

ALASKA LEGISLATURE COMMITTEE FILES 2001-2002 8672

10339 HOUSE LABOR & COMMERCE

HB

262

ALASKA STATE LEGISLATURE

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HOUSE LABOR AND COMMERCE COMMITTEE

Sponsor Statement HB 262 Building Safety Account

House Bill 262 is a fees-for-service measure establishing a building safety account that allows the Department of Labor to collect fees to support its mechanical inspections program and to eliminate the sizeable backlog of elevator and boiler inspections.

In the mid-1990s there were five electrical inspectors, two elevator inspectors, and five boiler/pressure vessel inspectors to inspect approximately six hundred elevators statewide. Currently there are only two electrical inspectors, one elevator inspector, and three boiler/pressure inspectors to inspect nearly 900 elevators, with nearly 6,000 boiler/pressure vessels overdue for inspection.

Passage of House Bill 262 will allow the mechanical inspections program to be self-sufficient and to fund and restore a Fairbanks-based electrical inspector and boiler inspector, a Juneau-based elevator inspector, and one Anchorage-based boiler/pressure vessel inspector. Revenue collected by the four additional inspectors will generate enough funds for the program to not only pay for itself, but will enable the department to eliminate the backlog of inspections in approximately two years.

Staff Contact: Amy Erickson
Last Updated: January 25, 2002

FISCAL NOTE

**STATE OF ALASKA
2002 LEGISLATIVE SESSION**

Fiscal Note Number: _____
 Bill Version: HB 262
 () Publish Date: _____

Revision Date/Time (Note if correction): _____ Department: Labor and Workforce Development
 Title: Building Safety BRU: Labor Standards & Safety
 Component: Mechanical Inspection
 Sponsor: Rules Committee
 Requester: House L&C Component Number: 346

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
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CHANGE IN REVENUES ()						
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FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	(404.5)	(404.5)	(404.5)	(404.5)	(404.5)	(404.5)
1005 GF/Program Receipts	(695.5)	(695.5)	(695.5)	(695.5)	(695.5)	(695.5)
1037 GF/Mental Health						
New# Building Safety Acct	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2002) cost: None

Check this box (X) if funding for this bill is included in the Governor's FY 2003 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

The bill creates the Building Safety Account in the state treasury, and designates certain fees collected by the Department of Labor and Workforce Development to be deposited into the fund. These fees include fees collected for boiler inspections, elevator inspections, and electrical and plumbing worker certificates of fitness. The Mechanical Inspection program within the Division of Labor Standards and Safety has collected program receipts in excess of appropriated authority for a number of years, while at the same time funding part of the program with general funds. Creating the Building Safety Account would consolidate collections into a single account and allow replacement of an equal amount of program receipt and general fund authorization.

Prepared by: Richard Mastriano, Director Phone: 269-4900
 Division: Labor Standards & Safety Date/Time: 1/28/02 3:40 PM
 Approved by: Ed Flanagan, Commissioner Date: 01/28/02
 Agency: Department of Labor and Workforce Development

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HB

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HOUSE LABOR AND COMMERCE COMMITTEE

Sponsor Statement

HB 269

“An act establishing employment protections for certain employees in the aviation industry relating to safety issues.”

The total number of Alaskan aviation accidents in the ten-year period from 1990 to 1999, totaled 1665, an average of one every other day. The total aviation fatalities for the same period totaled 394, one death every 9 days. Certainly, Alaskan aviation statistics can cause concern for most travelers, but insurance companies have become alarmed at Alaska's aviation industry by doubling rates each of the past three years. Some air carries can barely afford their premiums. To battle the high costs of aviation insurance while providing safe, air travel, the House Labor and Commerce Committee introduced House Bill 269.

Safety in Aviation or safety within any industry can sometimes be obfuscated by the overwhelming force to be profitable, hence the need for whistleblower legislation. HB 269 provides aviation employees with a “safety net” by protecting individuals that may voice concerns about safety, maintenance or inclement weather. HB 269 shields aviation employees in statute from being wrongfully “discharged, threatened, or otherwise discriminated against,” because the employee in good faith acted to ensure aviation safety.

In an industry struggling against sky-rocketing insurance costs, increased safety practices will assuredly lower the number of accidents per year. Sometimes in a direct reduction to safe, air travel, aviation employees are often forced to fly when conditions, mechanical operations and maintenance are far from perfect. To lower insurance rates by providing safe air travel, HB 269 provides needed whistle-blower legislation in an Alaskan industry plagued by high costs and numerous disasters.

Sectional Analysis

HB 269

“An act establishing employment protections for certain employees in the aviation industry relating to safety issues.”

***Section 1.** Amends Alaska Statute by adding a new chapter being chapter AS 02.80.

- (a) Sets forth into statute that an employer may not discharge, threaten or otherwise discriminate against an aviation employee for any reason if the employee in good faith acted in a safety conscience manner. Numbers 1-2 provide specific reasons that apply to (a).
- (b) Nothing within this section removes any rights concerning an individual's right to collective bargaining.
- (c) Requires that employers shall post notices as it relates to this section.
- (d) Under this section, if a violation of this section occurs a person may seek punitive damages in civil court.
- (e) If a violation does occur then punitive damages shall not be more than \$10,000, which may be enforceable by the Attorney General.
- (f) Clearly defines “aircraft” and “employer:” as it relates to this section.

***Section 2.** Amends the uncodified law within the statutes.

- (a) The changes to statute covered by this bill only relate to those individuals in the aviation industry.
- (b) The definitions in Section 1 also apply to Section 2.

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Alaska Aviation Accident Data Summary
Alaska Interagency Aviation Safety Initiative
NIOSH, Alaska Field Station
April 25, 2000

Prior to collation, these data were obtained from NTSB, FAA, Alaska Bureau of Vital Statistics, Alaska Office of the Medical Examiner, and the Alaska Department of Labor. All data for 1999 is preliminary.

- **Total aviation accidents in Alaska for the ten-year period of 1990-1999 = 1665, an average of one every other day**
- **Total aviation fatalities for 1990-1999 = 398, an average of one every 9 days**
 - There were 186 fatal crashes involving 194 aircraft during this time period with a total of 398 fatalities.
 - Of these 398 fatalities, 106 were occupational pilots, 86 were non-pilot occupational fatalities, and 206 were non-occupational fatalities.
 - The mean number of fatal crashes for this time period per year was 18.6, with an average of 2.1 fatalities per fatal crash, and an average of 39.8 fatalities per year.
 - 173 fatal crashes involved fixed wing aircraft, 14 involved helicopters (one crash involved both plane and helicopter, so adds to 187)
 - For 1990-1998, the most common first finding of the fatal crashes was loss of control in flight (28%), followed by in flight collision with terrain or water (28%), in flight encounter with weather (15%), and airframe/component/system failure/malfunction (5%). *(This section has not been updated for 1999 because data is not yet available.)*
- **Total serious injuries = 271 (1/90 through 10/99, most recent available data)**
- **Total minor injuries = 448 (1/90 through 10/99, most recent available data)**
- **Average of 11 pilot fatalities per year out of a commercial pilot workforce of 2600 = an annual pilot fatality rate of 420 per 100,000 pilots (or 0.4%).**
 - This is equivalent to a 30-year career fatality risk of 12% for commercial pilots in Alaska.
 - Compared to the average U.S. worker (with a 30-year career risk of 0.12), Alaska commercial pilots have a 100-fold increased risk of fatality.
- **Total of direct and indirect costs, and lost future wages based on 11 pilot fatalities per year are over \$18 million**

- **Total of direct and indirect costs, and lost future wages based on average of 9 non-pilot occupational deaths per year = yearly cost of \$9,279,000:**
- **Total of direct and indirect costs, and lost future wages based on average of 21 non-occupational deaths per year = yearly cost of \$26,355,000:**
- **Total combined costs of pilots, non-pilot occupational, and non-occupational fatalities = a total yearly cost of over \$53 million or over \$1.3 million per death.**

Alaska Interagency Aviation Safety Initiative:

- The 3-year interagency initiative involves the Federal Aviation Administration (FAA), the National Transportation Safety Board (NTSB), the National Weather Service (NWS), and the National Institute for Occupational Safety and Health (NIOSH). All four agencies share an interest in promoting aviation safety and preventing aircraft crashes. The initiative involves five elements:
 - Gather and analyze data
 - Bring together working groups
 - Work to develop communication and education tools
 - Evaluate effectiveness of and changes in flight safety practices
 - Evaluate progress and suggest additional improvements
- **Goal:** To reduce the number of occupational aviation-related fatalities in Alaska by 50 percent for the years 2000-2009 (compared to 1990-1999)
- **Objective:** To improve aviation data management and collaborative analysis capacity and optimize efforts by federal agencies (FAA, NTSB, NWS, NIOSH, and industry) to reduce aviation accidents in Alaska through partnerships.

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Monday, November 13, 2000

Page: A1

Section: Nation

Edition: Final

Study pinpoints deadliest type of Alaska crash

By Larry Campbell, Daily News Reporter

A newly released aviation study points to a specific kind of aircraft accident that kills more travelers in Alaska than any other, giving safety officials the most detailed focus yet on how to reduce crash fatalities.

The National Institute for Occupational Safety and Health said most people die when pilots flying without navigation instruments find themselves flying from good weather into bad and end up crashing. Called "controlled flight into terrain," these kinds of accidents made up less than 20 percent of all types of aircraft accidents but produced nearly 60 percent of Alaska's aviation deaths.

The study was published in this month's issue of Aviation, Space and Environmental Medicine by members of a national institute who have been studying work-related fatalities in Alaska for the past 10 years.

"We now know that if we put a concerted effort on this aspect of aviation fatalities, we can have a real impact on deaths in Alaska," said Dr. George Conway, of the occupational safety and health team. "With this level of focus, we can work with the (aviation) industry in a more deliberative fashion."

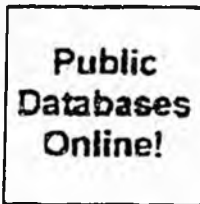
Raw numbers have always ranked Alaska as one of the most dangerous places to fly in the United States, despite the steady decline in aviation accidents and deaths over the past few years. The pilot fatality rate in Alaska is five times the national average. For people in Alaska who must fly as an integral part of their jobs - to and from work sites, for example - the fatality rate is 86 times the national occupational fatality rate.

The health and safety institute study will contribute to a federally funded effort begun this year between the institute, the Federal Aviation Administration, the National Transportation Safety Board and the National Weather Service to cut Alaska aviation crashes and deaths in half by 2009.

The significance of this study is in its specificity.

The safety analysts looked at every Alaska aircraft accident from 1991 to 1998, specifically air commuter or air taxi accidents. The

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accidents were categorized as takeoff or landing accidents, 51 percent; loss of control or an emergency, 17 percent; controlled flight into terrain, 17 percent; and taxiing or standing accidents, 5 percent.

The details revealed that of the 140 deaths in all these crashes, 82 happened during controlled flight into terrain — what air-safety experts call CFIT.

Further, the most dangerous CFIT situation occurred when pilots flew from good weather into bad, where navigation instruments would be required. The study showed that 52 of the 82 fatalities happened in those crashes.

An example of the most dangerous situation is a crash that killed a pilot and two passengers and seriously injured another on the Alaska Peninsula on Aug. 23.

A Cessna 180 operated by a fishing lodge was flying guests back from a fishing spot. According to a preliminary report by the National Transportation Safety Board, the pilot, flying under visual flight rules, entered a mountain pass. Heavy clouds closed in behind. A second airplane following the Cessna turned before entering the pass. But, according to the NTSB report, the pilot of the first plane radioed the pilot of the second plane that he was "kind of committed now."

Rescuers found the airplane about 34 miles south of Pilot Point in an area of steep rocks at the foot of a glacier, about 150 feet below the summit of the pass.

The state's commercial air carrier industry, which has often been skeptical of government oversight, praised this latest study.

"I think this is going to help the industry," said John Eckels, president of the Alaska Air Carriers Association, representing most of the state's commercial operations. "This is specific, and the more we know about what causes accidents, the better focused we can be."

Eckels said the report will help with the association's existing efforts to improve air safety. In the past year the air carriers group has begun drafting an outline of recommended operating standards for members, established a resource center, and drafted plans to ask the state's congressional delegation for money to increase pilot training.

The report also validates the views of federal safety officials, according to John Duncan, FAA division manager of flight standards in Alaska.

"These findings back up the efforts we've undertaken in the past year to help pilots and operators," Duncan said. He said inspection programs have been redesigned to help air carrier companies identify and fix problems in their operations, not just sanction them for violations, as had been the practice.

Now the institute will take the report to meetings with the industry and the other federal agency partners and start coming up with specific new ideas to help keep pilots from flying into bad weather

into the ground.

In the meantime, the institute's Conway said simply being aware of these findings may help both pilots and passengers make better decisions.

"This is more compelling evidence that should make pilots and passengers more circumspect about flying into bad conditions," he said.

Reporter Larry Campbell can be reached at lcampbell@adn.com or 257-4321.

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Fact Sheet: Newly-published study of Alaska Air Crashes (Page 1 of 2)
November 7, 2000

Because so much progress has been made in preventing commercial fishing and logging deaths, aircraft crashes are now the leading cause of occupational fatalities in Alaska. A new study of the most lethal type of Alaskan aircraft crash, by the National Institute for Occupational Safety and Health (NIOSH) Alaska Field Station, sheds some further light on this problem.

- 351 commuter and air taxi accidents, with 140 resultant fatalities, occurred in Alaska from 1991-1998
- 82 (59%) of these 140 fatalities were attributed to Controlled Flight Into Terrain (CFIT) accidents, although only 59 (17%) of these aviation crashes were CFIT
- A strong association was found between VFR flights into IMC and CFIT accidents.
- Thus, the most lethal, recurrent scenario was where the flight began in good or marginal visibility conditions, then proceeded into poor visibility (instrument) conditions, crashing into terrain.
- The National Transportation Safety Board had attributed all CFIT flights included in this study to pilot error, often for continuing visual flight into instrument conditions.

These findings support the need for exercising greater caution in marginal weather and improved training of pilots for flight decision-making.

Questions remain concerning why pilots continue flight into low visibility, the role of human error, and the ability of ground-proximity/avoidance technology to decrease CFIT crashes and the associated fatalities. NIOSH is currently working on a project to evaluate pilot flight experience and involvement in a crash.

Alaska has experienced an overall downward trend in occupational fatalities since 1990 (from 82 fatalities in 1990 to 42 fatalities in 1999 — a decrease of 49 percent), but occupational aviation fatalities continue to be a problem. During the 5-year period of 1990-94, there were a total of 367 occupational fatalities; 37% (137) were due to drownings, primarily among commercial fishermen and 28% (103) were due to aviation crashes. However, during the 5-year period of 1995-99, there were a total of 277 occupational fatalities; 32% (89) were due to aviation crashes, and 29% (79) were due to drownings, primarily among commercial fishermen.

Aviation Safety Initiative Update

(Page 2 of 2)

In response to Alaska's high occupational fatality rate from aircraft crashes, the U.S. Congress has supported the implementation of a federal initiative to reduce aviation-related injuries and fatalities and to promote aviation safety in cooperation with the air transportation industry in Alaska. The initiative is a three-year commitment led by a partnership of four federal agencies who share an interest in preventing aircraft crashes and promoting aviation safety – the Federal Aviation Administration (FAA), the National Transportation Safety Board (NTSB), the National Weather Service (NWS), and the National Institute for Occupational Safety and Health (NIOSH). The goal of the initiative is to reduce the number of aircraft crashes/injuries in Alaska by at least 50 percent by the end of 2009 (1990-1999 compared to 2000-2009). Since the initiative began early this year, a team of specialists (five NIOSH employees, and two FAA employees detailed to NIOSH) have worked intensively on completing the first two initiative objectives:

- Gathering and analyzing aircraft crash, injury and fatality data involving Alaska commuters and air taxis, and identifying risk factors.
- Bringing together aviation industry groups to characterize the problems.

This is being accomplished by analyzing NTSB and FAA data on aircraft accidents, and by conducting focus group meetings with air carrier operators and pilots throughout the state (so far in Anchorage, Juneau, Ketchikan, Bethel, Barrow, and Kotzebue). The team will focus on also completing the remaining three objectives within the next two years:

- Develop aviation safety education plans for pilots, companies, and the flying public.
- Evaluate the effectiveness of and changes in flight safety practices.
- Evaluate progress and suggest additional improvements.

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ORIGINAL RESEARCH

Controlled Flight into Terrain Accidents Among Commuter and Air Taxi Operators in Alaska

TIMOTHY K. THOMAS, M.D., DIANA M. BENSYL, PH.D.,
 JAN C. MANWARING, M.P.H.,
 GEORGE A. CONWAY, M.D., M.P.H.

THOMAS TK, BENSYL DM, MANWARING JC, CONWAY GA. *Controlled flight into terrain accidents among commuter and air taxi operators in Alaska.* Aviat Space Environ Med 2000; 71:1098-1103.

Background: Between 1990 and 1998, aviation accidents in Alaska caused 100 occupational pilot deaths (equivalent to 430/100,000 pilots/year, approximately 86 times the overall U.S. worker fatality rate). Although Alaskan geography and climate increase aviation risks, many accidents were attributed to pilot error. While most accidents occurred during takeoff/landing, most fatalities resulted from Controlled Flight Into Terrain (CFIT). The purpose of this study was to examine risk factors for CFIT. **Methods:** Using National Transportation Safety Board airplane accident data we identified CFIT from flight phase and event description fields, and calculated odds ratios for CFIT/non-CFIT accidents for visual conditions, aircraft features, and pilot experience. **Results:** Between 1991 and 1998, 351 single aircraft commuter and air taxi accidents occurred in Alaska; 59 (17%) were CFIT. Of 140 total fatalities, 82 (59%) occurred in 30 CFIT accidents. There was a twelve-fold risk for death in CFIT vs. non-CFIT accidents (OR = 12.42, 95% CI = 8.19-18.88). Accidents while flying Visual Flight Rules (VFR) into poor visibility were more likely CFIT than non-CFIT (Odds ratio = 46.06, Confidence Interval = 19.32-112.46), and caused 37% of all deaths. Additionally, flights in Instrument Meteorological Conditions (IMC) were 47 times more likely to be CFIT than non-CFIT. No risk for CFIT was shown for flight hour, number of engines, passenger presence, or pilot age. All CFIT were attributed to pilot error, often for continuing VFR into poor visibility. **Conclusion:** CFIT caused most aviation deaths. Further research into human factors contributing to CFIT is needed. Implementation of global-positioning, ground-proximity/avoidance technology, might reduce CFIT incidence.

Keywords: aviation, accidents, controlled flight into terrain, Alaska.

BETWEEN 1990 AND 1998 there were 729 fatal commuter and air taxi accidents in the United States; Alaska accounted for 49 (21%) of these accidents (13). Over the same period, 1990-1998, 100 people working as pilots at the time of the aircraft accident died in Alaska (1). This is equivalent to an occupational fatality rate of 430/100,000 per yr which is approximately 86 times the occupational fatality rate for all workers in the United States* and nearly 5 times the national fatality rate for all pilots[†]. Additionally, this is almost 24 times the rate for Alaskan workers[‡] making aviation the highest-risk occupation in Alaska.

These statistics may, to some extent, reflect the unique physical and demographic features affecting aviation in Alaska. Its northern latitudes, vast mountain ranges, flat marshy tundra, and extensive coastline result in diverse climatic zones and associated variable and often harsh weather. Because of this, conditions of

poor visibility are common. In addition, although over half of the Alaskan population lives in one of the state's three major cities (Anchorage, Fairbanks, and Juneau), much of the remaining population lives in remote villages not connected to the road system and only accessible year-round by aircraft. Commuter and air taxi operators (operating under 14 CFR Part 135) serve as the main link between these villages and regional hubs, and transport people, goods, and mail. In 1994 commuter airlines in Alaska served 238 locations, only 5 of which had road connection to the regional airline hub (14). Compared with the remainder of the United States, Alaska has 76 times as many commuter airline flights per capita (13).

A study by Garrett et al. (8) on work-related aviation fatalities in Alaska from 1990 through 1994 reported the death rate for commercial pilots in Alaska was 2.1 times higher than the overall U.S. rate for commercial pilots. Of the fatal occupational accidents, 64% occurred due to controlled flight into terrain (CFIT). A major risk factor for these fatal occupational accidents was poor weather, defined as Instrument Meteorological Conditions (IMC). Commercial pilots were also more likely to be flying into IMC at the time of a fatal accident than private pilots.

A recent analysis of risk factors for Federal Aviation Regulations (FARs) Part 91 (General aviation [GA]) accidents in the U.S. between 1983 and 1994 found that factors associated with CFIT-type accidents included

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This manuscript was received for review in August 1999. It was revised in March 2000. It was accepted for publication in June 2000.

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* Overall occupational fatality rate for U.S., 1998 = 5/100,000 per yr (3).

† Overall occupational pilot fatality rate for U.S., 1996 = 88/100,000 per yr (19).

‡ Overall occupational fatality rate for Alaska, 1994-1998 = 18/100,000 per yr (12).

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ALASKA CFIT ACCIDENTS—THOMAS ET AL

the following: instrument conditions; pilots over 50 yr of age; male pilots; pilots with fewer total hours; and multi-engine aircraft (5).

Another study by Li and Baker (11) of commuter and air taxi accidents found that IMC, multi-engine aircraft, and night accidents were associated with lack of survivability. They also found in a study of GA pilots (10) that IMC, multi-engine aircraft, and night accidents were associated with lack of survivability.

Over half (54%) of the fatal commuter and air taxi accidents in Alaska between 1989 and 1993 were related to flying Visual Flight Rules (VFR) into IMC (14). Until recently, regulations in 14 CFR Part 135 prohibited single engine commercial flights in Alaska from flying under Instrument Flight Rules (IFR). However, in a survey of 44 commercial pilots, conducted as part of the 1995 National Transportation Safety Board (NTSB) Safety Study on Aviation in Alaska, 22 (50%) stated that in response to operational pressures, they had flown VFR into IMC. "The incidence of VFR into IMC... suggests that the possibilities of inadvertent and intentional operation of VFR flights into IMC are accepted and... not unusual" (14). The study concluded that dependence on flying VFR was one of the underlying reasons for the number of VFR into IMC accidents and a leading safety problem for Alaskan commuter airlines and air taxis.

A CFIT accident refers to any collision with land or water in which the pilot was in control of the aircraft, but had lost situational awareness (i.e., was not aware of the plane's altitude, terrain elevation, or latitude and longitude position of the aircraft). CFIT accident designation requires first ruling out any detectable mechanical failure of the aircraft or its equipment. Most CFIT accidents are attributed to pilot error, wherein the pilot intentionally or inadvertently flies the aircraft into IMC. However, attributing pilot error as the cause of an aircraft accident still does not explain the, "lapse in judgment or deterioration in performance by experienced, competent pilots" (15).

The purpose of our study was to analyze the available data on accidents involving commuter and air taxi operations in Alaska to determine if the risk factors previously identified for GA accidents also apply to commercial operators in Alaska. This study included only operators with Part 135 certificates; therefore, not all occupational pilots in Alaska were included.

METHODS

Due to the lack of adequate exposure data for the denominator of all commercial pilots operating in Alaska, a traditional case-control approach such as that used in a previous aviation study by Li and Baker (11) was not feasible. An epidemiological method based on the use of hospital controls was undertaken. The usefulness of this method has been clearly demonstrated by other similar public health studies. For example, Thompson et al. (17) studied the effectiveness of bicycle helmets using head-injured cyclists as cases and non-head-injured cyclists as controls. Thompson et al. (18) also performed a study using this same data and approach where they compared subjects with facial injury

(cases) to those without facial injury (controls). Chalmers et al. (4) compared falls from playground equipment for injured children and non-injured children. For this study, commercial aviation accidents that were CFIT (cases) were compared with all other accidents (controls) which either did not occur during controlled flight or in which the accident may have resulted from the pilot's loss of control due to weather, terrain or mechanical failure.

The analysis used data abstracted from the NTSB accident reports and entered into a database maintained by the Federal Aviation Administration's (FAA) National Aviation Safety Data Analysis Center (NASDAC). According to the FAA and NTSB, an aviation "accident" is "an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and until such time as all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage" (7). This accident data was obtained and entered into a computer database (Corel Paradox) for analysis. Airplane accidents occurring in Alaska between January 1, 1991 and December 31, 1998, involving one aircraft were selected. Because an accident is given a single NTSB number regardless of the number of aircraft involved, it was decided to simplify the analysis by excluding events involving multiple aircraft, such as mid-air collisions. The study was further restricted to accidents involving commuter and air taxi flights operating under Federal Aviation Regulation (FAR) Part 135 or Part 91. Title 14 Code of Federal Regulations (CFR) Part 91 pertains to GA, but has portions that apply to all operators, for instance non-income generating flights such as returning to base. CFR Part 135 pertains to Commuter and Air Taxi Operators. Helicopter accidents were not included in our analysis.

CFIT accidents were determined by using a phase of flight field to select those accidents which occurred during climb, cruise, maneuvering, descent, or approach. A description of the event was then used to exclude those in-flight accidents due to uncontrolled or emergency situations, such as loss of control due to strong winds, mechanical or engine failure, fire, or pilot impairment. These were categorized as non-CFIT accidents in addition to all those accidents that occurred during other phases of flight (e.g., takeoff, landing, taxiing, or standing).

An epidemiologic software program, EPI-INFO, was used to calculate odds ratios for visual conditions, aircraft features, and characteristics of the pilot (which could have affected judgment and decision-making abilities). Specific potential risk factors examined included: number of engines; presence of passengers; pilot age less than 30 or greater than 50; total number of flight hours; total flight hours in the last 24 h, 30 d, and 90 d; total instrument hours; and total hours in make and model of the accident aircraft. These were compared by plotting the hours flown against frequency of accident and establishing cut-off points where the ratio of CFIT:non-CFIT accidents differed from the observed trend. Recent workforce data obtained from the FAA

ALASKA CFIT ACCIDENTS—THOMAS ET AL.

TABLE 1 COMMUTER AND ON DEMAND ACCIDENTS, 1991-1998.

	All Accidents	All non-CFIT	All CFIT	CFIT VFR/IMC
Total accidents:	351	292	59	38
Total on board	1060	884	176	128
Fatal accidents:	56	26	30	17
Total on board	156	68	88	57
Fatalities	140	58	82	52
Pilot fatalities	51	23	28	16

indicate approximately 2,600 pilots currently fly commercially for commuter or air taxi operations in Alaska; 2100 of these pilots are estimated to fly for Part 135 operators.

RESULTS

During the 8 yr from 1991-98 there were 1303 single aircraft accidents in Alaska. Of these accidents, 78% occurred under FARs pertaining to general aviation (CFR Part 91) standards and 21% under commuter and air taxi operations (Part 135). The remaining 1% were large commercial aircraft (Part 121) or were unknown; these accidents were not included in the analysis nor were occupational accidents for operators without a Part 135 certificate. There were also 61 helicopters, one ultralight, and one glider that were excluded from the study. From the remaining accidents, there were 351 commuter and air taxi accidents, 26% occurred while flying under the less restrictive Part 91 and 74% under Part 135. Although the proportion of flight hours flown under Part 91 by commuter and air taxi is unknown, the proportion of accidents in this category is of interest.

Of the 351 commuter and air taxi accidents, 180 (51%) were takeoff or landing accidents, 90 (26%) involved loss of control or an emergency, 59 (17%) were CFIT accidents, and 10 (5%) occurred while taxiing or standing. The CFIT accidents occurred during cruise (53%), maneuvering (31%), approach (8%) and descent, climb, or takeoff (8%). All CFIT pilots were instrument rated and 97% of non-CFIT pilots were instrument rated; these high values for instrument rating would be expected for commercial pilots. Over 99% of the subjects were male and all CFIT pilots were male. Because of the small values for instrument ratings and gender, analyses were not completed for these variables as they might not accurately reflect relationships among the variables. These 351 accidents had a total of 884 people on board. Of these accidents, 56 (16%) were fatal, accounting for 140 fatalities including 51 pilot fatalities (Table 1). This is equivalent to a fatality rate for the commuter and air taxi pilots of 300/100,000 per yr using a denominator of 2100 pilots.

Of the 59 CFIT accidents, 29 were fatal, accounting for 59% of all the fatalities. Only 38 (11%) of the accidents involved flying VFR into IMC. However, 17 of these were fatal accidents, accounting for 52 (37%) of all deaths and 16 (31%) of the pilot deaths. In contrast, only

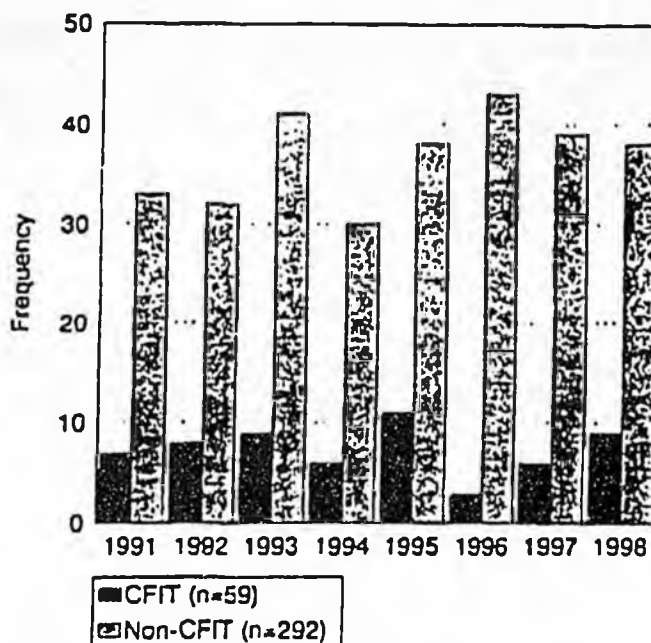


Fig. 1. Annual incidence of commuter and air taxi crashed: CFIT (n = 59) (Black bar) and Non-CFIT (n = 351) (gray bar) in Alaska, 1991-98.

26 (9%) of the 292 non-CFIT accidents were fatal. Other CFIT, i.e., those not due to VFR into IMC, accidents were primarily due to inattention to terrain and altitude. All of the CFIT accidents were attributed to pilot error (Fig. 1).

The annual number of commuter and air taxi accidents has not changed over the 8-yr period. Similarly, the annual number of CFIT accidents has not changed either. However, among the CFIT accidents, there ap-

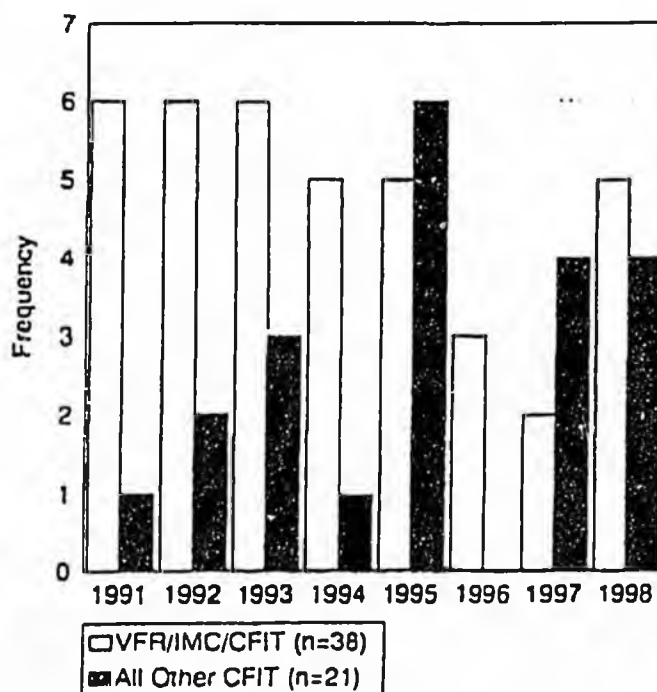


Fig. 2. Annual number of CFIT due to VFR into IMC crashes (n = 38) (gray bar) and all other CFIT crashes (n = 21) (black bar) in Alaska, 1991-98.

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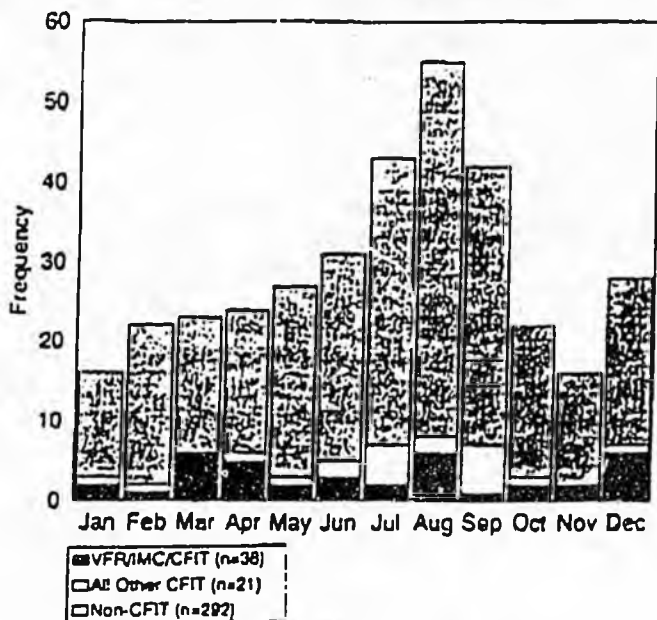


Fig. 3. Total Crashes in = 351) by month in Alaska, 1991-98: Non-CFIT (n = 292) (gray bar); CFIT due to VFR into IMC (n = 38) (black bar); and all other CFIT crashes (n = 21) (white bar).

pears to have been an incremental decline in VFR into IMC over the same period (Fig. 2). Monthly Air Traffic Control (ATC) activity shows that the summer months of June, July, and August are the busiest times of the year (6). However, the amount of instrument activity remains fairly constant over the year, with only a slight rise in the summer indicating that most of the increased activity in the summer months is due to VFR operations.

Examination of the monthly incidence of all commuter and air taxi accidents and the portion that were CFIT accidents shows that most accidents occurred in August and the fewest in November (Fig. 3). Two peaks in December and March did not correspond to an increase in ATC activity, but did correspond to peaks in CFIT accidents. This may be due to increased pressures on pilots to continue flights during these months due to Christmas travel and mail as well as travel for community activities such as spring break and the Iditarod Race.

CFIT accidents were 10 times more likely to be fatal vs. non-CFIT accidents, and there was 12 times the risk

TABLE II. ODDS RATIOS FOR EXPOSURE AND OUTCOME OF CFIT TO NON-CFIT FATAL ACCIDENTS

Exposure	Outcome		Odds Ratio (95% CI)
	Fatal Accidents	Non-Fatal Accidents	
CFIT Accident	30	29	10.58 (5.26-21.40)*
Non-CFIT Accident	26	266	
	Number died	Number Survived	
CFIT Accident	82	94	12.42 (8.19-18.89)*
Non-CFIT Accident	58	826	

* p < 0.05.

TABLE III. ODDS RATIOS FOR EXPOSURES FOR CFIT TO NON-CFIT ACCIDENTS

Exposure	CFIT	Non-CFIT	Odds ratio (95% CI)
IMC	30	15	47.49 (20.19-114.19)*
VMC*	15	274	
Due to VFR-IMC	38	11	46.06 (19.32-112.46)*
VFR-VMC, IFR-IMC	21	280	
Night	6	15	2.03 (.67-5.95)
Daylight	50	254	
Single engine	49	234	1.13 (.51-2.55)
Multiple engines	10	54	
Two/more on board	41	195	1.14 (.6-2.19)
Only one on board	18	98	
Age > 50 yrs	11	54	1.02 (.47-2.24)
Age < 50 yrs	48	231	
Age > 30 yrs	13	62	1.00 (.48-2.05)
Age < 30 yrs	46	219	

* p < 0.05.

* VMC = Visual Meteorological Conditions

for death among those involved in a CFIT vs. a non-CFIT accident (Table II). CFIT accidents were 46 times more likely than non-CFIT accidents to have occurred as a result of flying VFR into IMC. Of the CFIT accidents, 85% occurred during daylight, 10% at night, and 5% in either the morning or evening. There was no increased risk for CFIT vs. non-CFIT for accidents at night, number of engines, pilot age, or presence of passengers (Table III).

No significant associations were found for CFIT vs. non-CFIT for those pilots with less than 6000 total hours or total hours in make and model of the accident aircraft. Indicators of recent activity and possible fatigue did not show any association for CFIT or non-CFIT for total hours flown in the last 24 h, 30 d, and 90 d. The amount of instrument time flown was also not significantly associated with CFIT accidents (Table IV).

Overall, there was no decline in the total commuter or air taxi accidents, or those that were CFIT accidents during the period 1991-98. However, there was a slight

TABLE IV. ODDS RATIOS FOR FLIGHT EXPERIENCE AND CFIT TO NON-CFIT ACCIDENTS.

Flight experience (hours)	CFIT	Non-CFIT	Odds Ratio (95% CI)
Last 24 hours			
<6 h	38	173	1.18 (.54-2.62)
>6 h	11	59	
Last 30 d			
<100 h	41	190	1.27 (.57-2.90)
>100 h	10	59	
Last 90 d			
<250 h	37	195	0.92 (.46-1.88)
>250 h	15	73	
Instrument hours			
<200 h	26	115	0.96 (.47-1.97)
>200 h	18	77	
Make and Model			
<1000 h	36	170	1.01 (.53-1.96)
>1000 h	19	91	
Total			
<6000	41	169	1.68 (.88-3.25)
>6000	17	118	

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decline for VFR into IMC accidents. Only 17% of all accidents were CFIT accidents, yet these accounted for 59% of all the deaths, and 55% of all pilot deaths, giving an extremely high fatality rate of 300/100,000 per yr.

DISCUSSION

This study has sought to examine risk factors associated with CFIT accidents in the aviation industry in Alaska. A reduction in the number of CFIT accidents will not dramatically change the number of accidents, but it will reduce the number of total fatalities, and greatly decrease the pilot fatality rate.

A strong association was found between VFR flights into IMC and CFIT accidents. Therefore, interventions that target both human factors and navigational technology will need to be considered to reduce CFIT accidents. In regards to human factors, elements such as company operational procedures, management involvement in go/no-go decisions, training in pilot decision-making, and the personal or operational pressures that influence the pilot's judgment and performance should be examined.

Technology-based solutions for this problem involve promotion and installation of enhanced Ground Proximity Warning Systems (GPWS), improved Ground Collision Avoidance Systems (GCAS), new Global Positioning System (GPS) technology, and the expansion of navigational aids and weather reporting systems. In 1975 the FAA mandated the installation of GPWS for FAR part 121 operators. Since then, there has been a dramatic reduction in Part 121 CFIT accidents in the U.S., from an average of eight per year to one every 2 yr (2). Current FAA regulations for part 135 do not require GPWS in aircraft that carry less than 10 passengers. In an analysis of 108 CFIT accidents around the world between 1988-94 involving air taxi, regional and major operators, 75% were not fitted with GPWS. Additionally, in about 70% of the accidents it was not required. A fifth of these accidents occurred due to inadvertent VFR flight into IMC; most of these were single-pilot flights involving regional and air taxi operators (9). The recent FAA approval of IFR for single engine Part 135 carriers will allow for planned instrument flights and, therefore, may reduce the likelihood of VFR flights into IMC. However, the cost of the additional equipment and maintenance required may delay, if not prohibit, full implementation by many companies.

Although a previous study of GA accidents showed an association with CFIT and pilot age (5), our study did not find any association between pilot age or pilot experience and CFIT accidents. A study of 188 accidents involving corporate/executive pilots also did not show a significant difference for fatal or non-fatal accidents and pilot age, make and model time, or total time (16). Although there was no association detected between age and CFIT accidents, the reasons for the accident, or the inappropriate decision which led to it, may vary depending on the pilot's age and experience. An accident may be the result of the poor decisions or wrong actions of a young or inexperienced pilot, or it may be the result of inappropriate decisions or complacency that occur with older age and/or more flying time.

Company operating practices may also be a contributing cause. Further examination of this requires more research and is beyond the scope of this study.

The question of flight experience in Alaska is obviously important. However, this information is not readily available. The NTSB records the pilot's state of residence based on home address. This may not reflect the pilot's experience in Alaska, as many return seasonally, but do not establish permanent residency. Others may have an Alaska address but may have only recently started working in the state.

There are certain limitations to this study. The lack of readily available denominator data for all commercial pilots, including those who have not had accidents, (e.g., number of flight hours or number of flight departures), necessitates the use of a case-control analysis. In this study CFIT aircraft accidents were used as cases and non-CFIT accidents as controls. Although there are limitations inherent in comparing one accident population to another accident population, there is, nevertheless, some merit in this type of comparison (17,18). Thus, a sound epidemiologic method has been established which may be useful for further risk analysis studies of CFIT accidents.

The high occupational pilot fatality rate in Alaska and the high fatality rate associated with CFIT accidents reinforces the importance of addressing this type of accident and examining the associated risk factors. Understanding the factors that result in a pilot flying a perfectly good aircraft into the ground due to inappropriate or poor decision making and/or inadequate situational information could help in the design of appropriate training programs and other interventions. This would ultimately result in a major reduction of commercial aviation fatalities.

The National Institute for Occupational Safety and Health, in conjunction with the FAA, NTSB and the National Weather Service, has recently undertaken a joint initiative with the goal of reducing the number of occupational fatalities in aircraft accidents by 50%. Over the next decade we will attempt to accomplish this via more detailed analysis of accident and denominator data, collaborative development of voluntary standards with the air taxi industry, and evaluation of new technologies for their effectiveness in preventing CFIT in single-engine air taxi operations. The elimination of CFIT accidents alone would reduce the number of commercial aviation fatalities in Alaska by over 70%. If successfully implemented, intervention strategies that address human factors and make full use of new technologies could save many Alaskan lives.

ACKNOWLEDGMENTS

The authors would like to thank the following individuals and agencies for their assistance in preparing this document: Rick Kelly and Sharon Smith, NIOSH Alaska Field Station; Gary Childers and Dan Perry, FAA. In addition we also wish to acknowledge the sharing of data and background information by the following agencies: National Transportation Safety Board, National Aviation Safety Data Analysis Center, Federal Aviation Administration, and Civil Aviation Medical Institute.

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Alaska pilots feel pressured to fly

Commuter pilots tell researcher they're urged to fly despite unsafe conditions

THE ASSOCIATED PRESS

FAIRBANKS - Pilots for small air carriers in Alaska say they are pressured to fly under unsafe conditions and that companies with crash records have poorer safety practices, according to two recently published studies.

The Flight Safety Digest pub-

lished the studies in its November-December edition. The digest is the publication of the nonprofit Flight Safety Foundation, which describes itself as a "neutral clearinghouse to disseminate objective safety information."

One study was authored by Colleen Mondor of Fairbanks, a licensed private pilot who once worked in operations for a local air carrier. She interviewed 100 pilots from small companies around the state and wrote her study while obtaining a master's degree at the University of

Alaska Fairbanks in 1999.

"Eighty-two pilots said they had been pressured by their companies or had direct knowledge of other pilots who had been pressured by their companies to fly," Mondor wrote.

Companies were not the only source of pressure.

"Seventy-three pilots said that passenger pressure can affect their decision-making and could have a negative impact on flight safety," Mondor wrote.

The pilots succumbed to pressure, despite overweight

aircraft or poor weather conditions, for several reasons. Ego, a desire to help the company, worries about keeping the job, and competition among pilots were the most significant reasons, Mondor reported.

Alaska's aviation safety record has come under greater scrutiny in recent years. From 1982 to 2000, 29 percent of the accidents among the nation's commuter and on-demand air carriers occurred in Alaska, Mondor reported. From 1987 to 1997, she said, 77 percent of

those accidents were attributed to pilot error.

Mondor said her study was unique because it was unconnected to the Federal Aviation Administration, of which many pilots are suspicious. As a fellow pilot, she had an extra edge.

"If they didn't know me personally, they knew where I worked. They came to me feeling safe and secure," she said. "I guaranteed them anonymity."

The other study was conducted by the FAA using surveys, **Please see Pilots, Page 8**

Mixing old and new; do traditions still hold true?



Science fair participants compare modern medicine with Native practices

By ANDREW KRUEGER
THE JUNEAU EMPIRE

Devil's club may be better known today for the wicked wounds it can inflict, but Amanda Padron and Kami Wright have found that when its healing powers are compared to hydrocortisone, the modern medicine just doesn't cut it.

As a project for this weekend's Southeast Alaska Native Science Fair, Padron and Wright, seventh-graders at Floyd Dryden Middle School, used a traditional Alutian remedy — consisting of

spend millions missile system

Corps estimates
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e tag, the project
Alaska construc-
mmer, said Dick
e director of the
Associated Gen-
Alaska.
nd private con-
will far exceed
ssile defense, he

The project is expected to be a
boost for the Fairbanks area. The
project likely will produce 500 to
1,000 jobs, he said.

The money will come from the
\$7.8 billion Congress approved for
missile defense work during this
fiscal year. President Bush signed
that expenditure into law Jan. 10.

The government's formal "re-
quest for proposals," with more de-
tails of the contract work, will be
available next week.

Pilots...

Continued from Page 1

but Mondor said it suffered from
a low response rate. Out of 3,237
distributed, 491 were returned.

The authors of that study, who
work for FAA Civil Aerospace
Medical Institute in Oklahoma
City, looked at pilot perceptions
among Alaska companies that
have had "controlled flights into
terrain," the technical term for

some crashes, sometimes re-
ferred to as CFIT.

The data indicate that pilots
working for companies with crash
records rated their company prac-
tices lower than did pilots working
for companies without crash records.

"In the event that CFIT com-
panies create a more positive
safety climate and improve their
safety practices, it is likely that
they also will reduce their risk of
CFIT accidents," the authors said.

Trip...

"There was a part of me that felt
she was dead," he said. "I kind of
gave her a kiss. I knew that would

From the Desk of

R. MICHAEL O'NEILL

SECURITY AVIATION, INC
3600 International Airport Road
Anchorage, Alaska 99502
Telephone (907) 248-2677
Fax (907) 248-6911



2-2-01

RE: AVIATION INSURANCE

To: Lisa Murkowski & Andrew Halcro

Via Fax

Lisa & Andrew.

I want to thank both of you for getting something going on the aviation insurance problem.

Your press release had some very valid points. Another item to consider is that this insurance crisis could actually cause more accidents and fatalities. I believe that economic pressure has been a contributing factor for many of the operators having accidents. They have to fly to pay Chevron, payroll, rent and insurance so they push the weather and fly when they should not. We end up with the accidents as a result of scud-running or flying into weather the pilot or plane may not be capable of handling. I foresee more of that happening with the gigantic increases that everyone will have to pay.

My idea may not be realistic or possible but hopefully it will be considered by the Legislators. We need help and you are our last source. No matter how good my record (and others is) we are at the mercy of just a few insurance carriers and as a result we pay an exorbitant amount in Alaska. As an example: The maximum amount of liability coverage I can obtain is \$1 million per seat and with the hull insurance my premium this year is \$510,000. If I were in Seattle, Key West, New York City or even Whitehorse, I would be able to get \$50 million per seat and my total premium would be around \$95,000. Nice to have an Alaska address and a clean operation!

Possible solution: Start an insurance pool: Alaska operators put into it double what their premium would be in Seattle. Next the State put in \$100 - 200 million. Have a professional insurance broker (probably of national chain) administer the program and obtain reinsurance if the premium and State money is exceeded in claims.

The insured operators applying for the pool would have to "qualify" and if they had a bad record they could not get into the pool. If after qualifying, you had claims then the premium for that operator would be adjusted up each year or if they had several accidents they would be out of the pool. Conversely, if you had a good record and no accidents then your premiums would be reduced the following year(s).

It is my understanding that the MD's had a similar problem 20 years ago and started a pool that was successful and ultimately bought out by a major carrier and the members received insurance for the rest of their life at a reasonable rate. Dave McGuire and Mike Bierne are familiar with this. I also heard that the lawyers did the same thing with Mary Hughes (Eker) being involved in their program.

There is a small movement of another group to do something similar but what I have seen so far leads me to believe they have not got a real clue as to what needs to be done. We have "risk pools" for Workers Comp and bad drivers. I feel we have a real problem brewing and the State is the only solution. Lack of air service or fares so high people can not travel is certainly more critical than someone who can't drive their car to work because of their bad record.

Give me a call if there is anything I can help with. I would be glad to come to Juneau but I think you could get the best response having a hearing in Anchorage, possibly in conjunction with the Ak Air Carriers annual meeting which is Feb 18 - Mar 3rd.

Best regards,

Mike Still

February 2, 2001

Representative Murkowski
Room 406
Capitol Building
Juneau, Alaska 99801

Re: Airline insurance

Dear Representative Murkowski:

These are my thoughts and experiences with airlines in Alaska. I believe it would be helpful to consider them in reviewing the situation with airline insurance rates in Alaska.

1. It is a fact that most accidents are caused by pilot error. Please check the statistics with the NTSB and FAA.

2. Pilot errors are common in Alaska for several reasons: First, the seasonal nature of flying in Alaska means many airlines hire young kid pilots just out of flight school with no experience flying in Alaska. Many airlines throw these kids behind the yoke of an airplane without giving them any training in flying safely in Alaska. I myself have ridden on more occasions than I care to remember with these kids and have even had to tell them where to go and what pass to fly through because the airline that hired them failed to give them any training.

A regulation or law needs to be passed requiring pilots to either have 500 hours of flight time in Alaska or 50 hours of supervised flight time in the area of Alaska that they are working in before ever flying a plane on their own.

3. Another common practice in the airline industry was to have the most experienced pilots with seniority in the company sit around in the pilots shack if things were slow and drink coffee while sending the kids with no seniority out into the rain and wind to fly.

A regulation or law needs to be passed requiring pilots with seniority who are available to make a flight take that plane and passengers out instead of passing the flight on to the kid pilots just because the older more experienced pilots want to sit around and drink coffee.

4. Another common practice is to send planes out on flights with only one tank of gas 1/2 full or filled just to the point needed to complete the flight. Flying this way reduces the cost of the flight to the airline because additional fuel means more weight in the plane and more fuel burned to make the flight.

This is what happened in the attached NTSB report of a fatal crash in Ketchikan. It also happens on numerous occasions where the pilot safely lands the plane on water with tourists or other passengers and gets more fuel and takes off again. The pilot never reports the incident and the tourists do not know they should report it.

A regulation or law needs to be passed stopping this practice immediately.

5. Another common practice is for airlines to try and cost cut on maintenance. They do this either by hiring inexperienced maintenance people, falsifying records, or using cheap parts.

There needs to be a law requiring airline companies to hire only qualified and experienced personnel and with severe penalties for skimping on maintenance. These penalties could be imposed by stacking them on top of any FAA penalties.

6. Many airlines also push the limits of flying in bad weather just to make money. They risk their passengers lives for the buck. There needs to be a law or regulation prohibiting flying when weather conditions are marginal or deteriorating. This happens in Southeast alot with planeloads of passengers on flightseeing.

7. Along with the hiring of kid pilots, comes kid pilots who drink until 2-3 am and try to fly at 6:00 am. I have personally witnessed this. There needs to be a law prohibiting pilots from drinking within 24 hours of a flight with the sanction of pulling their license if they are caught..

Tort reform and insurance pooling are not the answer. Neither of those would bring back to life the dead and injured passengers or lower the number of accidents that are the result of pilot error. The state needs to regulate the cause of most accidents, pilot error.

Sincerely,

James Vest - P.O. Box 6582

ANC98FA116

HISTORY OF FLIGHT

On August 5, 1998, at 1605 Alaska daylight time, a float equipped Cessna A185F airplane, N5314R, was destroyed when it impacted terrain about 24 miles northeast of Ketchikan, Alaska, at position 55 degrees 30.98 minutes North latitude, 131 degrees 01.17 minutes West longitude. The commercial pilot and one passenger sustained serious injuries. The remaining passenger sustained fatal injuries. The flight was operated under 14 CFR Part 135, by Taquan Air Service, Inc., of Ketchikan, as an on-demand sightseeing flight. Visual meteorological conditions prevailed at the time of the accident, and a company VFR flight plan was filed. The flight departed the Ketchikan Downtown Seaplane Base at 1455, on a planned 1.5 hour sightseeing tour of Misty Fjords National Monument. Company dispatchers began attempting to contact the airplane at 1630, and declared the flight overdue at 1655. Pilots in the area of the accident site reported hearing an emergency locator transmitter (ELT) signal on 121.5 MHz. The wreckage was located at 1742.

The pilot told the NTSB investigator-in-charge (IIC) during an interview on August 6, that they had flown for 40 to 45 minutes, and landed at the confluence of the East Arm, and the West Arm, of Rudjard Bay, locally referred to as "The Y." A normal part of the tour was to land on the water along the route, and allow passengers out on the floats to take photographs. To do this, the pilot had to slide his seat aft, get out, and allow the right front seat passenger to exit. He indicated that when he did so, he pinched the feet of the rear seat passenger, who had her legs stretched out behind his seat. After a few minutes, he reseated the front seat passenger, and took off.

The pilot said that after taking off from "The Y," about ten minutes elapsed before the engine quit. The rear seat passenger, during three separate interviews, told the Alaska State troopers, and the NTSB IIC, that there was no warning prior to the engine "sputtering and stopping." She indicated the pilot acted surprised.

The pilot told the Alaska State Troopers on August 6, and the NTSB IIC on August 7, that while climbing up the Ella Lake drainage, about 800 feet msl, the engine suddenly quit. He said he turned on the fuel boost pump, and nothing happened. He looked down and saw the fuel selector valve handle on the "LEFT" position, so he turned it to "BOTH." He indicated the airplane was too low to clear the trees ahead of them and land on Ella Lake, so he reversed direction to glide to lower terrain. The engine did not restart, and he did not have time to extend the trailing edge flaps before the airplane contacted trees and marshy terrain.

The pilot had returned to Ketchikan from an earlier charter flight at 1435, and tied the airplane with the right wing over the dock. He requested a dispatcher have the right wing tank filled, and she called the float plane dock and made that request. The pilot said during an interview on August 7 with the NTSB IIC and FAA coordinator, that prior to departing on the accident flight, he noted the right wing tank was filled, and the 40 gallon left tank was between 1/8 and 1/4 full.

According to the field notes of the NTSB IIC, and the notes of the FAA inspectors present during the interview on August 7, the pilot indicated he placed the fuel valve to the left tank position after he landed at the dock, because fuel tends to flow from one tank to the other while the airplane sits on the water. He believed the fuel selector handle was in the center position ("BOTH") prior to departing Ketchikan on the accident flight. He stated he normally does a "GUMPS" (Gas-Undercarriage-Mixture-Props) check before takeoff.

The company submitted a written statement (attached) to the NTSB IIC on May 10, 1999, stating that after reviewing a draft of this report, the statement in the above paragraph is false. During a telephone interview

by the NTSB IIC on April 30, 1999, the company president stated that the pilot was under stress during the August 7 interview, and did not remember saying that he placed the fuel selector to the "LEFT" position while the plane was docked and being refueled.

During an interview with the Alaska State Troopers on August 6, and the NTSB interview on August 7, the pilot stated that the passenger in the back seat must have kicked the fuel selector valve to the "LEFT" position.

Investigation revealed that the fuel selector valve handle was in the "BOTH" position after impact. Fuel was present in the right wing tank, no fuel was present in the left wing tank. The accumulator fuel tank was ruptured, and about one teaspoon of fuel was present in the fuel lines between the accumulator tank and the engine. No rotational damage was observed on the propeller.

INJURIES TO PERSONS

The passenger seated in the right-front seat sustained fatal injuries. The remaining passenger and the pilot sustained serious injuries.

The pilot told the IIC that he did not observe any severe external injuries to the fatally injured passenger. After removing both passengers from the airplane, he attempted to perform cardio-pulmonary resuscitation (CPR) on the fatally injured passenger, but did not obtain any response. He and the surviving passenger indicated that CPR was continued until the pilot was exhausted and could no longer continue.

DAMAGE TO AIRCRAFT

The airplane was destroyed by impact damage.

PERSONNEL INFORMATION

The commercial pilot held single-engine land and seaplane ratings, and an instrument rating. His second class medical certificate was issued on August 11, 1997, with the restriction that he wear corrective lenses. He possessed a Statement of Demonstrated Ability (SODA) and waiver for his eyesight, which was 20/200 correctable to 20/20 with lenses.

The pilot completed initial training with the company in the Cessna 185 on March 27, 1997. He requalified in the Cessna 185 on June 15, 1998. Both of these qualifications were oral tests only. His most recent flight test was his annual 14 CFR Part 135.293 and 135.299 check on June 15, 1998. This flight test was completed in the DHC-2 Beaver.

AIRCRAFT INFORMATION

The seaplane was configured with PK-3000 floats. It was maintained on a 100 hour inspection interval. The most recent inspection was performed on July 29, 33 hours prior to the accident. The engine had accumulated 733 hours since overhaul. A review of aircraft records revealed no recent discrepancies.

The fuel system consisted of two 40 gallon main tanks, with 37 useable gallons per wing, and a 1.5 gallon accumulator tank between the fuel selector valve and the fuel shut off valve. A two speed electric fuel boost pump provides priming and emergency fuel pressure in the event the engine driven fuel boost pump fails. Both the electric and engine driven boost pumps are located forward of the firewall, between the accumulator tank and the engine fuel distributor manifold.

METEOROLOGICAL INFORMATION

The weather at the Ketchikan International Airport at 1453, was winds from 110 degrees at 7 knots; 10 miles visibility; and overcast clouds at 5,000 feet. At 1553, overcast clouds were reported at 7,500 feet.

A photograph taken by the surviving passenger depicts Eddystone Rock, which is located four miles east of the accident site. In this photograph the tops of mountains are visible, and visibility is unobstructed. During an interview on August 7, the pilot stated they flew past Eddystone Rock just prior to the accident.

The pilot described the weather as VFR with high clouds until after the accident. He said weather was not a factor in the accident, but heavy rain after the accident made them cold and uncomfortable.

The pilots of several other airplanes flying in the vicinity were interviewed by the PIC. All of these pilots described areas of rain showers, and a thunderstorm which was located approximately 10 miles northwest of the accident site. They said there was good visibility and ceilings higher than 3,000 feet outside of the rain showers.

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest upright, in a muskeg (marshy) area with numerous 50 feet high spruce trees. The wreckage path was oriented on a magnetic heading of 130 degrees, and extended for 300 feet.

Three hundred feet prior to the main wreckage, a 50 feet high tree had a freshly broken top. Light blue and white paint chips were scattered on the ground for the next 60 feet, and then two 7 feet long sections of freshly broken tree tops were found. A section of right wing debris was located 190 feet from the initial tree top. A 20 feet long crater which held the propeller was observed in the muskeg, 220 feet from the initial tree top. Two parallel skid marks, the approximate shape and width of the floats, were located 250 feet from the tree top.

The fuselage, with the cabin intact, tail twisted to the right, and left wing and engine attached, came to rest at an approximate 45 degree nose down angle, 300 feet from the initial damaged tree. Both floats were partially attached, and were on the left side of the fuselage. Both floats had extensive front end damage. The right wing was separated, and located 15 feet beyond the fuselage.

The right wing separated at the wing root, and had a teardrop shaped outward bulge in the area of the fuel tank. The right wing fuel tank remained intact, and contained approximately 15 gallons of blue tinted fuel. The wing came to rest upside down, with the vented fuel caps down. On the ground below the wing, puddles of blue fuel were present in the muskeg.

The left wing remained intact and attached to the airplane. No evidence of any fuel or fluid was found in the left wing tank. The 1.5 gallon accumulator fuel tank was ruptured, and contained no fluid. About one teaspoon of fluid was found in the intact fuel lines to the engine, and the engine fuel filter.

The fuel valve selector handle was found in the "BOTH" position. The valve was determined to be operable, and the internal ports were in the "BOTH" position. The handle was able to be rotated normally, and the position detents were clearly felt when the valve was operated by hand. The selector handle was recessed into its protective housing. The two fuel boost pump split switches were in the "ON," "HIGH," and "LOW" positions. The fuel shutoff valve, located at the firewall, was open.

The trailing edge flaps were attached to the respective wings, and in the retracted position. The flap control handle was in the down, or retracted position.

The propeller spinner was crushed directly aft, and had no rotational scoring or scratching. The three propeller blades were bent aft, and had no chordwise scratches, or leading edge gouges.

MEDICAL AND PATHOLOGICAL INFORMATION

No autopsy was performed on the fatally injured passenger. Due to the emergency medical treatment administered to the pilot, no toxicological samples or drug screenings were performed.

SURVIVAL ASPECTS

All three occupants were wearing seatbelts and shoulder harnesses. Both front seats separated from the seat tracks, but the seat/occupant combinations stayed restrained in place by the belt/shoulder harness assemblies. The surviving passenger told the IIC that the pilot made sure that both passengers had their shoulder harnesses on. The rear passenger seat remained attached to the airplane.

The pilot manually activated the ELT. The pilot attempted to provide shelter from the rain for the surviving passenger using blankets from the airplane's survival kit. He placed orange markers and silver space blankets in open areas around the wreckage, and fired flares when he heard an airplane, which assisted searchers in locating the survivors.

The wreckage was located about 1742 by another company airplane, which was unable to land due to terrain. Two helicopters were dispatched from Ketchikan at 1745, and arrived at the accident site at 1815. Both survivors were transported by helicopter, and arrived at the Ketchikan General Hospital about 1900.

TESTS AND RESEARCH

The engine was removed to the company maintenance facility and inspected by all parties to the investigation on August 8, 1998. No preaccident anomalies were noted.

Inspection of a spare fuel selector valve revealed that as the barrel of the valve is rotated from "BOTH" to "LEFT" there is always an open port which will allow fuel to pass through the valve body. About the 45 degree position, as the fuel ports transit from "BOTH" to "LEFT," the minimum opening cross section exists. Discussions with company check airmen revealed that if the selector handle is placed midway between "BOTH" and "LEFT" while operating at cruise power, the engine will stop from fuel starvation after about six to eight minutes. The check airmen emphasized that this is very sensitive, and only happens about 50% of the time.

The NTSB IIC, the FAA coordinator, and the company representative, each took turns attempting to kick the fuel selector to the "LEFT" position while sitting in the back right seat of a representative Cessna 185. None of the representatives were able to move the valve handle more than one inch (12 degrees) to the left of the "BOTH" position. None could get the valve handle near the 45 degree position, nor all the way to "LEFT." Each representative noted that the valve handle was recessed into the labeling plate, and was protected from the feet of a rear seat passenger.

Each representative noted that the valve handle was sunk deeply between the front seats, regardless of seat position. The valve could not be accessed with the feet of the front seat occupants, either while seated, or while climbing in or out of the airplane.

When questioned during each of three interviews, the surviving passenger stated to the NTSB IIC that she did not place her feet between the seats in front of her. She indicated that she stretched her legs out to the left, behind the pilot, in order to be comfortable.

ADDITIONAL DATA/INFORMATION

The Cessna A185F Floatplane supplement "SECURING AIRPLANE" check list states: "Fuel Selector Valve should be placed in LEFT TANK or RIGHT TANK to prevent cross-feeding and ensure maximum fuel capacity when refueling."

The Cessna A185F Normal Procedures "BEFORE TAKEOFF" checklist states, in part:

(5) Fuel Shutoff Valve - ON. (6) Fuel Selector valve -BOTH ON. (7) Fuel Quantity Indicators - CHECK QUANTITY.

The Cessna A185F Floatplane supplement "CRUISE PERFORMANCE" chart for 2,000 feet pressure altitude and 11 degrees C, states that at 2,300 rpm and 23 inches of Hg manifold pressure, a brake horsepower of 59%, and a fuel consumption of 12.5 gallons per hour (GPH) will result.

For a flight duration of 45 minutes, this consumption rate results in a consumption of 9.4 gallons, exclusive of additional fuel used during startup, taxi, or climb..

The Cessna A185F Floatplane supplement states: "...cruising climbs should be conducted at approximately 18 GPH up to 4,000 feet... ."

The wreckage was released to the operator on August 7, 1998.

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ANC97FA001

History of the Flight

On October 13, 1996, about 1455 Alaska daylight time, a float equipped deHavilland DHC-2, N64276, collided with terrain about 38 miles north of Ketchikan, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country on-demand passenger flight under Title 14 CFR Part 135 when the accident occurred. The airplane, operated by Seaside Air Service, Ketchikan, was destroyed. The certificated commercial pilot and two passengers received fatal injuries. A VFR flight plan was filed. The flight originated at the Ketchikan Harbor Seaplane base at 1358.

The flight was for the purpose of transporting the passengers to a remote area for goat hunting. After departure, the pilot filed a VFR flight plan at 1204 with the Ketchikan Automated Flight Service Station (AFSS). The pilot indicated the planned destination was Reflection Lake, located about 43 miles north of Ketchikan. There was no further communications from the airplane.

The U.S. Coast Guard reported that an emergency locator transmitter (ELT) signal was detected in the area of the accident about 1455. Local area pilots became concerned and began search operations. The flight was officially declared overdue at 1636 and the wreckage was located about 1640. Search personnel reported that the airplane struck the side of a steep canyon wall about 2,850 feet mean sea level. The wreckage then tumbled down the side of the canyon about 300 feet.

The accident occurred during the hours of daylight at latitude 55 degrees, 59.021 minutes north and longitude 131 degrees, 42.176 minutes west.

Crew Information

The pilot held a commercial pilot certificate with airplane single-engine land, multi-engine land, single-engine sea, and instrument airplane ratings. The most recent second-class medical certificate was issued to the pilot on October 30, 1995, and contained the limitation the pilot must wear lenses for distant vision and possess glasses for near vision.

No personal flight records were located for the pilot. Review of the pilot/operator report submitted to the Safety Board, and the operator's flight and duty time record, revealed the pilot's total aeronautical experience was estimated at 17,000 hours, of which 8,500 hours were accrued in the accident airplane make and model. In the preceding 90 and 30 days prior to the accident, the pilot accrued a total of 219 and 46 hours respectively.

Aircraft Information

The airplane had accumulated a total time in service of 12,474.7 hours. Examination of the maintenance records revealed that the most recent annual inspection was accomplished on January 11, 1996, 493.8 hours before the accident. In addition, a 100-hour inspection was completed on September 25, 1996, 19.7 hours before the accident.

The engine had accrued a total time in service of 7,909.6 hours of operation. The maintenance records note that a major overhaul was accomplished on November 30, 1994, 1,071.9 hours of operation before the accident. Annual and 100-hour inspections were accomplished on the dates specified above for the airframe.

Meteorological Information

The closest official weather observation station is Ketchikan, Alaska, which is located about 38 nautical miles south of the accident site. At 1447, an aviation routine weather report (METAR) was reporting in part: wind, light and variable at 3 knots; visibility, 20 miles; sky condition and ceiling, 2,200 feet scattered, 3,500 feet broken, 6,000 feet broken, 12,000 feet overcast; temperature, 10 degrees C; dew point, 6 degrees C; altimeter, 29.71 inHg.

The terminal area forecast (TAF) for the Ketchikan area issued on October 13, 1996, at 0933, was valid from 1000, October 13, 1996, until 1000 on October 14, 1996. The forecast was reporting in part: Wind, 150 degrees (true) at 12 knots, gusts to 20 knots; visibility greater than 6 statute miles in light rain showers; sky condition and ceiling, 1,500 feet scattered, 3,000 feet broken, 4,500 overcast; temporary changes expected within the valid period: visibility, 3 statute miles in light rain showers and mist; sky condition and ceiling, 500 feet scattered, 1,500 feet scattered.

The National Weather Service, Alaska Aviation Weather Unit, Anchorage, issued a area weather synopsis on October 13, 1996, at 1145. The synopsis, valid until October 14, 1996, at 0600, was reporting in part: A 982 millibar low near Whittier, Alaska, will remain nearly stationary through 0600, October 14, 1996. A 998 millibar low, 180 miles southwest of Sitka, Alaska, will be in the vicinity of Yakutat, Alaska, by 1600, October 13, 1996, and near Burwash, Yukon Territory, Canada, by 2400. An associated trough from the low to near Annette Island, Alaska, will extend from Yakutat to Skagway, Alaska, and southeast by 2400.

The synopsis for southern, southeast Alaska, valid until October 13, 1996, at 2400, included a meteorological notice to airmen (AIRMET). The synopsis was reporting in part: Airmet for mountain obscuration. Mountains temporarily obscured in clouds and precipitation, no change. Sky condition and ceiling, 2,000 scattered, 3,000 broken, 5,000 overcast, merging layers up to 30,000 feet. Light rain showers. Isolated areas, 1,000 feet scattered, 2,000 feet broken, 3,500 feet overcast. Visibility, 5 statute miles in light rain showers and mist. Surface winds, southeast with gusts to 20 knots. Outlook, valid from October 13, 1996, at 2400, to October 14, 1996, at 1800; marginal VFR conditions, ceilings with rain showers. Turbulence; isolated moderate turbulence below 6,000 feet. Icing and freezing level; light isolated moderate mixed icing in clouds and precipitation, 500 feet to 15,000 feet. Freezing level, 5,000 feet.

A pilot who initially spotted the wreckage reported that he had been in the area of the accident about 1100. At that time, the weather conditions were 2,000 feet scattered, visibility 10 to 15 miles, and no rain. When he arrived in the area of the wreckage at 1640, the weather conditions were 4,000 feet overcast, visibility 15 to 20 miles. While waiting for rescue helicopters to arrive in the area, the weather conditions deteriorated and lowered to 2,800 feet overcast with rain and snow squalls. The weather conditions continued to deteriorate with increasing snow and rain.

Communications

Review of the air-ground radio communications tapes maintained by the FAA at the Ketchikan AFSS revealed that the airplane successively and successfully communicated with the positions of "inflight #1" and "inflight #2." No unusual communications were noted between any FAA facility and the accident airplane during the review of the tapes.

A transcript of the air to ground communications between the airplane and the Ketchikan AFSS is included in this report.

Wreckage and Impact Information

The National Transportation Safety Board investigator-in-charge (IIC), along with an FAA Inspector from the Juneau Flight Standards District Office, attempted to reach the accident site on October 14 and 15, 1996, by helicopter. Low ceilings, with rain and snow, prevented the helicopter from reaching the scene. The accident site was then covered by snow. No further attempts to reach the accident site were made due to the onset of winter. On July 24, 1997, the NTSB IIC again attempted to reach the accident site by helicopter. Low ceilings and rain again prevented the helicopter from reaching the accident site.

Members of the Ketchikan Search and Rescue Squad (KVRS), a volunteer search and rescue organization, assisted Alaska State Troopers with the initial response to the accident scene. The team utilized technical rescue techniques, including the use of climbing ropes, to retrieve the occupants of the airplane. The KVRS members described the accident scene as a near vertical rock face. They reported the airplane fuselage was lodged in two large trees, about 1/2 way down the face of the rock. Evidence of a small postcrash fire was present at the fuselage point of rest.

Following the second attempt to reach the accident site, the NTSB IIC authorized a visit to the scene by an aviation insurance adjuster for the purpose of assessing the retrieval of the wreckage for examination in a less hazardous environment. On August 16, 1997, the adjuster traveled to the scene with several members of the KVRS and photographed the wreckage. Both parties recommended that no retrieval of wreckage should be attempted as long as the fuselage remained lodged in the trees.

Examination of the photographs provided by the KVRS and the adjuster, revealed the airplane collided with terrain, just below a large ridge line. A path of wreckage debris was scattered along the upper, lateral face of the ridge, until dropping off the edge onto a series of small ledges. The fuselage descended down the face of the ridge until lodging in two trees.

All of the airplane's major components were found at the main wreckage area. The engine separated from the fuselage and continued down the face of the ridge to an area of grass and rocks.

The engine sustained impact damage to the front portion of the engine. The propeller hub assembly remained connected to the engine crankshaft. One propeller blade separated from the hub and was located at the top of the ridge along with other wreckage debris. The other two blades remained attached to the hub, but were broken about midspan.

Medical and Pathological Information

A postmortem examination of the pilot was conducted in Ketchikan, Alaska, under the authority of the Alaska State Medical Examiner, 5700 E. Tudor, Anchorage, Alaska, on October 14, 1996.

Additional Information

The pilot held a single-pilot, on demand, air carrier certificate, issued on April 1, 1989. He was the owner/operator and the only pilot. The pilot's last FAR 135 proficiency check ride was completed on November 1, 1995.

Wreckage Release

The Safety Board did not take custody of the wreckage. No parts or components were retained by the Safety Board.

ANC97LA014

On December 12, 1996, at 0905 Alaska standard time, a float equipped DHC-2 Beaver airplane, N67694, registered to and operated by Taquan Air Service of Ketchikan, Alaska, crashed during takeoff from the water near Port Johnson, Alaska, located about 18 miles southwest of Ketchikan. The on demand air taxi flight, operating under 14 CFR Part 135, was departing the location of the accident and the destination was Ketchikan. A company visual flight rules flight plan was in effect and visual meteorological conditions prevailed. The certificated airline transport pilot was fatally injured and the passenger received minor injuries. The airplane sank in 400 feet of water.

According to the company, the passenger stated they had just taken off. They were in the initial climb phase when the right wing started to dip and the nose started to drop. The pilot had the control yoke turned all the way to the left and applied full power. He then yelled that they were going in. The airplane crashed into the water and the passenger exited the airplane through the windshield. He did not see the pilot.

During a telephone interview with the passenger, he stated that there was very little wind or wave action in the takeoff area. The takeoff area is protected by trees and the shoreline. After takeoff, as the pilot flew the airplane and exited the bay from which they took off, the passenger heard the pilot say, "here comes a gust." The passenger stated he could see the ripples on the water as a gust of wind struck the airplane. The engine power increased and the airplane began to descend. Then the right wing pointed at the water and the left wing was pointing at the sky. The passenger does not remember how the airplane struck the water. He exited the airplane after attempting to release his seat belt four times. He exited through the missing windshield.

The airplane was recovered in 411 feet of water near Port Johnson. As the salvage crew raised the airplane, the engine and instrument panel, the entire cockpit section forward of the pilot, broke away and sank. The remainder of the airplane was stored on a barge. The wreckage could not be examined due to the high winds. The barge could not sail across the open water due to the high winds. The wreckage was blown off the barge approximately 5 days later and the wreckage sank. It has not been recovered.

The pilot's remains were discovered still strapped into his seat when the fuselage was recovered.

An autopsy of the pilot was conducted by Dr. M.W. Stewart, 3100 Tongass Avenue, Ketchikan, Alaska.

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ANC97FA159

HISTORY OF FLIGHT

On September 29, 1997, at 1747 Alaska daylight time, a float equipped DeHavilland DHC-2 airplane, N4787C, was destroyed when it impacted the water after takeoff from Ketchikan, Alaska. The solo commercial pilot sustained fatal injuries. The airplane was operated by Promech, Inc., of Ketchikan, as a positioning flight after the last leg of Flight 89. The flight was conducted under 14 CFR Part 91, and had departed the Ketchikan International Airport seaplane dock, to reposition to the downtown seaplane base. The downtown seaplane base is located two miles to the east, on the opposite side of Tongass Narrows from the airport dock. Visual meteorological conditions prevailed at the time of the accident, and a company VFR flight plan was on file.

Witnesses described seeing the airplane takeoff westbound, enter a steep climb, and make a sharp left turn at 200 feet above the water, to the east toward downtown. Witnesses then described the airplane roll rapidly the opposite direction, and impact the water at a steep angle. None of the witnesses described hearing a reduction in engine power after takeoff.

INJURIES TO PERSONS

The pilot sustained head injuries, and was submerged for approximately one hour prior to recovery.

DAMAGE TO AIRCRAFT

The airplane was destroyed by impact forces when it impacted the water in about a 90 degrees nose down attitude. Both floats separated and were recovered. The right wing separated at the wing root and was not recovered.

PERSONNEL INFORMATION

The pilot held a commercial pilot certificate with single engine land, sea, and instrument ratings. He held a valid second class medical certificate with no restrictions. At the time of the accident he had accumulated approximately 2,071 hours of flight experience, with 1,200 in float equipped DHC-2 airplanes. In the last 90 and 30 days, he had flown 306, and 83 hours respectively, all in the DHC-2. He had flown 7.3 hours on the day of the accident.

The pilot was hired by the operator as a seasonal dock worker in 1992. He obtained his commercial pilot certificate on May 15, 1994. He was hired as a seasonal pilot in 1996. This was his second season as a pilot for the company.

He was approved to fly all the DHC-2 airplanes operated by the company. The pilot's training record indicated that on April 12, 1997, during annual recurrent training, he received 'differences' training on the "DHC-2 4787C Baron STOL," and for "995WA Wipaire." This record showed 0.3 hours of ground training, and no flight training. According to the company, 'differences' for the STOL equipped airplane consisted of a review of a manufacturer's videotape. Initial training, received one year earlier, included flight training, to include stalls.

One witness to the accident described the airplane depart in "a near vertical climb, then bank to the left." A second witness described the airplane takeoff at a "steep angle of attack."

A third witness interviewed by the NTSB stated that approximately 1 to 1 1/2 weeks prior to the accident, he witnessed the same airplane and pilot depart the dock at Ketchikan airport, do an aggressive high rate of climb, and then a hard, left hand turn, to return to the direction of downtown.

AIRCRAFT INFORMATION

The airplane was a DHC-2 Mark-I "Beaver" manufactured by DeHavilland in June 1959. It was equipped with EDO 4930 nonamphibious floats. The airplane had always been operated on floats while owned by the company. The airplane had been modified with a Baron / STOL (Short Take Off and Landing) kit on May 10, 1993. This modification was approved under U.S. Supplemental Type Certificate (STC) number SA-1070NE, and Canadian Supplemental Type Approval (STA) number SA92-45.

This STOL modification consisted of a full span contoured leading wing edge, drooped wing tips, upper wing surface stall fences, and trailing edge flap gap seals. Additionally, an electrically powered, aural stall warning horn was installed as a mandatory component in the modification kit.

The company stated that the stall warning horn was not required to be operable, and that it was routinely disabled to prevent the horn from continually activating at slow speeds. The system was disabled by pulling the electrical circuit breaker located in the cockpit. The company indicated that they obtained the information that the system was not required from a training and marketing video tape provided by the manufacturer.

Company personnel told the NTSB IIC that during 100 hour maintenance inspections, the stall warning system was tested to ensure it was operable.

The airplane was configured with vertical "Kenmore" seaplane finlets on the horizontal stabilizer ends. The airplane was not equipped with a lower surface ventral fin.

METEOROLOGICAL INFORMATION

The weather at the time of the accident was clear, with winds from 300 degrees magnetic at 5 knots, favoring departures to the west from the water. The water surface was calm.

AERODROME INFORMATION

The seaplane dock and waterway at Ketchikan International Airport is at the western end of the airport facility. The waterway is part of Tongass Narrows, and parallels the airport's paved runway 11-29. The seaplane traffic was departing and landing to the west at the time of the accident.

WRECKAGE AND IMPACT INFORMATION

The airplane impacted the water about one mile west of the International Airport seaplane dock. Several boats operating in the harbor responded to the accident, and towed the airplane to a beach. The airplane was initially examined by FAA inspectors, then disassembled. The stall warning circuit breaker in the cockpit was observed in the pulled, or open, position. The airplane was loaded on a truck, and relocated to the airport for further examination.

The wreckage was examined by the NTSB investigator-in-charge on October 22 and 23, 1997, after relocation to the Ketchikan airport.

DHC-2 configured with EDO 4930 floats, Kenmore finlets, and the complete "Baron STOL" kit, stated in part: "Stall Warning... did not comply with BCAR section D with the Flap Gap Seal installed. Approval of the gap seal would require changes to enhance stall warning or installation of a stall warning system." "Stability... The static directional stability tended to be marginal and under some circumstances the rudder would not tend to re-center...The tendency to "overbalance" was most pronounced with the gap seal installed; The worst case was in the climb condition with flap up, or in the climb position... When both the ventral fin and finlets were installed the overbalance condition was rectified, and in the climb configuration the pedals would tend to re-center, albeit slowly." "...with or without the gap seal and Kenmore finlets only installed the aircraft did NOT comply with CAR 03; With the Kenmore finlets and DHC ventral fin installed the aircraft satisfied the CAR 03 requirements." "Conclusions and Recommendations. Approval...is recommended...provided that...For Canada (STA) - if the flap gap seal is installed the aircraft must be fitted with both ventral fin and finlets and in addition a stall warning system must be installed and approved. For the USA (STC) - the aircraft must be fitted with both Kenmore finlets and DHC ventral fin, or equivalent."

The manufacturer then added a stall warning system to the modification package, and further certification tests were conducted.

The Transport Canada Flight Test Inspection / Evaluation for STA # SA92-45, dated August 14, 1991, after testing of a stall warning system installation stated: "The volume of the warning horn was inadequate... The warning could not be considered clear and distinctive. The warning tended to fire at a relatively high speed (stall plus 10-15 mph IAS). It would be much better if the system 'fired' somewhere between 5 and 10 mph in advance of the stall."

Corrections were made, and Canadian approval of STA # SA92-45 was received on July 23, 1992.

A review of the correspondence from Transport Canada, to the FAA New York Aircraft Certification Office on December 18, 1992, applying for U.S. Supplemental Type Certification (STC) # SA1070NE, revealed that all drawings and installation instructions included a stall warning system, with no mention that it was optional. U.S. approval for STC # SA1070NE was received on March 23, 1993.

STC # SA1070NE contains the exact language as Canadian STA number SA92-45, and requires that the stall warning system be installed. The kit installation Drawing # AOG-01-001-1, dated May 25, 1992, include the following components: Full span contoured leading edge, drooped wing tips, wing fences, Flap gap seals, and an audible stall warning system.

The Flight Manual Supplement #1, revision B, dated Feb 25, 1993, Section IV - Operating Limits specifies: "Approved Configurations 1/ The Baron Stoll kit is comprised of: (a) - Full span contoured leading edge, drooped wing tips, wing fences, Flap gap seals, and an audible stall warning system, ...installed in accordance with AOG Air Support inc., installation Drawing # AOG-01-001-1, Dated May 25/92 or later DOT approved revision. (b)- If... floats equal or exceed EDO model 4930 size, ...an approved ventral fin and approved horizontal stabilizer auxiliary finlets."

AOG Drawing # AOG-01-002-4, reference "D" Leading Edge Skins Installation, includes installation of wiring for the stall warning.

AOG Drawing # AOG-01-002-6, reference "F," Stall Warning System Installation is required by AOG Drawing # AOG-01-001-1. Additionally, the stall warning vane and structural opening in the contoured leading edge is a standard in all kits produced by the manufacturer. There is no mention in these instructions that the stall warning is optional.

A review of the manufacturer's marketing videotape produced in May of 1992, revealed an opening statement that "Transport Canada approval was received on May 23, 1992, and U.S. approval is expected by midsummer of 1992." A second statement was made during narration of stall demonstrations that "the loud background noise is a stall warning horn, required by Transport Canada, but not needed by the Federal Aviation Authority for American certification." This tape was in use by the operator for pilot training in the performance of the STOL equipped DHC-2. During interviews by the NTSB investigator, company managers stated that this videotape was a basis for allowing pilots to intentionally disable the stall warning system by pulling the circuit breaker. Company personnel interviewed said that the stall warning horn would continually activate in flight at speeds 10 to 15 miles per hour above stall.

Correspondence dated December 8, 1997, from the Transport Canada certification flight test pilot who performed the flight tests, to the NTSB investigator, noted the following: Testing was performed using a Baron STOL modified DHC-2 mounted on EDO 4930 floats, at weights from 5100 to 5400 pounds. The power used for power on stalls was that required for level flight at 1.4Vs and maximum continuous power (MCP) of 30 inches manifold pressure. There was no record of stall testing being performed at takeoff power (TOP) of 36.5 inches manifold pressure and 2300 rpm. The test pilot wrote, "Stall testing conducted did not highlight significant adverse stall characteristics. I would assess the stall characteristics of the Beaver as docile, although... if the a/c is stalled with the ball displaced from the center, there is a tendency to roll off (slowly) as compared to dropping the nose slightly... ."

The test pilot further stated in his correspondence, "In the configuration you describe [that of the accident airplane] I would expect that there was little, if any, clear and distinct stall warning."

ADDITIONAL INFORMATION

A review of the FAA inspection history of the accident airplane revealed that since April 24, 1995, 14 inspections (6 ramp, 7 spot, and 1 en route) had been performed by FAA inspectors. None of these inspections made mention of the ventral fin not being installed as required by the STC. All inspections were noted "satisfactory."

The wreckage was released to the owner's representative at Ketchikan on October 23, 1997.

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FISCAL NOTE

STATE OF ALASKA
2002 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HB 269
 () Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: DCED
 Title An Act establishing employment BRU Insurance (116)
protections for certain employees in the aviation industry Component Insurance Operations
 Sponsor House Labor & Commerce
 Requester House Labor & Commerce Component No. 354

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
-------------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
1156 GF Receipt Supported Services						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2002) cost: 0.0
 Check this box (X) if funding for this bill is included in the Governor's FY 2003 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

This bill has no fiscal impact on this component.

Prepared by: Robert A. Lohr, Director Phone 907-269-7900
 Division Insurance Date/Time 4/9/02 8:34 AM
 Approved by: Deborah B. Sedwick, Commissioner Date 4/9/2002
 Agency Department of Community & Economic Development

FISCAL NOTE

STATE OF ALASKA
2002 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HB 269
 () Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Law
 Title "An Act establishing employment protections BRU Civil Division
for certain employees in the aviation industry . . ." Component Governmental Affairs
 Sponsor House Labor and Commerce Committe
 Requester House Labor and Commerce Committe Component No. 2207

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	*****	*****	*****	*****	*****	*****

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()	0.0	0.0	0.0	0.0	0.0	0.0
-------------------------------	-----	-----	-----	-----	-----	-----

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	*****	*****	*****	*****	*****	*****

Estimate of any current year (FY2002) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2003 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)
 HB 269 would protect an aviation employee from retaliation if they refused to carry out a job assignment, or performed in a manner different than requested by the employer, because of a safety-related issue. The bill prohibits the employer from firing, threatening, or otherwise discriminating against the employee for such action. An employee who alleges such retaliation could seek civil damages from the court, and the attorney general could pursue a civil fine of up to \$10,000 against the employer.

Enforcing an employer's liability for the civil fine will require Civil Division resources. However, there is no practical way to estimate how often the department would be asked to enforce this provision, and we are unable to quantify a potential cost. The division would also be required to defend the state in any civil action brought by a state employee as a result of this bill. Again, we have no way of estimating how often this might occur.

Prepared by: Joan M. Kasson Phone (907) 465-5370
 Division Attorney General's Office Date/Time 4/10/02 8:33 AM
 Approved by: Kathryn Daughettee for Bruce M. Botelho, Attorney General Date 4/10/2002
 Agency Department of Law

HB

271

Alaska State Legislature

HOUSE OF REPRESENTATIVES

Rep. Andrew Halcro, Chair
Rep. Pete Kott
Rep. Joe Hayes

Rep. Lisa Murkowski, Chair
Labor & Commerce



State Capitol, Room
#414
Juneau, Alaska
99801-1182
(907) 465-4939
Fax (907) 465-2418

Labor & Commerce Sub-Committee

Aviation Insurance

Punitive Damage Statutory Limit

An integral part of dealing with the dilemma of unobtainable aviation insurance was addressing the issue of exorbitant court awards.

So Rep. Halcro went to the source: spoke with representatives of the insurance companies:

- the issues of pooling and industry enhancements in the way of safety initiatives are fine in their own right, but.....
- the only viable solution that would have a direct effect on insurance rates would need to involve some sort of tort reform.

Consensus of recent AK Air Carriers Conference that some sort of Tort Reform is the real solution.

In this regard, Work Draft #22-LS0741\A Limits the amount of punitive damages that can be awarded in the event of an aviation accident.

The amounts shown are purely a starting point, being reflective of what is currently in statute under other limits:

A plausible solution is limits not to exceed:

\$500K for with < 100 employees

\$1M for companies with > 100 employees

Intention: To provide a tangible limit to the liability incurred when writing policies in Alaska.

Factors:

- Jury awards have been steadily increasing in the past decade
- The liability assumed by insurers has been expanded by recent court decisions, which had an immediate, direct affect of increases for policy premiums

ALASKA STATE LEGISLATURE

Representative Lisa Murkowski Chair
Representative Andrew Halcro Vice-Chair
Representative Pete Kott
Representative Kevin Meyer
Representative Norman Rokeberg
Representative Harry Crawford
Representative Joe Hayes



Alaska State Capitol
Juneau, AK 99801-1182
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Representative_Lisa_Murkowski@legis.state.ak.us

HOUSE LABOR AND COMMERCE COMMITTEE

Sponsor Statement

HB 271

“An Act relating to recovery of punitive damages resulting from an aviation accident and providing for an effective date.”

In the past few years, aviation insurance has skyrocketed leaving some air carriers in the state without adequate or affordable insurance coverage. The industry's biggest problem regarding insurance relates to liability. In 1998, \$24.68 million was paid out by insurance companies to cover aviation accidents in Alaska, while the industry only netted \$14.74 million in premiums.

Recent court cases have added to an increasing gap between outgoing payments and incoming premiums. Unfortunately, insurance companies have had to raise rates dramatically, creating monetary ceilings, which limit aviation carrier operations by high-cost premiums. In order to limit liability payouts for air accidents, the Labor & Commerce Committee introduced House Bill 271.

HB 271 controls the high cost of premiums by lowering the insurance overhead for Alaska's air carriers. If premiums continue to climb, most air carriers will be forced to close their doors. A loss of commercial aviation operations in Alaska could severely and negatively impact rural communities.

In some situations renewal premiums have been increasing at 50 percent per year. Alaska Statute requires a minimum limit of \$150,000 per seat for bodily injury. Most air carriers have increased liability insurance to \$500,000 or more to limit bankruptcy award settlements. Affordable premiums or finding coverage is nearly impossible at those levels, hence the impetus for introducing HB 271.

HB 271 clearly limits in state statute award settlements for airplane disasters. By introducing tort reform for air carrier insurance, the Labor & Commerce Committee hopes to lower insurance premiums, thus stabilizing the air carrier industry and maintaining future air travel for all Alaskans.

Air carriers see leap in insurance bills

By James MacPherson
Journal Reporter



Insurance premiums are skyrocketing for air carriers, and the number of companies willing to write policies in Alaska has dropped to just a handful in the past few years.

High accident rates and repair costs, a slumping stock market, lawsuits and the terrorists attacks of Sept. 11 are just some of the reasons for soaring insurance costs in Alaska and elsewhere, air carriers and insurance officials say.

The bottom line likely will be increased prices for airplane seats, as the costs will be

passed on to passengers.

Rates for Alaska air carriers have increased anywhere from 20 percent to more than triple in the past year, depending on the number of company claims, said Mike Salazar, a Ketchikan-based agent with Acordia Northwest, an insurance brokerage firm in Seattle.

"Most air carriers with a clean record had a 20 percent increase," said Salazar, adding that those who had claims are seeing rates go up as high as 200 percent or more.

Salazar is not unsympathetic to air carri-

ers. For nearly 30 years before selling aviation insurance, he owned Ketchikan Air Service Inc., a company he sold in 1998.

"Certainly my time in the industry helped me understand the problems on their side of the fence," Salazar said.

Mike Vanard, vice president of Seattle-based U.S. Aviation Underwriters Inc., said insurance his company offers generally has risen 18 to 30 percent in the last year.

"Insurance is cyclical, it has big, sweeping curves. Right now we're at the opposite (high) end of that curve," Vanard said.

Continued on Page 9

Economy helps push insurance rates up

Continued from Page 1

Orin Seybert, president of Peninsula Airways Inc., has been in the commercial airline business since 1956. The longtime Alaska aviator agreed the rates are cyclical.

"I look at insurance like a pendulum, it goes in cycles, every four to six years it goes up," Seybert said. "It's been edging up there and it is absolutely the highest I've seen it."

Seybert said insurance accounts for about 10 percent of his company's overall costs.

Vanard's company is one of about five or six companies willing to offer insurance in Alaska. A few years ago that number was at least a dozen, according to air carriers and insurance officials.

Nationwide, there also has been a decrease in the amount of companies willing to insure air carriers.

When selling insurance, companies, whether aviation or otherwise, bet that they will not have to pay out a claim; those buying an insurance policy are betting they may have a claim, said Thomas Turner, an aviation author and former insurance broker based in Cleveland, Tenn.

In the case of aviation, both sides are losing, Turner said, as accidents are up and so are claim amounts.

That also has prompted many insurance underwriters to get out of the aviation business, Turner said.

Key to understanding aviation insurance industry is what is called "loss ratio," the amount of money paid out in claims versus what is taken in by the insurer, Turner said.

Aviation insurance companies, who write both general aviation and commercial policies, have paid out as much as \$1.25 for every dollar taken in, but the company would still make money — 30 percent or more — in investments during a healthy economy, Turner said.

"Until a few years ago underwriters could operate at a loss, turn around and take the money and invest it in the stock market and make a small fortune out of it," Turner said.

Seybert, who has operated in Alaska for 46 years, said he believes the economy more than claims is what drives insurance costs.

"Rates are not determined by losses as much as on the economy in general," Seybert said.

Simply buying aviation insurance is not the problem, but the amount of coverage offered to many carriers may not be sufficient to cover lawsuits, air carrier and insurance representatives say.

Many air carriers in the state are operating at minimum liability coverage levels, but not by choice.

"Some operators are at a \$250,000 per person limit, and in this day and age, that is unrealistic. The carrier is exposed," Seybert said.

Most carriers in Alaska, according to Salazar of Acordia Northwest, carry insurance liability minimums of between \$500,000 and \$1 million per aircraft passenger seat.

"Most attorneys will almost always try to breach that," Salazar said.

The threat of lawsuits scares underwriters, Turner said, and most insurance companies know they'll lose a jury trial. Out-of-court settlements are typical, he said.

"From a legal standpoint, pilot negligence is easy to prove, because almost all accidents do have some sort of pilot error," Turner said.



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Anchorage Daily News

State air carriers feel insurance pinch

COSTS: Rates have risen at least 20 percent in the past year.

The Associated Press

(Published: February 27, 2002)

Anchorage -- Alaska air carriers are being squeezed by rising insurance premiums and a dwindling number of companies willing to write policies.

Now only a handful of companies offer policies in Alaska.

Air carriers and insurance officials blame high accident rates and repair costs, a slumping stock market and the cost of doing business after the Sept. 11 terrorist attacks.

The bottom line is that increased costs will likely be passed on to passengers.

Rates for Alaska air carriers have increased from 20 percent to more than triple in the past year, depending on the number of company claims, said Mike Salazar, a Ketchikan-based agent with Acordia Northwest, an insurance brokerage firm in Seattle.

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Alaska Aviation Accident Data Summary
Alaska Interagency Aviation Safety Initiative
NIOSH, Alaska Field Station
April 25, 2000

Prior to collation, these data were obtained from NTSB, FAA, Alaska Bureau of Vital Statistics, Alaska Office of the Medical Examiner, and the Alaska Department of Labor. All data for 1999 is preliminary.

- **Total aviation accidents in Alaska for the ten-year period of 1990-1999 = 1665, an average of one every other day**

- **Total aviation fatalities for 1990-1999 = 398, an average of one every 9 days**
 - ▶ There were 186 fatal crashes involving 194 aircraft during this time period with a total of 398 fatalities.
 - ▶ Of these 398 fatalities, 106 were occupational pilots, 86 were non-pilot occupational fatalities, and 206 were non-occupational fatalities.
 - ▶ The mean number of fatal crashes for this time period per year was 18.6, with an average of 2.1 fatalities per fatal crash, and an average of 39.8 fatalities per year.
 - ▶ 173 fatal crashes involved fixed wing aircraft, 14 involved helicopters (one crash involved both plane and helicopter, so adds to 187)
 - ▶ For 1990-1998, the most common first finding of the fatal crashes was loss of control in flight (28%), followed by in flight collision with terrain or water (28%), in flight encounter with weather (15%), and airframe/component/system failure/malfunction (5%). *(This section has not been updated for 1999 because data is not yet available.)*

- **Total serious injuries = 271(1/90 through 10/99, most recent available data)**

- **Total minor injuries = 448 (1/90 through 10/99, most recent available data)**

- **Average of 11 pilot fatalities per year out of a commercial pilot workforce of 2600 = an annual pilot fatality rate of 420 per 100,000 pilots (or 0.4%).**
 - ▶ This is equivalent to a 30-year career fatality risk of 12% for commercial pilots in Alaska.
 - ▶ Compared to the average U.S. worker (with a 30-year career risk of 0.12), Alaska commercial pilots have a 100-fold increased risk of fatality.

- **Total of direct and indirect costs, and lost future wages based on 11 pilot fatalities per year are over \$18 million**

- **Total of direct and indirect costs, and lost future wages based on average of 9 non-pilot occupational deaths per year = yearly cost of \$9,279,000:**
- **Total of direct and indirect costs, and lost future wages based on average of 21 non-occupational deaths per year = yearly cost of \$26,355,000:**
- **Total combined costs of pilots, non-pilot occupational, and non-occupational fatalities = a total yearly cost of over \$53 million or over \$1.3 million per death.**

Alaska Interagency Aviation Safety Initiative:

- The 3-year interagency initiative involves the Federal Aviation Administration (FAA), the National Transportation Safety Board (NTSB), the National Weather Service (NWS), and the National Institute for Occupational Safety and Health (NIOSH). All four agencies share an interest in promoting aviation safety and preventing aircraft crashes. The initiative involves five elements:
 - Gather and analyze data
 - Bring together working groups
 - Work to develop communication and education tools
 - Evaluate effectiveness of and changes in flight safety practices
 - Evaluate progress and suggest additional improvements
- **Goal:** To reduce the number of occupational aviation-related fatalities in Alaska by 50 percent for the years 2000-2009 (compared to 1990-1999)
- **Objective:** To improve aviation data management and collaborative analysis capacity and optimize efforts by federal agencies (FAA, NTSB, NWS, NIOSH, and industry) to reduce aviation accidents in Alaska through partnerships.

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REPRESENTATIVE ANDREW HALCRO District 12

FOR IMMEDIATE RELEASE: Jan. 31, 2001

Contact: Rep. Andrew Halcro (907) 465-4939
Rep. Lisa Murkowski (907) 465-3783

Airline Insurance to Get Closer Look Subcommittee Seeks Options to Lower Costs, Preserve Air Service

(JUNEAU) – With soaring insurance costs threatening to choke off in-state passenger air service, Rep. Andrew Halcro (R-Anchorage) will lead a House Labor and Commerce subcommittee to study ways to resolve the issue and maintain passenger service throughout Alaska.

“A multitude of factors, including some tragic accidents, have forced the companies insuring Alaska’s smaller air carriers to raise their rates substantially in the last few years,” said Halcro. “We need to see if there’s some way we can relieve this burden on airlines, while making sure the flying public is properly protected.”

As the insurance industry demands more liability coverage for airlines offering passenger service and the cost for that coverage soars, some carriers are abandoning passengers to focus on less lucrative but more affordable freight service, Halcro said. That means higher prices and fewer flights for rural Alaskans, who depend on smaller carriers for access to jobs, friends, families and emergency services.

“It’s been clear for some time that there is a lack of affordable insurance for Alaska’s smaller flying operations,” said Halcro. “Air service is a lifeline for many residents, and if we don’t address this insurance problem it could mean significant hardships for a lot of people -- not only airline customers, but their employees, as well.”

Halcro’s district includes the state’s largest commercial airfield, Ted Stevens Anchorage International Airport, and he has been working on the issue for some time. Labor and Commerce Committee Chair Rep. Lisa Murkowski (R-Anchorage) created the subcommittee last week, and named Reps. Pete Kott (R-Eagle River), Joe Hayes (D-Fairbanks) and Halcro as members.

“We’ll sit down with the Division of Insurance to see what role, if any, the state can play in resolving this situation,” said Halcro. “We’ll also talk to those in the private sector who are writing or have written insurance coverage for air carriers in Alaska, to identify the exact problems.” Following its initial investigation, the subcommittee is due to issue a preliminary report to the full committee Feb. 7.

“Do we need tort reform for aircraft liability?” he asked. “Should the state work to facilitate insurance pooling? We’re not sure, but we’ll turn over every stone to find solutions.”

###

Broadcasters note: Comments are available on the Majority Actuality Line 1-800-478-6540

E-Mail: Representative_Andrew_Halcro@legis.state.ak.us

Title: *Aviation* rates set to take off.

Subject(s): INSURANCE, Aviation -- Rates -- United States; AVIATION Insurance Association -- Congresses

Source: Business Insurance, 05/22/2000, Vol. 34 Issue 21, p2, 2p

Author(s): Lenckus, Dave

Abstract: Focuses on the anticipated rate hikes for *aviation insurance* in the United States according to discussions at the 2000 meeting of the *Aviation Insurance* Association in Washington, D.C. Factors attributed to threats to the market's survival; Challenges in expanding the *insurance* market.

AN: 3162770

ISSN: 0007-6864

Full Text Word Count: 1081

Database: MasterFILE Premier

Print: Click here to mark for print.

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AVIATION RATES SET TO TAKE OFF

WASHINGTON -- Commercial airlines and air frame manufacturers should prepare for dramatic *insurance* rate hikes later this year, says a top executive for a U.S. *aviation* underwriting group.

A leading underwriting executive in the London market agrees that the airline and *aviation* market cannot survive if claims continue to far outpace premium volume, as has been the case for most of the last decade.

And as underwriters try to push up rates, they will have to address several other market problems, including how to expand the market and replenish a depleted talent pool, said the executives during a session at the *Aviation Insurance* Assn.'s 24th Annual Educational Conference. The AIA held the conference in Washington earlier this month.

Opinions vary on whether the airline and *aviation* market is hardening, observed Daniel M. Izard, president and chief executive officer of Short Hills, N.J.-based Associated *Aviation* Underwriters, a consortium of U.S. underwriters.

Mr. Izard said that he hears from brokers that the market is too overcapitalized to turn, but he quickly pointed out that they have noticed a greater underwriting discipline among insurers.

"Most people recognize the time is at hand" for a market turn, Mr. Izard said.

Rates have been rising for the past six months, though the increases have not been sufficient, Mr. Izard said. Indeed, underwriters "didn't get the job done during the fourth quarter," he said.

But during spring renewals -- a far less busy renewal season for underwriters than the peak fall renewal season -- rate hikes continued, Mr. Izard said.

Rates increased 15% to 20% for those few airlines that renewed their hull and liability *insurance* this spring, he said. Manufacturers' *insurance* rates rose by single digits up to 9%, he said.

"Underwriters appear to have drawn a line in the sand," Mr. Izard said.

For the remainder of the year, he said he expects to see rate hikes "on every class of business" that AAU writes, largely due to the higher reinsurance rates that underwriters are facing.

By the time fall renewals come along, "30% to 40% increases are not going to be uncommon," he predicted.

"We have some very definite changes in rates coming," Mr. Izard warned.

Mr. Izard and London market underwriting executive Graham A. Nichols said a hardened market is critical to maintain the market's viability after nearly a decade of underwriting losses.

For example, premium volume for the London airline and *aviation insurance* market during the 1990s exceeded claims in only two calendar years, noted Mr. Nichols, citing figures produced by the London Processing Centre. The LPC is the paper and electronic-processing unit of the International Underwriting Assn. of London.

And in both years, 1995 and 1996, premiums exceeded claims only marginally. But during the first four years of the decade and in 1998, claims exceeded premiums by between 25% and 75%.

"I don't understand how a market can trade on that set of figures for that length of time," said Mr. Nichols, chief executive and chief underwriter for Westminster *Insurance Agencies Ltd.*, which underwrites on behalf of two French companies in the London market.

"It's a pretty dire scene," he said.

Pointing to the U.S. airline and *aviation* market's 120% combined ratio in 1999, Mr. Izard described the market as "extremely volatile" for investors.

There are probably some emotional reasons to invest in the market right now "but not too many good business reasons," he observed. "Nobody can make money on investment income when we have a level of returns like that."

Mr. Nichols noted that the market does not have a capacity problem. "Whether we can deal with pricing is another question," he said.

"We have a huge responsibility" to the marketplace, Mr. Izard told airline and *aviation* underwriters. "The only way it is going to work is if we make money using other people's money."

Mr. Nichols said that the market does not want a rating correction that is forced on policyholders and underwriters because of a capacity shortfall resulting from investors abandoning the market.

"We don't want to see that happen to our customers," he said.

The consolidation of airlines and air frame manufacturers over the years has compounded the premium volume problem for underwriters, Mr. Nichols noted. Combined risks do not generate as much premium volume for underwriters.

In addition, bigger risks have much greater ability to retain losses or manage them differently using other financial markets, Mr. Nichols said. Such risk financing decisions could pull even more premium out of the market, he said.

"The fact that's not happening now might say something about the price of our product," Mr. Nichols observed.

But in addition to raising rates, airline and *aviation* insurers should take several other steps to improve their underwriting results and their investors' returns, Mr. Izard said.

U.S. underwriters in particular need to expand their market reach globally, he said. European insurers have been better about looking for growth beyond their borders because of the small size of their local markets, he said.

"We have to get aggressive or get left behind," Mr. Izard maintained.

Just as important, he said, is that "we have to provide more than the traditional *insurance* products."

With the convergence of financial services, "people are looking for non-traditional services for financial products," he said.

Outdated technology is another customer service problem for the market, according to Mr. Izard.

"The Internet has changed the world -- has changed how we perceive the world," Mr. Izard observed.

"We have to back away from the traditional way" of dealing with customers, he said. Insurers have to enhance their product, "and the Internet is a big part of that."

But to take advantage of that opportunity, a much bigger investment in technology by insurers will be required, he said.

"Insurers need to catch up quickly" to the technology investments other industries already have made, he said.

At the same time, the airline and *aviation insurance* market faces some "severe problems" in attracting and keeping talent, Mr. Izard noted. "We need to find ways to lure people into the business."

For example, he said, the U.S. market lacks international expertise. "We're a very provincial country, but we need to think more globally."

Mr. Izard said that all of the issues the market faces have important implications. Unless those matters are addressed, airline and *aviation* insurers face becoming takeover targets or having a tough time raising capital, he said.


~~~~~  
By Dave Lenckus

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Source: *Business Insurance*, 05/22/2000, Vol. 34 Issue 21, p2, 2p.

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Record: 12

Title: Cost of Plane *Insurance* Skyrockets

Subject(s): BUSINESS; PUBLIC COMPANIES; WALL STREET

Author(s): N.A.

Source: Associated Press O. line, 09/28/2001

AN: CX2001271U6358

Database: Newspaper Source

## Cost of Plane *Insurance* Skyrockets

LONDON, Sep 28, 2001 (AP Online via COMTEX) -- Airlines are being hit with huge increases to insure their planes after the terrorist attacks in the United States, a major *aviation insurance* company said Friday.

Goshawk *Insurance* Holdings, which insures aircraft around the world, said rates had soared as much as 10-fold since the Sept. 11 terror attacks when four airliners were destroyed in the United States.

Goshawk finance director Chris Fagan said the cost of insuring planes against war, terrorism and political risks was increasing before the American attacks. *Insurance* companies have begun reviewing *aviation insurance* policies to reduce their risk after the American incidents, Fagan said.

The company denied the *insurance* industry was trying to profit from the recent attacks.

"Rates had started to go up anyway. We are reacting to the market," Fagan said.

Airlines around the world have cut services and dismissed staff as their business has plunged in the wake of the crisis. They are also struggling with increased security costs.

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APO Priority=r  
APO Category=1103

KEYWORD: LONDON  
SUBJECT CODE: 1103

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Source: Associated Press Online.  
Item Number: CX2001271U6358

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APR 30 1999

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APR 29 1999

UNITED STATES DISTRICT COURT  
DISTRICT OF ALASKA

By REC Deputy

UNITED STATES DISTRICT COURT  
DISTRICT OF ALASKA

AIG AVIATION SERVICES, INC., )  
 )  
 Plaintiff, )  
 )  
 vs. )  
 )  
 LORENE YOUNG, as Personal )  
 Representative of the Estate of Eugene )  
 Young; MARGARET AENGASUK, as )  
 Personal Representative of the Estate of )  
 Emma Kippi; JACOB ADAMS, as )  
 Personal Representative of the Estate of )  
 Frances Hopson; and HAGEMAN )  
 AVIATION SERVICES, INC., )  
 )  
 Defendants. )

Case No. A98-137 CV (JWS)

ORDER FROM CHAMBERS

[Re: Motion for Summary Judgment -  
Docket 83;  
Cross-Motion for Summary  
Judgment - Docket 89;  
Motion to Supplemental  
Briefing - Docket 97]

I. MOTIONS PRESENTED

At docket 83, plaintiff AIG Aviation, Inc. ("AIG") moves for summary judgment. The motion is opposed at docket 89 by defendants Lorene Young, *et al.* (collectively referred to as "Young" or the "Estates"), who cross-move for summary judgment. At docket 97, AIG seeks leave to file supplemental briefing. Oral argument was held on April 28, 1999.

EXHIBIT 17  
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## II. BACKGROUND

On April 10, 1997, a Hageland Aviation Services, Inc. ("Hageland") flight bound for Barrow from Wainwright crashed. Eugene Young, Emma Kippi, and Frances Hopson were killed in the crash. Their respective estates and survivors are defendants in this case, as is Hageland. AIG insured Hageland. As will be described in greater detail further below, the policy sets a "per person" or "per seat" \$500,000 liability limit and a per occurrence (accident) \$10,000,000 liability limit.

On April 29, 1998, AIG filed this declaratory judgment action against Hageland and Young seeking a declaration that the "per seat" or "per person" \$500,000 policy limit applied to all claims arising out of each passenger-decedent's death. Neither AIG's complaint nor AIG's instant motion specifies what claims being made by defendants are concerned. AIG's complaint is broadly phrased and requests "declaratory relief adjudging that only Five Hundred Dollars [sic] (\$500,000) limit provided by the Policy . . . is available for the claims because of decedent's [sic] accident, including the claims, if any, of the decedent's [sic] survivors."<sup>2</sup> AIG's motion is also broad in scope and "seeks a ruling that only one Five Hundred Thousand Dollar policy limit is contractually available to its insured, Hageland . . ., to respond to all claims flowing from the death of each of the three passengers . . ."<sup>3</sup> AIG's memorandum further contends that "this [\$500,000] per seat limit applies to all claims resulting from the death of a passenger, regardless of who brings the claim or the nature of the cause of action."<sup>4</sup>

Young has a pending action in the Superior Court for the State of Alaska, Second Judicial District at Barrow, Case No. 2BA-98-73 Civil. The state case includes claims by the decedents' survivors and the Estates for negligent infliction of emotional distress, loss of consortium, loss of

<sup>1</sup>The parties have used the phrases "per person," "per passenger," and "per seat" interchangeably. *See, e.g.*, AIG Memorandum, at 7, 12.

<sup>2</sup>First Amended Complaint, filed May 19, 1998, docket 3 at 5. The use of a singular apostrophe appears to be simply a typographical error.

<sup>3</sup>AIG's Motion for Summary Judgment, filed March 9, 1998, docket 83 at 1.

<sup>4</sup>AIG's Memorandum, at 2.

financial services, loss of property, and punitive damages. Young concedes that statutory survivorship claims for pre-death pain and suffering and medical expenses are subject to the \$500,000 limit.<sup>5</sup> However, Young argues that the survivors' claims for emotional distress, loss of consortium, and loss of services are not subject to the \$500,000 "per person" limit. Young also contends that the policy does not limit claims for property damage, claims for punitive damages, or potential liability for costs and fees.

### III. STANDARD OF REVIEW

Rule 56 of the Federal Rules of Civil Procedure provides that summary judgment should be granted if there is no genuine dispute as to material facts and if the moving party is entitled to judgment as a matter of law. The moving party has the burden of showing that there is no genuine dispute as to material fact.<sup>6</sup> The moving party need not present evidence; it need only point out the lack of any genuine dispute as to material fact.<sup>7</sup> Once the moving party has met this burden, the nonmoving party must set forth evidence of specific facts showing the existence of a genuine issue for trial.<sup>8</sup> All evidence presented by the nonmovant must be believed for purposes of summary judgment and all justifiable inferences must be drawn in favor of the nonmovant.<sup>9</sup> However, the nonmoving party may not rest upon mere allegations or denials, but must show that there is sufficient evidence supporting the claimed factual dispute to require a fact-finder to resolve the parties' differing versions of the truth at trial.<sup>10</sup>

<sup>5</sup>Young's Opposition, docket 88, at 7 n.4.

<sup>6</sup>*Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986).

<sup>7</sup>*Id.* at 323-325.

<sup>8</sup>*Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248-9 (1986).

<sup>9</sup>*Id.* at 255.

<sup>10</sup>*Id.* at 248-9.

#### IV. DISCUSSION

An insurer's obligations are determined by reference to the policy's terms and the parties' reasonable expectations.<sup>11</sup> To determine the parties' reasonable expectations, the court analyzes (1) language from the disputed policy provision; (2) language from other provisions in the policy; (3) relevant extrinsic evidence; and (4) case law interpreting similar provisions.<sup>12</sup> Under Alaska contract law, the court may examine relevant extrinsic evidence even if the contract is unambiguous.<sup>13</sup> Relevant extrinsic evidence includes any evidence other than the contract's language which bears on the parties' intention,<sup>14</sup> and may include the parties' subsequent conduct.<sup>15</sup> If a contract is unambiguous, its meaning presents a question of law for the court to resolve.<sup>16</sup> However, if the parties present extrinsic evidence to clarify an ambiguous contract, the contract's meaning should be determined by the trier of fact.<sup>17</sup> A contract is ambiguous when it supports two different, but reasonable, interpretations.<sup>18</sup>

##### A. Language of The Disputed Provision

Hageland purchased Coverage D. The declarations page establishes a \$500,000 limit for each person and a \$10,000,000 limit for each occurrence (accident).<sup>19</sup> The liability coverage that

<sup>11</sup>*State of Alaska v. Underwriters of Lloyds*, 755 P.2d 396, 400 (Alaska 1988).

<sup>12</sup>*Maynard v. State Farm Mut. Life Ins. Co.*, 902 P.2d 1328, 1330 (Alaska 1995).

<sup>13</sup>*Fairbanks North Star Borough v. Tundra Tours, Inc.*, 719 P.2d 1020, 1024 n.6 (Alaska 1986).

<sup>14</sup>*Wright v. Vickaryous*, 598 P.2d 490, 497 (Alaska 1979).

<sup>15</sup>*Fairbanks North Star Borough v. Tundra Tours, Inc.*, 719 P.2d 1020, 1024 (Alaska 1986).

<sup>16</sup>*Johnson v. Schaub*, 867 P.2d 812, 818 n.12 (Alaska 1994).

<sup>17</sup>*Little Saitna Const. Co. v. Soil Processing, Inc.*, 944 P.2d 20, 23 (Alaska 1997).

<sup>18</sup>*McMillan v. Anchorage Community Hosp.*, 646 P.2d 857, 862-63 (Alaska 1982).

<sup>19</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. A at 1 (emphasis in original).

Hageland purchased provides:

**Coverage D - Single Limit Bodily Injury and Property Damage Liability**

To pay on behalf of the Insured all sums which the Insured shall become legally obligated to pay as damages because of bodily injury sustained by any person (excluding any passenger unless the words "including passengers" appear in Item 3 of the Declarations) and property damage caused by an occurrence and arising out of the ownership, maintenance or use of the aircraft; or, only with respect to Coverages A, B, and D, caused by an occurrence and arising out of the maintenance or use of the premises in or upon which the aircraft is stored.<sup>20</sup>

Hageland's policy has the words "including passengers" in Item 3 of the Declarations.<sup>21</sup> AIG is therefore obligated to pay "all sums" which Hageland becomes "legally obligated to pay as damages because of bodily injury sustained by any person . . . and property damage caused by an occurrence . . . ." The policy limits liability for damages as follows:

**Coverage D.** The total liability of the Company for all damages, including damages for care and loss of services, because of bodily injury or property damage sustained by one or more persons or organizations as the result of any one occurrence shall not exceed the limit of liability stated in the Declarations as applicable to "each occurrence."

And further provided that if the Declarations are completed to show "passenger Liability limited internally to", the total liability of the Company for all damages, including damages for care and loss of service because of bodily injury to passengers shall not exceed:

(a) as respect to any one passenger, the amount stated in the Declarations as applicable to "each person".

(b) as respect two or more passengers, subject to the above provisions respecting any one passenger, the amount stated in the Declarations as applicable to "each person" multiplied by the number of passenger seats as

<sup>20</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 1 (emphasis in original).

<sup>21</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. A at 1.

stated in Item 4 for the aircraft involved, but in no event shall the Company's Liability for all bodily injury (including passenger bodily injury) and property damage exceed the limits stated in the Declarations as applicable to "each occurrence".<sup>23</sup>

The policy defines "bodily injury" as "bodily injury, sickness, disease or mental anguish sustained by any person which occurs during the policy period, including death at any time resulting therefrom."<sup>24</sup>

AIG contends that these provisions establish that all damages because of bodily injury to passengers shall not exceed \$500,000 per passenger and that Young's claims all arise because of bodily injury to a passenger.<sup>24</sup> Consequently, AIG argues that all of Young's claims are subject to the \$500,000 liability limit. Young responds by arguing that because the policy only refers to "damages for care and loss of service," the "per person" limit cannot apply to other claims such as loss of consortium, loss of personal property, loss of financial support, negligent infliction of emotional distress, and punitive damages. Young also contends that policy limits cannot apply to liability for costs and attorneys' fees. AIG does not contest this point, for the policy states that the liability limits do not apply to costs taxed against the insured.<sup>25</sup>

The policy provides coverage for "all sums which the Insured shall become legally obligated to pay because of bodily injury sustained by any person . . . and property damage."<sup>26</sup> The liability limit provides that the "total liability . . . for all damages . . . because of property damage sustained by one or more persons. . . shall not exceed the limit of liability . . . as

<sup>23</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 4 (emphasis in original).

<sup>24</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 5 (emphasis in original).

<sup>25</sup>Docket 83 at 9.

<sup>26</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 1 (Section IV. (a)).

<sup>27</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 1 (emphasis added).

applicable to 'each occurrence'.<sup>27</sup> Consequently, the "per person" limit does not apply to any potential claims for property damage. The "per person" limit would not apply to claims for punitive damages if these were based on bodily injury to a non-passenger. This is because the liability limit AIG is relying upon is based upon "damages . . . because of bodily injury to passengers."<sup>28</sup> If the punitive damages were based on a claim for bodily injury to a passenger, the liability limit would apply.

The remaining disputed issues are whether the "per person" limit applies to claims for loss of consortium, loss of services, and negligent infliction of emotional distress. The remainder of this order will address those issues.

#### B. Language of Other Provisions

AIG argues that the policy as a whole must support its position because otherwise a non-passenger with a derivative or independent claim could recover up to the \$10,000,000 per occurrence limit while a passenger, "no matter the gravity of the injury, could recover no more than \$500,000."<sup>29</sup> The argument that such a result is patently unreasonable is based on a false premise that passengers are necessarily more at risk than non-passengers. In an airplane crash, the lives of persons on the ground or in other aircraft may also be at risk. Moreover, AIG's argument ignores express provisions in the policy which distinguish between passengers and non-passengers. The liability limit provision states that "if the Declarations are completed to show 'passenger Liability limited internally to', the total liability . . . for all damages . . . because of bodily injury to passengers shall not exceed (a) as respect to any one passenger, the amount stated in the Declarations as applicable to 'each person' ".<sup>30</sup> Other provisions in the policy neither support nor detract from either party's respective arguments.

#### C. Relevant Extrinsic Evidence

<sup>27</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 4 (emphasis added).

<sup>28</sup>Docket 3, First Amended Complaint, filed May 3, 1998, Exh. B at 4.

<sup>29</sup>AIG's Memorandum, at 10.

<sup>30</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 4 (emphasis in original).

Co-defendant Hageland has filed papers in court expressing its understanding of the relevant policy language. Hageland's understanding was that "the insurance coverage it purchased was limited to \$500,000 per passenger (including derivative claims)."<sup>31</sup> Hageland's insurance broker has filed an affidavit attesting to the same understanding.<sup>32</sup> AIG's underwriter who was responsible for underwriting Hageland's policy has also filed an affidavit attesting that it was his understanding that liability coverage "was limited to \$500,000 for all claims because of, related to, or flowing from the injury to or death of a passenger, regardless of who brings the claim or the nature of the particular claim."<sup>33</sup>

Young argues that Hageland, in fact, believed it was purchasing coverage which would not be limited to \$500,000 per passenger. According to Young, the \$500,000 limit was not applied to damages suffered by non-passenger dependents in a prior settlement. This settlement was not executed until January 8, 1998, after the April 10, 1997, accident in this case occurred. But settlement negotiations for the other case preceded the April 10, 1997, accident.<sup>34</sup> However, the settlement correspondence and related settlement do not create a genuine issue of material fact. To begin with, evidence of settlement offers and corresponding settlement agreements are not admissible "to prove liability for or invalidity of the claim or its amount."<sup>35</sup> But even assuming admissibility, the settlement correspondence was authored by counsel for the plaintiffs in the other case. The terms of a settlement eventually reached based upon negotiations in another lawsuit simply do not shed light on Hageland's reasonable expectations at the time it purchased the insurance. Parties discuss settlement and settle cases for any number of reasons.

Young also points to a March 25, 1997, letter from AIG to Hageland confirming that coverage would be bound effective April 1, 1997. In that letter to Hageland, AIG described the

<sup>31</sup>Docket 61, Opposition to Motion to Compel, filed November 25, 1998, at 3.

<sup>32</sup>Docket 83, Exh. A, Affidavit of Michael E. Kardatzke, ¶¶ 5-9 at 2-3.

<sup>33</sup>Docket 83, Exh. B, Affidavit of Chris Spencer, ¶ 8 at 2.

<sup>34</sup>Docket 88, The Estates' Opposition, Exh. C.

<sup>35</sup>Fed. R. Evid. 408.

that derivative claims are customarily "regarded as injuries to one person, so that the lower policy limits applicable to injuries sustained by any one person . . . govern."<sup>40</sup> The controlling question, however, is whether the claims for loss of consortium, loss of services, and negligent infliction of emotional distress are derivative or independent.

Only one case in this district has been found addressing the issue. In *Government Employees Insurance Co. v. Encelowski*,<sup>41</sup> Government Employees Insurance Company ("GEICO") issued an automobile insurance policy with "per person" liability limits of \$100,000 and "per occurrence" limits of \$300,000. Encelowski's son was killed in an accident. His father filed suit seeking damages as both a personal representative and in his personal capacity. These claims settled. GEICO then sought a declaratory judgment that there was no coverage under the policy for the mother's claims for negligent infliction of emotional distress and loss of consortium. GEICO's policy provided that liability limits "as applicable to 'each person' is the limit of our liability for all damages, including damages for care and loss of services, because of bodily injury sustained by one person as the result of one occurrence."

In an opinion by Judge Holland, the court held "per person" limits did not apply to a claim for negligent infliction for emotional distress. GEICO argued that Encelowski's negligent infliction of emotional distress claim was derivative of her son's bodily injury because she did not actually see the accident. Judge Holland rejected this construction. Analyzing existing Alaska law, the court noted:

In a negligent infliction of emotional distress case, the duty allegedly breached is owed to the witness/relative. It does not matter whether the relative saw the accident at the moment it happened. Under Alaska law, a duty is owed even when the relative does not witness the accident as long as the [relevant legal] test is met. A breach of this separate duty which leads to a separate bodily injury is actionable. There is no suggestion in Alaska law that a claim for negligent infliction of emotional distress is

693-94 (1990); *United Serv. Auto. Ass'n v. Warner*, 64 Cal. App. 3d 957, 961, 135 Cal. Rptr. 34, 36 (1976); *Gonzales v. Allstate Ins. Co.*, 122 N.M. 137, 921 P.2d 944, 946 (1996).

<sup>40</sup>Docket 83 at 13 (Appleman, *supra*, § 4893 at 60.).

<sup>41</sup>A94-211 Civil, 1995 WL 25427 (D. Alaska 1995). Pursuant to Local Rule 7.1(c), "unpublished decisions on the same issue by judges of this district . . . may be cited . . ."

liability limitations as "\$500,000 for each declared passenger seat and each person outside the aircraft."<sup>36</sup> Young argues that this proves Hageland understood the liability limit was not limited to \$500,00 for each passenger. However, this sentence is ambiguous. It could be interpreted as declaring a \$500,000 limit for each passenger and a \$500,000 limit for each person outside the aircraft or it could be interpreted as declaring an inclusive \$500,000 limit; that is a \$500,000 limit for all claims relating to any one passenger. Accordingly, the March 25, 1997, letter is of little help.

However, notwithstanding the preceding, the relevant extrinsic evidence relied upon by AIG—that is, the affidavits submitted by Hageland's insurance broker and AIG's underwriter—are not entitled to controlling weight under the circumstances of this case for three reasons. First, Young's lawsuit against Hageland in State Superior Court is still pending. Liability has not been determined. Subjective declarations of intent in the midst of ongoing litigation are rarely probative.<sup>37</sup> Second, a person's mistaken understanding of legal principles or relevant law does not and cannot alter the law's scope and effect. For example, assuming AIG believed negligent infliction of emotional distress was a derivative claim under Alaska law and communicated this belief to Hageland, the parties' understanding would not and could not change the actual scope and effect of Alaska law. Third, the reasonable expectations of the insured with which the court must concern itself are objectively reasonable expectations, not subjective expectations.<sup>38</sup>

#### D. Case Law Interpreting Similar Provisions

No controlling Alaska case law has been found. Cases from other jurisdictions offer conflicting guidance. AIG observes that courts generally hold "per person" liability limits apply to all claims arising out of one person's bodily injury.<sup>39</sup> Citing one leading treatise, AIG contends

<sup>36</sup>Docket 88, The Estates' Opposition, Exh. D at 1.

<sup>37</sup>*Peterson v. Wirum*, 625 P.2d 866, 870 (Alaska 1981); *Day v. A & G Const. Co., Inc.*, 528 P.2d 440, 444-45 (Alaska 1974).

<sup>38</sup>See, e.g., *Peterson v. Wirum*, 625 P.2d 866, 870 (Alaska 1981); *Day v. A & G Const. Co., Inc.*, 528 P.2d 440, 444 (Alaska 1974).

<sup>39</sup>See, e.g., *Safeco Ins. Co. of America v. Simmonds*, 642 F. Supp. 305, 308 (N.D. Cal. 1986); *United Serv. Auto. Ass'n v. Lilly*, 217 Cal. App. 3d 1396, 1401-02, 266 Cal. Rptr. 691,

derivative of the breach of a duty to another person such as Mrs. Encelewski's son.<sup>42</sup>

Judge Holland's analysis is persuasive and applies with equal force to the circumstances of this case. Judge Holland's analysis also accords with existing case law in other jurisdictions.<sup>43</sup> At oral argument, AIG conceded that the policy provided coverage for non-passengers who might be injured in an accident. The policy expressly covers "damages because of bodily injury sustained by any person . . . ." The "per person" liability limit only applies to "damages . . . because of bodily injury to passengers . . . ." Given the state of Alaska law as correctly summarized by Judge Holland, any claims for negligent infliction of emotional distress that Young may have in the pending state court action are not subject to the policy's "per person" limits.

The remaining question is whether claims for loss of consortium and services are subject to the "per person" limit. In *Geico*, Judge Holland did not address whether "per person" limits applied to the loss of consortium claim because the court determined such claims did not constitute a "bodily injury," and, thus, were not covered under the policy. Here, however, AIG concedes that loss of consortium is covered. But coverage does not mean that a claim for loss of consortium is not subject to the "per person" limit. Most courts analyzing policy language essentially identical to the language in this case have held that claims for loss of consortium are subject to "per person" limits where, as here, the liability limits define all damages as including damages for loss of care and services.<sup>44</sup> One leading treatise states the majority rule as follows:

<sup>42</sup>*Encelewski*, 1995 WL 25427 at \*4.

<sup>43</sup>*Treichel v. State Farm Mut. Auto. Ins. Co.*, 280 Mont. 443, 448-49, 930 P.2d 661, 664-65 (1997); *Auto Club Ins. Ass'n v. Hardiman*, 228 Mich. App. 470, 476-77, 579 N.W.2d 115, 118 (1997) (citing authority); *Bernard v. Cordle*, 116 Ohio App. 3d 116, 121-23, 687 N.E.2d 3, 6-7 (1996); *Employers Cas. Ins. Co. v. Foust*, 29 Cal. App. 3d 382, 387-88, 105 Cal. Rptr. 505, 508-09 (1972).

<sup>44</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 1.

<sup>45</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 4.

<sup>46</sup>*Safeco Ins. Co. of America v. Simmons*, 642 F. Supp. 305, 308-09 (N.D. Cal. 1986); *Montgomery v. Farmers Ins. Group*, 585 F. Supp. 618, 619 (S. D. Ind. 1984); *United Serv. Auto.*

Where a minor child sustains injuries in an automobile accident and dies, the child's estate and the parent entitled to sue under the wrongful death of a minor statute are not each entitled to collect the maximum limit of liability as two separate entities, the policy intending only one maximum payment for bodily injury to the person injured. Stated otherwise, where a minor is injured by an insured, the minor's parent's claim for recovery of loss of the minor's service and the minor's medical expenses under the terms of an automobile liability policy do not make the parent a separate "person" for purposes of recovering more than the policy limits of liability for "bodily injury" to "each person."<sup>47</sup>

The authority relied upon by Young, *Abellon v. Hartford Ins. Co.*,<sup>48</sup> is distinguishable because the policy language in that case did not specifically include damages for care and loss of services.<sup>49</sup> The *Abellon* court recognized that if damages for loss of care and services were included in a provision limiting liability, loss of consortium claims would be subject to "per person" limits.<sup>50</sup>

Young attempts to avoid this conclusion by arguing that a claim for loss of care and services is not the same as a claim for loss of consortium. Young notes that "loss of care and services" is not defined in the policy, and that the absence of a controlling definition renders the phrase ambiguous.<sup>51</sup> Young argues that if AIG had wanted to include loss of consortium claims, it should have expressly addressed these claims in the policy. Its failure to do so, Young suggests, should be construed against AIG. According to Young, "absent a specific reference to loss of consortium damages, the limit is inapplicable to such claims."<sup>52</sup> Young bases her

*Ass'n v. Warner*, 64 Cal. App. 3d 957, 961-62, 135 Cal. Rptr. 34, 36-37 (1976). See also *Appleman*, *supra*, § 4893 at 60 n.22 & 1998 Supp. at 12-13 n.22 (citing authority holding that loss of consortium claims subject to "per person" limits).

<sup>47</sup>12 Lee R. Russ and Thomas F. Segalla, *Couch on Insurance 3d*, § 170:8 at 170-17 (1998) ("Couch").

<sup>48</sup>167 Cal. App. 3d 21, 212 Cal. Rptr. 852 (1985).

<sup>49</sup>*Abellon*, 167 Cal. App. 3d at 30, 212 Cal. Rptr. at 858.

<sup>50</sup>*Id.*

<sup>51</sup>Docket 88 at 4.

<sup>52</sup>Docket 88 at 16.

argument that claims for loss of care and services are different from claims for loss of consortium on language from *Schreiner v. Fruit*,<sup>53</sup> in which the Alaska Supreme Court stated:

A claim for relief for loss of consortium provides a means of recovery for an injury not otherwise compensable. It should be recognized as "compensating the injured party's spouse for interference with the continuance of a healthy and happy marital life." The interest to be protected is personal to the wife, for she suffers a loss of her own when the care, comfort, companionship, and solace of her spouse is denied her. The basis for recovery is no longer the loss of services, but rather the injury to the conjugal relation.<sup>54</sup>

At first impression, this argument seems unduly strained, particularly in light of objectively reasonable expectations. The average lay person may or may not apprehend technical phrases such as "loss of consortium." However, most would readily grasp the meaning of "loss of care and services" and ascribe to that phrase the meaning ordinarily attached to "loss of consortium."

But notwithstanding the preceding, there is some support for Young's argument. Alaska law distinguishes between wrongful death damages for loss of assistance or services and wrongful death damages for loss of consortium.<sup>55</sup> The Alaska Pattern Civil Jury Instructions provide different instructions for loss of assistance or services and loss of consortium.<sup>56</sup> Loss of services is not an element or even referred to in the jury instruction for loss of consortium.<sup>57</sup> Based on

<sup>53</sup>519 P.2d 462 (Alaska 1974).

<sup>54</sup>*Fruit*, 519 P.2d at 465-66 (emphasis added).

<sup>55</sup>AS 09.55.580(c) (providing damages in wrongful death action for loss of assistance or services); AS 09.55.580(d) (providing damages in wrongful death action for loss of consortium).

<sup>56</sup>Alaska Pattern Civil Jury Instruction § 4.07 (setting forth elements for damages for loss of assistance or services); Alaska Pattern Civil Jury Instruction § 4.08 (setting forth elements for damages for loss of consortium).

<sup>57</sup>Alaska Pattern Civil Jury Instruction § 4.08, addressing damages for loss of consortium, provides:

The item of claimed loss is the fair value of society, comfort, care, protection, affection and companionship that the deceased reasonably could have expected to provide to (the) (each) beneficiary if the deceased had continued to live.

these distinctions. one could construct an argument that loss of services is wholly distinguishable from loss of consortium.

However, where this issue has arisen, courts—and even litigants—seem to accept the fact that a claim for loss of consortium is the same as a claim for loss of services.<sup>58</sup> In *United Services Automobile Association v. Warner*,<sup>59</sup> the California Court of Appeals observed:

Clearly the words "all damages" includes the loss of consortium which loss necessarily arises out of the bodily injury sustained by one person, the injured spouse. It is true that the policy specifically mentions only damages for care and loss of services. However, in this context it is apparent that the phrase is inclusive rather than exclusive. Loss of consortium is not only similar in kind to damage for loss of services in that it arises out of the bodily injury sustained by the injured spouse, but actually includes loss of services as one of its elements. It would seem obvious that if loss of consortium includes loss of services, then they must have the same source, i.e., the same injured person.<sup>60</sup>

Keeping in mind it is this court's responsibility to ascertain the parties' reasonable expectations, and not hypertechnical interpretations constructed during the midst of litigation, the Warner court's conclusion seems sound.

Finally, Young argues that because AIG's policy defines "bodily injury" to include mental anguish, loss of consortium claims constitute an independent claim not subject to the policy's "per person" limit. However, this argument overlooks the policy's unambiguous liability limit which applies to "all damages, including damages for care and loss of service because of bodily injury to

In fixing this amount for each individual beneficiary, you may consider, along with other evidence, the closeness and harmony of the relationship between the deceased and (the) (each) beneficiary and the willingness of the deceased to participate in activities with (the) (each) beneficiary.

<sup>58</sup>See, e.g., *Allstate Ins. Co. v. Handegard*, 70 Or. App. 262, 265, 688 P.2d 1387, 1388 (1984) (insurance company concedes that a claim for loss of consortium is a claim for loss of services); *United Serv. Auto. Ass'n v. Warner*, 64 Cal. App. 3d 957, 962, 135 Cal. Rptr. 34, 36-37 (1976).

<sup>59</sup>64 Cal. App. 3d 957, 135 Cal. Rptr. 34 (1976).

<sup>60</sup>*Warner*, 64 Cal. App. 3d at 962, 135 Cal. Rptr. at 36-37.

passengers . . . .<sup>61</sup> A loss of consortium claim arises "because of bodily injury to passengers." In *Tommy's Elbow Room, Inc. v. Kavorkian*.<sup>62</sup> the Alaska Supreme Court discussed the distinctions between claims for negligent and intentional infliction of emotional distress and claims for grief arising under the wrongful death statute. The court noted that "the mental distress for which recovery can be sought under the wrongful death statute is limited to mental anguish, sorrow, or grief resulting from the death itself."<sup>63</sup> Young's reliance on the term "mental anguish" within the definition of bodily injury is misplaced. The claim for Young's mental anguish not arising because of the death itself is her claim for the negligent infliction of emotional distress.

Although as Judge Holland observed in *Geico*, a "painful study" of the policy might support Young's arguments, this court's obligation is to give effect to the parties' reasonable expectations.<sup>64</sup> Doing so, this court concludes that the "per person" limit applies to Young's claims for loss of consortium and loss of services.

E. Whether Additional Discovery is Necessary under Rule 56(f)

Young argues that, failing all else, the defendants should be afforded the opportunity to conduct additional discovery before the court enters summary judgment. Young advises that there are pending discovery motions.<sup>65</sup> Young also implies, without expressly stating, that the defendants need time to depose Spencer, whom Young observes was only first identified on February 2, 1999.<sup>66</sup> However, Young has not submitted an affidavit explaining what additional discovery is necessary to oppose AIG's motion. Under Rule 56(f), the burden is on the party requesting a continuance to set forth the particular facts expected to be discovered.<sup>67</sup> The party

<sup>61</sup>Docket 3, First Amended Complaint, filed May 19, 1998, Exh. B at 4.

<sup>62</sup>727 P.2d 1038 (Alaska 1986).

<sup>63</sup>*Id.* at 1048 n.13.

<sup>64</sup>*Encelowski, supra*, 1995 WL 25427 at \*4.

<sup>65</sup>Docket 88 at 7.

<sup>66</sup>Docket 88 at 6.

<sup>67</sup>*Brae Transp., Inc. v. Coopers & Lybrand*, 790 F.2d 1439, 1443 (9<sup>th</sup> Cir. 1986).

must submit affidavits setting forth particular facts which additional discovery will develop, establish why the additional discovery would preclude summary judgment, and explain why the party cannot immediately provide the necessary information to preclude summary judgment.<sup>68</sup> The failure to comply with Rule 56(f)'s requirements is sufficient grounds to deny a request for a continuance.<sup>69</sup> Furthermore, Young previously moved for a Rule 56(f) continuance.<sup>70</sup> The parties eventually agreed to extend discovery until January 30, 1999. This court subsequently extended this deadline further until February 20, 1999.<sup>71</sup> Moreover, as AIG observes, Young has cross-moved for summary judgment on the premise that there are no genuine issues of material fact. Under these circumstances, further continuance to explore undefined discovery subjects is not warranted.

F. Certification to the Alaska Supreme Court

Young also argues that the present issue should be certified to the Alaska Supreme Court. Based on recent experience, certification is unlikely to accomplish anything but delay. One example illustrates the court's concerns. On August 4, 1998, this court certified a significant issue concerning whether Alaska law would recognize a claim for "loss of chance" in a medical malpractice action.<sup>72</sup> The "loss of chance" doctrine represents a fairly recent development in the law which has provoked sharply divided decisions from lower courts. Alaska state superior courts are divided on whether Alaska law recognizes a claim for "loss of chance," and courts from other jurisdictions are also split. Opinions from other states' supreme courts have often been closely decided and issued over vigorous dissent. Notwithstanding the circumstances, which

<sup>68</sup>*Maljack Prod., Inc. v. Goodtimes Home Video Corp.*, 81 F.3d 881, 888 (9<sup>th</sup> Cir. 1996); *United States v. One*, 917 F.2d 415, 418 (9<sup>th</sup> Cir. 1990); *Mackey v. Pioneer Nat'l Bank*, 867 F.2d 520, 523-24 (9<sup>th</sup> Cir. 1989); *Hancock v. Montgomery Ward Long Term Disability Trust*, 787 F.2d 1302, 1306 n.1 (9<sup>th</sup> Cir. 1986).

<sup>69</sup>*Brae*, 790 F.2d at 1443 (holding that "[f]ailure to comply with the requirements of Rule 56(f) is a proper ground for denying discovery and proceeding to summary judgment).

<sup>70</sup>Docket 28, September 17, 1998.

<sup>71</sup>Docket 74.

<sup>72</sup>*Crosby v. United States*, A95-359 CV, Certification, docket 89.

would ordinarily suggest that certification was both appropriate and necessary to resolve an important issue of first impression, the Alaska Supreme Court did not act on the certification question for three months. The Alaska Supreme Court finally declined certification on November 5, 1998, with no explanation.<sup>73</sup> This case presents what is, in effect, a simple contract dispute over language in an insurance contract. Given that the Alaska Supreme Court declined certification without comment after a three-month delay of a clearly important issue with far-ranging consequences, there is little reason for this court to conclude that a certification request in this case would achieve anything of value.

G. Whether Supplemental Briefing is Warranted

Finally, AIG seeks leave at docket 97 to file supplemental briefing to strike portions of Young's reply at docket 95. In Young's reply at docket 95, Young raised issues which do not appear to have been previously briefed. Local Rule 7.1 (b) prohibits parties from raising issues for the first time in a reply. The arguments Young raised in the reply at docket 95 primarily involve Young's contention that AIG's interpretation of the policy violates state and federal law because AIG's interpretation makes less than \$300,000 available. This argument lacks merit. AIG interprets the policy as providing \$500,000 for damages because of bodily injury to each passenger. Moreover, the state and federal statutes Young cites and relies upon for this new argument do not address what kind of claims should be included in the "per seat" or "per person" limit.<sup>74</sup>

## V. CONCLUSION

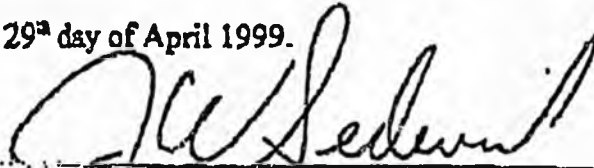
For the foregoing reasons, AIG's motion at docket 97 is **DENIED** as moot, AIG's motion for summary judgment at docket 83 is **GRANTED** in part and **DENIED** in part, and Young's cross-motion for summary judgment at docket 89 is **GRANTED** in part and **DENIED** in part.

<sup>73</sup>*Crosby v. United States*, A95-359 CV, Order, docket 91.

<sup>74</sup>*See* 14 C.F.R. § 205.5(b)(2) (requiring commercial air carriers to provide insurance "for bodily injury to or death of aircraft passengers, with minimum limits of \$300,000 for any one passenger); AS 02.40.010 (requiring commercial air carriers to provide insurance for "\$150,000 per seat for bodily injury, or death in a single occurrence . . .").

Claims for loss of consortium and loss of services are subject to the "per person" policy limits. Claims for negligent infliction of emotional distress are not subject to the "per person" policy limits. Claims for punitive damages are not subject to the "per person" policy limits to the extent such claims arise out of bodily injury to a non-passenger. Any fees and costs to which Young may be entitled are also not subject to the "per person" policy limits.

DATED at Anchorage, Alaska, this 29<sup>th</sup> day of April 1999.



JOHN W. SEDWICK  
UNITED STATES DISTRICT JUDGE

498-8137--CV (JWS)

- X. VESTER (GROW)
- X. JOER
- X. LOZESSER

Tony Knowles, Governor



**Division of Insurance**

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February 2, 2001

The Honorable Andrew Halcro  
House of Representatives  
State Capitol, Room 414  
Juneau, AK 99801-1182

Dear Representative Halcro:

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Re: Aviation Insurance

Legislators, the Division of Insurance (Division) and the news media have all heard from Alaskan air carriers about the difficulty of obtaining affordable liability insurance for their operations. The loss of commercial aviation operations would have a significant negative impact on Alaska, both for the air carriers as well as the rural Alaskans who depend on them for transportation.

The Division has identified options that may improve the availability and affordability of this insurance coverage. The issues of availability and affordability are related yet distinct. Availability refers to the ability of a consumer to obtain insurance coverage. Affordability refers to the price of the coverage.

From discussions the Division has had with consumers and insurance producers, coverage continues to become less affordable. These discussions indicate that renewal premiums may be increasing at amounts up to 50 percent and in a few instances even higher. Some of this increase is due to poor loss experience. Some of it is due to a hardening of the soft insurance market.

Another factor related to the availability and affordability issues is the per seat limit of coverage that air carriers need or want to purchase. Alaska Statute 02.40.010 requires a minimum limit of \$150,000 per seat for bodily injury. Air carriers desiring to purchase higher limits may find availability and affordability problems in obtaining the desired coverage.

**SAFETY**

Aviation insurers have pointed to the need for more stringent safety in the aviation industry. On June 30, 1999, The National Institute for Occupation Safety and Health issued a report that states the occupation of air taxi pilot in rural Alaska is

more hazardous than that of lumberjack or crab fisherman. However, unlike the air taxi pilot, neither the lumberjack nor crab fisherman routinely places the lives of trusting passengers at risk in the performance of his job.

The aviation insurance availability and affordability problems are directly related to safety. Insurance premiums are driven by the cost of issuing a policy and paying any covered claims. Reducing the frequency or severity of claims has the greatest impact on reducing policy premiums.

Safety programs are an essential factor in reducing claims and, therefore, premiums. Air carriers who implement a comprehensive safety plan and are consistent in carrying out the safety plan should expect to see credits on their insurance policies as a result of these efforts. Use of flight simulator training, which is available in Anchorage, could be part of a safety plan. The air carriers association would be a possible source for additional information on safety programs.

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If not adopted on a voluntary basis, safety plans could become a mandatory requirement for air carriers operating in Alaska. This would probably require legislation to implement and set up a statewide safety plan. Difficulties in implementing a mandatory plan include costs to monitor compliance with the plan, development of a safety plan that meets the variety of situations faced by air carriers in Alaska, and possible conflicts with FAA regulation. A mandatory plan could also be an additional burden for those air carriers which currently have an effective safety plan in place.

#### MARKETS CURRENTLY AVAILABLE IN ALASKA

Based on discussions with consumers and producers, the Division is aware of the following markets that are available in Alaska. Detailed information on these entities should be obtained from the producers or insurers themselves. However, they are listed here to show the various options that may be available now. The players in the market are always subject to change.

United States Aircraft Insurance Group (USAIG) is a group, or pool, of insurers that collectively provide aviation insurance on a worldwide basis. On its website at [www.usau.com](http://www.usau.com), USAIG states that its primary goal is "to provide a stable, reliable aviation insurance market by (1) insuring individuals and organizations whose safety standards and loss histories satisfy our underwriting requirements; and (2) charging premiums which are sufficient to support expected losses."

Associated Aviation Underwriters (AAU), the U.S. branch of British Aviation Insurance, is another pool of insurers writing limited business in Alaska, mainly corporate jets with commercial pilots, not owner flown.

London Aviation Underwriters and Houston Casualty Company write air taxi operations as well as other types of aviation risks.

AIG Aviation is non-renewing its book of business.

W Brown & Associates is not writing new business but is renewing its existing book of business.

ACE USA writes in Alaska on a limited basis.

AirSure Ltd. writes mainly large fleets.

Lloyds of London also write portions of some risks.

#### OPTIONS CURRENTLY AVAILABLE BUT NOT USED IN ALASKA

Pooling may be seen to be a solution to the availability and affordability issues. However, pooling does not necessarily improve the loss experience of the members of the pool. If members of a pooling arrangement have poor loss experience, the costs of insurance coverage may not become more affordable. The following four options are ways that air carriers could join together to purchase insurance coverage. They are listed in the order from easiest to most difficult to implement.

##### 1. Risk Purchasing Group

A risk purchasing group is authorized under the federal Liability Risk Retention Act, 15 USC 3901-3906. Members of a risk purchasing group may be able to obtain better rates and customized forms because of the buying power available to a group that is not available to an individual purchaser. The risk purchasing group can also provide loss control services (e.g. safety programs) for its members. As mentioned above, this is an important feature needed to negotiate better rates. Purchasing groups have been used elsewhere by small airlines to lower costs by avoiding minimum premium charges.

The purpose of a risk purchasing group is to purchase liability insurance on a group basis for its members. The group members must have similar business activities and their risk exposure must be similar or related to one another. A group consisting of air carriers would appear to meet this test.

A risk purchasing group may be domiciled in any state. If it is not domiciled in Alaska, then it must register with the state under AS 21.89.090. Purchasing groups are subject to regulation under Title 21.

Guaranty association coverage is available if the purchasing group obtains coverage from an admitted insurer. Guaranty association coverage provides protection to policyholders if the insurer becomes insolvent and cannot pay outstanding claims.

A purchasing group may only provide liability coverage to its members, therefore hull coverage must still be procured individually.

## 2. State Based Joint Underwriting Association or Joint Reinsurance

A joint underwriting association (JUA) and joint reinsurance are combinations of insurers joining together to provide the capacity to write a specific type of risk. A JUA and joint reinsurance are distinguished by the way in which the insurers share the risk among themselves. The national pools mentioned above are organizations of this type. The difference between the national pools and a state pool is that only insurers writing in Alaska would combine together and only Alaska air carriers would be able to obtain coverage from the state pool. The premium would be based upon the experience of the JUA or the reinsurance pool.

JUA's and joint reinsurance are subject to rate regulation under AS 21.39.110. Since aviation insurance is exempt from AS 21.39, a JUA or joint reinsurance writing only aviation insurance would be exempt from AS 21.39.110. However, other section of Title 21 would apply to these pools.

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The disadvantage to a state based JUA is that there are few risks over which the exposure can be shared. The law of large numbers is difficult to achieve in the Alaska market. Guaranty association coverage would not be available for non-admitted insurers participating in a JUA or joint reinsurance.

## 3. Reciprocal Insurer

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A reciprocal insurer is an unincorporated aggregation of subscribers operating individually and collectively through an attorney-in-fact to provide insurance among themselves. Ten or more persons may join together to form a reciprocal. The liability of each subscriber is individual, several and proportionate liability, not joint. Reciprocal insurers are authorized under AS 21.75.

A reciprocal insurer controls all aspects of the insurance coverage such as underwriting, rating, and claims handling. A reciprocal insurer is subject to regulation under Title 21. Guaranty association coverage is available to subscribers of a reciprocal.

The main disadvantage of a reciprocal is the start-up costs for establishing the reciprocal. The minimum capital and surplus requirements for an Alaska domestic reciprocal writing liability insurance are \$1,500,000. There is also a relatively small base from which potential members can be drawn.

Alaska Timber Insurance Exchange in Ketchikan is authorized as a reciprocal insurer under AS 21.75. They would be a good source of additional information on the operations of a reciprocal.

## 4. Risk Retention Group (RRG)

A risk retention group is a corporation or limited liability association formed under the federal Risk Retention Act, 15 USC 3901-3906. An RRG operates like an insurance company to provide liability insurance for the group. The primary

purpose and activity is to assume, or spread among the members, any or all of the liability exposure of the members. The group must consist of members whose business or activity exposure is similar or related to one another.

An RRG must be licensed or chartered and authorized as a liability insurance company in a state. If the RRG is licensed in another state, it must register with Alaska under AS 21.89.090. RRG's are subject to regulation under Title 21.

As with a reciprocal, the primary disadvantage of a risk retention group is the start-up costs. A domestic Alaskan RRG has minimum capital and surplus requirements of \$2,000,000. Other disadvantages are that an RRG may only provide liability coverage to its members, so hull coverage would need to be obtained individually. Also, guaranty association coverage is not available to an RRG.

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## ~~OPTIONS REQUIRING NEW STATUTORY PROVISIONS~~

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### 1. Assigned Risk Plans

An assigned risk plan is one method used to provide coverage in the residual market. (The residual market consists of persons or organizations who cannot get the insurance coverage they need from private insurance companies.) Alaska currently has two assigned risk plans, one for automobile insurance, the other for workers compensation insurance. ~~An assigned risk plan for aviation insurance~~ could be modeled after these plans as in AS 21.39.155. The auto assigned risk plan is also mentioned in AS 28.20.580.

Assigned risk plans are managed by an administrator representing insurers licensed in the state and writing the kind of insurance offered by the plan. Participation in the plan is mandatory with policies assigned to insurers based on their voluntary market share. The plan may use servicing carriers who handle claims and other policy related services. Some plans pool the losses among all participating insurers, other plans require the individual insurer to accept the profit or loss from its share of the assigned risk market.

Implementing an assigned risk plan could cause insurers to withdraw from the state since they may be required to bear additional assessments if the plan operates at a loss. If these assessments are larger than an insurer can bear, the cost can be passed on to their own policyholders, thereby increasing costs for the voluntary market.

### 2. Risk-Sharing Plans

Arkansas and New Hampshire both have statutes allowing the director to intervene in markets when a kind of insurance is not readily available. The director may direct insurers to prepare a plan to provide the necessary insurance coverage. If the plan submitted by the insurers is not acceptable, the director may develop his or her own plan.

A copy of the Arkansas statute may be found in the Arkansas Code sections 23-95-101 through 23-95-108. This statute may be accessed via the state website at [www.state.ar.us](http://www.state.ar.us).

The New Hampshire statute may be found under NHRSA 404-C. This statute may be accessed via the NH state website at <http://sudoc.nhsl.lib.nh.us/rsa>.

### 3. Market Assistance Plan

Maine has a statute that allows the director to establish a market assistance plan when a particular type of insurance is unavailable or unaffordable. The market assistance plan is a voluntary agreement between the division and the insurers that the insurers will write the insurance at an agreed upon rate for those persons that are unable to obtain the coverage.

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The Maine statute is found in section 2325-A. Internet access is available at [http://janus.state.me.us/legis/statutes/24\\_A/title24-Asec2325\\_A.html](http://janus.state.me.us/legis/statutes/24_A/title24-Asec2325_A.html).

This program was successfully used a couple of years ago when day care liability was difficult to obtain. Additional information on the operation of this program would be available from Maine.

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### 4. Joint Insurance Arrangement

A joint insurance arrangement (JIA) allows members of the JIA to pool contributions to either assume risks from losses to the participants on a group basis or purchase coverage for the participants on a group basis. JIA's are authorized under AS 21.76. JIA's are not subject to regulation by the Division, except for review of the cooperative agreement.

Formation of an aviation JIA would require a statute change since only municipalities, city and borough school districts and regional educational attendance areas may enter cooperative agreements. Guaranty association coverage is not available to members of a JIA.

## ALTERNATIVE MARKETS

There are at least two sources of information for hard-to-place coverage. The National Underwriter publishes a supplement called "Agent/Broker Buyers Guide to Insurance Coverages." Rough Notes Company, Inc. publishes "The Insurance Marketplace." Both of these guides list markets by type of risk and each of these guides includes an aviation or aircraft section. However, most of these markets may be through wholesalers not licensed in Alaska or with nonadmitted unlisted insurers.

February 2, 2001

tax credit would overcome the underwriting judgement of the riskiness of the market.

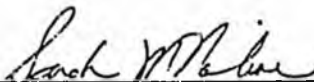
### 3. Subsidization

Many of the options described are likely to have more effect on availability of coverage rather than affordability. Even in a pooling arrangement, if claim costs are high, the insurance premiums will be high. If claim costs are high, some type of subsidization may be the only way to lower insurance premiums.

### CONCLUSION

For any of the options outlined above to improve availability and affordability of aviation liability insurance, the aviation community will need to address safety issues and find ways to reduce the frequency and severity of losses. We have tried to identify various options that may assist air carriers to obtain the coverage they need. If you need additional information, or if you would like to discuss particular options further, we would be happy to discuss these with you.

Sincerely,



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For Robert A. Lohr  
Director

## Sectional Analysis

### HB 271

**“An Act relating to recovery of punitive damages resulting from an aviation accident and providing for an effective date.”**

**\*Section 1.** Amends the statute AS 09.17.020(h) by adding a new number (1) to renumber and letter current statutes limiting punitive damage awards.

Adds a new number to AS 09.17.020(h) that being number (2). A new limitation on punitive damages resulting from an aviation accident is added to current statute.

The limits on punitive damages that may be awarded are set forth into statute in (2) A-C.

**\*Section 2.** Amends the codified law relating to applicability. \*Section (1) is only applicable if the cause or reason for invoking \*Section (1) occurred on or after the effective date.

**\*Section 3.** States that the effective date will be July 1, 2001.

## Aircraft

| Calendar Year           | Number of Companies | Direct Losses Incurred | Earned Premium |
|-------------------------|---------------------|------------------------|----------------|
| 1990                    | 47                  | \$13,304               | \$14,034       |
| 1991                    | 44                  | \$31,341               | \$14,929       |
| 1992                    | 42                  | \$5,976                | \$12,433       |
| 1993                    | 45                  | \$8,513                | \$14,465       |
| 1994                    | 45                  | \$9,797                | \$13,488       |
| 1995                    | 48                  | \$18,045               | \$19,790       |
| 1996                    | 47                  | \$19,868               | \$30,799       |
| 1997                    | 46                  | \$25,588               | \$26,195       |
| 1998                    | 39                  | \$31,455               | \$22,681       |
| 1999                    | 40                  | \$13,500               | \$20,263       |
| 2000                    | 40                  | \$31,455               | \$22,669       |
| 2001                    | xxx                 | xxx                    | xxx            |
| 2002                    | xxx                 | xxx                    | xxx            |
| Average Annual % Change | -1.20%              | 8.35%                  | 6.99%          |
| 1990 to 2000 % change   | -12.39%             | 141.67%                | 110.36%        |

\*Dollar amounts are in (\$000)

