's understandable that the value of the Medallion Foundation may be questioned when there are accidents involving Medallion carriers. By that logic, we should also question the value of the FAA, since 100 percent of carriers are regulated and overseen by the FAA.

A more informed viewpoint would be to see Medallion as providing a path to improved safety for those who are willing to make an honest commitment to the Medallion programs. However, it is unrealistic to think that Medallion, with its limited resources, could provide assurance that a company or its employees are fully adhering to their Medallion audited programs.

The determination of causal factors for Alaskan CFIT accidents should go beyond examining the roles of Alaskan operators or the Medallion Foundation. There is grossly inadequate IFR infrastructure to serve this vast state with its abundance of poor weather, and its hundreds of remote communities that have no road connection to the hub cities where they obtain needed goods and services. The bulk of flying in Alaska is essential and



not discretionary, yet there are not enough instrument approaches and automated weather stations to serve many community airports.

Additionally, the automated weather stations required for a Part 135 operator to conduct an approach are often out of service for extended periods. For example, our company serves the the Nikolai airport (PAFS) from Anchorage four days per week. Nikolai's AWOS has had an inoperative viability sensor since May, so it is not legal for us to fly Nikolai's instrument approach. Instead, we must fly past Nikolai to conduct an approach at McGrath, 34 nautical miles away along hilly terrain, then once beneath the cloud bases, attempt to fly under visual flight rules to get back to Nikolai.

Inadequate IFR access is a gross deficiency when the only transportation alternative for the vast majority of Alaska's communities is by air.

To support the case for improving IFR access, contrast the data on Alaska CFIT accidents for IFR versus VFR flights. If the major airlines only option was to operate under VFR during poor weather, they would not have such an envious safety record.

In conclusion, the Medallion Foundation cannot single handedly eliminate CFIT accidents in Alaska. But it does help genuinely willing operators to improve their levels of safety. Similarly, building a more comprehensive IFR infrastructure will not eliminate CFIT, but it will give operators the choice to manage CFIT risk by operating IFR during poor weather.

Since there are no other means of transportation, operators rarely have the luxury of waiting for clear weather. For aviation safety culture in Alaska to fully evolve, the means to operate safely, by using IFR procedures during marginal weather, must be made available.

Sincerely yours,

*Dan Owen*

Owner/ operator  
Alaska Air Transit





August 1, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener;

This letter is in support of the Medallion Foundation and their programs. Alaska Seaplanes has been a member of the Foundation under the current ownership since April 2011. Because of the Medallion Foundation, Alaska Seaplanes has been able to attend classes presented by top industry individuals, such as Tony Kern and Mike Doiron, that otherwise would have been cost prohibitive. Through these classes and the Medallion Foundation's Star and Shield program Alaska Seaplanes has become a more efficient and safer company, both for our passengers and employees. To date our managers and employees have completed 87 Medallion sponsored safety courses, we've also experienced a noticeable improvement in all Company Operations, which has resulted in substantial reductions in insurance premiums.

Because of the Medallion Foundation, the culture at Alaska Seaplanes has gone from a "tribal knowledge" run company to a company with a "Just Safety Culture" With documented safety and training procedures available to all employees.

The foundation has been instrumental in helping our managers develop these policy and procedures throughout all our aviation operations. This includes the safety program, operational control, ground operations, maintenance and CFIT (controlled flight into terrain). Because of the Medallion Foundation, the CFIT program in particular has been a wonderful tool, we have free use of a PCATD (personal computer-based aviation training device). This device is extremely helpful in preparing new pilots, as well as returning pilots, on routes to be flown in varying weather conditions without the risk of flying in actual hazardous weather situations.

With the Medallion Foundation and other safety programs such as the FAA Weather Cameras and the Capstone Program the fatal accident rate in Alaska has been reduced substantially in the last fifteen years.

Sincerely,  
Mike Stedman  
Co-Owner  
Alaska Seaplanes



6400 Carl Brady Drive  
Anchorage, Alaska 99502

907-562-2227

[ryanalaska.com](http://ryanalaska.com)

July 21, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: Medallion Foundation

Dear Mr. Weener;

It is my understanding that the role of the Medallion Foundation has been under scrutiny during recent NTSB investigations in the state of Alaska. I have two perspectives on the Foundation: one as a board member for the last three years, and another as a client of the Foundation for the past seven years in my role as Director of Safety for a FAR Part 135 airline in Alaska.

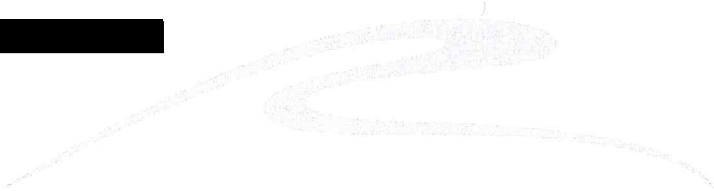
At Ryan Air, we have worked in a close capacity with the Medallion Foundation since its inception to strengthen our company safety culture and programs. We have been through the process of attaining all five original Medallion stars (Safety, Controlled-Flight-Into-Terrain Avoidance, Operational Control, Maintenance/Ground Service, and Internal Auditing) as well as the Medallion Shield. The Program Managers at Medallion have been an indispensable asset, and are available for any questions about the Star/Shield program as well as Safety Management Systems in general.

I joined the board because I support the mission of Medallion and I have been convinced of its efficacy over the years. I have no doubt that the Foundation has been of tremendous benefit to the Alaskan aviation community. I grew up in Bethel, Alaska, and I have seen the culture of rural aviation safety change, albeit slowly. The statistics do reflect this change over time. It is my firm belief that the aviation community needs a non-enforcement partner like Medallion. In particular, many Part 135 carriers have somewhat limited resources and expertise when they attempt to adopt elements of Safety Management Systems, and Medallion is able to aid them every step of the way.

I am confident that during this process, including the public hearing on August 17, the Medallion Foundation will be shown to be a valuable asset to the Alaskan aviation community. If you have any questions, I can be reached at the contact information below.

Regards,

Andrew Angstman  
Director of Safety  
Ryan Air



July 20, 2017

Bruce A. LaLonde

2215 Arbor Circle

Anchorage, AK 99517

The Honorable Earl F. Weener, Ph.D

National Transportation Safety Board

490 L'Enfant Plaza SW

Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener;

The 1990s were a dangerous time for Alaska pilots – 192 commercial pilots were lost during the decade and the US Department of Labor stated that being an Alaska pilot was rated as one of the most hazardous occupations in the United States.

To address this issue, the Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The Foundation created a series of programs that specifically addresses the numerous unique challenges of flying in Alaska.

Now a certified 501(c)(3) non-profit organization, the Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The National Institute for Occupational Safety credited the Foundation for reducing the number of controlled flights in to terrain (CFIT) accident by 57 percent.

The Foundation's programs have been extraordinarily useful in helping Alaska pilots to improve their safety procedures. They provide the resources to help Alaska air carriers develop training programs and document safety procedures that provide consistency across all levels of their organization.

I currently serve as a member of the Medallion Foundation Board of Directors, it is my pleasure to serve this excellent organization. I have always been impressed with the Medallion Foundation's leadership and staff's level of unwavering commitment to improving aviation safety. I know of no other program that provides Medallion's level of dedication and professionalism either on a non-profit or for-profit basis. There is no doubt in my mind that air carriers who have used Medallion's programs have prevented accidents and saved lives.

Sincerely,

A handwritten signature in blue ink, which has been partially obscured by a black redaction bar.

Bruce A. LaLonde

Board Member

Medallion Foundation

Anchorage, Alaska

Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

July 24, 2017

Re: August 17 Alaska Field Hearing

Dear Board Member Weener:

I am writing to support the Medallion Foundation as a former Alaska Department of Transportation (AKDPTPF) Deputy Commissioner responsible for airports & aviation.

The Federal Department of Labor rated being a pilot in Alaska as one of the most hazardous occupations in the country in the 1990's after 192 commercial pilot fatalities occurred over a decade. Besides tough unforgiving environmental conditions in Alaska, statistically we also have the largest numbers of required aircraft trips per person annually due to lack of roads and distant communities. The vast state of Alaska reaches across the USA in total expanse when overlain on a map drawn to scale. To help address the high numbers of aviation accidents and fatalities, Alaska Air Carriers Association formed the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations.

During my tenure at the department, I was able to witness initial start-up, development and growth of Medallion Foundation as it became a more professional and respected organization. The programs specifically address unique challenges of flying in Alaska, raise safety awareness, and are instrumental to help reduce aviation fatalities. Medallion has been able to educate and reach commercial operators, small carriers, and individual pilots in ways that the FAA and other regulatory agencies cannot – in improving safety for the industry and the public.

Medallion is now a certified 501(c)(3) non-profit with over thirty voluntarily participating carriers who have completed at least one of five safety classes--Terrain Avoidance, Operational Control, Maintenance & Ground Service, Safety & Internal Evaluation. National Institute of Occupational Safety credits the organization for reducing number of controlled flights into terrain accidents by 57 percent.

The Medallion Foundation's programs have been extremely useful to improving aviation safety in Alaska. They assist operators to develop training programs and document safety procedures to provide consistency across all levels of aviation in our state, and thus safer public transportation.

Sincerely,



Christine Klein  
Former Deputy Commissioner  
AK Dept. of Transportation

July 20, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener;

The 1990s were a dangerous time for Alaska pilots – we lost 192 commercial pilots during the decade and the US Department of Labor stated that being an Alaska pilot was rated as one of the most hazardous occupations in the United States.

To address this issue, the Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The Foundation created a series of programs that specifically addresses the unique challenges of flying in Alaska.

Now a certified 501(c)(3) non-profit organization, the Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The National Institute for Occupational Safety credited the Foundation for reducing the number of controlled flights in to terrain (CFIT) accident by 57 percent.

The Foundation's programs have been extraordinarily useful in helping us to improve our safety procedures. They provide the resources to help develop training programs and to document safety procedures that provide consistency across all levels of our organization.

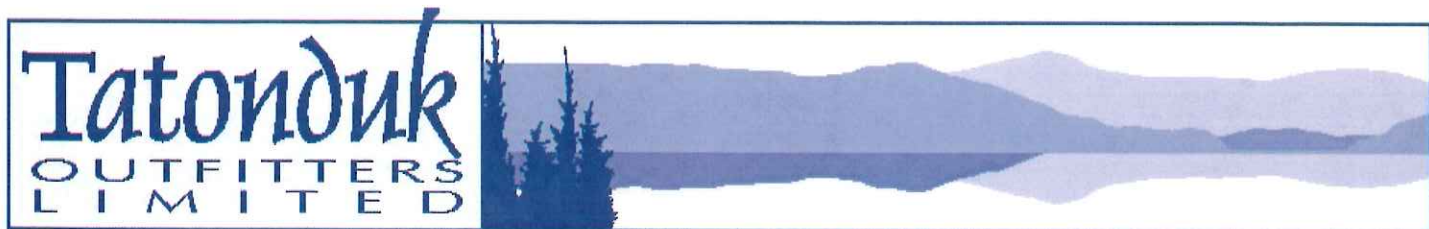
We view participation in the Medallion Shield program a commitment to excellence and to the ideal that we can always be a safer company. The Medallion Foundation has come under recent attack for lack of effectiveness, however the program was never intended to "fix a company". The program allows for an independent evaluation of a company's safety culture and adherence to its own standards above the FAA minimums. The program works hard to maintain an atmosphere of transparency and trust, whereby a company can honestly evaluate its own effectiveness of its safety programs and have them validated by the Medallion program. We strongly support the Medallion Foundation and what it stands for. As we continue down the path of fully implemented Safety Management Systems for both our Part 121 and Part 135 airlines, we will continue to do what we can to support and share our programs with the Medallion team.

Sincerely,

A handwritten signature in blue ink is positioned above a solid black rectangular redaction bar. The signature is partially obscured by the bar.

Bob Hajdukovich  
CEO, Ravn Air Group  
Hageland Aviation  
Corvus Airlines  
Frontier Flying Service





d/b/a Everts Air Alaska, d/b/a/ Everts Air Cargo • P.O. Box 61680, Fairbanks, AK 99706-1680 • (907) 450-2345, fax: (907) 450-2320 • www.evertsair.com

July 13, 2017

The Honorable Earl. F. Weener, Ph.D.

National Transportation Safety Board

490 L'Enfant Plaza SW

Washington, DC 20594

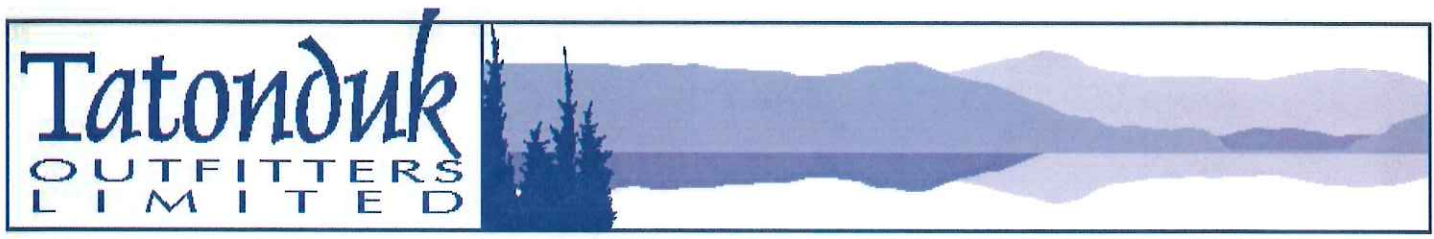
Re: August 17 Alaska Field Hearing

Dear Member Weener;

The 1990s were a dangerous time for Alaska pilots – we lost 192 commercial pilots during the decade and the US Department of Labor stated that being an Alaska pilot was rated as one of the most hazardous occupations in the United States.

To address this issue, the Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The Foundation created a series of programs that specifically addresses the unique challenges of flying in Alaska.

Now a certified 501(c) (3) non-profit organization, the Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The National Institute for Occupational Safety credited the Foundation for reducing the number of controlled flights in to terrain (CFIT) accident by 57 percent.



d/b/a Everts Air Alaska, d/b/a/ Everts Air Cargo • P.O. Box 61 680, Fairbanks, AK 99706-1 680 • (907) 450-2345, fax: (907) 450-2320 • www.evertsair.com

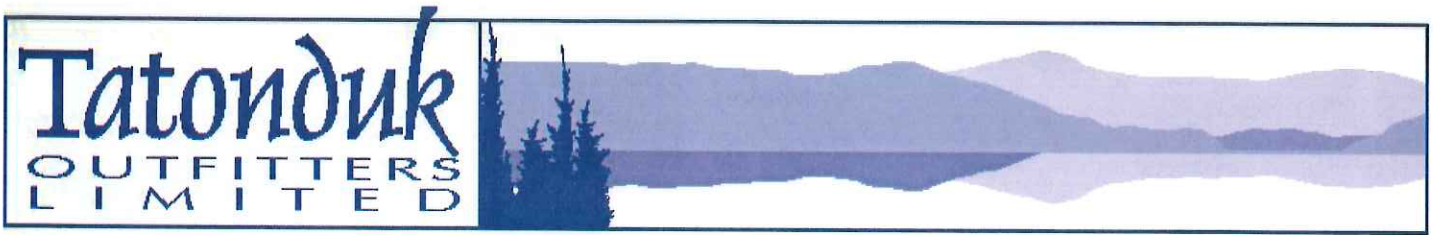
The Foundation's programs have been extraordinarily useful in helping us to improve our safety procedures. They provide the resources to help develop training programs and to document safety procedures that provide consistency across all levels of our organization.

Everts Air is an active member in the Medallion Foundation Shield Program® which focuses on establishing and sustaining an elevated level of safety performance through the application of Safety Management System (SMS) principles. While not all carriers embrace the same Safety Culture, it has been, a priority for Everts Air. We have been at the forefront of the SMS for seven (7) years. In 2009 we volunteered to participate in the SMS Pilot Program. We actively worked through the stages of the program and were the 1st Alaska based 121 carrier to achieve approval on our FAA required SMS Implementation Plan after the Part 121 SMS law was put into place. We are currently in SMS Sustainment, and our Safety Culture was directly improved by our participation in the Medallion Shield Program.

Everts Air experience with Medallion Shield has us helped develop and promote:

- A safety culture that holds safety as a core value
- Continuous professional development of individual safety skills and competence
- Proactive sharing of operational control responsibilities
- Hazard identification and risk management techniques and trend analysis
- Management practices that support the organization's safety objectives

In 2014 through 2017, Everts Air underwent extensive evaluations of our company by the Medallion Foundation, which inspected all five (5) Medallion Stars (CFIT, Operational Control, Safety, the Internal Evaluation program, and Aviation Maintenance) and participated in over 100 + employee interviews each year by Medallion which measured the Safety Culture at Everts Air. This effort culminated in the Medallion



d/b/a Everts Air Alaska, d/b/a/ Everts Air Cargo • P.O. Box 61680, Fairbanks, AK 99706-1680 • (907) 450-2345, fax: (907) 450-2320 • www.evertsair.com

Foundation awarding Everts Air the Medallion Shield.

Everts Air is also a DOD contractor and must undergo a stringent DOD aviation inspection every 2 years which is designed to focus on 4 major functional areas (Internal Evaluation Program, Safety, Operations and Aviation Maintenance). In the last four years, Everts Air has excelled in these DOD evaluations of our major functional areas. We received outstanding ratings from Scott AFB. In 2016, Everts Air was the 1st Alaska based air carrier to undergo a DOD level Emergency Readiness Exercise which simulated an aircraft accident of an Everts Air aircraft carrying a DOD payload. One comment noted in the final DOD report read, "All programs were well managed. Team coordination was key". – Civil Reserve Air Fleet (CRAF). All this was made possible by our participation in the Medallion Shield Program.

Since receiving our safety shield, we have experienced a noticeable improvement in our flight safety. We now have documented safety and training procedures available to all employees. Our 14CFR Part 121 and Part 135 operations have not had a CFIT type accident in the last ten years. We do feel that this is in part due to the emphasis provided by our CFIT-Avoidance training. Our insurance rates have decreased by an estimated 10% as a result of our improved procedures.

Sincerely,

  
  
Robert W. Everts  
Accountable Executive (President/CEO)  
Tatonduk Outfitters Limited

July 21, 2017

The Honorable Earl F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener;

The Shore Excursion Departments of Holland America Line and Princess Cruises partner with numerous flightseeing excursion companies (via contract) in Alaska and around the world in conjunction with their shore excursion programming. The goal is to provide our guests with a first-class, quality and safe tour experience to complement the visit to these special destinations. That said, the safety of our passengers and crew is the number one priority onboard and when providing adventures ashore.

Back in the 1980's and 1990's there were a number of air accidents in Alaska that claimed lives of local residents and visitors alike. As a local resident here in Alaska, I believe this gave most air operators and tour companies pause as they looked at their own safety programs and protocol.

The Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The

Foundation created a series of programs that specifically addresses the unique challenges of flying in Alaska. I am proud to say that I am a current member of the Board of Directors of the Medallion Foundation and have been very impressed with the organization and the dedication of its members to improving the safety culture of aviation in Alaska.

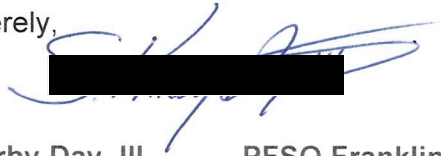
The Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The organization is now a certified 501(c)(3) non-profit. As well, the National Institute for Occupational Safety credited Medallion with reducing the number of controlled flights into terrain (CFIT) accidents by 57 percent. Medallion provides the resources to help develop training programs and to document safety procedures that provide consistency for member operators.

Holland America Line and Princess Cruises further these efforts by posting the *Circle of Safety* flyer at the tour counters on the ships and by presenting the short *Circle of Safety* video onboard on the tour/port channels. This program assists in emphasizing the companies' and the operators' commitment to safety and encourages passengers to pay close attention the safety briefings.

As well, the cruise lines' tour operator manual encourages flightseeing operators to consider joining a safety organization such as Medallion Foundation or Tour Operators Program of Safety (TOPS).

Medallion Foundation is making a difference by addressing training, safety systems/  
programming, and the culture of aviation safety with Medallion members and their FAA  
counterparts.

Sincerely,



**S. Kirby Day, III**      **PFSO Franklin Dock, Juneau Alaska**  
Manager/Port Operations - Baltic, Mexico (West Coast), Hawaii, Southern California  
Holland America Group | Serving Princess Cruises, Holland America Line & Seabourn  
[redacted] | Juneau, AK 99801  
[redacted] office | [redacted] mobile

[redacted]



Lake and Peninsula Airlines

UNLOCKING ALASKA!

July 21, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener;

The 1990s were a dangerous time for Alaska pilots – 192 commercial pilots were lost during the decade and the US Department of Labor stated that being an Alaska pilot was rated as one of the most hazardous occupations in the United States.

To address this issue, the Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The Foundation created a series of programs that specifically addresses the unique challenges of flying in Alaska.



## Lake and Peninsula Airlines

### UNLOCKING ALASKA!

Now a certified 501(c)(3) non-profit organization, the Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The National Institute for Occupational Safety credited the Foundation for reducing the number of controlled flights into terrain (CFIT) accident by 57 percent.

The Foundation's programs have been very useful in helping us to improve our safety procedures. They provide the resources to help develop training programs and to document safety procedures that provide consistency across all levels of our organization.

Since completing the CFIT safety courses we have experienced a noticeable improvement in our flight safety. We have updated documented safety and training procedures available to all employees. Our accident free record has been maintained and our awareness of safety procedures has increased during our partnership with Medallion.

Sincerely,

A black rectangular redaction box covers the signature of Lyle Wilder.

Lyle Wilder, Chief Pilot

Lake and Peninsula Airlines, Inc





MAILING ADDRESS  
P.O. Box 511  
Soldotna, AK 99669

TEL 907-262-5388  
FAX 907-262-3193  
WEB [www.marcalaska.org](http://www.marcalaska.org)

July 24, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener;

The 1990s were a dangerous time for Alaska pilots – we lost 192 commercial pilots during the decade and the US Department of Labor stated that being an Alaska pilot was rated as one of the most hazardous occupations in the United States.

To address this issue, the Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The Foundation created a series of programs that specifically addresses the unique challenges of flying in Alaska.

Now a certified 501(c)(3) non-profit organization, the Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The National Institute for Occupational Safety credited the Foundation for reducing the number of controlled flights in to terrain (CFIT) accident by 57 percent.

I arrived in Alaska to fly for MARC in 1998. When I arrived there was more than 1 insurance carrier. In two short years we were down to one only because of the tremendous losses the other insurance company experienced due to the accidents. That placed a real hardship on our organization, as we had to fly dual pilot for hundreds of hours with our new pilots, despite our rigorous training and weather standards. We were very grateful for what the Air Carriers Association did to try and mitigate this problem with the formation of the Medallion Foundation.

The Foundation's programs have been extraordinarily useful in helping us to improve our safety procedures. They provide the resources to help develop training programs and to document safety procedures that provide consistency across all levels of our organization. While we were on the right track, they have been invaluable to us as an outside, and impartial organization that gives a defined and focused structure to our safety program, allowing us to do our mission better.

To date MARC has completed and obtained 2 Stars within the program, the Operational Control Star, and the CFITstar. Thank you for taking the time to read this.

Sincerely,

Brian Bruxvoort  
Chief Pilot  
Missionary Aviation Repair Center

*Giving Wings to Alaskan Missions*

# Alaska State Legislature



## Pilot Caucus

### Co-chair

**Mia Costello**  
Alaska State Senate  
Alaska State Capitol  
Juneau, AK 99801  
907-465-4968  
sen.mia.costello@akleg.gov

July 27, 2017

**Jerry Rock**  
Executive Director, Medallion Foundation  
1520 Post Road  
Anchorage, AK 99501

### Co-chair

**Neal Foster**  
Alaska State House of  
Representatives  
Alaska State Capitol  
Juneau, AK 99801  
907-443-5036  
rep.neal.foster@akleg.gov

Dear Mr. Rock,

The Alaska State Legislature's Pilot Caucus supports the mission and role of the Medallion Foundation in their efforts to improve the culture of safety in Alaska and reduce aviation accidents. Since its establishment in 2001, the Foundation has partnered with air carriers and pilots to help transform air safety in Alaska.

### Gary Knopp

Alaska State House  
Soldotna

The Medallion Foundation's leadership role in providing pilot training devices and single-handedly improving safety is invaluable. The importance of their safety audits and trainings cannot be overstated. Per capita, Alaska has more pilots and aircraft than any other state in America. Our state is known as a challenging region for aviation, and being a pilot was one of the most dangerous occupations in the United States. By instituting high standards and increasing simulator training, the Medallion Foundation has been able to reduce aviation accidents by 47 percent in association with weather reporting and improved avionics technology over the last 15 years. It's important to keep these efforts moving forward.

### Lance Pruitt

Alaska State House  
Anchorage

The Alaska Legislature recognizes the importance of their work and has appropriated over \$1.6 million to the Medallion Foundation since its inception. The Federal Aviation Administration (FAA) has also recognized the Medallion Foundation as a model for other states, and lauded their essential services provided in Alaska. Air service connects Alaskan communities, and links our state to the world. More than transportation, it is essential for public safety, commerce, and the health of Alaskans.

### Dan Saddler

Alaska State House  
Eagle River


As members of the Pilot Caucus, we hold private, instrument, and commercial licenses and ratings for ASEL, AMEL, helicopter, Lear Jet and Grumman GIII type ratings, along with five ATP licenses. We know first-hand the value the Foundation provides to Alaska's aviation community. The Alaska State Legislature's Pilot Caucus is proud to voice our support for the Medallion Foundation.


### Natasha von Imhof


Alaska State Senate  
Anchorage

*Alaska is home to more private pilots per capita than any other state and has the largest and busiest seaplane base in the world. More than 7,930 active pilots use 400 airports, 114 seaplane bases, four heliports, and the fifth largest air cargo hub in the world. The state has more than 300 certified air carriers, eight FAA control towers, five military control towers, and one commercial space port.*

Sincerely,


  
\_\_\_\_\_  
Senator Mia Costello, Co-chair


  
\_\_\_\_\_  
Representative Lance Pruitt

  
\_\_\_\_\_  
Representative Neal Foster, Co-chair

  
\_\_\_\_\_  
Representative Dan Saddler

  
\_\_\_\_\_  
Representative Gary Knopp

  
\_\_\_\_\_  
Senator Natasha von Imhof

  
\_\_\_\_\_  
Senator Donald Olson

*Alaska is home to more private pilots per capita than any other state and has the largest and busiest seaplane base in the world. More than 7,930 active pilots use 400 airports, 114 seaplane bases, four heliports, and the fifth largest air cargo hub in the world. The state has more than 300 certified air carriers, eight FAA control towers, five military control towers, and one commercial space port.*

Misty Fjords Air & Outfitting Inc.  
1716 South Tongass Highway  
Ketchikan AK 99901

The Honorable Earl. F. Weener, Ph.D.  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

August 1, 2017

Re: August 17 Alaska Field Hearing

Dear Member Weener;

The 1990s were a dangerous time for Alaska pilots – we lost 192 commercial pilots during the decade and the US Department of Labor stated that being an Alaska pilot was rated as one of the most hazardous occupations in the United States.

To address this issue, the Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The Foundation created a series of programs that specifically addresses the unique challenges of flying in Alaska.

Now a certified 501(c)(3) non-profit organization, the Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The National Institute for Occupational Safety credited the Foundation for reducing the number of controlled flights in to terrain (CFIT) accident by 57 percent.

The Foundation's programs have been extraordinarily useful in helping us to improve our safety procedures and culture. They have provided additional resources to help enhance training programs; to document efficiently, our safety procedures that provide consistency across all levels of our organization.

Since completing the requirements of all safety stars and receiving our safety shield; we have experienced a noticeable improvement, in additional awareness of our flight safety and its culture we have nurtured throughout our 36 years of operation. In addition we have a documented safety and training curriculum with its procedures available to all employees. Our insurance rates have decreased by 10% as a result of our improved procedures.

All training and procedures adapted since enrolling in the program have been easily integrated throughout our company. A tangible value in peace of mind knowing all employees are disseminating the same information and utilizing all checks and balances set forth by the company and within the program. It has assisted in developing the necessary tools for us to flourish within our culture of safety and awareness.

Sincerely,



David Doyon  
Vice President / Secretary  
Misty Fjords Air & Outfitting, Inc.



July 25, 2017

The Honorable Earl F Weener  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener,

PenAir is a family owned business started by my dad in 1955 and continues today as one of the largest carriers in the State of Alaska. During the 70's and 80's and up to 1994 we had just as many accidents as anyone else. That was the culture back then and it was acceptable to all involved.

In summer of 1994 we had a particularly bad accident and three people died. At that point our Director of Operations Richard Harding decided that was no longer acceptable to operate within the 135 FAR's and he decided the FAR's were not good enough to provide safe flying in Alaska under 135 rules. So over the next few years we developed a safety program which is still not required of a 135 operator. We also developed a risk assessment program along with wind charts which has wind limits by quadrant that stops the operation when the winds exceed the set limits. We also started using simulators for training and greatly increased our training program

Well what happened is we stopped having accidents. Prior to us changing our culture and attitude we had either an accident or an incident on average every 6 months. Once we had our programs in place we went to zero problems. We convinced our insurance underwriters that what we did is working and we got a reduction in our rates.

More importantly by about 1998 the insurance industry because of the accidents in Alaska tripled their rates for everyone but PenAir. It was at that point that Richard Harding and The Alaska Air Carriers Association thought if we can do it so can they. So they approached Senator Ted Stevens and explained what they needed to get everyone using these programs and changing the culture. Senator Stevens thought it was worth a try so he gave them \$4,000,000 to start the Medallion Foundation. We were the second carrier to get the Shield and are very proud of that.

In the 70's 80's and 90' the average number of fatalities in Alaska was 40 per year. The first full year it dropped to 20 then within 3 years it went to zero and stayed very low since then for the shield carriers that are enrolled in all programs.

At PenAir we know the value of being a shield carrier and will never go back to the way we used to operate.

Sincerely



Danny Seybert  
CEO  
PenAir

peninsula airways inc. | 6100 boeing avenue | anchorage alaska 99502

907.771.2500 | fax 907.771.2664 | info@penair.com | penair.com

August 1, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener;

The 1990s were a dangerous time for Alaska pilots – we lost 192 commercial pilots during the decade and the US Department of Labor stated that being an Alaska pilot was rated as one of the most hazardous occupations in the United States. Many of those lost were personal friends of myself and my family. The impact of a single accident goes on for a lifetime for those who loose a family member or friend.

To address this issue, the Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The Foundation created a series of programs that specifically addresses the unique challenges of flying in Alaska.

Now a certified 501(c)(3) non-profit organization, the Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The National Institute for Occupational Safety credited the Foundation for reducing the number of controlled flights in to terrain (CFIT) accident by 57

percent. The goal has always been zero accidents and the Foundation is on it's way to achieving that goal but can only do so with the support of the FAA, NTSB and the Aviation Community.

The Foundation's programs have been extraordinarily useful in helping us to improve our safety procedures and promote a safety culture at Alaska Airlines. Change the behavior and change the culture has been the mantra of our management since our involvement with Medallion. They provide the resources to help develop training programs and to document safety procedures that provide consistency across all levels of our proud airline.

Alaska Airlines has been a Shield Carrier for many years and serves as an example of how even a large organization can benefit from the resources made available by the Medallion Foundation. Over the years we have built a relationship of trust with the Medallion Foundation to find ways through auditing and information exchange to improve safety in aviation and protect the precious cargo we fly every day.

Sincerely,

Captain Sean J. Ellis

Alaska Airlines

ANCOK



4085 Tongass Ave Ketchikan, Alaska 99901

August 1, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Mr. Weener;

The 1990s were a dangerous time for Alaska pilots – we lost 192 commercial pilots during the decade and the US Department of Labor stated that being an Alaska pilot was rated as one of the most hazardous occupations in the United States.

To address this issue, the Alaska Air Carriers Association created the Medallion Foundation to help operators establish and maintain a safety culture that exceeds current FAA regulations. The Foundation created a series of programs that specifically addresses the unique challenges of flying in Alaska.

Now a certified 501(c)(3) non-profit organization, the Foundation has over 30 carriers who have completed at least one of the five safety classes (CFIT Avoidance, Operational Control, Maintenance and Ground Service, Safety and Internal Evaluation). The National Institute for Occupational Safety credited the Foundation for reducing the number of controlled flights in to terrain (CFIT) accident by 57 percent.





4085 Tongass Ave Ketchikan, Alaska 99901

The Foundation's programs have been extraordinarily useful in helping us to improve our safety procedures. They provide the resources to help develop training programs and to document safety procedures that provide consistency across all levels of our organization.

Since completing our Medallion Shield, we have experienced a noticeable improvement in our flight safety. We now have documented safety and training procedures available to all employees. CFIT accidents have decreased by 100% over the past 10 years for our company. As a Shield carrier, we operate under a very conservative weather assessment program which includes operation risk assessment for all flights. The Medallion Foundation is a vital component to our safety culture and an integral partner for flight safety for all aviation operations in Alaska.

Sincerely,

George W. Curtis

Director of Operations

Taquan Air

Ketchikan, Alaska

August 1, 2017

The Honorable Earl. F. Weener, Ph.D  
National Transportation Safety Board  
490 L'Enfant Plaza SW  
Washington, DC 20594

Re: August 17 Alaska Field Hearing

Dear Member Weener;

This letter is in support of the Medallion Foundation and their programs. Wings Airways has been a member of the Foundation since their inception in 2002. Because of the Medallion Foundation, Wings Airways has been able to attend classes presented by top industry individuals, such as Tony Kern and Mike Doiron, that otherwise would have been cost prohibitive. Through these classes and the Medallion Foundation's Star and Shield program Wings Airways has had the ability to further foster our safety culture. This is extremely important to us as the safety of our passengers and employees is a top priority.

Wings Airways has always had a very conservative safety culture. With the help of the Medallion Foundation, we have been able to document our policies and procedures to more formalize our operations and training. This includes the safety program, operational control, ground operations, maintenance and CFIT (controlled flight into terrain). The CFIT program in particular is a wonderful tool. Because of the Medallion Foundation, we have the free use of a PCATD (personal computer-based aviation training device). This device is extremely helpful in preparing new pilots, as well as returning pilots, on routes to be flown in varying weather conditions without the risk of flying in actual hazardous weather situations. The Cue Based Training, in particular, help pilots make cautious decisions by learning to judge in-flight visibilities.

Sincerely,

Daniel Corson  
Director of Operations  
Wings Airways

## APPENDIX C

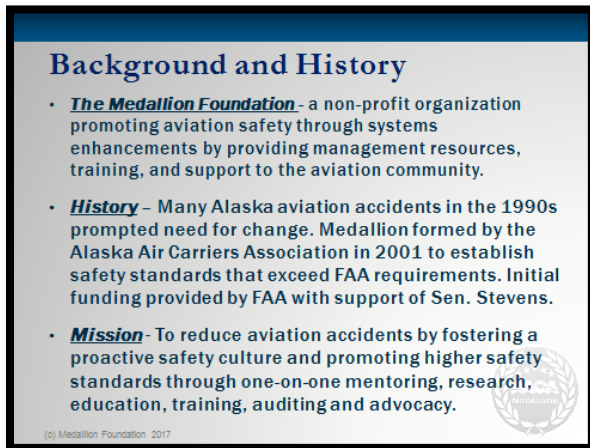
### MEDALLION PRESENTATION SCRIPT for NTSB Hearing

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#### *Slide 1 - Cover Slide - Introduction*

Thank you Dr. Wilson, and good afternoon everyone. The Medallion Foundation appreciates this opportunity to participate in this hearing, and to share the lessons we have learned from our members who voluntarily share their information with us so we can all make flying in Alaska as safe as it can be.



#### *Slide 2 – Background & History*

- The Medallion Foundation is a non-profit organization that promotes aviation safety through systems enhancements by providing aviation management resources, training, and support. We work closely with commercial air carriers who participate in our voluntary safety programs, which are rooted in SMS principles and are intended to foster a positive change in the safety culture of all air carrier personnel. I will focus on these programs a bit later.
- Our Mission is to reduce aviation accidents by fostering a proactive safety culture and promoting higher safety standards through one-on-one mentoring, research, education, training, auditing and advocacy.
- (History) In an effort to reverse the tragic legacy of the 1990s fatal commercial aircraft accidents, the Alaska Air Carriers Association formed the Medallion Foundation in

2001 to establish safety standards that exceed FAA requirements. Funding was initially provided by FAA, with the support of Senator Ted Stevens.

*Slide 3 – Medallion’s Benefits*

The list of safety benefits that Medallion can provide to an air carrier is very long.

- Medallion provides mentorship, providing carriers with resources, knowledge and experience to gradually build their systems and improve their cultures
- Management engagement and participation create effective programs which promote positive safety cultures
- Medallion is licensed to provide TapRooT root cause analysis training, and the cost to operators is approximately a third of what they would be charged in the lower 48 states. Over the years, hundreds of employees and managers have attended TapRooT, Human Factors and Safety training conducted by the Foundation.
- The operators who benefit the most from our programs are likely to be the small operators with limited resources. For example, we have a member who has been operating outside of Ketchikan for almost 40 years. It is five-person operation that does not have the budget to run a safety office. With the services provided by Medallion, this operator has completed the requirements of all safety stars and has received our safety shield.
- Medallion is arguably the most impactful voluntary safety effort in Alaskan Aviation, and it comes at a minimum financial cost to the carriers who participate compared to other well-known safety organizations.



**Benefits of Membership**

- Mentorship for air carriers to enhance safety culture
- Training in SMS, Human Factors, ISO 9000 Auditing and other safety courses
- TapRooT Root Cause Analysis Training
- Free ATDs and Flight Simulator available statewide
- Frequent internal Auditing of air carrier operations
- Aviation Safety Action Program (ASAP)
- Recognition for Successful completion of each Safety Programs (see next slide)
- Minimal Membership and Training Fees - allowing small operators to participate with Medallion providing the infrastructure to improve safety

(c) Medallion Foundation, 2017

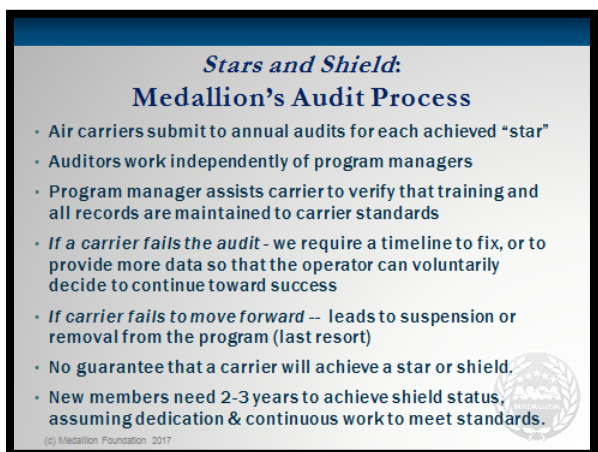


#### Slide 4 – Medallions Safety Programs

These programs are designed with input from the FAA and commercial operators in Alaska to address the unique operational environments here. Our program includes the

- Operational Control
- Controlled Flight Into Terrain Avoidance
- The Maintenance and Ground Service program
- The Safety Program
- Internal Evaluations Program

Each is designed to challenge a carrier to design programs which exceed the Federal Regulations, identify and manage their unique environments and risks, and provide a structure for success.



#### Slide 5 – Medallion's Audit Process

Let me take a moment now to discuss how Medallion monitors an operator who has earned a star or a shield. We audit our carriers annually. Our auditors work separately and independently of our program managers. We provide a program manager to assist the carrier to verify that the training programs and record-keeping requirements are maintained to our standards and the carrier requirements.

If a carrier fails the audit, we require a timeline to fix or provide additional data so that the operator can voluntarily make the decision to continue to work to be recognized by Medallion.

If an operator fails to move forward, it leads to suspension or removal from the program. Medallion's goal is always to continue to move the carrier forward -- removal or suspension is a last resort.

It is important to note that joining Medallion does not guarantee that an operator achieves a star or shield. Some carriers work for years, and while making significant improvements, they still fail to meet the shield-level standards. Currently, Medallion has many carriers that are new to the program, or use our standards and tools as a member,

but never work toward a star. It will typically take a carrier three years or more of dedicated work to adopt, implement and manage effectively all the programs under the Shield.

### CFIT Avoidance Program

- Well-established safety program that recognizes CFIT to be a significant challenge in Alaska
- Provides a framework for an air carrier to build an effective CFIT-A training program for pilots
- Combination of classroom and FREE ATD/Simulator scenario-based curriculum
- Focuses on recognition, avoidance and operational decision-making aspects when flying into flat-light, white-out, and/or deteriorating weather conditions.



(c) Medallion Foundation 2017

*Slide 6 – CFIT Avoidance*

- Our CFIT avoidance program is designed to provide a framework to build an effective training program for all pilots.
- It is a combination of classroom training blended with a free Aircraft Training Device (ATD) or Flight Simulator scenario-based curriculum that focuses on the recognition, avoidance and operational aspects of flying in areas of flat-light, white-out, and deteriorating weather conditions. These ATDs and simulators permit pilots to safely practice maneuvers that are not possible in the aircraft.
- Programs such as the Medallion Foundation’s CFIT-Avoidance have aided in a significant decrease in accidents, as reported by several entities.

### Proactive Actions to Improve Safety

- Medallion is proactive in working with carriers, FAA, and others to address issues discovered from accident/incident investigations.
- As a result of two fatal accidents in 2013, and within the span of 16 months, Medallion and its partners produced and provided materials to effectively combat CFIT hazards



**2015**

- 1<sup>st</sup> Commuter W. AK Summit
- Full Motion Simulator Chaired
- Begin Development of Safety Video with NTSB & Industry
- CFIT Computer Formative

**2016**

- Never CFIT Again! Accident Avoidance Course
- Proactive Training
- Simulator
- Video
- CFIT Course
- Video in W. AK
- Safety Reporting App

*Slide 7 – Medallion is Proactive*

Medallion has been very proactive in working with carriers, our FAA partnership, and other safety organizations to address accidents as they happen. Our CFIT avoidance program has gone through several changes in the past year. These changes began in 2013 following two fatal commercial aviation accidents in Alaska. Within 16 months, Medallion accomplished the following.

- In the Spring of 2015, Medallion hosted the first annual “Commuter Summit” to address Western Alaska commercial aviation safety issues and CFIT accidents. We also ordered a new full-motion flight simulator to provide Crew Resource Management (CRM) training for large and small air carriers in Alaska.
- In the Fall of 2015 -- FAA, Medallion, NTSB, and others contributed to a safety video addressing CFIT concerns which has been presented at our safety events around the State ([www.bit.ly/CFIT](http://www.bit.ly/CFIT)).

- Also in the Fall of 2015, Medallion formed a committee to address CFIT-A Star and Carrier Management after an accident. The resulting CFIT-A changes are focused on advanced equipage in aircraft, training associated with the equipment, and decision-making processes to name a few. I will talk more about these a bit later.

- In the Spring of 2016 -- Medallion developed training videos to address how to set up scenarios for Flat Light, Deteriorating Weather, and White Out conditions and another on the Capstone navigation equipment used in Southeast Alaska. We also developed and improved an app for smartphones that was provided to us by an air carrier so any employee within the company could report safety hazards immediately to their safety department.

We are proud to be part of a unique organization that produced impactful safety improvements that would not have occurred otherwise.

*Slide 8 – Medallion is NOT ....*

- While I have explained what the Foundation is, let me also share with you what we are not.
- We are not an enforcement body or agency, nor are we a reporting conduit to the FAA.
- Medallion was not designed to actively oversee a member carrier's operations. Ultimately, our member carriers must take responsibility for implementing, managing and overseeing the programs we help them develop and adopt.
- Medallion is successful not only because of the programs, but primarily because our operating partners trust us. They trust us with their confidential information and that we are working in their best interests alone..
- This element of trust -- I cannot emphasize this aspect enough -- is the foundation of our success and the success of our partners.

**Medallion is NOT ...**

- NOT a regulatory or oversight body
- NOT an enforcer
- NOT a reporting conduit to FAA
- NOT a clearinghouse for voluntary safety data

**Medallion is built on TRUST**


- Member carriers TRUST Medallion with their confidential information that we use to provide suggestions to improve their operations and those of others.
- TRUST is the foundation of our success and the success of our partners.

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## Recent Changes since Togiak

- **CFIT avoidance Star Program Modified**
  - February 2016, effective February 2017
- **Operational Control Star Program Modified**
  - February 2016, effective 2017
- **Shield Program Policy Changes**
  - "Administrative Hold" following an accident. Must notify Medallion within 10 days
  - No new Stars or achievements recognition until Hold is lifted.
  - Carrier completes TapRoot within 45 days w/ corrective actions
  - Carrier to maintain existing Stars/Shield w/ regular audit cycle
  - Medallion to confirm corrective actions implemented by carrier
- **Star/Shield Audit Process Changes:**
  - Separation of pre-audit process from the annual audit
  - Conduct program review (formerly "pre-audit") 6 months after annual audit to determine if lapses exist in the programs.
  - Any deficiency noted after program review to be corrected within 30 days



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### Slide 9 –Shield Program Policy Changes

This past May, another recent change became effective. This change describes an:

- "Administrative Hold" following an accident. Must notify Medallion within 10 days
- No new Stars or achievements recognition until Hold is lifted.
- Carrier completes TapRoot within 45 days w/corrective actions
- Carrier to maintain existing Stars/Shield w/ regular audit cycle
- Separation of pre-audit process from the annual audit
- Conduct program review (formerly "pre-audit") 6 months after annual audit to determine if lapses exist in the programs.
- Any deficiency noted after program review to be corrected within 30 days

## In Conclusion ...

- We provide a valuable service to our members.
- More than a membership - it is a *partnership*
- Ask our members – they will tell you how Medallion is making their operations safer.
- We are making a difference every day in a challenging environment of extreme weather, rugged terrain, limited infrastructure, and seasonal operations.
- Our success has attracted interest from other commercial aviation operations in other states, such as in the Hawaii air tour industry.
- Air travel is essential to Alaska. Safety would suffer if we did not offer our services.



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### Slide 10 - Conclusion

The Medallion Foundation is successful because we provide a valuable, inexpensive service to our members.

It is more than a membership; it is a partnership that is intended to be long term.

Our success is also attracting interest from other commercial aviation operations in other states.

Due to the limited time provided for this important public hearing, it will not be possible for me to describe in detail all of the numerous ways our carriers have taken our programs and expanded and improved them to fit their operation. However, I would encourage you to talk with our members. Ask them if they feel the Medallion Foundation is making a difference in their operations. I would also encourage you to read the letters sent in by our member operators in which they discuss how they have used the Medallion program to make their operation safer.

We believe we are making a difference every day in an extremely challenging



environment. Our weather is extreme; our aviation infrastructure is a challenge and the seasonal nature of some of our carrier's operations makes it difficult to reach out to all of their employees. However, because air travel is essential for so many Alaskans, we know that safety would suffer if we did not offer our services.

Thank you for the opportunity to talk about the Medallion Foundation and the success achieved by our member operators.