

**Docket No. SA-520**

**Exhibit No. 2-A**

**NATIONAL TRANSPORTATION SAFETY BOARD**

**Washington, D. C.**

**Operations/Human Performance Group Chairman's Factual Report**

Captain David J. Ivey  
Mr. Malcolm Brenner, Ph. D.

(84 Pages)

**NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

September 6, 2000

**Group Chairman's Factual Report**

**OPERATIONS/HUMAN PERFORMANCE**

**DCA00MA023**

**A. ACCIDENT**

Operator: Alaska Airlines, Inc.  
Location: Pacific Ocean near Port Hueneme, California  
Date: January 31, 2000  
Time: 1621 Pacific Standard Time (PST)<sup>1</sup>  
Airplane: McDonnell-Douglas, MD-83, N963AS Serial Number 53077

**B. OPERATIONS GROUP**

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<sup>1</sup> All times are Pacific Standard Time based on a 24-hour clock, unless otherwise noted. Actual time of accident is approximate, determined by the Flight Data Recorder (FDR) and Air Traffic Control (ATC) transcript.

## **C. SUMMARY**

On January 31, 2000, at about 1621 PST, Alaska Airlines flight 261, a Boeing MD-83, N963AS, crashed approximately 2.69 miles north of Anacapa Island, California into the Pacific Ocean. The flight, from Puerto Vallarta, Mexico to Seattle, Washington with an intermediate stop in San Francisco, California, was operating under Title 14 Code of Federal Regulations (CFR) Part 121. All 83 passengers and 5 crewmembers were fatally injured and the aircraft was destroyed. Visual meteorological conditions prevailed at the time of the accident.

## **D. DETAILS OF THE INVESTIGATION**

The operations group convened at 0900 on February 1, 2000 at Port Hueneme Navy Base, Oxnard, California to begin the field investigation of the accident. Interviews with pilots flying in the area that witnessed the accident were conducted. Alaska Airlines personnel interviewed included a mechanic who talked to the accident flight crew by radio, and an operations agent and a dispatcher who were on duty at the time of the accident. The operations group also interviewed the flight crew who had flown the accident airplane, N963AS, for two flight segments before the accident flight.

On February 3, 2000, the operations group moved to Alaska Airlines company headquarters in Seattle, Washington. Interviews were conducted with company personnel to include the Chief Pilot, the Director of Training, the Manager of MD-80 Flight Operations Training, and the Manager of Advanced Qualification Program.

On February 4, 2000, the operations group visited an MD-80 flight simulator to familiarize the group with the primary and alternate trim systems for the stabilizer. Normal, abnormal, and emergency procedures were reviewed pertaining to the trim and stabilizer systems. Both aural and visual indications were observed during trim operations. All abnormal and emergency procedures were demonstrated for the primary and alternate trim systems in both airplane nose up and nose down directions with the autopilot engaged and disengaged. Both jammed stabilizer and runaway trim failures were demonstrated. The circuit breaker locations for both the primary and alternate trim systems were observed.

The Federal Aviation Administration (FAA) Seattle Certificate Management Section (CMS) was visited by the operations group and the MD80 Aircrew Program Manager (APM) and the principal operations inspector (POI) were interviewed.

The operations group concluded the initial field phase of the accident investigation at 2100 on February 6, 2000.

On April 6, 2000, the operations group conducted a joint telephone interview with individuals in the Alaska Airlines San Diego, California base. The personnel interviewed had heard or monitored the radio conversation between the accident flight crew and Seattle Dispatch and Maintenance Control.

On May 5, 2000, Dr. Malcolm Brenner, and Captain David Ivey from the NTSB operations group and Mrs. Victoria Anderson representing the FAA, traveled to Atlanta, Georgia, to conduct an interview of a former POI who worked with the Alaska Airlines certificate.

On June 6, 2000, the operations reconvened in Seattle, Washington, to interview another former FAA POI for Alaska Airlines, the FAA Certificate Management Section Supervisor, and company officials of the airline. The operations group concluded the second part of the field phase on June 8, 2000.

## 1.1 HISTORY OF FLIGHT

According to Alaska Airlines records, the accident captain and the accident first officer reported for duty in Ontario, California (ONT) on January 29, 2000, at least 2 hours prior to the scheduled departure of 1637 to begin a 3-day trip sequence.<sup>2</sup> The first day consisted of one flight from ONT to Seattle, Washington (SEA) and the flight crew began a layover of 11 hours and 14 minutes.

On January 30, 2000, the accident captain and accident first officer departed SEA at 0619 as flight 158 to Puerto Vallarta, Mexico (PVR) with an intermediate stop in San Francisco, California (SFO). According to company records, flight 158 arrived in PVR 33 minutes late at 1323.<sup>3</sup> The accident captain and accident first officer began a layover of 24 hours and seven minutes<sup>4</sup>, and remained overnight at the Westin Hotel on the Puerto Vallarta Harbor Beach.

On January 31, 2000, N963AS, the accident airplane, was being operated as Alaska Airlines flight 158. It was scheduled to arrive at PVR from SFO, at 1250. According to ATC data, the airplane touched down at PVR at 1239, and arrived at position number 5 at the PVR ramp at 1241.<sup>5</sup> The airplane was towed to the gate and arrived at 1244.

The captain and first officer both met the accident crew outside the airplane and held brief discussions about the status of the airplane and exchanged pleasantries. According to the captain and first officer, they told the accident crew the airplane had one write-up concerning an overhead latch in the cabin that had been previously entered in the logbook.

Flight 261 was loaded with 80 adults and 3 infants, along with their personal baggage for the non-stop flight to SFO. No cargo was placed on the airplane. The scheduled departure time for flight 261 was 1530 local time. According to data provided by ATC, the flight called for a taxi clearance at 1531 and was cleared to taxi for takeoff at 1533, and departed at 1537.

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<sup>2</sup> See Attachments 2-B, Scheduled and Actual Trip Paring.

<sup>3</sup> PVR has a time differential of two hours later than Pacific Standard Time due to time zone changes. The local time in PVR was 1523. Times used in History of Flight are PST.

<sup>4</sup> The layover includes a release time of 15 minutes after the block-in time and a report time of 45 minutes before departure at a non-domicile station.

<sup>5</sup> See Attachment 2-C, Copies of Air Traffic Control Transcripts: Puerto Vallarta, Mexico.

Review of ATC and cockpit voice recorder (CVR) transcripts from the accident flight indicated that the accident captain was performing the pilot flying (PF) duties, while the first officer was performing the radio communications and other related pilot-not-flying (PNF) duties during the flight from PVR to SFO. An instrument flight rules (IFR) flight plan<sup>6</sup> had been filed with a request for a final cruising altitude of flight level (FL) 310.<sup>7</sup>

Alaska Airlines flight 211 had departed from Mazatlan, Mexico (MZT) enroute to Los Angeles, California (LAX), and had been cruising at FL 280 when they requested a higher altitude from Mazatlan ATC. Mazatlan center said they were unable to approve a higher altitude as flight 261 was flying behind them at a range of 3 miles and at an altitude of FL 310. According to flight 211 crew statements, both flights proceeded along the same course for about one hour. During this time, flight 261 passed flight 211 on the right hand side at the higher altitude near the Guyamas NDB.<sup>8</sup> As flight 261 approached the Penasco VOR<sup>9</sup> a reroute was issued to the accident flight to SFO and flight 211 lost sight of them.

According to Alaska Airlines documents, at about 1549,<sup>10</sup> the accident crew contacted dispatch and maintenance control in Seattle (SEA) to discuss the problem with the stabilizer and to discuss a possible diversion into LAX. The dialogue continued for an extended period of time between SEA dispatch, SEA maintenance, and LAX operations and maintenance. The accident crew requested the current SFO weather, winds, and runway in use. SEA dispatch provided the information to flight 261, and also advised them about holding delays into SFO. The accident crew acknowledged the information, and later asked SEA dispatch if they could get support from the instructors located there in the building, to assist with their problem. The request was not acknowledged by SEA dispatch. The accident crew told SEA dispatch they intended to divert into LAX and would need a center of gravity (CG) calculated. According to the dispatcher on duty, he told the flight crew to contact LAX operations for the CG information as it was computerized at that station. Then, flight 261 called LAX operations, who had been monitoring the conversation, and advised them to compute a center of gravity for landing and advised they would be diverting into LAX and would need a gate.

According to the ATC transcripts, at about 1551:20 flight 261 switched to the Los Angeles center controller and reported at FL 310.

After LAX operations concluded talking to flight 261, a LAX mechanic stated he called flight 261 and asked if they were the flight with the stabilizer problem. He said the flight crew stated that they were, so he asked if they had tried the “pickle switches” on the yoke, and “the suitcase handles,” which referred to the longitudinal primary trim systems. The flight crew asked if there were any hidden circuit breakers for the trim systems. A discussion was held between the mechanic

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<sup>6</sup> See Attachment 2-D, Copies of ATC Flight Progress Strips, Puerto Vallarta, Mexico.

<sup>7</sup> Altitudes below 18,000 feet are presented in feet above mean sea level (msl) and are corrected for variations from standard sea level pressure. Altitudes above 18,000 feet msl are expressed as flight levels (FL)s, and are based on an altimeter setting of 29.92 inches of mercury. Therefore, FL 310=31,000 feet pressure altitude.

<sup>8</sup> Non directional beacon.

<sup>9</sup> Very high frequency omnidirectional range navigation facility.

<sup>10</sup> See Attachment 2-E, Summary of tape recording between Alaska Airlines flight 261 and SEA maintenance control.

and the flight crew related to the primary and alternate trim indications on the overhead electrical panel. The flight crew indicated there was an electrical “spike” when the primary trim was activated and no indication when the alternate trim system was used. They stated the stabilizer appeared not to move. The mechanic stated he went to study diagrams pertaining to the trim system.

According to Alaska Airlines records and interviews, at about 1608, the flight crew of flight 261 called LAX maintenance and reported they had tried everything and asked if there were any other circuit breakers. The flight crew reported they had tried about every configuration and “it appears to be jammed. The AC motor tries to run.”

Normal radio communications were conducted between flight 261 and ATC until about 1609:55, when flight 261 reported, “center Alaska two sixty one we are uh in a dive here.”

When asked by ATC to say again their transmission, at 1610:06, flight 261 stated, “yeah, we’re out of twenty six thousand feet we’re in a vertical dive...not a dive yet but uh we’ve lost vertical control of our airplane.” Flight 261 responded, “we’re at twenty three seven request uh...yeah we’ve got it back under control there,” followed by a second voice “no we don’t” (unintelligible).

At 1611:06, flight 261 stated, “they were at twenty four thousand feet kinda stabilized...we’re slowin’ here and uh we’re gonna uh...do a little troubleshooting we’ll be can you give me a block between uh twenty and twenty five.”

About 1611:21, ATC told flight 261 to maintain a block altitude flight level two zero zero through flight level two five zero.

About 16:12, flight 261 called maintenance in LAX and said they had tried the pickle switch<sup>11</sup> and got a run-away trim full down. According to the mechanic, the flight crew stated, “we are in a worse situation than we were...I’m afraid to try it again to see if we can get it to go in the other direction.”

At 1614:53, flight 261 was issued instructions to change radio frequencies and to contact another Los Angeles center. The flight crew acknowledged.

At 1615:19, flight 261 contacted the center controller and stated, “...we’re with you we’re at twenty two five we have a jammed stabilizer and we’re maintaining altitude with difficulty uh but uh we can maintain altitude we think...our intention is to land at Los Angeles.” The flight was cleared direct to Los Angeles and the controller asked, “...you want lower now or what do you want to do sir.”

At 1615:56, flight 261 stated, “I need to uh get down about ten change my configuration make sure I can control the jet and I’d like to do that out here over the bay if I may.”

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<sup>11</sup> A slang term used by some pilots on transport category airplanes to refer to the electric trim switches on the pilot’s yoke.

At 1616:31, the controller issued flight 261 a heading of two eight zero degrees and cleared the flight down to one seven thousand feet.

At 1616:38, flight 261 acknowledged, “two eight zero and one seven seventeen thousand Alaska two sixty one and we generally need a block altitude.”

At 1616:44, the controller responded, “O. K. uh just I’ll tell you what do that for now sir and contact L. A. center on one three five point five they’ll have further uh instructions for you sir.”

At 1616:56, flight 261 acknowledged, “O. K. twenty five five say the altimeter setting.” The controller responded, “the L. A. altimeter is three zero one eight.”

At 1617:01, flight 261 said, “thank you.”

This was the last transmission of flight 261.

The airplane crashed in the Pacific Ocean near Anacopa Island about 1621.

## 2.0 FLIGHT CREW INFORMATION

Both flight crewmembers were certificated under Alaska Airlines and Federal Aviation Administration (FAA) certification requirements<sup>12</sup>. According to FAA documents, there was no history of accidents, incidents, or enforcement against either the captain or first officer certificate numbers. There was one surveillance record on the captain pertaining to a cockpit enroute inspection that was closed as satisfactory/no comment. There were no surveillance records found for the first officer certificate number.

### 2.1 Captain Ted Martin Thompson

Date of birth: [REDACTED]-47

Date of hire with Alaska Airlines<sup>13</sup>: 08-16-82

Airline Transport Pilot Certificate Number [REDACTED] (issued 03-16-84)  
Airplane Multiengine Land DC-9, L-300 Commercial Privileges  
Airplane Single Engine Land

Flight Engineer Certificate Number [REDACTED] (issued 10-01-78)

<sup>12</sup> See Attachment 2-F, Copies of flight crewmember certificates.

<sup>13</sup> Captain Thompson was hired by JetAmerica that later merged with Alaska Airlines. According to company records Captain Thompson began a 3-day ground school, entitled JetAmerica Merger Training, on September 8, 1987.

Turbojet Powered

Flight Instructor Certificate Number [REDACTED] CFI (reissued 08-18-99)  
Airplane Single and Multiengine  
Expires September 30, 2001

Ground Instructor Certificate Number [REDACTED] (issued 05-05-81)  
Advanced

Medical: First Class (issued 11-15-99), Limitation: MUST WEAR CORRECTIVE LENSES.

Flight Times: (Company provided information)

Total flying time:	17,748.9 hours
Total flying time Alaska Airlines:	10,458 hours
Total flying time JetAmerica:	3,691 hours
Total Alaska Airlines PIC time:	10,458 hours
Total PIC <sup>14</sup> time (MD-80):	14,149.4 hours

Total flying time last 24 hours:	3.0 hours
Total flying time last 7 days:	24.1 hours
Total flying time last 30 days:	51.8 hours
Total flying time last 90 days:	132.9 hours

Initial type rating (MD-80):	03-15-84 (JetAmerica record)
Completed Initial Operating Experience:	(No Record; completed at JetAmerica)
Last recurrent training:	11-19-99 (AQP <sup>15</sup> )
Last proficiency check:	11-23-99 (AQP)
Last line check:	07-15-99 (AQP)

## 2.2 First Officer William Joseph Tansky

Date of birth: [REDACTED]-42  
Date of hire with Alaska Airlines<sup>16</sup>: 07-17-85

Airline Transport Pilot Certificate Number [REDACTED] (issued 04-03-85)  
Airplane Multiengine Land DC-9  
Commercial privileges/DC-6, DC-7

Medical: Second Class (issued 04-07-99), Limitation MUST WEAR CORRECTIVE LENSES.

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<sup>14</sup> Pilot-in-command.

<sup>15</sup> Advanced Qualification Program.

<sup>16</sup> First Officer Tansky was hired by JetAmerica that later merged with Alaska Airlines. According to company records First Officer Tansky began a 3-day ground school entitled JetAmerica Merger Training on September 8, 1987.



Flight Times: (Company provided information)	
Total flying time:	8,141 hours
Total flying time Alaska Airlines:	8,060 hours
Total SIC <sup>17</sup> time (MD-80):	8,060 hours
Total flying time last 24 hours:	3.0 hours
Total flying time last 7 days:	14.5 hours
Total flying time last 30 days:	77.9 hours
Total flying time last 90 days:	142.2 hours
Initial SIC check ride:	08-18-85 (JetAmerica)
Completed Initial Operating Experience:	(No Record; completed at JetAmerica)
Last recurrent training:	04-23-99 (AQP)
Last line check:	03-16-97 <sup>18</sup>
Last proficiency check (SIC):	04-25-99 (AQP)

### 2.3 TOXICOLOGICAL INFORMATION

Human remains recovered from the accident site were identified with the captain by conventional means and portions of these remains were sent to the FAA Civil Aeromedical Institute (CAMI) for toxicological testing. DNA identification of these remains was pending. No human remains recovered from the accident site have been identified at the time of this report for the first officer.

### 2.4 72 HOUR HISTORY

According to company schedules, the captain was off-duty for 2 days prior to the accident trip and the first officer was off-duty for 3 days.

The accident trip was a 3-day sequence<sup>19</sup> beginning Saturday, January 29, in Ontario, California with a scheduled reporting time of 1537 and a release time of 1920 followed by an overnight stay in Seattle, Washington. The second day of the trip began with a reporting time of 0525 and a release time of 1538 for an overnight stay in Puerto Vallarta, Mexico. The final day of the trip began with a reporting time of 1445 (the accident leg).

The accident crew spent the night before the accident at the company layover hotel in Puerto Vallarta, Mexico. The layover hotel was a resort outside of town that, according to another crewmember, had excellent food and allowed very restful sleep. It had athletic facilities that included a pool, beach, marina, volleyball, and gym.

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<sup>17</sup> Second-in-command.

<sup>18</sup> Under AQP, after initial qualification, a first officer has no recurring requirement for a line check.

<sup>19</sup> See Attachment 2-B, Scheduled and Actual Trip Paring.

The captain on the arriving flight who delivered the accident airplane to Puerto Vallarta spoke briefly with both members of the accident crew. He described them as rested, relaxed, and in good spirits prior to departing on the accident leg. The first officer of the arriving flight described the accident captain as happy to see them, upbeat, rested, and ready to go to work. The accident captain stated he had watched the Superbowl football game on television during the layover, and told them that “it’s a very nice layover” and “enjoy the sun.”

The wives of both pilots declined to be interviewed. No further information was obtained concerning the crew’s activities before the flight.

### **3.0 AIRPLANE INFORMATION**

According to FAA documents, the airplane was N963AS, a DC-9-83, serial number 53077, manufactured in 1992. Alaska Airlines added this airplane to the Operations Specifications on May 27, 1992. The seating configuration for the airplane was a total of 140 seats (12 First class seats and 128 seats in the main cabin). According to the NTSB 8120.1/2 filed by Alaska Airlines, the registered airplane owner was the First Security Bank of Utah. The airplane was equipped with two Pratt and Whitney JT8D217C engines.

### **3.1 AIRPLANE FLIGHT HISTORY**

According to Alaska Airlines records, the airplane had originated as Alaska flight 199 from SEA to Anchorage, Alaska (ANC) on the evening of January 30, 2000. After a short ground time in ANC, the flight originated as Alaska Airlines flight 158 from ANC to PVR with stops in SEA and SFO. During the flight from ANC to SEA, there was a flight crew change in SEA. The pilots and flight attendants that originated in SEA continued to SFO and to PVR with the accident airplane.

Upon arrival in PVR, the entire flight crew commenced a layover and the accident flight crew arrived at the airport to originate flight 261 to SFO, on the accident airplane.

### **3.2 WEIGHT, BALANCE, AND PERFORMANCE CALCULATIONS**

The following information was listed on the Alaska Airlines flight 261 loadsheet<sup>20</sup> for January 31, 2000:

Adjusted Operating Empty Weight (Crew of 5)	85,725.6 pounds
First Class (10 Adults)	1,794.3 pounds
Coach class (70 Adults) <sup>21</sup>	12,592.9 pounds

<sup>20</sup> See Attachment 2-G, Flight Plan, Weight and Balance Documents.

<sup>21</sup> There were 3 children not included in the passenger count listed above. According to *Alaska Airlines MD-80 Loading Handbook*, for weight and balance purposes, during normal operations, infant or child weights are normally not considered under 2 years of age.

Cargo	1,998.3 pounds <sup>22</sup>
Zero Fuel Weight	102,111.1 pounds
Zero Fuel Weight center of gravity (CG)	11.1
Fuel Load	34,901.7 pounds
Ramp Weight	137,012.8 pounds
Take off Weight	136,512.8 pounds <sup>23</sup>

Limits for the airplane contain the following:

Maximum Structural Take Off Weight	160,000 pounds
Maximum landing weight	130,000 pounds
CG limits (% MAC) <sup>24</sup>	Forward Limit 8.0 Aft Limit 26.0

Weight and Balance calculations<sup>25</sup> were reviewed by the operations group, Alaska Airlines, and Boeing Flight Operations Engineering. Boeing Flight Operations Engineering submitted calculations based upon available information provided by the Safety Board. Weight and Balance calculations were performed in accordance with *Alaska Airlines MD-80 Loading Handbook*, containing latest revision number 199, dated January 10, 2000.

A review of the weight and balance form revealed an error in the adjusted cargo weight used on the form. The original cargo adjusted weight was computed on table 4.1.2 (aircraft without aux tanks) vs. table 4.1.3 (aircraft with aux tanks). The result was an entry for adjusted cargo weight of 1,997.3 vs. 1,998.3 for airplane 963. This error was carried throughout the form, which resulted in a take off weight of 136,512.5 pounds and a take off CG of 11.8%MAC units vs. 12.8%MAC units.

According to Boeing calculations, one additional error was found pertaining to presumed interpolation of the fuel load of 34,900 pounds. Boeing stated, “interpolations are not to be made when using an adjusted weight loading system.” Boeing calculations found the adjusted weight of the fuel to be 34,801.7 pounds vs. 34,901.7 pounds. Further, the calculations determined by Boeing indicated the takeoff weight and index to be 136,412.8 compared to the Alaska Airlines 136,512.5. The index unit provided a CG of about 13%MAC. Boeing stated they were unable to verify the Alaska Airlines Adjusted Operating Empty Weight of the since Boeing records reflect the Manufacturer’s Empty Weight determined at the time of airplane delivery. The Adjusted Operating Empty Weight is determined by the operator. Hence, the difference in weight and CG.

Based upon weight and balance calculations, the following “vee speeds” were calculated by Alaska Airlines for the departure based upon Flaps 11° for a flex (reduced thrust) takeoff:

- V<sub>1</sub> 140 knots
- V<sub>R</sub> 143 knots
- V<sub>2</sub> 149 knots

<sup>22</sup> The cargo was passenger baggage. There was no actual cargo loaded on the airplane.

<sup>23</sup> This is the corrected take off weight with the weight and balance load sheet corrections applied. The flight crew reported the take off weight to be 136,511.8 pounds to LAX operations when they requested a recalculated CG.

<sup>24</sup> Per cent mean aerodynamic chord.

<sup>25</sup> See Attachment 2-G, Flight Plan, Weight and Balance Documents.

The Safety Board asked both Alaska Airlines and Boeing to calculate the approach speeds for Stabilizer Inoperative for landing weights of 13,600 pounds and 10,000 pounds of fuel remaining. These numbers represent what the flight crew reported to LAX operations as the current fuel state and the planned landing fuel in LAX. The calculations are as follows:

Alaska Airlines provided calculations of Jammed Stabilizer based upon the *Quick Reference Handbook* (QRH) page 54/item 8. Assumptions were for the stabilizer trim position of minus (-) 2, landing fuel of 13,400 pounds, flaps 15° (1.4 V<sub>S</sub>) for the landing, plus the CG additive.

Based upon the current fuel of 13,400 pounds, the computed additive to the reference speed was calculated to be 19.8 knots, however, according to Alaska Airlines, crews would have used the higher rounded up number of 24 knots as the additive. The landing weight was calculated to be 115,713.4 pounds and a landing CG of 13.4%MAC. The landing data card of 116,000 pounds would be used in the airplane for speed calculations.

V<sub>REF</sub> 148 knots for flaps 15°  
V<sub>REF</sub> 168 knots includes the CG computed additive (148 + 20 = 168)  
V<sub>REF</sub> 172 knots includes the 24 knots additive (148 + 24 = 172)

Based upon a landing fuel of 10,000 pounds, the landing weight was calculated to be 112,112.5 pounds with a landing CG of 12.5%MAC. The computed additive to the reference speed was calculated to be 20.5 knots. The landing data card of 114,000 pounds would be used in the airplane for speed calculations.

V<sub>REF</sub> 147 knots for flaps 15°  
V<sub>REF</sub> 168 knots includes the CG computed additive (147 + 21 = 168)  
V<sub>REF</sub> 171 knots includes the 24 knots additive (147 + 24 = 171)

The Boeing Company reviewed the Safety Board's request and provided the following information:

The Boeing calculations were based upon fuel loads of 13,900 pounds and 10,000 pounds. There is a 400-pound discrepancy between the Boeing calculations and Alaska Airlines based upon fuel, however, the weights calculated are close in approximation. Boeing calculations for 13,900 pounds of current fuel provided a weight of 116,010 pounds and a CG of 13.3%MAC. The calculations were for stabilizer inoperative at minus (-) 2 degrees airplane nose down.

V<sub>REF</sub> 148.4 knots for flaps 15°  
V<sub>REF</sub> 167.7 knots for flaps 15°, based on the above V<sub>REF</sub> and the speed additive of 19.3 knots (148.4 + 19.3 = 167.7) determined from the Flight Crew Operating Manual (FCOM).

The calculations based upon a landing fuel of 10,000 pounds provided a landing weight of 112,110 pounds and a CG of 12.1%MAC. The calculations were for stabilizer inoperative at minus (-) 2 degrees airplane nose down.

V<sub>REF</sub> 145.9 knots for flaps 15° based on V<sub>REF</sub> = 1.4V<sub>S</sub>

$V_{REF}$  166.4 knots for flaps 15,<sup>0</sup> based on the above  $V_{REF}$  and the speed additive of 20.5 knots ( $145.9 + 20.5 = 166.4$ ) determined from the FCOM.

### 3.3 TRIM SYSTEM PROCEDURES

According to *Alaska Airlines MD-80 Flight Handbook*, the before start expanded procedures<sup>26</sup> regarding the stabilizer trim includes a check of both the primary and alternate trim systems. The PRIMARY MOTOR BRAKE is moved to the “stop” position and both the captain’s control wheel trim switches are moved in the NOSE UP and NOSE DOWN directions. The stabilizer is observed not to move or the aural warning does not sound. Unless the stabilizer is running away. NEVER PLACE THE PRIMARY MOTOR BRAKE SWITCH TO “STOP” WITH THE STABILIZER IN MOTION. Damage will result. The PRIMARY MOTOR BRAKE is placed in the “normal” position and the captain’s individual switches [both left and right] on the control wheel are moved (one at a time) to NOSE UP AND NOSE DOWN positions. The stabilizer should not move and the aural warning should not sound during activation of the individual trim switches.

Operation of BOTH trim switches in the NOSE UP and NOSE DOWN directions should produce corresponding trim movements and an aural tone. Similarly, operate the LONG TRIM HANDLES<sup>27</sup> in the same directions and check for corresponding trim indicator movement.

Moving the individual switches of the alternate longitudinal trim (one at a time) and observing no movement of the stabilizer trim and no aural sound checks the ALTERNATE LONG TRIM switches. Operate BOTH trim switches and observe a corresponding trim movement and direction of travel at a slower rate.

During taxi procedures,<sup>28</sup> the FLAP thumbwheel, in the LONG TRIM Takeoff Position Display is set for the takeoff flap value in the FLAP window. The CG thumbwheel is rotated in the LONG TRIM Takeoff Position Display, until the computed CG value appears in the CG window. When both values are set, the LONG TRIM Readout window will display the proper trim setting. The trim is set using the Primary LONG TRIM Control Wheel Switches, or the LONG TRIM Handles to set the trim indicator opposite the Long Trim Takeoff Position (Green) Indicator.

In the event deicing or anti-icing action is required on the airplane, an additional flight crew procedure is required. The *Alaska Airlines Flight Operations Manual, Section 12.200, page 7*, in part states:

Horizontal Stabilizer	Trim Full Nose Down <sup>29</sup>
Elevators (MD-80)	Hold Full Nose Down

<sup>26</sup> See Attachments 2-H, Excerpts from MD-80 *Flight Handbook*.

<sup>27</sup> Longitudinal trim handles.

<sup>28</sup> See Attachment 2-H-3, Excerpts from MD-80 *Flight Handbook*.

<sup>29</sup> See Attachment 2-I, Excerpts from MD-80 *Flight Operations Manual*, regarding the placement of the stabilizer during deice/anti-ice operations.

### 3.3.1 STABILIZER MALFUNCTIONS

According to the *Alaska Airlines MD-80 QRH*,<sup>30</sup> there were two procedures contained therein related to stabilizer anomalies. The first procedure pertained to a runaway stabilizer and was considered an emergency procedure in the QRH<sup>31</sup>. Associated with the emergency procedure was a “boxed” first step action item that must be accomplished from memory. Additional steps in the procedure were accomplished by referring to the QRH. The QRH contained a second procedure in the Abnormal Index related to Stabilizer Inoperative. These will be discussed in order.

#### 3.3.1.1 RUNAWAY STABILIZER

In part, the following procedure was detailed in the QRH and found in the Emergency Section:<sup>32</sup>

IF THE INDICATOR HAS REACHED THE FULL NOSE UP OR DOWN LIMIT, ATTEMPT TO RETRIM THE AIRCRAFT WITH THE LONGITUDINAL TRIM “SUITCASE” HANDLES.

- |  |                           |
|--|---------------------------|
| 1. <b>Stabilizer Trim (Red guarded Switch)</b> | <b>Stop</b> <sup>33</sup> |
| 2. Longitudinal trim indicator                 | Observe                   |

If longitudinal trim indicator stops;

- |   |      |
|---|------|
| 3. Primary trim malfunction Use the alternate trim system (alternate longitudinal trim levers) when trimming is required. Use the autopilot as desired. |      |
| 4. Primary Longitudinal Trim (All 3) C/Bs (Left Generator Panel)  | Pull |

CHECKLIST COMPLETE

If longitudinal Trim Indicator continues to Move,

- |  |        |
|--|--------|
| 3. Stabilizer Trim (Red Guarded Switch)  | Normal |
| 4. Alternate Trim Malfunction. Use the primary trim system (yoke thumb switch or longitudinal trim “suitcase” handles) to maintain the aircraft in trim. |        |
| 5. Autopilot and Alternate Longitudinal Trim C/Bs (D-9, D-10, & D-11)  | Pull   |

**CAUTION:** The autopilot must not be used during approach or during large speed/configuration changes with the alternate trim circuit breakers pulled. Ensure the aircraft is in trim before engaging autopilot.

RUNAWAY STABILIZER CHECKLIST COMPLETE

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<sup>30</sup> Quick Reference Handbook.

<sup>31</sup> See Attachment 2-J-1, 2-J-2, Excerpts from *MD-80 Quick Reference Handbook*.

<sup>32</sup> See Attachment 2-J-2, Runaway Stabilizer procedure.

<sup>33</sup> The bold was added to reflect a memory action item to be accomplished by the pilot(s).

### 3.3.1.2 STABILIZER INOPERATIVE<sup>34</sup>

The Stabilizer Inoperative checklist is found in the System Abnormal Section of the QRH.

The following procedures are listed, in part, pertaining to stabilizer inoperative:

**CAUTION:** Frequent application of primary trim may cause the primary trim motor to overheat and shut down. It may take several minutes to cool.

- |   |                    |
|---|--------------------|
| 1. Stabilizer Trim Switch (Red Guarded)         | Normal             |
| 2. Circuit Breakers                             | Reset if tripped   |
| Primary Longitudinal all 3 C/Bs                 | Left Generator Bus |
| Autopilot/Alternate Longitudinal Trim           | D-9, D-10, & D-11  |
| Primary Longitudinal Trim (Control Breakers)    | G-22 & 23          |
| 3. Both Primary and Alternate Longitudinal Trim | Check              |

Either system operative;

**CAUTION:** The autopilot must not be used during approach or during large speed/config[uration] changes with the alternate trim inop[erative].

CHECKLIST COMPLETE

Both Systems inoperative;

- |  |  |
|--|--|
| 4. Consider stab jammed, do not use autopilot. |  |
| 5. Flap/Trim condition                         | Determine  |
| If the flaps are 28, 40 and aircraft trimmed,  |  |
| 6. Landing                                     | Flaps 28 <sup>0</sup> or 40 <sup>0</sup> /V <sub>ref</sub> + 5 |

CHECKLIST COMPLETE

If flaps 28, 40 not trimmed, any other flap position,

- |  |   |
|--|---|
| 6. Ground Proximity Switch   | Ovrd  |
| 7. Landing   | Flaps 15 <sup>0</sup> /1.4V <sub>s</sub> +CG Additive |
| Flaps 15 <sup>0</sup> /1.4 V <sub>s</sub> is 15 <sup>0</sup> flap minimum maneuver on the speed cards. |   |
| 8. CG Speed Additive   | Determine   |

If in trim at flaps 15<sup>0</sup> add +5 KIAS for approach and landing.

If current CG unknown: Enter additive chart with takeoff CG minus 2%

(If aux tank used contact operations to determine current CG)

If time does not permit obtaining current center of gravity, increase speed up to 30 KIAS to fly in trim for adequate elevator control.

<sup>34</sup> See Attachment 2-J-3, Excerpts from *MD-80 Quick Reference Handbook*.

CG %MAC	STAB TRIM POSITION				
	-2	0	2	4	6
	ADDITIVE IN KNOTS				
0	40	29	20	13	6
5	31	22	14	7	6
10	24	15	8	5	5
15	17	8	5	5	5
20	8	5	5	5	5

Increase additive on final for wind if conditions necessitate.

9. Avoid high descent rates and steep deck angles.

CAUTION: During the flare, do not reduce the approach thrust until the landing flare has been initiated & sink rate reduced.

STABILIZER INOPERATIVE CHECKLIST COMPLETE

According to the CVR, the flight crew made a calculation of minus two (-2) worst case for the trim condition and calculated an additive of 24 knots which corresponds to a 10% MAC.<sup>35</sup>

### 3.4 AIRPLANE LIMITATIONS

According to the *Alaska Airlines MD-80 Flight Handbook*, Section 1.000, pages 2, 3 and 6, the following limitations (in part) apply:

#### FLIGHT MANEUVERING LOAD ACCELERATION LIMITS (AFM)

Flaps UP +2.5g to -1.0g

Flaps Down +2.0g to -0.0g

#### SPEED LIMITATIONS (AFM)

Maximum Operating Speed VMO/MMO

VMO 340 KIAS (knots indicated air speed)

MMO .84 MACH

When both an airspeed and MACH number are shown as a limit the lower displayed value is limiting.

#### OVERSPEED WARNING

MMO .79 MACH above 25,300 feet

VMO 325 KIAS below 25,300 feet

#### FLAP/SLAT MAXIMUM LIMIT SPEEDS

<sup>35</sup> See Attachment 2-J-3, Excerpts from *MD-80 Quick Reference Handbook*.



SLATS EXTENDED

Mid	(Flaps 0 <sup>0</sup> – 13 <sup>0</sup> )	280 KIAS or .57 MACH
Full extend	(Flaps 15 <sup>0</sup> - 40 <sup>0</sup> )	240 KIAS or .57 MACH

FLAPS DOWN

Flaps 11 <sup>0</sup>	280 KIAS or .57 MACH
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FLIGHT CONTROL LIMITATIONS (AFM)

Speed Brakes:

Do not extend speed brakes with flaps extended.

Speed brakes may be used only in the 0 degree flap configuration with or without slats extended.

#### 4.0 METEOROLOGICAL CONDITIONS

According to the automatic terminal information service (ATIS) transmitted by LAX and recorded by the CVR, the following weather conditions were reported, in part:

ATIS Information “Mike,” observation at 1550 local time.

Wind two three zero at eight. Visibility eight. Few clouds at two thousand eight hundred. One two thousand scattered. Ceiling two zero thousand overcast temperature one six dewpoint one one. Altimeter three zero one seven. Simultaneous ILS<sup>36</sup> approaches in progress runway two four right and two five left or vector for visual approach will be provided. Simultaneous visual approaches to all runways are in progress and parallel localizer approaches are in progress between Los Angeles International and Hawthorne airports. Simultaneous instrument departure in progress runway two four and two five.

#### 5.0 COMPANY HISTORY

According to company documents, Alaska Airlines, Inc. was a subsidiary of a holding company, Alaska Air Group, Inc. (Air Group) that was incorporated in Delaware in 1985. The Air Group had two principal subsidiaries; Alaska Airlines, Inc. and Horizon Air Industries (Horizon). Both subsidiaries operated as airlines, Alaska Airlines, Inc. was a major airline that operated an all jet fleet and Horizon a regional airline that operated jet and turboprop airplanes.

Alaska Airlines was an Alaska corporation that was organized in 1932 and incorporated in 1937. Alaska Airlines served 35 cities in six states, one city in Canada, and five cities in Mexico. At the time of the accident, Alaska Airlines operated both B-737 and MD-80 series airplanes. According to FAA documents, the Alaska Airlines had a fleet composition of 88 airplanes, of which, 39 were MD-82 or MD-83 airplanes.

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<sup>36</sup> Instrument landing system.

## **5.0.1 COMPANY ACCIDENT HISTORY**

According to information provided by the FAA<sup>37</sup>, Alaska Airlines had five accidents and 78 incidents since July 2, 1986. One accident involved a DC-9-82 airplane in Seattle, Washington<sup>38</sup> on September 1, 1997. This involved minor injuries during a passenger evacuation after a nose gear collapse on landing. Of the 78 incidents, 10 involved MD-80 airplanes.

Alaska Airlines had a total of three fatal accidents prior to Alaska flight 261:

On September 4, 1971, 111 people died when an Alaska Airlines B-727-100 hit a mountain during controlled flight into terrain (CFIT) during an approach into Juneau, Alaska.

On April 5, 1976, one person died when a B-727 ran off the runway during an approach to Ketchikan, Alaska.

On March 13, 1990, an Alaska Airlines B-727 struck and killed a mental patient from a hospital attempting to cross the runway during a takeoff at Phoenix, Arizona.

## **5.0.2 COMPANY ENFORCEMENT HISTORY**

According to FAA records, in the last 5 years, there have been two major violations. One was settled for \$338,000 for installing a wrong main landing gear part and the other was for \$125,000 for inappropriate repairs on a fuel tank. Five other violations have been settled with civil penalties ranging from \$17,000 to \$4,000. Four investigations were closed with warning letters and 40 were closed with no action.

In 1993, five Alaska Airlines pilots were found to have signed a ground school attendance roster(s) certifying they had received training when, in fact, they had not attended the ground school. The carrier was found to have used technically unqualified airmen based upon the failure to complete the training required. Legal enforcement action against the five Alaska Airline pilots in May 1994 resulted in: 1) Revocation of Airline Transport Pilot Certificates of all five Alaska Airlines pilots for 180 days, and 2) suspension of all certificates of the Vice-President of Operations, for 90 days.

## **5.1 COMPANY TRAINING**

According to FAA and company documents, Alaska Airlines has conducted training for the MD-80 fleet under the Advanced Qualification Program (AQP) since March 1, 1985<sup>39</sup>. According

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<sup>37</sup> See Attachment 2-K, FAA briefing papers dated 1/31/00. Also note that p.2-K-1 incorrectly stated that John M. Hubbard was the PMI. The temporary PMI at the time of the accident was Mr. Tim Bennett.

<sup>38</sup> Attachment 2-K-2 incorrectly stated this accident occurred in Fairbanks, Alaska.

<sup>39</sup> AQP is an alternative means of qualifying, certifying, training, and otherwise ensuring the competency of flight crewmembers, aircraft dispatchers, instructors, evaluators, and other operations personnel trained and evaluated under FAR Part 121. To establish an AQP, each carrier will work through a five-phase

to the Principal Operations Inspector for the carrier, in 1999 Alaska Airlines entered into Phase IV for all flight crewmember curricula. Phase IV is the initial approval stage of the training program, and that approval may take up to 2 years.

A review of the training curriculum of the MD-80 indicated the components of the primary and alternate horizontal trim systems were covered in the eighth day of airplane specific ground school during initial training. During the second period of simulator training, a stated objective is to describe situations requiring use of Runaway Stabilizer checklist. During the simulator period, the student was to perform the Runaway Stabilizer checklist. Similarly, during the third and fourth periods, the curriculum called for application and performance of the Runaway Stabilizer checklist.

As part of the MD-80 continuing qualification programs in 1999, classroom materials included a section on flight control systems to include normal and abnormal procedures. To supplement the classroom, additional distributed materials were given to the pilots, including an examination. One of the questions pertained to electrical failure and associated stabilizer inoperative indications. The question required the pilot to calculate the configuration and/or speeds for landing in order to select the proper answer based upon a known takeoff CG and an unknown current CG.

## **6.0 FAA SURVEILLANCE OF ALASKA AIRLINES**

The FAA managed the certificate of Alaska Airlines from the Certificate Management Section (CMS) located in Seattle, Washington. Alaska Airlines held the certificate ASAA802A (DFG) which was issued September 23, 1946. The certificate holding district office is located in Seattle, Washington. The carrier had been in scheduled passenger carrying operations since 1946. The CMS reported to the Seattle Flight Standards District Office in the Northwest Mountain Region (NM01).

The CMS staffing level was comprised of a supervisor, and three principal inspectors of operations, maintenance, and avionics. Assigned to the certificate were three geographic inspectors; from the Alaska region, Northwest Mountain Region, and the Western Pacific Region to assist in carrier surveillance. Staffing within the CMS authorizes five operations inspectors and three geographic inspectors. A review of the CMS staffing indicated that all positions authorized by the CMS were filled in operations. Also, the staffing level of three geographic inspectors were filled. Prior to 1998, the authorized level of operations inspectors had been four inspectors.<sup>40</sup> Four had been assigned.

According to the POI, the current staffing included two aircraft program managers (APM), one each for the B-737 and the MD-80 airplanes and one cabin safety inspector. The cabin safety inspector position had been vacant for about seven months. The assistant principal operations inspector (APOI) was a part time position.

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process with the FAA: Initial Application, Curriculum Development, Training System Implementation, Initial Operations, and Continuing Operations.

<sup>40</sup> See Attachment 2-K-4 regarding authorized versus on-board manning for the CMS.

Alaska Airlines is an Air Transportation Oversight System (ATOS) carrier<sup>41</sup>. According to FAA documents, the CMS transitioned to ATOS in late 1998, and the CMS supervisor stated the inspectors received training during that same period. In November of 1999, the CMS sent a memorandum to ANM 200 requesting four airworthiness inspector positions and one cabin safety inspector. The CMS was provided two airworthiness inspector positions and one cabin safety position. The CMS was advised that further assessment was needed before providing the two remaining airworthiness inspector positions requested.

Inspector activities of Element Performance Inspections (EPI) revealed that as of February 1, 2000, there were 279 planned inspections and 44 had been completed for a completion rate of 16 per cent.<sup>42</sup> The activities covered the time period from March 1999 until February 1, 2000.

A review of inspector activities of Safety Attribute Inspections (SAI) indicated that as of February 1, 2000 there were 88 planned inspections of which 31 had been completed for a completion rate of 35 per cent. These activities also covered the time period from March 1999 until February 1, 2000.

An additional ATOS 2000 Inspection/Activity Summary Report was provided by the FAA with data reported as of May 16, 2000. This report is based upon the planning year beginning on February 2, 2000 until the next planning year. The next year is tentatively set for February 2001. According to the FAA, the number of planned and completed inspections on this report had reduced numbers from the earlier data provided on the February 1, 2000 report. The number of planned inspections on the February 1, 2000 data is significantly higher on this chart for two primary reasons. In the first year of ATOS, the annual planning meetings developed Comprehensive Surveillance Plans (CSP). Many inspectors for the certificate management teams (CMT) did not grasp the concept that ATOS inspections (EPIs and SAIs) included numerous inspection activities that had previously been accomplished under the Program Tracking and Reporting Subsystem (PTRS). Second, they did not fully understand that ATOS inspections were much more comprehensive in nature than traditional inspections done under the National Program Guidelines (NPG) process.

Both Summary Reports mentioned above, provide a comparison of the top ten airlines inspection activity, and is found in Attachment 2-J.

A National Aviation Safety Inspection Program (NASIP) inspection was performed during the period August 13 to August 23, 1995 on the carrier. Potential problems with Alaska Airlines' systems for assuring compliance with FAR requirements were identified in the areas of operations training, flight control, maintenance training programs, and contractual arrangements. All the issues raised during the inspection were discussed with company personnel and principal inspectors. In all cases of findings, supporting documentation had been provided to the Certificate Holding District Office.

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<sup>41</sup> ATOS is a new airline oversight process developed by the FAA with the support of Sandia National Laboratories. It embodies a system approach to certification and surveillance oversight, using system safety principles and risk management built into air carrier operations.

<sup>42</sup> See Attachment 2-K regarding ATOS Inspection/Activity Summary Report.

The findings included eight from operations, and eight from airworthiness. The team found five operations training findings that dealt with flight attendant issues. Two findings were related to flight control. Of these findings, five were Category A and three were Category C findings<sup>43</sup>.

Since the accident, the FAA has conducted a Special Inspection of Alaska Airlines during the period April 3–April 19, 2000. It included a team of 14 inspectors and a team leader from the System Process Audit Program Staff (AFS-40). In a final report dated June 20, 2000, there were several findings. In part, three findings were disclosed in the functional area of Lack of Management Personnel.

The findings were the Director of Maintenance position had been vacant for nearly two years, the Director of Operations position was vacant and the Director of Safety, who was also the Director of Quality Control and Training, did not report directly to the highest level of management. An additional six findings were found in the functional areas of Flight Operations, Flight Crew Training and Dispatcher Duty Time.<sup>44</sup> Three findings in Flight Operations dealt with the Quick Reference Handbook approved signatures, cabin discrepancies form definitions and training, and inconsistency between manuals regarding clear ice checks on the company's MD-80 airplanes.

Two findings in Flight crew training were related to shortages of qualified and available instructors and Alaska Airlines failure to use the approved AQP formula for determining instructor requirements. One finding was related to dispatcher duty times in that not enough time was allowed for briefings during shift changes.

## **7.0 FAA INTERNAL EVALUATION OF THE SEATTLE FSDO**

As a result of interviews with the current/former POIs, the current MD-80 APM, and former manager of the Certificate Management Section, it was determined that the Alaska Airlines Certificate management section had experienced a history of internal disagreements between the principals and management<sup>45</sup>. These disagreements resulted in accusations of an inappropriate relationship between the FAA and senior management of the airlines. Disciplinary actions were taken against several of the principals including the involuntary removal of one POI from the certificate. Further, individuals holding the positions of Supervisor of the Certificate Management Section, Supervisor of the Operations Section, and Supervisor of the Air Carrier (Geographic) Section, were rotated among the same three individuals. This rotation occurred three times; once in the early 1990s, again in 1994 just prior to the internal evaluation, and in May 2,000.<sup>46</sup>

An evaluation report of the Seattle FSDO was conducted between May 23, 1994 and June 2, 1994 by the AFS-300 Branch of the FAA Headquarters as a result of difficulties experienced within

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<sup>43</sup> Category A findings are any non-compliance with a FAR. Category C findings are lack of systems that would assure the certificate holder of compliance with continuing or reoccurring FAR requirements.

<sup>44</sup> See Attachment 2-M, Excerpts from the Special Inspection of Alaska Airlines.

<sup>45</sup> See Attachment 2-L, Excerpts from the Evaluation Report of the National Evaluation of the Seattle FSDO.

<sup>46</sup> See interview summaries of Mary Rose Diefenderfer, Mr. Philip Hoy, Mr. Steven Franklin, and Mr. Robert Lloyd.

the Seattle FSDO<sup>47</sup>. Findings included ineffectiveness in the management of the FSDO office, and the three section supervisors. Recommendations, in part, included the removal of the current manager of the Seattle FSDO, and to place poorly performing section supervisors on formal performance improvement plans.

## **8.0 INTERVIEW SUMMARIES**

### **Brennan C. Moore, Captain, Skywest Airlines**

The operations group interviewed Captain Moore on February 1, 2000

He was employed by Skywest for 4 ½ years as a pilot on the EMB-120 Brazilia (2 ½ years as a first officer and 2 years as a captain).

On January 31, he flew Skywest flight 5154 from SBA to LAX. After switching from departure control to LAX Center on frequency 135.5 [MHz], air traffic control asked the crew if they could see an MD-80 at 17,000 feet in distress. He said he selected the above mode on TCAS and acquired symbology for the distressed aircraft. It was 7,300 feet above them descending at their one o'clock position. He looked to that position outside the window and acquired the jet immediately in a vertical dive, straight down. The jet descended for approximately 3,000 feet in its vertical dive, gently turning to the right for about 120 degrees of roll. At this point, it began a gentle, curving pull up to a level position and he thought they had recovered the aircraft. However, the jet abruptly continued its rotation to past vertical, approximately 110 degrees, and it zoomed for approximately 1,500 feet. It appeared to nearly stop, and then the nose fell back to the horizontal, leaving the airplane inverted and it began to enter a clockwise (as viewed from above) flat, inverted spin. It made 2 to 3 rotations in this position and as the nose fell through their altitude and it entered what he called a corkscrew, nose low inverted dive. At this point, the jet did an indescribable maneuver during which it appeared to tumble end-over-end. The Captain Moore lost sight of the airplane for about 10 seconds due to cockpit obstructions. He then saw the airplane come out of the corkscrew inverted and hit the water with about 10 degrees of bank. He could not tell which wing was down. On impact, the water separated. The airplane was briefly visible on the surface, the water came back very quickly, and the airplane disappeared. He thinks it disintegrated. There were no flashes, no smoke, and no pieces fell from the airplane. The lateral range was 5 to 7 miles, and the event lasted 60-75 seconds.

### **Philip Gauthier, First Officer, Skywest Airlines**

The operations group interviewed First Officer Gauthier on February 1, 2000.

Skywest had employed him for 1 year, and 2 months as an EMB-120 first officer. Total flight time was 2,600 hours with 1,000 hours in the EMB-120.

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<sup>47</sup> See Attachment 2-L, Excerpts from the Evaluation Report of the National Evaluation of the Seattle FSDO.

On January 31, 2000, he flew Skywest flight 5154 from SBA to LAX. They reached a cruising altitude at 11,000 feet and were just finishing their cruise check. They were given a handoff to LAX center, frequency 135.5 [MHz]. He was busy getting the LAX ATIS and had adjusted TCAS to the cruise mode. They received a handoff to SOCAL, Frequency 124.5 [MHz], after checking in, the controller asked if they could see an Alaska aircraft about 17,500 feet at their one o'clock position. They reset their TCAS and saw a blip 7,300 feet above them in a descent. They looked out and saw the airplane in a vertical dive with a slow rotation to the right. The airplane made a quick reversal to vertically up, appearing to tail slide briefly, continuing over to an inverted spin and rotating 1 to 2 rotations. The airplane appeared to be intact. It always was rotating to the right. The bottom of the first dive occurred above 11,000 feet. The airplane came back down rapidly through 11,000 feet in a flat spin. No smoke, fire, or flash was observed. The airplane appeared to be traveling very fast while going down. The airplane transitioned to a graveyard spiral; the right wing was always down and it seemed to be wallowing with the nose rising and dropping like a falling leaf. The airplane impacted the water somewhat flat and inverted. He could see jet fuel everywhere. There was a huge splash and the impact created a perfect circle in the water. The airplane disappeared right after impact. There was a fishing boat about 1½ miles from the impact. There was some thin cirrus clouds above the MD-80 when it was first observed. He had the airplane in sight the entire time. The airplane was 5-7 miles laterally from them and the total time it was observed was about 1 ½ minutes.

**Paul Typpi**  
**Alaska Airlines MD 80 First Officer**

The operation group conducted a telephone interview on February 2, 2000.

F/O Typpi flew flight AS 211 on January 31, 2000, from Mazatlan (MZT) to LAX. He had been employed at Alaska Airlines for 15 months and he had accumulated about 600 hours of MD 80 time and 4,500 hours total time.

On departure out of MZT, his flight leveled off at 28,000 feet. They had filed for 31,000 feet, and when they asked for a higher altitude from Mazatlan Center, they were advised that 31,000 feet was unavailable due to traffic at their 6 o'clock position, at a range of 3 miles. That traffic was the accident aircraft, Alaska 261 flight (AS 261). Mazatlan Center contacted AS 261 twice to ask them if they could accept 35,000 feet to allow their company traffic, AS 211, to climb to 31,000 feet. On the second attempt, AS 261 stated that they could not accept 35,000 feet, but could take a lower altitude. This offer to accept a lower altitude was discussed by F/O Typpi and his captain as curious since AS 261 was going considerably further than they were and flying into significantly worse weather. He said it was inconsistent for normal fuel planning to accept lower altitudes to fly further, unless the ride was unsatisfactory. F/O Typpi stated that the winds at flight level were not significant, and the ride was occasionally light chop.

During the next hour, F/O Typpi heard an Alaska Airlines airplane try twice to contact Seattle dispatch, using the company DTMF (Digital Touch Microphone Facility, similar to SELCAL). He thought it might be AS 261, but had no way of verifying that, since neither

attempt to contact dispatch was successful. He stated there was about 45 minutes between attempts.

Passing the Guyamas NDB, F/O Typpi noticed AS 261 passing them on the right side of the airplane at a range of 2 miles at the one o'clock position. He noted his MACH number to be .765 and commented to his captain that AS 261 was flying pretty fast. Near Penasco VOR, AS 261 was rerouted and the airplane departed from their view.

Over Penasco VOR, AS 211 continued for its destination of LAX and AS 261's course diverged for its route to SFO. AS 211's captain left frequency to get the LAX ATIS and gate assignment. When he returned from that task, he notified F/O Typpi that AS 261 was on company frequency with an in-flight problem. F/O Typpi turned up the volume on company frequency and overheard someone ask AS 261, "Did you try the "Pickle Switch?" The crew answered, "Yes. It's worse now. I have a full nose down trim and it won't trim up." F/O Typpi believed that this radio conversation was with LAX maintenance. The response from maintenance was "Hmmm." F/O Typpi missed the next transmission from maintenance, but the response from AS 261 was, "No, I don't want to try that. I'm not sure what that will do." The pilot's voice on AS 261 seemed normal, not excited. At this point, F/O Typpi had to switch off his company radio due to workloads as the pilot flying into LAX.

**KARL SMITH**  
**Alaska Airlines MD 80 Captain**

The operations group interviewed Captain Smith on February 2, 2000.

Captain Smith flew AS 211 on January 31, 2000, from MZT to LAX. He had been employed at Alaska Airlines for about 16 years and had flown the MD-80 for about 9 years. He had accumulated about 8,000 hours of MD 80 flight time and about 14,000 hours total time.

On departure out of MZT, his flight leveled off at 28,000 feet. They had filed for 31,000 feet, and when they asked for a higher altitude from Mazatlan Center, they were advised that 31,000 feet was unavailable due to traffic at their six o'clock position at a range of 3 miles. That traffic was the accident aircraft, Alaska flight 261. Mazatlan Center contacted AS 261 on the second attempt to ask them if they could accept 35,000 feet to allow their company traffic, AS 211, to climb to 31,000 feet. AS 261 stated that they could not accept 35,000, but, "as a matter of fact, we could descend." This offer to accept a lower altitude was discussed with his F/O Paul Typpi. He thought this was curious since AS261 was going considerably further than they were, and flying into significantly worse weather. He said it was inconsistent for normal fuel planning to accept lower to fly further, unless the ride was unsatisfactory. Captain Smith stated that the winds at flight level were not significant, and the ride was occasionally light chop.

During the next hour, Captain Smith heard an Alaska aircraft try twice to contact Seattle dispatch using the company DTMF (similar to SELCAL). These calls were about 45 minutes apart. He thought it might be AS 261, but had no way of verifying that, since neither attempt to contact dispatch was successful.



Passing the Guyamas NDB, F/O Typpi notified him that AS 261 was passing them on the right side at a range of 2 miles at the one o'clock position. He noted his MACH number to be .765 and discussed with Typpi that it was unusual that AS261 would be flying so fast.

Near the Penasco VOR, AS 261 was issued a reroute to San Francisco to go direct to Tijuana, direct Oceanside, direct San Marcos. He noted that it took the AS 261 crew 2 calls to respond to the reroute. At this point the two aircraft lost sight of each other and after crossing into U.S. airspace, they switched to different radio frequencies. Captain Smith left the frequency to get the LAX ATIS and a gate assignment. While on LAX company frequency, he overheard an aircraft state that the stab was full nose down. He was able to deduce that the aircraft with the problem was AS 261. He also heard the flight crew state they had tried that and it made it worse. He could not tell who the crew was responding to or what suggestion had been given. At this point he had to discontinue monitoring company frequency due to workloads in the terminal phase of the arrival into LAX.

He stated he did not know the accident captain.

#### **JUAN RANGEL**

#### **ALASKA AIRLINES MD 80 CAPTAIN**

The operations group conducted a telephone interview on February 2, 2000.

Captain Rangel was flying an Alaska MD80 into LAX as flight AS 460 during the same time frame of the accident flight, AS 261, was airborne experiencing a mechanical problem. He was able to hear both sides of the conversation between the flight and Seattle dispatch, Seattle maintenance, and Los Angeles maintenance.

The first conversation he heard was with dispatch over whether the accident aircraft should continue to its destination (SFO) or divert into LAX. The captain wanted to divert to LAX, but Seattle seemed unhappy with that decision, at first. After persisting, Seattle concurred with him about diverting to LAX. The accident captain decided there was better weather, winds, and runways that LAX provided. The company yielded to the captain's request and released him to LAX.

He overheard the accident crew ask Seattle to see if they could get an instructor pilot to come to the radio, to provide any further expertise or guidance. The crew also stated that they had done all the checklists they could think of, and were out of ideas on what to do. The crew asked if there were any other circuit breakers they could think of that might help their situation. They discussed circuit breakers D9, D10, and D11 and the longitudinal circuit breaker. Captain Rangel was under the impression that the D9, D10, and D11 circuit breakers were open at one time, but did not know if they were still pulled. The pilot stated that he thought the stabilizer brake was the problem, because every time the trim switch was activated it showed a "power spike" on the gauge. He stated that he had tried both primary trim switches, the suitcase handles, and the alternate trim switches.

The crew asked LAX for a CG. The crew stated the takeoff weight was 136,000 pounds and they had about 15,000 pounds of fuel and wanted to get down to 10,000 pounds for landing. He overheard the accident crew advise someone (unknown) that they were going to configure the aircraft to a landing speed to see if it was controllable for landing. At this point, Captain Rangel landed his aircraft in LAX.

After parking at the gate, he overheard LAX maintenance recommend to the accident crew that if they try trimming nose down (or possibly full nose down) to see if it would allow the brake to unlock. The crew said, "it made it worse." The last radio transmission that Captain Rangel overheard was LAX maintenance stating, "Well, it's okay with me if you try it."

Captain Rangel could not tell which pilot was speaking on the radio. He believed it was the captain. Due to several Alaska stations using the same frequency in LAX, there is a higher than normal chance of a covered or garbled transmission.

Captain Rangel said he thought that dispatch was more interested in getting the airplane to the destination, than providing assistance.

**Chris Zupsic**  
**Pilot of Twin Commander N50DE**

The operations group interviewed Mr. Zupsic on February 2, 2000.

Mr. Zupsic stated he was a private pilot with a total flight time of 1,100 hours. He was flying IFR flight rules from SNA to SBA at 10,000 feet, while proceeding direct to HABIT on a heading of 295 degrees. He was given an FAA traffic advisory: "MD-80 FL180 descending at one o'clock, high over the coast."

He observed the airplane on a heading of 285 degrees, and watched it for two minutes in a straight and level flight at his one o'clock position, above him. The left wing abruptly dropped to 90 degrees of bank, then the airplane flipped inverted. It made one or two turns horizontally, and then appeared to cartwheel tail over nose. The aircraft went through his altitude inverted in a flat spin. He clearly saw the airplane windows. It stopped spinning on a westerly heading, the nose went vertical for its last 3,000 feet, and he watched it go into the water. The nose hit first, then the wing, then the tail, then it was gone. There was a splash as high as an MD-80. He gave a running description of the event to the air traffic controller. There was a Cessna airplane at 500 feet, and a fishing vessel arrived at the site within 5 minutes.

**Scott Newbold, Line Mechanic Alaska Airlines**

Mr. Bob Pickard, Alaska Airlines, was present with Mr. Newbold. The operations group conducted the interview on February 2, 2000.

Mr. Newbold was hired by Alaska Airlines on June 6, 1988 as a ramp worker. He got his

A & P license at Northrop University, Long Beach, California, in 1991. He had been furloughed by Alaska Airlines and was hired back in 1991 as an A & P mechanic in the ANC, SFO, and LAX stations. He was a lead mechanic at SFO but returned to line maintenance at LAX.

He heard the lead mechanic say there was a flight diverting into LAX with a horizontal stabilizer problem. He was one of three mechanics examining the Lamm schematic document to review the stabilizer system. He heard Alaska 261 call Operations for a landing center of gravity calculation and he voluntarily went to the maintenance radio and called flight 261 to ask if they were the ones with the stabilizer problem. The crew said “yes, we are the aircraft. Do you have any suggestions?” He asked whether they had tried the pickle switches or the suitcase handles. They said they had done all that; they had tried all three controls for trim without success but asked if he knew about any hidden circuit breakers. He said no, then went to study the Lamm book. Ten to 15 minutes later they called back. They said that they had a horizontal runaway nose down, he thinks they said full nose down. They were in a worse situation than before. The lead mechanic came over to him, took the microphone away, and said, “hang it up.” On the first call, the pilot sounded concerned, and on the second call he sounded more concerned. The pilot’s voice was wavering. He did not overhear SEA maintenance control or dispatch on the frequency during this time period.

**Rozanne Sanchez**  
**Operations Agent LAX**

Mr. Chris Birch Ground Operations Supervisor, was present with Ms. Sanchez during the interview. The operations group conducted the interview on February 2, 2000.

She was hired by Alaska Airlines 2/10/98, and had been an operations agent since October 1998. Her job was to perform weight and balance calculations for MD-80 and B-737 airplanes, and to coordinate aircraft and passenger service activities. There were three operations agents on duty; two were responsible for outbound flights and one for the inbound flights.

She had just come on duty at 1600 and her position was to handle the inbound flights. She heard that flight 261 was diverting out of Mexico and would be making a high speed landing. The aircraft was going to gate 37A and then would be towed to the hangar. She stated she was aware that an airplane had trim problems. She heard Scotty talking on the radio to flight 261 and she heard the term “pickle switches” used by him on the radio. The situation escalated. They had asked the previous operations agent for a cg calculation, which was not a normal call. She did not remember talking to flight 261 on the radio. She heard from hall talk that flight 261 had a maintenance delay out of Mexico. She did not pull up computer information to verify that the flight was late.

**Betty Bollert**  
**Training Dispatcher**

The operations group interviewed Ms. Bollert on February 3, 2000.

She was hired by Alaska Airlines in 1987, after checking out in 1986 with San Juan Airlines.

Flight 261 pushed at 2130Z, on schedule. The only MEL was an overhead bin lock-inoperative.

The dispatcher can patch in the LAX people with the crew. In the accident case, the SEA dispatcher apparently disconnected off the line while the crew spoke with LAX (although they have the capability to listen).

Both the dispatcher and the accident crew were former Jet America employees. The dispatcher knew the captain. Personally, he was very pleasant. He had varied interests and a good work ethic. He had no problems with anyone else in the office. She was not aware of him having been involved in any previous emergencies.

On the day of the accident, she gave the dispatcher an annual proficiency check that began at 1330 and lasted 90 minutes. Professionally, the dispatcher was very competent. She had administered competency checks to him and he was very thorough. She was not aware of any problems. He had a moderate workload. He was working the D desk that was responsible for the whole San Francisco Bay area. That day there was a flow control that caused higher workloads. Central flow control had issued a delay order due to a low overcast. He did a good job alerting everyone; planning delays. There were 3 other dispatchers on duty at the time. At 1500 she said, "that does it" and ended the check. He did fine. He is very computer oriented. It is easy for him to use the tools. She believed this was his first day on duty out of 5.

After the accident, she made sure he was taken off position. He wrote a statement of what happened and was drug tested. The dispatcher who signed the release was also drug tested.

#### **Elmer A. ("Al") Smith, Alaska MD-80 First Officer**

First Officer Smith was interviewed on February 3, 2000. He excluded the FAA operations group member from participating in the interview.

He estimated his total flying time as about 4,900 hours. This included about 3,500 hours of Air Force time flying in the C-141, of which 2,500 hours was as pilot-in-command or instructor. He had flown about 1,200 hours in the MD-80 in 2 years on the line as a first officer. He was hired by Alaska Airlines on December 1, 1997, and was based at LAX.

He and the accident captain had been in the same Air Force Reserve unit, although the captain retired shortly after First Officer Smith arrived. He recalled flying one trip with the accident captain more than 1 year before (although there may have been additional flights). It was probably a 2-3 day trip. There was nothing remarkable about the trip. The captain's flying skills were top notch. First Officer Smith was relatively new, and was impressed by the quality of pilots at the airline. The captain seemed rock solid, and it was a routine, enjoyable flight. The

captain knew many people at the SEA airport; all seemed happy to see him. He was outgoing and personable. He did not socialize with the captain.

He last saw the captain when they handed off the accident airplane at PVR. He was happy to see them, upbeat, rested, and ready to go to work. It was a typical handoff. They told him that "it's a good airplane, have a nice flight." The accident captain encouraged them to enjoy the sun. The accident first officer had appeared several minutes before the captain. He knew the captain of the arriving flight and they engaged in a friendly exchange about computers for a few minutes. He greeted First Officer Smith. He was very upbeat. He seemed eager to go to work, have fun, and get the job done. This was the first time he met the accident first officer.

He believed that the layover for the accident crew had been 24 hours, arriving about 1500 and taking the bus back the next day about 1430. It was a nice layover. The scheduled arrival of the flight was 1450 PVR time.

The flight down was SEA-SFO-PVR as flight 158. It was "routine as routine can be." First Officer Smith thought that the flight originated in ANC, but there was a pause in SEA and the crew was no longer present. He did not review the logbook, which is the captain's responsibility, but he looked for MEL items inside the cover. The only open MEL item was an overhead bin latch inoperative on row 11 or 13. Every captain pulls out the logbook and checks it, so he had an image of the captain on this trip reviewing the logbook but did not recall specifically seeing him do this. It was a routine thing.

The captain was in the airplane when he returned from his walk around preflight. The preflight was normal, the engine start was normal, and there were no abnormal situations at all. The flight attendant asked whether they would hold for a late passenger whose partner was on the flight, but the captain decided to push. The gate was pulled back and, as the captain later explained, there was no way to know when the passenger would arrive and there were many flights to SFO. The taxi out was routine. First Officer Smith flew the leg to SFO. It was a very routine flight. The flight control check was normal. When he got numbers from operations, he dialed in the cg to set the stabilizer trim. He set the trim computer for 11 degrees flaps. He used the control wheel primary trim to set 14.5 units of trim. He used the primary trim to set the trim as it runs faster. That was the first time he used the trim in the airplane. He used the buttons on the yoke, because to use the suitcase handles would interfere with the captain's arms while taxiing with the throttles. All was routine. To check the elevators, he pushed forward on the yoke to the forward stop to confirm that the powered elevator light illuminated (deep stall recovery system activates). Then he pulled back to neutral to observe the light extinguish and confirm there was no resistance. Then he pulled the elevator to the back stop. Sometimes there was a slight, steady resistance the first time he pulled the yoke back. Finally, he cycled the yoke full forward and aft and confirmed that it moved smoothly and freely. On this flight, the test was absolutely normal, exactly what he felt on every flight.

The aileron check was normal. It involved going to the stops on both sides and confirming free motion. About 1/3 of the way in each direction there was normally a slight resistance, like a detent, when the spoiler deployed and the spoiler light would illuminate. The light illuminated in each direction.

To set the trim, the cg is dialed into one window of the trim computer and the takeoff flap setting is dialed into the other window. This sets the trim index and the pilots match the stab trim to the index.

Normally, flaps 11 are set for takeoff. So he checked the computer. The wheel was set for flaps 11 and stabilizer trim was set within the green marker. On this flight he set flaps 11, and the CG of 14.5 units. The mechanical aspects were routine. The trim itself responded and went right to the selection.

Under Alaska Airlines procedures, the first officer did very little in the cockpit preflight (contrary to the Air Force, where the first officer did everything). He turned on the hydraulics and did the outside preflight, while the captain did the cockpit preflight.

During his first use of the trim, it went right to the spot he wanted. He could not recall which direction, but there was nothing unusual. The CG on that leg was 14.0. It was routine for the aural indicators to sound when the trim is used, although he could not tell positively that he heard them. The takeoff was normal, the stick control forces were normal. He would have recalled if there was anything out of ordinary. In the Air Force, he had one experience where he performed a takeoff with an incorrectly calculated cg, so he knows the feeling on takeoff and recalls it very well.

He hand flew the airplane until about 10,000 feet, engaged the autopilot until the descent, at about 4,000 feet, and performed an approach into SFO. The autopilot was very solid, there was nothing unusual (he was always impressed with the MD-80 autopilot). After disengagement, he used primary trim to land, never secondary, and it worked fine. The airplane was in trim when the autopilot was disconnected.

In SFO, there were no write-ups. He noticed nothing at all unusual about the horizontal stabilizer or elevators during the outside walk around inspection. He specifically looked at the elevators and stabilizer. In the Air Force, he once observed chaffing of an elevator on an adjacent surface. So he now always looked to make sure there were no physical contact of adjacent surfaces, including the aileron, rudder, elevator, and flap tracks. He recalled nothing unusual about the stabilizer position.

The taxi out was unusual because it was necessary to return to the gate after engine start to board a late passenger (whose luggage was already loaded on the airplane). The flight control check was routine. For the trim setting, he obtained the cg from the paperwork, and dialed in the trim. There was a light load that day, runway 1R, and flaps 11.

The captain flew that leg. They blocked out 1 minute behind schedule at 1717Z. There was nothing remarkable about the trip to PVR. It was a little bumpy, there was a nice tailwind, every thing was routine. The captain flew the airplane by hand, to about 17,000 feet and then engaged the autopilot. There were no comments by the captain, and no unusual control inputs.

Regarding maintenance at PVR, they had no contact with them.

They met the accident crew at the bottom of the air stairs. Initially, only the accident first officer was present and he talked with the captain while First Officer Smith got his bags. Then the accident captain approached. First Officer Smith was surprised to see the identity of the accident captain. He had seen him depart on the trip sequence one day before. He had a few words with him and shook his hand. The accident captain was his LEC chairman in LAX. The accident captain saw his ALPA pin and gave him a smile and gesture of approval. He said, "it is a very nice layover. Enjoy the sun."

The layover hotel at PVR was very nice. Sleep was very restful. All rooms had a nice view of the pool. There were athletic facilities, including a pool, beach, volleyball, and a gym. The hotel was not in town, but on the bay with other hotels. The food was excellent, there was a small marina.

First Officer Smith saw the accident captain at Ontario coming to work a few days before. He talked about being LEC Chairman, and discussed union business with another pilot saying that a lot of people showed up at the union meeting.

Regarding Alaska Airlines, he stated pay at the company is good; morale is good or better; and there are really positive people. He was always impressed with the quality of the pilots. Training was very good. CRM training was a good program. Equipment was outstanding. Maintenance was excellent. He was impressed that he could fly a long time without problems.

He had not experienced previous emergencies, although he had experienced anomalies like a spurious warning.

The financial condition of the company was very solid. Relations between the union and the company were normal, although there were often disagreements about issues such as pay and schedules. The JetAmerica pilots were integrated well into the company, and there was no distinction. The Safety Office provided publications and bulletins to the pilots.

He remembered an anecdote from his first trip with the accident captain. He was really new in the airplane, and when he gave the captain the fuel figures he compared them to those of the C-141. The accident captain was also a C-141 pilot. The captain reminded him that this was not a C-141. He appreciated that the captain did not give him lessons. He had already flown, and already had much self-criticism of his own performance in the new airplane without the captain's input. As an instructor, it was important to know when to speak and when not to. The accident captain reflected that.

The accident captain had a reputation in the Air Force as a technical and thorough person; a hands-on pilot type rather than a non-flying manager. If someone did not measure up, he would tell them.

During the walk around, there was no paint missing or any other evidence of anything unusual where different pieces contacted in the vertical stabilizer. The tail was not de-iced in SEA; maybe just the wings.

### **Steven Dale Shrock, Alaska MD-80 Captain**

Captain Shrock, was interviewed on February 3, 2000. He excluded the FAA operations group member from participating in the interview.

Captain Shrock estimated his total flying time as 12-13,000 hours. He started flying the MD-80 as a first officer in 1981. He had served as a captain on the MD-80 since 1983. He also served as a JetAmerica check pilot during 1984-1985 years. He also served as an Alaska Airlines check airman from 1984-1990. Since that time he had flown the line. The total MD-80 flight time as a first officer was about 1,200 hours. As captain on the MD-80, he estimated 7,500 to 8,000 hours.

Captain Shrock knew the accident captain very well; he was a friend. The accident captain was also was a check pilot who worked for him while he was chief pilot at JetAmerica. The accident captain taught ground school at Jet America and was very energetic. Captain Shrock had never flown with the accident captain, nor did he socialize with him. He had flown with the accident first officer for a month about a year ago.

The last time he saw the captain and the first officer was in Puerto Vallarta (PVR). He and his first officer were the only crewmembers to leave the airplane, and outside the airplane he met and talked briefly with both accident crewmembers. The accident first officer came up first and they talked a few minutes about computers and on-line banking. Then the accident captain walked up and greeted him. The accident captain said that the layover was good and that they had watched the Superbowl. Captain Shrock said that the airplane was good and that there were bumps along the way [referring to the ride at altitude].

Captain Shrock flew with the accident first officer for 1 or 2 whole months, last year. The pilot abilities of the first officer were excellent. He was very experienced; retired from the Navy with military experience in the C-9. The first officer was a wonderful person, easy going, pleasant, and very thorough. They did not socialize as they lived in different cities, but they had mutual friends.

Captain Shrock picked up the accident airplane in SEA in the morning. It was a through flight from ANC. The previous crew that brought the airplane in was gone when he arrived.

Regarding preflight procedures, the first officer had a preliminary safety setup and then the cockpit preflight was the captain's responsibility. The trim system check consisted of checking the red guarded switch for primary stabilizer trim. With the suitcase handles, check the operation of the trim motor, and check that it required two handles to operate the system.



The trim check did not include running the primary or alternate trim from one stop to the other. There was a caution not to operate the trim motor too long, because of a thermal cutout. There was an aural tone associated with the trim moving. He recalled hearing the sound that morning during the trim check.

He had experienced runaway trim during simulator training and, over the years, had experienced this both while flying with the autopilot engaged and while hand flying the simulator. If the autopilot trim ran away while you're distracted; it was slower and took more time to recognize. If the airplane was out of trim enough, the autopilot clicked off. It could be tricky to tell which trim failed; confusing in the heat of battle. When hand flying, it was very apparent. With the autopilot engaged, a runaway trim situation was harder to diagnose.

Everything was normal during the preflight and trim check on the accident airplane in SEA. The first officer flew the leg from SEA to SFO and the only unusual occurrence was a passenger problem on the flight. The taxi, rotation, and takeoff were normal. Nothing unusual happened on that flight. It was so normal that few things stuck out about it. The captain flew the second leg out of SFO. The stabilizer trim check was the same on a through flight as on the first flight of the day. Everything worked normal. The rudders performed in a standard manner during the rudder check. There was nothing remarkable about any system. The captain liked to hand-fly above 10,000 feet on the SFO departure. He used trim from the primary switch on the yoke, and engaged the autopilot at 18,000 feet after the climb check. All was normal. There were no autopilot anomalies during the flight. They flew a 20-mile arc approach to PVR (for spacing), and he kept the autopilot engaged during this time while they slowed up. When he clicked the autopilot off at 800 feet, it was in trim. If the trim had not worked properly, the big configuration and trim changes from the approach would have revealed it. After disengaging the autopilot the primary electric trim worked normally until landing. The amber autopilot out of trim light did not come on.

The pilot-not-flying was responsible to call maintenance and ramp operations. The company used other airlines for maintenance at PVR and they were very helpful. All Mexican maintenance was contract. He experienced a bird strike in PVR that damaged an engine, and maintenance was very good.

He did not have any idea how the media obtained the idea that they experienced trim problems on the flight.

The accident first officer did not mention what he did during his layover. He only talked about computers. He seemed real happy and smiling. Then the accident captain came over. Both accident crewmembers seemed rested, relaxed, and were smiling; in good spirits. They seemed like themselves.

Previous to this meeting, he had not seen either of the accident crewmembers for several months.

JetAmerica pilots have been well received. The merger was pretty seamless.

Morale in the company was good. The company was doing well. It had always felt like a family and been a pleasant place to work. Training was excellent; the company spared nothing. Equipment was excellent. The company had a young fleet, and maintenance responded well. The Safety Office was good. The Director was really thorough and dedicated. He kept bringing issues to the attention of the pilots.

Hand-flying control pressures were normal during the flight. Following Navy practice, he reviewed the last 10 write-ups in the logbook when he preflighted the airplane. There were normal signoffs and minor line items.

The airplane did not require deicing in either SEA or SFO.

### **Larry Jones, Manager MD-80 Flight Operations Training**

The operations group interviewed Mr. Jones on February 4, 2000.

Mr. Jones was a retired USAF Colonel and had been with Alaska Airlines for 12 years. He had been the manager of the Flight Operations Training for the past 2 years. He had about 10,000 hours total time and was type rated in the MD-80. There were 3 ground school instructors that were type rated in the MD-80, including himself. Three others were not type rated. There were seven instructors, including him.

Two and one half years ago, they went to AQP. The majority of pilots like AQP. "We fly as we train." The MD-80 pilots are in AQP 100%. Training was a 4-year cycle that enabled all the systems to be covered more in-depth. It overlapped in a 2-year cycle of the distributed materials. The overlap allowed some of the systems to be covered every year. There was a graded open book test provided to crews one month before ground school. In the 4-year cycle, this allowed the crews to get into abnormal procedures. There was a log of every question missed. The pass rate was 99% by the pilots. There was no option in the AQP program to opt for the old formatted training.

The FAA APM relationship was good. The POI had been very good in the relationship. QRH changes had been approved timely by the APM.

Fixed based simulators were incorporated in the ground school. The ground school was now 15 days. It used to be 14 days, but one day was added for GPS. The two accident pilots treated him with respect. There were 3 days of ground school, followed by 11 days of flight guidance aircraft systems trainer (FGAST) and ground school. The ground school instructors and the flight managers worked together to produce the changes in training.

Ground school instructors rate the student coming through the school. It was a pleasure to see both accident pilots as they did well in school. He taught the accident captain about 3 years ago. He taught the first officer in 1997 and rode a jumpseat on his airplane in September of 1998. He was one of 3 pilots on the flight to Russia. The first officer did not have any children. He was dedicated to his wife. The flight to Russia was uneventful.

In recurrent training, you were asked to teach and go beyond the rote procedure; to use all available resources. He believed this crew was doing that. He did not believe any ground school instructor was called by dispatch to help with the problem on the accident flight. He has had calls from dispatch for instructors to help with other flight events at other times.

During AQP, the oral preps and FAA orals were replaced by a closed book written exam. A single AQP sign-off box replaced the whole training record. Prior to the AQP, the preps were done by Mr. Jones. Both the captain and the first officer were trained under the old system. The pass rate was nearly 100%. The oral prep was systems, operational knowledge and situational knowledge.

The previous POI did not affect the way ground school and training was taught. There was a good working relationship with the current POI.

### **Robert S. Graves, MD-80 Aircrew Qualification Program Manager**

The entire operations group interviewed Captain Graves on February 4, 2000.

Captain Robert Graves had been a pilot for Alaska Airlines since January 7, 1980. He had accumulated 10,000 hours in the MD 80 and had a total time of 16,000 hours. He had been in his current position since January 1995. He was an MD 80 captain, an instructor pilot, a check airman, an instructor evaluator, and an FAA Aircrew Program Designee; all on the MD 80.

Captain Graves reviewed the procedure by which Alaska Airlines became certified to conduct AQP training and checking on the MD 80. Phase 1 application occurred in 1994. Phase 2, approval for Single Visit Training, occurred in late 1995. Phase 3, small group tryouts, a very short program, took place in a timely manner, and Phase 4, AQP began in October of 1998. The other aircraft types at Alaska Airlines are still in SVT.

He reviewed the differences between Appendix base training and AQP. The significant difference was the pilots returned to the schoolhouse for training once each year rather than two visits for the captains and one for the first officers. AQP required the company keep accurate de-identified data on all tasks accomplished, and to provide this data to the FAA. This data was then used to tailor the training program to the flying needs of the airline. A significant change to the pilots was they must fly "First Look Maneuvers" without being prebriefed by an instructor. The sequence of events was two days of ground school followed by a filmed no-jeopardy LOFT, a Maneuver Validation simulator conducting difficult tasks such as V-1 engine failures, single engine approaches and missed approaches, emergency and abnormal situations. The third simulator period is LOE (Line Operational Evaluation) which was a line oriented two-leg flight that encompassed normal, abnormal, and emergency operations. The prebriefing covered all of the critical action emergencies, limitation questions, and systems questions. The training must be done as a crew (no periods with 2 captains) with each pilot beginning one leg as the pilot flying. Cockpit Resource Management (CRM) was graded just like a flight maneuver event. The FAA APM must complete the Alaska Airlines captain training program and he was

evaluated just like a line captain annually, except that he does not receive a line check. The check airman and instructor pilots receive special calibration training annually. They must be evaluated by an instructor/evaluator annually, and the instructor/evaluators must be evaluated annually by the AQP Manager or the Flight Manager. The Aircrew Program Designees (APD) must be evaluated annually by the FAA APM. The APM must also evaluate the AQP Manager and the Flight Manager annually.

The instructor staff had standardization meetings quarterly, and the Instructor/evaluators met monthly and published findings for the instructor staff after each meeting.

Captain Graves was asked if he conducted training on the stabilizer trim system. He said he did and described the details. The primary and alternate trim systems were both covered in depth during initial ground school, and then regularly in recurrent training at least every second year. During initial training in the simulator, all malfunctions were covered in flight applications and the emergency for runaway trim was covered a minimum of four times (primary runaway nose up and down, and alternate runaway nose up and down). Special attention was given to helping crews identify the difference between the two types of runaways (fast or slow), how easily they could be confused, and the ramifications of misidentifying the type of runaway trim.

As a learning tool, typically the instructors wanted the student to recognize what they had. With a primary runaway nose down it didn't take long to reach the limits. It was easy to not recognize what type of runaway trim you had; the troubleshooting was more difficult. The instructors gave them the worst possible case in order to maximize learning. Once the trim was against the stops, and the cutout switch was activated, the student may have thought they cured the problem. If it was an alternate runaway trim, it could be overcome with the primary trim. If it was the alternate runaway nose down trim, and the autopilot was operating, and the trim got to the full nose-down stop, if the crew turned off the cutout switch it appeared that they had solved the problem because the trim index would have stopped moving. It did not stop because of the trim cutout switch; it would have stopped because the trim was at the full nose-down limit, not because the trim cutout switch was activated. However, leaving the trim cutout switch activated, or pulling the circuit breaker for the primary trim, would prevent the crew from operating the primary trim motor which had the capability to overpower the alternate trim runaway and restore a more normal trim condition. They would have, in fact, deactivated the only operational trim system. The evolution of retrimming with the primary trim toward nose-up would alleviate the problem by driving the trim from the full nose-down situation. However, when the primary trim switches were released, the alternate trim drove back to the full nose-down limit unless the alternate trim circuit breakers were pulled.

Ground school or distributed materials covered every system of the aircraft in a 24-month cycle. The AQP circular mandated this. In the simulator maneuver validation period, the selections of emergencies and abnormals were left to the discretion of the check airman. A jammed or runaway stabilizer event could be run in the simulator but may not be. The jammed stabilizer event was very time-consuming. Runaway trim was a quicker event to evaluate however, this system had not been shown to be a particular system failure that was emphasized.

Not in any of the instructor/evaluator or check airman meetings has the subject of trim or stabilizer been brought up as a problem.

Captain Graves stated that he did not have any training with the first officer. He knew the captain. He stated that the captain came from JetAmerica and he integrated well into Alaska Airlines. He last saw him in November 1999. There was nothing remarkable about the meeting with the captain. They both had flown the same type of C-141 airplanes.

AQP allowed him to vary his training program whereas under the old system training was set and controlled by the FAA.

Anyone can request to have additional training and that was permitted under AQP (however, it was not non-jeopardy). There may have been only one pilot take advantage of this. It may not have been widely known.

The company had petitioned the FAA for 24-month line check intervals. A captain could not get a line check for 3 months after receiving one. The 24-month line check was approved under SVT. Part of the approval required 50% of captains to receive a line check annually. All new captains received two line checks before entering the 24-month review process. AQP was computerized. There were no paper products. All electronic data was available to the FAA.

The accident captain satisfactorily completed two evolutions of AQP and the first officer satisfactorily completed one evolution.

**Daniel Wasserstrom**  
**Director of Flight Operations Training**  
**Alaska Airlines**

The entire operations group interviewed Mr. Wasserstrom on February 4, 2000.

He retired from the United States Air Force in 1982 after 26 years. He joined Alaska Airlines in January 1984, as an instructor. He became Flight Operations Training Manager, and in 1997, was promoted to his current position.

He was type rated in the B-737-200, and was a simulator instructor. He did not fly the line. His total flight time was greater than 10,000 hours.

The current training was not computer based but the company was working on it. The AQP program began in 1997, but the Phase IV did not go into effect until more recently. The advantage of AQP was the program could be tailored to your operational needs; and you do not have to focus on pre-specified areas.

A strength of the Alaska Airlines training program was that it trained pilots to understand the systems; not just respond to a light, nor make them engineers. The weakness of the program

was that the company was in a growth mode and the quality of training demanded more instructors.

Twice per month there were FAA coordination meetings. The Flight Operations Training Manual was a coordinated effort between Alaska Airlines and the POI. The approved training program took about 1 year to finalize. It included B-737 training and AQP, Subparts N & O (of the FAR) and SVT (single visit training). The B-737-400 program should be AQP by January 2001.

Mr. Wasserstrom principally dealt with the POI. The current POI, who has held the position since 1997, had been extremely good. There had been close cooperation. The POI supported the AQP training, although it was a learning process for everyone.

The relationship with a previous POI began well, but turned into a difficult relationship. There was a reluctance to tell her everything due to the lack of trust. It became necessary to send correspondence to her by certified letter. She downgraded a check airman in ANC. Mr. Wasserstrom understood that the company complained to her supervisor and higher management and action was taken. He was not directly involved with her at the time.

The POI who preceded her was very good.

A review of the critiques had not supported an interest in an additional training period, jeopardy or non-jeopardy.

Mr. Wasserstrom was not familiar with either of the accident pilots.

### **Paul A. Majer, Chief Pilot, Alaska Airlines**

The entire operations group interviewed Captain Majer on February 4, 2000.

Captain Majer estimated his total flying time to be about 7,000 hours. He had type ratings in the B-707, B-720, B-727, B-737, DC-9, and the CE-500. He was hired by Alaska Airlines on April 8, 1985. He has held the chief pilot position for 2 years.

He interacted with the POI, Mr. Dennis Harn, and the two APMs. He stated that the relationship was very good, strong, and respectful. Mr. Harn was meticulous with attention to detail, and very responsive. Mr. Harn had been an assistant POI for Alaska Airlines and for an interval was not on the certificate before he became the POI. The APM was also very attentive to the airline.

There was a formal relationship with the FAA in place. Meetings were held every Thursday with the FAA and through the Director of Regulatory Compliance. The Director of Regulatory Compliance was the focal point through which all formal actions passed. The Director of Flight Safety and the Director of Regulatory Compliance reported to the Vice President of Flight Operations.

He stated there were 34 MD-80s, excluding the accident airplane. There were 1,255 pilots plus 8 new hires for a total of 1,263. The morale was medium with the pilot group. There was a contract in 1997 that still had unresolved issues.

He knew the accident captain. He was a real solid individual. People liked flying with him. He was very caring. The captain was the LEC [local ALPA Chairman] representative for the LAX base.

He did not know the first officer.

Most problems in Mexico involved language and availability of maintenance. Most operations personnel in Mexico were Alaska employees. He believed that all maintenance was contract, but was not sure.

Maintenance control was staffed with 2 people for the flight crews and mechanics. They coordinated all maintenance activities system wide. The Director of Flight Control (DFC) and maintenance control worked together within the same space. At present, the DFC and maintenance control were being organized as a Systems Operations Control (SOC). The airplane scheduling, DFC, maintenance control and the passenger services manager reported to the SOC. Pilot scheduling and dispatch reported to the chief pilot.

He stated the captain had completed a full cycle under AQP qualification and had talked to him about the program and how good it was.

Captain Majer commented that neither pilot had been disciplined during his tenure as chief pilot.

The last accident prior to this crash involved a MD-80 nose gear collapse on landing about 2 years ago. In 1976, in Ketchikan, Alaska, there was a B-727 runway overshoot that resulted in one fatality.

There was a B-727 crash in Juneau, Alaska in 1971.

The Safety Office was outstanding. Through use of the QARs and the FOQUA program it showed that "we fly as we train and train as we fly." The fleet has 5 QARs, all on the MD-80s.

The former POI used the emergency power of revocation to suspend the Juneau departures relating to Lemon Creek and Fox Departures.

Regarding pilot morale, it was better at the outlying stations than here in Seattle.

There are 5 duty officers that rotated a 24-hour schedule every week. During normal business hours, the instructors were on the other side of the wall. Should an airplane inflight need assistance, the procedure to get an instructor would be for the DFC or the duty officer to

contact one. The instructor would have to come to the maintenance control location or to the DFC in order to talk to the flight. This did not happen on the accident flight.

He believed if this plane could have been pulled out, this crew could have done it.

**Steven R. Franklin**  
**MD-80 Air Group Program Manager, Alaska Airlines**  
**Seattle Flight Standards District Office**  
**Federal Aviation Administration**

The entire operations group interviewed Mr. Franklin on February 5, 2000.

Mr. Franklin joined the Air Force in 1977 and served as a C-130 pilot. He still flew in the Air Force Reserves. His total flight time, including military and private flying, was about 3,500 hours. He held type ratings for the B-767, B-737, B-757, L-382, and MD-80 airplanes obtained through the FAA. He joined the FAA in 1984. He worked in Flight Standards beginning in 1987, first as an inspector in the SLC and SEA offices and, since 1992, in his current position as Alaska Airlines APM. This APM position was newly created when he became the first person to hold it.

As APM, he monitored all paperwork by the company in his area, served as the contact point for all FAA material, and oversaw the aircrew program designees. The FAA Handbook specified the need for an APM when the company had 40 certifications per year, plus an AQP program required an APM. He was involved in the AQP process from the outset, and was the only one on the operations side who had been involved in the process of bringing the designees into the program.

The traditional training program had inflexible requirements, more like “filling squares,” for all pilots. AQP allowed the airline to reflect its unique operating environment in its training. AQP allowed Alaska Airlines to emphasize Juneau and Reno airports rather than a generic airport. Alaska Airlines started out with what they thought was needed in their training. They trained to proficiency, and kept data on the training and checking. By reviewing the data, the airline could change its emphasis to those areas where pilots showed difficulties, subject to FAA approval.

The designees served as his eyes and ears and he placed credibility in them. They were very experienced compared to him. It was not a “we-they” relationship, but a “we” relationship. There were roadblocks generated by the company that caused Alaska Airlines to spend more money and lengthen the process. The roadblocks were due to the airline’s desire to have the best training program. The FAA headquarters in Washington viewed the Alaska MD-80 AQP program as a model program. There were no particular problems because it had been a collaborative effort. The present state of AQP was Phase 4, which meant Washington was starting to shift the control back to the CMS. Washington still had joint approval with the CMS. When Phase 5 arrives, the approval authority will move largely from headquarters to the FAA.



local level and allow the FAA to make fine adjustments. The feedback from pilots was all positive, “we’re finally being trained the way we fly.” AQP was a big change.

When he began the job, he was very surprised at the responsiveness of the company to his input despite his limited MD-80 experience. Although he had disagreements with Alaska Airlines, it concerned professional issues and did not involve personal relations. He experienced a good and supportive relationship with Alaska Airlines. By contrast, he had experienced difficulties at times from his FAA upper management that had involved meddling and might be viewed as an overriding concern to keep the company happy, rather than compliant.

Mr. Franklin reviewed the history of Principal Operations Inspectors (POI) at Alaska Airlines. One POI left the FAA to take a management position at Alaska Airlines as Director of Safety, and Mr. Franklin felt that this job change could be viewed as unethical. Another POI, who emphasized compliance, did not receive support from FAA senior management. Another had strong beliefs and also emphasized enforcement. The company became dissatisfied with her performance and she was removed from her position as POI because she did not fit her manager’s image of a POI. She later resigned from the FAA. Mr. Franklin noted that there have been 8 POI’s in the 10 years since 1990. He felt that this signaled to the aviation industry that there was an instability in the FAA Certificate Management Section. He felt that there was an overriding concern to keep the carrier happy enough “not to complain to Washington.”

He believed he would be removed from his position by FAA management if the company complained about him. He believed that the company was happy with both him and the POI.

Implementing the AQP program was very expensive. Hopefully, there would be a future savings when fully implemented due to eliminating the 6-month training cycle and this concept was sold by the FAA to the airline. He was convinced, based on pilot input, that the results were well worth the expense.

He did not know the accident pilots.

He indicated that morale at Alaska Airlines was good and that the company had a strong sense of family (which tremendous recent growth had begun to pressure).

He described relations between the company and the pilot union as good and bad depending on the issues. There were contentious issues such as flight and duty time limits on domestic trips in Alaska, but the company and union cooperated in developing a good program for preventing altitude busts (which the FAA headquarters in Washington failed to renew).

The growth of the airline was shown in enlargement of the physical buildings and the seniority lists. It was growing because it was a good company, that did many things right and treated its passengers well. They got awards from travel magazines. People liked the company. The growth put pressure on training, as they had difficulty training pilots to their standards as fast as they were needed. The company was on the leading edge of many technologies, including AQP, GPS, RNP (required navigational performance), HUD, and enhanced GPWS.

Regarding equipment, it was rare for him to see an MEL sticker whenever he inspected an Alaska Airlines MD-80 logbook; in contrast to the practice at other carriers. Crews reported things as soon as they saw them, and maintenance repaired them. They had very clean airplanes and the youngest fleet in the industry.

He characterized maintenance as, according to his understanding, generally pretty good. It was not his area, although he saw there were a minimum of MEL stickers and that pilots received maintenance at the gate when they called for it.

Regarding the Safety Office, he stated he was “out of the loop.” Previous POI’s invited him to attend meetings with the Safety Office, but, under the present POI, he is not invited to attend these meetings although he believed it would be valuable.

While he handled violations, he preferred to prevent them by discussing problems directly with the company. He had received guidance from higher management that he should not do this but rather refer problems to them for resolution.

Senior FAA management needed to seriously review the staffing needs of his group. They needed to hire a cabin safety specialist and a full time assistant POI. Since Alaska Airlines was one of the top 10 carriers, the FAA program was ATOS and required permanent staffing of certain posts.

Under the AQP program, pilots could voluntarily request additional training and he knew of one case where a pilot did this. Where necessary, other pilots recognized by the program were given more frequent training.

The problem involving falsified records occurred around 1994, and involved a falsification of training records. Check airmen signed that they had received required ground school training when they were not actually attending. The Vice-President of Flight Operations falsified the attendance roster and 3-4 check airmen were implicated.

Alaska Airlines had 5 QARs (quick access recorders) on the MD-80 airplanes. The data was useful.

He had attended all AQP monthly supervisory meetings and all IP (instructor pilot) meetings. He had never felt excluded, or felt that people were holding back from discussions of sensitive issues, because of his presence. Whenever a pilot had failed a check ride, he had usually found the paperwork on his desk within 12 hours and often had been invited by the company and the instructor pilot to attend the recertification.

Alaska Airlines worked more than other carriers to help a new-hire pilot succeed in initial training.

One former APM for Alaska Airlines solicited check airmen to subscribe to a commercial marketing operation he owned, and received disciplinary action on another issue and was relieved [of his position].

Mr. Franklin indicated he believed that the cause of the accident may involve a catastrophic failure of the airplane and had no relation to the history of instability of the POI program.

### **Dennis M. Harn, FAA Principal Operations Inspector Alaska Airlines**

The entire operations group interviewed Mr.Harn on February 5, 2000.

Mr. Harn stated he had a total flying time of about 8,000 hours. He had an ATP with type ratings on the Dash 8 and the Boeing 737. He had flown as a captain for a commuter airline in Alaska prior to joining the FAA. He came to the FAA in 1988. In 1991, he transferred to the air carrier section. In June 1993, he became the assistant POI (APOI) for Alaska Airlines. After leaving the Alaska group in 1996, he became the POI for Alaska in October 1997.

He stated the FAA had conducted an investigation into falsification of records in 1993-1994. In 1994 to 1996, there was a congressional mandated safety study of departure procedures out of Juneau, Alaska. There was an enforcement action against the company and pilots due to the failure of pilots to enter maintenance discrepancies in the logbooks and altitude deviations.

There was a NASIP inspection just before he became the APOI. There were no significant findings.

There had been several Department of Defense inspections including an annual desk audit. Every 2 to 3 years, there was a weekly facility inspection that included enroute inspections. The DoD commended the company for implementing safety programs.

Regarding his relationship with the company, he said that from the beginning in 1993, the relationship was rocky and definitely “regulator-regulatee.” During his tenure as the APOI, the relationship was sometimes positive and sometimes not, depending on the issues, although always very positive with the people he dealt with. When he left the certificate as the assistant POI there was internal friction in the office. He then later returned to the certificate after one year and became the POI. As POI, the relationship was very positive. The Vice President of Flight Operations had been very proactive and had set a good tone.

When the CMS office was established while he was the APOI, and there were two aircraft program manager (APM) positions created.

The current staffing included 2 APMs, one for the B737 and the other for the MD-80. There was one assistant APM full time for the B737. A cabin safety inspector position had been authorized but has not been filled for seven months. The assistant POI was a part time position.

The CMS organization reported to the Seattle FSDO (NM01).

The AQP Phase 1 began when he was the assistant POI. He left the certificate and when he returned to that position Phase 3 had been approved. Last year, Phase 4 [initial approval] was granted. AQP had to be developed by Alaska Airlines from the start. Previously, Subparts N and O of the FARs was the way training was conducted by Alaska Airlines. AQP mandated data collection. It also mandated that check airmen take a training program to standardize grading criteria. Under Subparts N and O, the FAA was totally reliant on instructor comments. AQP removed that problem.

He said the downside to AQP was that the records resided in a computer. The program was stored electronically rather than in book form. It was much less intuitive to find things. The information was not available to the FAA other than in aggregate form. The data was de-identified.

The individual training records for qualification were kept separate from the aggregate training records.

In 1993 there were 700 pilots. In 2000 there were 1,200 pilots. Other than a tax on resources on the FAA, there had been no problems.

Alaska had several innovations; RNP, enhanced GPWS, AQP, FTMS (paperless system), and the HUD program.

One issue with the Alaska Safety Office was that the individual wore three hats. He did not interact with the FAA operations directly. The individual was the Director of Safety, Director of Maintenance QC, and Maintenance Training Director.

The MD-80 side of the house was “vanilla.” There was nothing out of the ordinary in the MD-80 operation. There were no issues, only tweaking of the system.

Management eventually supported him or told him, “why not.” His relationship with Alaska management may not always be eye to eye, but very cordial. They were up-front, and informed. They talked to him on issues and were very candid. They kept him abreast of internal issues. Sometimes he had to work hard in order to make a sale to Alaska management.

Under AQP, an outside inspector would have to have completed Alaska AQP training in order to administer checkrides.

The Safety Office had an open line of communication with the FAA. They did not want to hide anything.

If revisions to the training program were delayed, it could impact Alaska’s training. He stated they try to approve changes more rapidly in order to expedite the process. Under a previous administration, it took excessive time for approval that may have impacted training. For example, it took 3 years to get one change approved, which he thought was excessive.

The company had been good at using the provision of self-disclosure and taking care of problems.

### **Harold Samdal, Captain MD-80 Alaska Airlines**

David Ivey, NTSB and Lyle Parker, Alaska Airlines representing the operations group conducted a telephone interview on February 5, 2000

Captain Samdal picked up airplane number 973 in Seattle. He and the first officer flew the airplane from Seattle to Reno, Nevada. There was nothing abnormal during the preflight or the flight down to Reno. He was the pilot flying on this leg.

In Reno, the first officer was the pilot flying the airplane as flight 631 to Seattle. They departed on runway 16R and used a flap setting of 4 degrees that corresponded to a gross weight of slightly less than 135,000 pounds. The flap setting was based upon optimum flaps. After the landing, an overweight landing was entered in the logbook as the airplane was landed at a gross weight of about 133,100 pounds.

While passing about 7,500 feet in the climb, toward the Mustang VOR, the first officer tried the primary trim and it did not work. He also tried the alternate trim and it, too, did not work. The first officer was hand flying the airplane. They extended on to downwind and decelerated to 210 knots, and extended the slats. The airplane was flying o.k. He did not declare an emergency, as it became an operational nonevent. The trim began working again. The speed was about 210 knots when the trim first failed to operate. The airplane was clean with the slats retracted and was accelerating towards 250 knots. He extended the downwind and got a hard altitude. The descent check was accomplished and an approach speed was calculated. The controller asked if he wanted to declare an emergency and he said, "no." They rolled the trucks anyway. The bug speed was calculated for 134,000 pounds. He estimated the bug was about plus 7 knots for flaps 40 degrees. Downwind while configuring for the approach, they regained the trim and lost it again. When the airplane was slowed, it was almost in trim. The first officer did not have to use a lot of backpressure.

The captain did not put his finger on the trim indices to see if it was moving. He thought the trim motors might have heated up. On the ground the trim worked. He thought the trim motor failed.

When the airplane started accelerating from 210 to 250 knots, the first officer started trimming nose down when the problem was discovered. The first officer stated that the trim was not working; both primary and alternate systems. The speed had been set to 250 knots, so the decision was made by him to slow the airplane and the slats were extended. The approach was flown at 140 knots, almost in trim. The primary trim came back and then went away again. The suitcase handles, and his yoke switches were checked for operation but the trim did not operate.

**Don Wimberly  
MD-80 First Officer  
Alaska Airlines**

The entire operations group conducted a telephone interview with First Officer Wimberly on February 6, 2000.

He stated he had about 18,000 flight hours. He had flown the MD-80 since 1990, and had about 9,000 hours in the airplane.

The inbound flight 624 from SEA to RNO was routine. The incident flight was flight 631 from RNO to SEA. Preflight internal and external inspection was normal. Taxi out time was 1817 local, and he was the flying pilot. The takeoff was made with an optimum flap 4 setting with the trim set at 7.1 degrees. This was not far from the landing setting. Liftoff was normal, gear up, flaps were retracted and slats were left extended to make a 180-degree course reversal using 30 degrees angle of bank at 210 knots. Rolling out on the departure heading, the flaps were retracted and the airplane accelerated to 250 knots. On acceleration, the stick forward aerodynamic pressures approximately doubled. Passing through 7,000 feet, nose-down trim was required and he reported to his captain that the primary trim was inoperative. Alternate trim was attempted and also found to be inoperative. Both yoke switches were tried as well as the manual suitcase handles but to no avail. He reconfigured, to slats extend, and the trim began to work. He used primary trim 2-4 times and it functioned normally. He tried the alternate trim and it functioned normally.

On his next attempt to relieve stick force pressures with primary trim, it was once again inoperative. Alternate was attempted and it too, was inoperative. Primary, secondary, and suitcase handles were ineffective. He decided to land with flaps 40 due to an overweight landing condition. The landing flare appeared normal, although the stick force pressure appeared higher than expected, similar to curling a 15-pound bar bell. He never used the autopilot and no abnormal checklist was conducted due to time constraints. Circuit breakers were not checked until after landing and none were found open. The trim index at landing was approximately 1 ½ inches from the aft stop. The captain reported that both trims were operational during taxi.

The pilot reported having 3 previous primary trim thermal cutout malfunctions in the previous 9 years. None were accompanied by alternative trim failures.

The flight was flown at night, in visual conditions. Total time in the air was 27 minutes. The captain reported that the trim was operational on taxi-in. The tail was not de-iced in either SEA or RNO.

DCA00MA023

Alaska Airlines, Flight 261, N963AS, 1-31-00

Summary of Telephone Interview conducted on April 17, 2000.

Participating in the interview:

Mr. Richard Rodriguez, NTSB

Ms. Cindy Keegan, NTSB

Mr. David Ivey, NTSB (Operations Group Chairman)

**Carlene H. Walker, Flight Attendant on Alaska Airlines flight 158**

Hire Date: May 6, 1989.

Do you have any method of recording the tail numbers on previous flights or distinguishing between different airplanes that you crew on?

She personally, did not make an effort to keep tail numbers on the different airplanes. Some other people may do that, but she didn't.

Which flight leg(s) did you fly on the accident airplane? SEA-SFO-PVR.

Did you see, hear, observe or report anything unusual during your flight on 1-31-00 (on N963AS)? She did not hear or feel anything abnormal on the flights from SEA or SFO.

At anytime during the flight did you notice any pitch changes in the airplane that seemed unusual? She did not notice any pitch changes on the airplane during either flight

During taxi, takeoff or landing did you hear any unusual noises in the airplane, and if so, where did they originate? No, everything seemed normal.

Was the airplane de-iced prior to departure, and if so, did you hear any unusual sounds from the rear of the airplane before or during the de-icing? She did not remember if the airplane was de-iced prior to departure.

What seat position did you occupy during the flight? She was seated in the tail cone jumpseat. It is a double seat.

Did you hear any reports from other Alaska Airlines crewmembers of problems/malfunctions of the accident airplane? No.

How do you report cabin discrepancies to the cockpit? She writes up a cabin discrepancy form and sends it up to the flight crew.

She said she did not talk to the flight attendants or pilots who brought the airplane in from ANC.

She could not recall if the airplane had been deiced in SEA or SFO, although she was familiar with the de-icing procedure.

She stated the flight attendants stayed with the cockpit crew on a layover in PVR. After finding out about the accident, she called the captain. The captain, Mara, and her, got together and debriefed relative to the accident. They asked the captain about the airplane and he confirmed that nothing was wrong with the airplane.



DCA00MA023

Alaska Airlines, Flight 261, N963AS, 1-31-00

Summary of Telephone Interview conducted on April 17, 2000.

Participating in the interview:

Mr. Richard Rodriquez, NTSB

Ms. Cindy Keegan, NTSB

Mr. David Ivey, NTSB (Operations Group Chairman)

**Joyce G. Sarff, Flight attendant on Alaska Airlines flight 158**

**Hire date: June 1971.**

Do you have any method of recording the tail numbers on previous flights or distinguishing between different airplanes that you crew on? She recognized tail numbers of airplanes if she had been on them before. She did not keep a log with airplane numbers but would recognize an airplane if she had written it up before. She almost exclusively flew MD-80 airplanes.

Which flight leg(s) did you fly on the accident airplane? She flew SEA-SFO-PVR.

Did you see, hear, observe or report anything unusual during your flight on 1-31-00 (on N963AS)? No.

At anytime during the flight did you notice any pitch changes in the airplane that seemed unusual? No.

During taxi, takeoff or landing did you hear any unusual noises in the airplane, and if so, where did they originate? No. She did not hear any odd noises.

Was the airplane de-iced prior to departure, and if so, did you hear any unusual sounds from the rear of the airplane before or during the de-icing? She could not recall being de-iced in SEA. It is very rare on early morning flights that they are not de-iced.

What seat position did you occupy during the flight? The "A" flight attendant seat which was forward and inboard on the jumpseat.

Did you hear any reports from other Alaska Airlines crewmembers of problems/malfunctions of the accident airplane? No.

How do you report cabin discrepancies to the cockpit? Through the use of the Cabin Discrepancy form.

She stated she heard no unusual noises during taxi, takeoff or during the flight on either of the two legs. Neither of the other two flight attendants reported anything to her regarding this issue either.

The flight to PVR had tailwinds and they arrived there about a 30 minutes early. The flight was quick and very smooth. Upon arrival, they did not have a gate, so they parked on the tarmac, deplaned, and boarded a bus. They did not see the outbound accident crew, perhaps due to their early arrival.

She met the captain later in the evening after learning of the accident. She said the crew had been talking about it for hours and that was, "about it." She said she just called the captain, "Terry" and he said, "Joyce." They both gave a thumb's up to each other, regarding the airplane.

DCA00MA023

Alaska Airlines, Flight 261, N963AS, 1-31-00

Summary of Telephone Interview conducted on April 17, 2000.

Participating in the interview:

Mr. Richard Rodriguez, NTSB

Ms. Cindy Keegan, NTSB

Mr. David Ivey, NTSB (Operations Group Chairman)

**Doreen Smithson, Flight Attendant on Alaska Airlines flights 199 and 158.**

Hire Date: March 15, 1985

Do you have any method of recording the tail numbers on previous flights or distinguishing between different airplanes that you crew on? No, unless there was an airplane she may have written up or if there was a distinguishing mark. She was not in the habit of looking at airplane numbers.

Which flight leg(s) did you fly on the accident airplane? She flew in the airplane from SEA to ANC [flight 199] the night before the accident, and from ANC to SEA [originated flight 158].

Did you see, hear, observe or report anything unusual during your flight on 1-31-00 (on N963AS)? She noticed nothing unusual on either flight.

At anytime during the flight did you notice any pitch changes in the airplane that seemed unusual? No.

During taxi, takeoff or landing did you hear any unusual noises in the airplane, and if so, where did they originate? She heard no unusual sounds.

Was the airplane de-iced prior to departure, and if so, did you hear any unusual sounds from the rear of the airplane before or during the de-icing? She did not recall being de-iced. It was something that happens often, but she did not recall.

What seat position did you occupy during the flight? Tailcone seat. It was a double seat and she sat on the left-hand side.

Did you hear any reports from other Alaska Airlines crewmembers of problems/malfunctions of the accident airplane? No.

How do you report cabin discrepancies to the cockpit? She would verbally tell the flight crew and fill out a cabin discrepancy form and give it to the pilots.

She stated the flight was normal. In SEA, the airplane was pulled from the hangar. She did not know if there was maintenance performed on the airplane. She assumed that there was maintenance. Normally, the airplane turned from another flight at the terminal, so this was unusual. The flight attendants had boarded the airplane about 45 minutes before departure and while the passengers were loading, a mechanic was working on the coffee maker in the galley. This was the only unusual event. She departed SEA Sunday night at about nine o'clock. It was a three hour and fifteen minute flight to ANC, and she estimated the arrival at about twelve fifteen Monday morning. She stated she thought the ground time was about one hour before departure to SEA. It was not a very long time. Normally, the airplanes are de-iced near the jetway after pushback. She did not recall being de-iced. She also did not notice the weather in ANC prior to leaving. Departure from ANC was about one o'clock in the morning [Monday January 31, 2000]. Arrival in SEA on flight 158 was about five thirty in the morning.

After she realized the accident flight was the airplane she had been flying, she said she could not think of anything out of the ordinary about her flights. She was paying attention to the airplane while flying but she did not notice anything unusual.

DCA00MA023

Alaska Airlines, Flight 261, N963AS, 1-31-00

Summary of Telephone Interview conducted on April 17, 2000.

Participating in the interview:

Mr. Richard Rodriguez, NTSB

Ms. Cindy Keegan, NTSB

Mr. David Ivey, NTSB (Operations Group Chairman)

**Mara G. Pugel, Flight attendant of Alaska Airlines flight 158**

Hire date: March 15, 1985

Do you have any method of recording the tail numbers on previous flights or distinguishing between different airplanes that you crew on? Routinely, she did not log the airplane numbers in her logbook. If she wrote an airplane up, she might notice the airplane because of the malfunction. Since the accident, she now logs airplane numbers.

Which flight leg(s) did you fly on the accident airplane? SEA-SFO-PVR.

Did you see, hear, observe or report anything unusual during your flight on 1-31-00 (on N963AS)? No.

At anytime during the flight did you notice any pitch changes in the airplane that seemed unusual? No pitch changes at all.

During taxi, takeoff or landing did you hear any unusual noises in the airplane, and if so, where did they originate? No.

Was the airplane de-iced prior to departure, and if so, did you hear any unusual sounds from the rear of the airplane before or during the de-icing? They were on the airplane 45 minutes before departure in SEA and she did not think they were de-iced. When de-icing occurs, it usually incurs a fifteen-minute delay.

What seat position did you occupy during the flight? Seat "B", the folding chair on the aisle in the back of the airplane.

Did you hear any reports from other Alaska Airlines crewmembers of problems/malfunctions of the accident airplane? She heard no reports about the airplane either prior to or after the accident.

How do you report cabin discrepancies to the cockpit? She called the flight crew about discrepancies if it was not during "sterile cockpit" time. Otherwise she would go up and discuss with them the discrepancy.

She said she was alert to unusual sounds in the airplane and stated that the flight was uneventful. The flight was clear and with no turbulence.

After the accident, she met with the captain and asked him very much the same questions we have asked. The captain told her there was nothing wrong with the airplane.

They arrived 15-20 minutes early in PVR and as a result, they did not see the accident pilots or flight attendants.

That evening, the first officer was not present during the discussion of the accident. She and Carlene and the captain debriefed for about an hour and a half. She had replayed the day over and over again in her mind, and there was nothing remarkable.

Regarding the keeping of airplane numbers, she said that some flight attendants are pilots and they may keep airplane tail numbers. These would be the people most likely to keep those records and may see the airplanes in a different way.

DCA00MA023

Alaska Airlines, Flight 261, N963AS, 1-31-00

Summary of Telephone Interview conducted on April 17, 2000.

Participating in the interview:

Ms. Cindy Keegan, NTSB

**Roxanne Tunison, Flight attendant on Alaska Airlines flights 199 and 158.**

Hire date: December 13, 1983.

Do you have any method of recording the tail numbers on previous flights or distinguishing between different airplanes that you crew on? No, she often flew on the MD-80 airplanes.

Which flight leg(s) did you fly on the accident airplane? SEA-ANC-SEA.

Did you see, hear, observe or report anything unusual during your flight on 1-31-00 (on N963AS)? No. The only thing unusual was the coffee maker being changed in the forward galley.

At anytime during the flight did you notice any pitch changes in the airplane that seemed unusual? No.

During taxi, takeoff or landing did you hear any unusual noises in the airplane, and if so, where did they originate? No.

Was the airplane de-iced prior to departure, and if so, did you hear any unusual sounds from the rear of the airplane before or during the de-icing? She cannot remember, however if needed, it would have been.

What seat position did you occupy during the flight? Forward and inboard on the flight attendants seat.

Did you hear any reports from other Alaska Airlines crewmembers of problems/malfunctions of the accident airplane? No.

How do you report cabin discrepancies to the cockpit? She would call the cockpit and fill out a cabin discrepancy form and give it to the cockpit.

DCA00MA023

Alaska Airlines, Flight 261, N963AS, 1-31-00

Summary of Telephone Interview conducted on April 17, 2000.

Participating in the interview:

Ms. Cindy Keegan, NTSB

**Steve Sandvik, Flight attendant on Alaska Airlines flights 199 and 158.**

Hire date: February 23, 1985

Do you have any method of recording the tail numbers on previous flights or distinguishing between different airplanes that you crew on? No.

Which flight leg(s) did you fly on the accident airplane? SEA-ANC-SEA.

Did you see, hear, observe or report anything unusual during your flight on 1-31-00 (on N963AS)? No.

At anytime during the flight did you notice any pitch changes in the airplane that seemed unusual? No.

During taxi, takeoff or landing did you hear any unusual noises in the airplane, and if so, where did they originate? No.

Was the airplane de-iced prior to departure, and if so, did you hear any unusual sounds from the rear of the airplane before or during the de-icing? Doesn't remember.

What seat position did you occupy during the flight? Seat "B", the fold down "ironing board."

Did you hear any reports from other Alaska Airlines crewmembers of problems/malfunctions of the accident airplane? No.

How do you report cabin discrepancies to the cockpit? Tell the flight attendant co-workers, assess the condition and contact the cockpit.

**Ms. Jovita Rivera, Alaska Airlines Customer Service Agent San Diego, CA.**

A telephone interview was conducted by the entire operations group on April 6, 2000.

Ms. Rivera stated she was hired by Alaska Airlines on August 31, 1990. There was not an operations classification for her position, so she worked both the ticket counter and operations. Her title was customer service agent.



She worked flight 515 at the gate, on the day of the accident. She said she looked at the clock and it was 3:37 PM. She went into the break room and then heard a dial-up on the air/ground radio. She said she heard, "flight calling maintenance control, go ahead." She walked over to the radio. It was flight 261 coming up from Puerto Vallarta, Mexico. She was aware of the flight talking on the radio. She said, it was 3:42 PM and she had to start getting ready for her flight at the gate. She was talking to a co-worker however, she could hear flight 261 in the background. The people talking were dispatch, maintenance control and the captain of flight 261.

He was trying to get as much information as he could. He was looking for other ways to help himself in the airplane. He asked maintenance control if someone more familiar with the airplane could help him. She still was not concerned as she felt the flight crew could handle the problem. The conversation lasted about 15 minutes.

During the conversation, the captain talked about diverting into Los Angeles. He asked for the weather and then discussed whether or not to go into Los Angeles or to continue to San Francisco. He certainly did not want to compromise safety. Around 4:00 to 4:05 PM he said he was diverting into Los Angeles.

She went to the rest room after hearing that statement and she said it was about 4:11 PM. There had not been any conversation for about 5 minutes and she needed to be at the gate for her flight at 4:15 PM.

When asked about the air/ground communications system, she said it is a 3-letter code followed by 2 numbers then the star key is depressed. The first three digits are the city code and she did not know whether the captain called Los Angeles or Seattle. Both dispatch and maintenance sound the same when dialing. She could hear both sides of the conversation.

She believed it was maintenance control that was talking to the captain, first. The first part of the conversation was about the airplane. She believed it was the captain talking. The flight crew did not sound particularly stressed. Initially, the situation did not sound out of the ordinary. She thought the crew could handle it. They didn't sound frustrated. The stress level may have increased.

She did not remember the response for help. She did not hear anyone else introduced on the radio that might help them. She thought she heard the crew, maintenance control, and maybe a dispatcher over the radio. They were trying to decide whether to go to Seattle or to divert into Los Angeles.

When asked if she had heard a comment about making something worse, she said she could not remember such a statement. She did not tune out the conversation on the radio, however, she was not paying full attention as much as if it had been coming into San Diego.

She had never had anyone call her to request a CG calculation. She had not performed a calculation for an actual flight. She said, she may have learned how to calculate the CG about 10 years ago.

**Ms. Tori Kanno, Alaska Airlines Customer Service Agent San Diego, CA.**

The operations group conducted a telephone interview on April 6, 2000.

Ms. Kanno started with Horizon Airlines in 1990. She moved to San Diego in January 1999, and was employed as a customer service agent. On the day of the accident, she was scheduled to work for another agent and the shift began at 4:00 PM. She walked in the door of the break room at 3:35 PM and heard flight 261 talking on the radio. She knew something was wrong, as crews do not normally talk on the radio for that length of time. The radio was on in the break room and people were talking, so she sat down beside the radio and listened. One pilot was talking about looking in a manual. She did not know the flight number at the time. They got weather reports, runway conditions, and were getting the Los Angeles weather. She could hear the concern in the pilot's voice. It sounded discouraged about going to San Francisco. Someone told her the flight was coming from Puerto Vallarta, Mexico.

At 4:00 PM, she started her shift at the gate. Twenty-five minutes later, another employee told her about the crash. She said the flight crew asked for a second opinion and she felt so helpless. She said the captain sounded concerned. She did not remember the specifics of the conversation on the radio, however, the first part of the conversation was about the airplane.

She did not know to whom they were talking. Whether it was Seattle or Los Angeles. She stated, she did not work in operations there in San Diego. When they were discussing the runway conditions and the weather regarding San Francisco, she thought the person speaking was trying to discourage the crew from going into San Francisco. She did not know the pilots.

She also said there was a period of silence after the flight crew asked for a second opinion. The pilots were asking for instructions.

**Mr. Santiago Santoyo, Alaska Airlines Ramp Supervisor San Diego, CA.**

The operations group conducted a telephone interview on April 6, 2000.

Mr. Santoyo was hired by Alaska Airlines in January 1994. He stated he was a ramp supervisor. In July 1994 he began as a part-time employee with Alaska Airlines. He became a full-time employee with them in September 1994. From May 1995 until the present, he had worked in operations and was an operations instructor. He had been a lead supervisor since some time in 1999.

He stated he heard a communications link to Seattle maintenance control for flight 261. He said to himself, "we have a situation." The flight was 33 miles south of Tijuana, Mexico and they were at 32,000 feet and wanting to come down to 30,000 feet. They were talking about a fast approach into Los Angeles.

He stated, he called Los Angeles to alert them. He said he talked to the operations agent there, and the agent didn't know anything about the flight. He said, he told her they would be able to hear it soon.

He heard the pilot say he had tried something several times. About 20 minutes later, he received a call that said flight 261 had gone down. He knew something was not right at the time.

Seattle dispatch and Seattle maintenance control telephone link sounds the same, but the reply was by maintenance control.

He had two flights (553 and 503) and they were planned for departures at 5:00 PM and 5:15 PM respectively. The communication he heard was between 3:00 PM and 3:45 PM. He said he was working two flights and did not look at his watch to note the time.

An Aeromexico supervisor told him about the accident.

He said the flight crew was asking the procedure for a fast speed approach. They were asking about the fuse boxes. The pilots were not nervous. They were "pretty cool." They discussed the fuses. He said the pilot reported that they had done it several times and it was not working. This was in reference to the fuses. The ground personnel were assertive, but not beyond their control.

He stated he initially heard maintenance control. If there was any transfer to talk to another location on the radio, he was not aware of it.

He knew both pilots, but could not recognize which pilot was talking on the radio. When asked about a CG request, he stated it would be unusual for a crew to request a CG calculation. He had received training on that type of calculation. He stated, if you know how much fuel has been burned then the CG can be calculated.

He stated he called Los Angeles operations because he heard there was a diversion coming up. He called them to give them a "heads up" on the arrival of flight 261.

**Ms. Linda Hytinen, Alaska Airlines, Customer Service Agent San Diego, CA.**

The operations group conducted a telephone interview on April 6, 2000.

Ms. Hytinen was hired in 1984 by Alaska Airlines. She stated she worked in operations and as a customer service agent. She was working San Diego operations when the flight called maintenance control. She heard them talk for about 20 minutes in duration. They were talking about stabilizers. She heard the captain on flight 261 state they were over Tijuana, Mexico, and both stabilizers were not working. He asked for permission to go into Los Angeles. It was a technical conversation.

She said it could have been both crewmembers talking but assumed it was the captain. She believed both maintenance control and dispatch were involved in the conversation. The crew was insistent about landing in Los Angeles. They were concerned about a fast landing and rain in the San Francisco area.

She said maintenance call-ups are frequent. They are usually flights into or out of Los Angeles. Occasionally, there may be a call from a flight coming out of Mexico. At some point they were only able to hear one side of the conversation. It was the pilot's side. This is not unusual. She heard them calling Los Angeles operations but could not hear the response from Los Angeles.

The flight crew insisted about wanting to go to Los Angeles, and not San Francisco. The flight crew gave no indication of real serious trouble.

She had never gotten a request for an in-flight CG calculation. She heard them ask Los Angeles for one. When asked if she could perform the calculations, she said she could not do one. It was not a normal procedure. During training, CG calculations had been mentioned.

She stated she heard the crew asking about circuit breakers. She stated they replied that they had "done it nine or ten times," referring to the circuit breakers.

She had the feeling dispatch wanted them to go to San Francisco, but the flight crew was insistent about diverting into Los Angeles. She did not know the pilots. She remembered the flight crew had asked for an instructor and she thought they were trying to track somebody down to help the pilots.

She did not know if the conversations on the radio frequency were recorded in San Diego.

**Mr. Robert Lloyd, Air Safety Investigator, Federal Aviation Administration**

The interview was conducted in Atlanta, Georgia on May 9, 2000, with the following individuals present:

Mr. David J. Ivey, NTSB  
Mr. Malcolm Brenner, NTSB  
Ms. Victoria Anderson, FAA

All parties in the operations group were excluded except for the FAA.

Mr. Lloyd was employed by the FAA in the Certification, Standardization, Evaluation Team (CSET) in Atlanta, Georgia. He started with the FAA in 1980 and began his career as an assistant principal operations inspector (APOI) on the Pan American Airlines certificate. He worked from 1980 until 1982 in New York and transferred with the certificate to Miami, Florida and worked there from 1982-1991 at the Miami Flight Standards District Office (FSDO). In

1983, he started the first Pan American Aircrew Program Manager (APM) concept using B-747s. Now it is a national policy using APMs.

In 1987/1988 he became a geographic surveillance supervisor in Miami for general aviation. He also acted as the assistant manager of the certification unit for 2 years while in Miami. In 1991, there was an opportunity for a job in Seattle for an APM and POI on the Alaska certificate. He interviewed for the APM position however, he stated he was talked into the POI position. He transferred to Seattle, and after a few months, became an operations supervisor and then the POI for Alaska Airlines. At that time (1991) he worked for a Mr. Bob Hill who was the acting office manager and the Certificate Management Unit (CMU) supervisor. Mr. Hill is currently the FSDO Office Manager.

He knew he could have had the APM job because he created the position 10 years earlier, while working on the Pan Am certificate. When he began as the POI for Alaska Airlines, he had no assistant POI (APOI), two new APMs who were new to certificate management, and one secretary. Mr. Steve Franklin was one of the new APMs and he is still one of them today for Alaska Airlines. Six months later, he got an APOI. The APOI was brand new to the FAA. The APMs were not new to the FAA; however, they came from a geographic surveillance unit.

In 1993, he transferred to the Aircraft Evaluation Group (AEG) and remained there until 1997. That year he transferred to Atlanta and worked for the National Simulator Evaluation Team until 1998 when he joined his current position in CSET.

He estimated his total flying time to be about 11,500 hours. He flew as a captain for PBA Airlines, which was a regional airline. He held type ratings in the B-777, B-747, B-727, Martin 404, DC-3 and SA-2000 airplanes. When he became the POI for Alaska airlines, he held all ratings but the B-777 and SA-2000. He stated most of his time was as pilot in command.

He said that the current Alaska Airlines management is totally different from the one he dealt with, but he stated, the attitudes are ingrained.

Within two weeks of becoming the POI of Alaska Airlines, he knew he needed a new job. Mr. Tom Cufley, Staff Vice President of Operations was continually lying to him. He kept good notes and records when he was the POI for the airline.

On September 13, 1991, he had his first meeting with Alaska Airlines. He went to the meeting with his supervisor, Mr. Bob Hill, and met Mr. Cufley and the Chief Executive Officer of the Airline. He stated that Mr. Cufley had worked for the FAA for one year prior to going to Alaska Airlines about 10 years before. Mr. Cufley asked him how he operated. Mr. Lloyd responded if you follow the Air Carrier Inspector Handbook you would do fine. Mr. Cufley responded, that was a good practice, and he always followed it because it contained excellent information.

In a meeting on October 25, 1991, Mr. Cufley said he wanted an address and was calling Washington, DC to get a handbook because he did not have one. Further, Mr. Cufley wanted him to approve Alaska Airlines to carry 14 Russian air traffic controllers in the cockpit for

familiarization. He thought this was not a bad idea, however, they would need a cabin seat in the airplane. They wanted to fill the airplane with passengers and put the controllers in the jump seat. He said, "no." Mr. Cufley said the Northwest Airlines POI had approved it in the past. Mr. Cufley was angry. Mr. Lloyd said it was illegal and against regulations. Subsequently, Mr. Lloyd called the Northwest POI. The Northwest POI said he did not approve this but, under special authority from headquarters in Washington, D.C., had approved 2 Russian representatives to ride the jump seat but on a one-time basis and with a ticketed cabin seat. It had been approved in Washington, DC. Mr. Cufley knew he was trying to put him on the spot. In that meeting on October 25<sup>th</sup>, he knew he did not have a copy of the Air Carrier Inspector's Handbook. Mr. Cufley was an amiable personality but had not been honest with him.

He felt he was totally undermanned, but Alaska Airlines tended to wait until the last minute and pressure for a quick response.

On September 30, 1991 Mr. Cufley wanted him to approve flying into Toronto in just a few days. He said he did not approve it because of the need for a base inspection there in Toronto. He stated Mr. Cufley became really angry. Mr. Cufley indicated to him he had never had to have a base inspection before.

On October 26, 1991, Mr. Lloyd advised Alaska Airlines that the method to certify principal check airmen was unacceptable and told the Director of training to cease and desist. Alaska Airlines was selecting and training an applicant for check airman. They would arrange a date for a proficiency check to be observed by an inspector outside of the certificate. The POI was supposed to be advised of who the check airman was to be selected. He then needed to observe the applicant training and checking. This particular applicant was conducting a type rating rather than a proficiency check. Alaska Airlines was very upset; they had used this procedure for years. Mr. Lloyd stated that in a type-rating ride, there is not training given, only checking. He wanted to see both the training and checking abilities of the applicant.

On October 21, 1991, he told Mr. Bob Hill of the problems he encountered and requested a NASIP inspection of the carrier. Mr. Hill said he wanted Mr. Lloyd to conduct an in-house inspection rather than a NASIP inspection. There ultimately was a NASIP inspection performed on the carrier. They found more airworthiness than operations issues. The inspection did not catch any of the previously mentioned issues cited in this interview.

He stated there were other issues. Alaska Airlines wanted to fly across 358 miles of ocean near Siberia, Russia without life rafts. They wanted him to approve the operation. The Handbook states the limits are 360 miles. Alaska management told him that Eastern Air Lines operated without life rafts in the Caribbean over similar distances. He said the Siberian water conditions were a lot different than the Caribbean. He would not approve the plan. He did offer to allow them to use rear seats to carry the rafts rather than having to modify the airplanes to carry rafts. They were mad and referred to him as "pursuant Bob." He wrote a letter about the issue and he has in his possession 90% of all letters he wrote to Alaska Airlines. FAA management in front of Alaska Airlines officials publicly chastised him because of his extensive letter writing. They wanted him to do business over the telephone.

He stated he felt the life raft issue was the zenith of his career at Alaska airlines. At a meeting with the company and FAA representatives, he was chewed out by FAA management about the issue of the life rafts. He was told to do more on the telephone and less on the typewriter. He was asked to quit harassing the company. Not long after this meeting, he transferred to the AEG.

His boss, Bill Baldwin, closed the door and "chewed him out" in front of Alaska Airlines management concerning the life raft issue: "stop harassing them, stop taking letters, get this resolved."

Alaska Airlines ultimately got approval for these overwater flights without life rafts from Mary Rose Diefenderfer who replaced Mr. Lloyd as POI. She did not like to do it either, but there was an equivalent level of safety accomplished.

On December 23, 1991, Mr. Cufley wanted relief from the windshear-training requirement and needed it by the end of the year. He could not approve the request. Alaska Airlines had not been doing windshear training during the year so they wanted relief so as not to be violated. This was not discovered in the NASIP inspection either. There was a May 14, 1991 letter written by the company stating the use of simulators for windshear training in Long Beach, California. Later, on January 10, 1992, an individual from the FAA's AEG at Long Beach said none of the simulators had the windshear equipment installed during that period. One had windshear installed, however, that was put into the simulator about one week ago. After a discussion with headquarters FAA and the CMU about the issue, it was discovered that the letter of May 14, 1991 was found to be missing, it had disappeared. The equipment was ultimately placed in the simulators and they got the training approved. The airline could have been violated, but the entire windshear file disappeared.

Mr. Lloyd stated he was very happy with Mr. Franklin's performance as an APM, but that FAA management did not like him. When he severed his ties he only kept up with Mary Rose Diefenderfer. He was happy to see her come on board. He was promoting her for the position of POI. He instructed her on an outbriefing to "keep good notes," and advised her about the check airman issue. She appeared to agree with his interpretation of this issue. The Alaska Airlines problems were present long before she arrived. She may have become her own worst enemy trying to "buck the bull."

He stated that his secretary had told him that his immediate supervisor had been on the phone a lot with Mr. Cufley. She indicated to Mr. Lloyd that his supervisor would give Mr. Cufley permission to do things, countermanning Mr. Lloyd's decisions. He had his authority usurped as the POI. Mary Rose Diefenderfer told him that she experienced similar pressure, when Alaska management would call her supervisor to complain about not being cooperative or realistic and this pressure was put on her. He did not know why the other POIs left.

He did not know why there was such a close relationship between Alaska and the FAA.

When the charge of falsification of training records was brought upon Alaska Airlines in 1993, Mr. Cufley was on of those who falsified the records. The FAA action was to revoke Mr.

Cufley's license. The FAA made an agreement with Alaska. He got his license back from revocation in 6 months and took no tests or written evaluations. The license was revoked. The check airmen who were involved in this falsification of training issues had their licenses suspended and the check airman authority was pulled. After a year, the records were expunged and the check airmen were reinstated.

Among positive things at Alaska Airlines, he thought the pilots were some of the best around. They flew in difficult weather. They had good training of flight attendants and were written up for good service to the passengers. Dispatch provided good weather to the pilots.

Mr. Cufley once remarked that he had received permission from Dave Harrington at FAA Headquarters for some action. Mr. Lloyd telephoned Mr. Harrington and learned that this was not true.

Mr. Lloyd had no remarks regarding the morale at Alaska Airlines. In the FAA, morale is frustrating unless you are a major player. A former POI, Ed Duchnowski, was hired as Director of Safety at Alaska Airlines and became the FAA liaison. He questioned the ethics of being hired directly from the FAA to that position. However, the FAA had no problems with it.

When asked about the former POI, he stated he was very intense and focused. However, other things would fly by until he became aware of them and then would work hard on those issues. He would do an intense and outstanding job on the issue on which he was focused, but miss the big picture.

Regarding the attitude at Alaska Airlines, he felt if compliance with the regulations was doable, then there was no problem. If the regulation was a problem, never mind the regulation, we'll do it this way. He felt the bush pilot mentality was prevalent at Alaska Airlines and was pushed by the management.

He cited an example. A captain made two or three landings while carrying passengers with a red gear warning light illuminated. He tried to get a violation against the captain for the action. All the violation he could get was a warning letter. There was a fine on the airworthiness side.

When he would issue a letter of investigation (LOI) and give it a number, Alaska Airlines would complain about him not calling on the telephone rather than putting it into the system with the number. Management did not support him.

He stated the FAA, in Seattle, was a shell game. They continue to move people around in the FSDO but never out of the office. He did not know what the connection was between Alaska Airlines and the FAA in Seattle. Some of the FAA participated in the military with Alaska pilots with a lot of interaction through the Air Force Reserves. Some of the people in the Seattle FSDO had been there for years and years and years. They had not left. There should have been changes to bring in new blood. There were a lot of buddies there between the FAA and Alaska personnel. Also, between McCord Air Force Base and the FSDO. There were a lot of spouses of FAA personnel that worked for Alaska Airlines.



He stated the principal maintenance instructor (PMI) did not get hassled by the supervisor like he did. The PMI didn't think he was being lied to. The supervisors were operational types so they were out of their area of expertise.

**Interview with Mary Rose Diefenderfer, former FAA Principal Operations Inspector**

June 6, 2000

Captain David Ivey, NTSB Operations Group Chairman

Malcolm Brenner, NTSB Human performance

Captain John Miller, Boeing

Mr. Jim Ford, FAA Certification, Van Nuys CA FSDO

Captain Ross Roseman, ALPA, was substituted for Captain John Bentley

Captain Lyle Parker, Alaska Airlines, was excluded by Mrs. Diefenderfer from participation in the interview.

Mrs. Diefenderfer currently was Vice President for Flight Safety and Regulatory Compliance for Seattle based Pro Air. Pro Air was a Part 121 air carrier that operated B-737s.

She was a pilot for Texas International Airlines from 1978 - 1982. Texas International Airlines merged into Continental Airlines in 1982. She flew as a Continental Airlines pilot and resigned in 1985 due to personal reasons.

She stated her flying time was about 4,000 hours as second-in-command on the DC-9 airplanes and had accumulated about 5,000 hours total flying time.

In 1988, she was hired by the FAA as a Geographic Inspector in the Kansas City, FSDO. In 1990, she became an APM for Midway Airlines in Chicago. In 1992, she transferred to Seattle and became the assistant POI for Alaska Airlines. She worked for 4 months under Mr. Bob Lloyd. Mr. Lloyd left, and in May 1993 she was awarded the bid for the POI position. She served as POI from May 1993 until June 1997 when she was involuntarily transferred to the regional office. She worked for 8 months in the CSET (Certification Surveillance and Evaluation Team) section. In November 1999, she left the FAA and went to work for Pro Air.

She held ratings in the A320 and DC-9 airplanes, and held a Flight Engineer turbojet rating. Her education included a B. S. in Aeronautical Science.

Her husband currently worked with the FAA CSET (Certification Surveillance and Evaluation Team). She stated her husband had not had any contact with the Alaska Airlines certificate other than to accomplish type ratings for them when she lived in Kansas City.

In 1992, the certificate unit was being formed and Mr. Lloyd needed to hire APMs and an APOI. The unit did not exist before Mr. Lloyd. Mr. Lloyd became the POI after Mr. Ed

Duchnowski. He remained the POI for about 2 years. She became the acting POI from February until May 1993, then she became the POI.

Mr. Lloyd felt that there was a very close, inappropriate relationship between the company and the FAA and that made him very ineffective. He couldn't get anything done. He thought the carrier had great potential, but Alaska Airlines would need some guidance. He warned her that he was having problems and she should document everything very well. He stayed one month to train her and then left for the AEG (aircraft evaluation group). She always sought positions of high responsibility and aspired to become POI through out her entire time in the FAA.

She was an assistant POI from December 1992 until May 1993. From February until May 1993,, she was the acting POI and became the permanent POI in May 1993. Mr. Bob Lloyd was just down the hall if she needed any help.

The relationship with the company was very good, initially. Mr. Tom Cufley was the Vice President of Flight Operations and he had been previously with the FAA. Mr. Bill Boser was Mr. Cufley's assistant and he was very close to Mr. Bill Baldwin, her supervisor. Three former FAA employees went over to Alaska Airlines for employment including Mr. Cufley and Mr. Duchnowski. Mr. Cufley formerly worked for Baldwin and maybe Mr. Duchnowski. She could not recall the third individual.

Mr. Bob Lloyd's relationship with company officials was good, but later deteriorated. Mr. Cufley seemed very open at first and very willing to work with her. However, two events changed the relationship:

1. A life raft deviation was requested during Russia operations. Mr. Lloyd had done some research before her, to show the lack of Russian search and rescue equipment in cold, Russian waters. Her supervisor, Mr. Bill Baldwin, was very upset about this research and had many meetings with them. He finally directed her to grant the exemption in support of Alaska Airlines. Alaska Airlines was granted a life raft deviation in cold northern waters. Two years later, the FAA revoked all cold water life raft operations.

2. The second event involved alternate airports in Russia. She asked that at least one person in the Russian Air Traffic Control speak English at those alternate airports, and the Russian chart publications be printed in English. Both Mr. Baldwin and Mr. Boser disagreed with her. Ultimately, the charts were printed in English. There was a Russian interpreter on each airplane, unless the FAA occupied the jumpseat. Nevertheless, she felt that in an emergency, the interpreters could not be counted on.

The real problem began in August 1993, when she heard a rumor that Mr. Tom Cufley got into trouble with controllers in Russian Airspace. Mr. Cufley did not attend the Russia Qualification Training. She asked for the training roster and discovered that Mr. Cufley's name was on the bottom of the list for each of the five days of ground school. Mr. Boser faxed a complaint to Mr. Baldwin (her supervisor) that we were looking at Mr.

Cufley's records. She knew that if she called Mr. Baldwin about it, that Mr. Boser would know about it, and the records would disappear.

Under FAA Manual 1600 38B, Order on Criminal Investigations, she believed she was directed to go directly to FAA security if she had these concerns. FAA security took over the investigation. Ten pilots were under investigation and 5 pilots were found to have falsified documents. All of them were management pilots and check airman, including Mr. Cufley.

She said that the US attorney's office and FAA security expressed concern about FSDO leaks to the company. FAA Security determined there were two sets of training records. Mr. Baldwin was upset that she went over his head and directly to FAA security.

The CMS secretary told Ms. Diefenderfer on repeated occasions, she overheard Mr. Baldwin talking with Alaska Airlines management advising them to ignore actions taken by the POI.

During the latter part of 1993, her supervisor chose Mr. Dennis Harn as her assistant POI and she was not allowed input into the process. Mr. Harn had a general aviation background and had no airline experience.

She went to Mr. Bill Baldwin's supervisor, Mr. Keeton Zachary, who was the office manager. At one meeting, he threatened to send her for a mental evaluation if she continued with the complaints against Alaska Airlines. She said it was very intimidating. She had APM's with her. The requirement was all inspectors were required to hold a current medical certificate to remain employed.

When Alaska started flying to Russia on the inaugural flight, Mr. Boser ordered Vodka to be used as a deicing fluid on the wings of the airplane. There were safety concerns with using flammable liquids and a possible corrosive material.

When she reported this to Mr. Baldwin, he told Mary Rose there was no problem. According to Mrs. Diefenderfer, Mr. Cufley had told a line pilot that the company's friends in the FAA would fix the problem.

Before sanctions were applied she was removed from her job. She stated a letter of correction was written to the company. Mr. Cufley lost his ATP for one year, and the others for six months. They had to take oral and simulator evaluations in order to be recertified.

The findings went against the airman and not against the airline.

In April 1994, she was involuntarily assigned to the Technical Standards Branch for 2 months. During that two months, the letters of correction and revocations were issued to the airmen. She filed a complaint with EEOC and Office of Special Counsel in

Washington, D. C. In June 1994, the Seattle FSDO had an evaluation based upon her complaints. The report suggested that members of management rotate positions. The rotation included Mr. Phil Hoy, Mr. Bob Hill, and Mr. Bill Baldwin. The three supervisors were from the general aviation section, the Alaska Airline certificate and the geographic section (air carrier). She stated they would rotate jobs whenever trouble would appear.

She stated the rotation had occurred once before she became POI, once in June 1994 when she was reinstated as POI, and the most recent switch since the accident. She believed the region was responsible for the switches.

She stated, because of the falsification of training charges at Alaska Airlines, the management in the airline changed. Mr. Tom Cufley was out, Captain Mike Swanigan was in, and initially problems were solved. With the new management and her return to POI status in 1994, they got back on track. ALPA approached her about a partnership program. They established an Altitude Awareness Program that was successful and lasted about one year.

She stated that Mr. Gibson, the B-737 APM, began to find problems in the training program. There were increasing violations, especially in the State of Alaska. There seemed to be an attitude that the State of Alaska was different and rules could be bent. She heard that the ANC base manager was pressuring pilots to bust minimums at Dutch Harbor, which had a 3,900 foot runway surrounded by water and frequent bad weather. Minimums were 1,900 feet but the base manager had them go down to 600 feet. Therefore, in July 1995, she rode the jumpseat on a flight into Dutch Harbor. The weather was below minimums, and, after a discussion with her, the pilot decided to divert. Mike Swanigan called her and was angry, claiming the airline had a special FAA approval to go down to 600 feet. He was unable to produce the approval. When she returned to SEA, she was in trouble with her supervisor Phil Hoy. He said the airline had been doing this for a long time and should be allowed to continue. The airline appealed the issue to the FAA Air Transport Division at FAA headquarters and they supported her position. Subsequently, the airline requested lower minimums, they were tested, and approved to 600 feet.

She stated that there were other examples of her inspectors observing illegal operations in Alaska.

After the pilots lost their ATP ratings as a result of the training falsification problem, the airline continued to let them fly from the left seat with check airmen in the right seat so they could keep their salary. It sent a wrong message. The airline management wanted to get rid of her.

For about one year, in 1995, things got better. Mr. Boser and Mr. Baldwin were gone, and with the new management, the FAA entered a Partnership Agreement with the airline and union. Following a series of accidents at Juneau airport, Congress ordered a study of

the safety of Juneau and there was cooperation between the FAA, Alaska Airlines, and other major airlines in Alaska.

Her support from FAA management became intermittent in 1996, and bad in 1997. In June 1995, the SEA FSDO report was released and her supervisor became angry with her because he thought she was an instigator. In late 1996, she initiated more and more violations against Alaska Airlines, primarily in the B-737. Her supervisor began pressuring her to back off on Alaska Airlines, saying that he believed the Alaska airlines manager rather than her. The airline began refusing to allow inspectors to ride the jumpseat. Mr. Gibson was refused jumpseat access, and he became involved in an incident in which the gate agents stated he became threatening. Following a limited investigation, FAA took disciplinary action against Mr. Gibson.

In 1997, she said disciplinary action was taken against another APM (Mr. Franklin) and a second action against Mr. Gibson. Several Alaska airlines check airmen made erroneous allegations against Mr. Gibson, and he received a 30-day suspension. Later, the two check airmen retracted their statements. Phil Hoy reduced the suspension from 30 days to 5 days, but Mr. Gibson asked to be removed from the certificate because he could no longer be effective.

Another controversy concerned the Reno approach with engine out procedures. She asked the airline to make changes in training for departures from Reno, and the airline refused. She received complaints from the FAA.

Marlene Livack became the new FAA office manager and appeared to side with Alaska airlines. She held threatening meetings, and appeared to be trying to get rid of Ms. Diefenderfer. Ms. Diefenderfer was removed involuntarily from her position in June 1997, and on-going violations against Alaska Airlines were not pursued. She hired an attorney, but was not returned to her position. Mr. Gibson left the certificate soon after. In October 1997, the head of the FAA headquarters AAI-100, Mr. David Thomas, came to investigate the situation in Seattle and reported that he did not see problems. Many of the FAA managers, such as Phil Hoy and Brad Pearson, were still in their positions at the time of the Flight 261 accident.

There were many good things about Alaska Airlines. Nobody else could fly into the places as well as they did, they hired the most experienced pilots. They have some of the best check airmen.

Alaska Airlines was a small airline that grew up in Seattle, and FAA managers watched them grow up. They still looked on it as a small airline.

The airline prepared a video about its history that showed how they fooled inspectors in the early history. The video, shown in training, set a tone to pilots to not follow the rules.

When asked if any FAA managers had relatives, who worked for the airline, she said that she did not believe any FAA spouses worked for the airline but that the current POI Dennis Harn had a sister-in-law who did. His family was very close.

John Hubbard, the PMI worked closely with Ms. Defenderfer. He was a very independent person, and was not bothered by FAA management.

A former POI, Mr. Duchnowski, interviewed with Alaska Airlines while he was the POI. She said it was unethical and illegal and no action was taken.

The Seattle FSDO was outrageously blatant towards Alaska Airlines. Everyone had been here too long, the FAA senior management covered for one another if necessary. There needed to be people brought in from outside the region.

She stated that Mr. Hill, Mr. Hoy, and Mr. Fowler had a meeting to agree to a “white glove” inspection of the airline after the accident with the understanding that there would be no findings. The airline would be allowed to use self-disclosure. A Memorandum of Understanding was written but FAA legal shot it down.

The big Alaska airline growth period was 1996-97 and that was when a lot of the problems started.

Sam Aaron was the FAA office manager who was very ethical and was a good manager. He was supportive of their actions and allowed her to take the high road and do as she saw fit.

There has been a lot of upheaval in the management. Alaska Airlines had taken advantage of that.

She was concerned about the compliance mentality of the FAA management and the closeness with the airline. Brad Pearson, the Regional Director, was in place during this whole period.

**Mr. Philip James Hoy  
Supervisor Air Carrier Section, Seattle FSDO**

Mr. Hoy was interviewed on June 6, 2000. The entire operations group was present with the exception of Captain John Bentley, ALPA. Captain Ross Roseman ALPA was substituted for him.

Mr. Hoy stated he had accumulated about 8,500 hours of total flying time. The flying time was from a general aviation background and included some commuter experience. He joined the FAA in January 1973 as an air carrier inspector in operations.

He was an instructor in the Lear Jet, and in DC-3 and DC-9 airplanes in Oklahoma City, OK with the FAA. He transferred to Seattle and has been there for 18 years. He stated

he had been in the Seattle FSDO for about 10 years as a supervisor. He has served in various positions within the FSDO. He has held the position of supervisor of the certificate management section, supervisor of the geographic section, and supervisor of the operations section.

Until May 30, 2000, he was supervisor of the certificate management section. Mr. Brad Pearson, Manager of the Flight Standards Division, directed the change to supervisor of the air carrier section. Mr. Bob Hill was his replacement as supervisor of the certificate management section. Mr. Hill had previously been the Seattle FSDO manager. Mr. Bill Baldwin became the acting FSDO manager. He had been the supervisor of the air carrier section. Mr. Hoy became the new supervisor of the air carrier section.

In the past, there had been three moves with the same three people involved. Each had held the three positions mentioned above, at some period in time. The latest shift occurred the last week in May 2000. The first switch occurred in January 1992, he believed. It may have been in 1993. He was moved from geographic to operations. He did not know why the shift occurred. He was not displeased with the change. He didn't remember any contentious issues at the time or know why the change was made.

In March or April 1994, the second rotation occurred. He was moved from the operations section to the certificate management section. This move was made to move Mr. Baldwin out of the CMS due to the breakdown in the relationship with the POI (Ms. Diefenderfer), who had been removed from her position and reinstated, and also the relationship with the APM (Mr. Franklin) who was under the supervision of Ms. Diefenderfer. The relationship was broken, so Mr. Baldwin was rotated out of the position of CMS supervisor.

The third rotation was not explained to him, but he believed the region wanted a different management style than he had been using. He would have chosen to remain within the CMS in his previous position rather than be moved. Mr. Hill, his replacement, is more of a "hands on" type of person with the FAA employees.

Mr. Hoy stated Ms. Diefenderfer had technical abilities and a good background for her job as POI. She did not do a good job as POI. She exercised bad judgment and made some bad decisions. She pursued areas that were not productive. She was not cooperative and had a contentious relationship with her supervisors in the FSDO and regional office. She was not a team player, and frequently bypassed her supervision and the regional office.

The Alaska management feedback was favorable, although there was frustration that showed through in their relationship with Ms. Diefenderfer. She sometimes made arbitrary decisions.

In March 1999, an article appeared in the Seattle Newspaper critical of the FAA and Alaska Airlines relationships. There is a 32-page summary that captures the issues developed in the newspaper article.

After the accident, at the suggestion of the headquarters Washington Flight Standards, an ATOS Safety Action Team (SAT) inspection was discussed. These discussions were held with Alaska Airlines management regarding the SAT. This would allow the company the option of non-punitive self-disclosure on issues. This option was rejected by FAA legal.

Since the NASIP inspection, there have been several Department of Defense inspections with minor findings. These were on site inspections.

When asked about positive qualities of Alaska Airlines, he stated that Management was very professional and of a high caliber. He also stated that the pilots were very professional and well regarded. When asked about some specific qualities of Management, he was unable to provide any specifics.

He had the authority to override principal inspectors' decisions. They could operate autonomously and he used less "hands on" supervision. That was his style. He stated he had to exercise more hands on supervision during Ms. Diefenderfer tenure.

The B-737 APM asked to leave the certificate because he felt he had a broken relationship with the company. He felt that the Vice President of Flight Operations, Captain Swanigan, was out to get him.

Mr. Franklin (APM), Mr. Gibson (APM), and Mr. Martin (APOI) were all supervised by Ms. Diefenderfer. They were a tight group and were held together by her informal leadership. She influenced the three of them.

Captain Swanigan had asked for Mr. Gibson to be removed from the certificate. Mr. Gibson was a man who liked to avoid friction and this may have caused some problems for Alaska Airlines, as Mr. Gibson may have misled the airline at times.

ATOS in its concept is a good idea. In the fall of 1988, there were a series of training programs held at DFW. Everyone assigned to the CMS in Seattle attended the training. He stated he had also attended ATOS training.

Initially, the inspectors within the FSDO had a lack of understanding of how to apply the data to ATOS. As a result, ATOS was not well received. It was difficult at first. The Automation Repository is a continuing issue. The analysis function has not gotten off the ground. An Operations Research Analyst position had not been filled at the FSDO.

The ATOS process was launched in October 1998. The first planning meeting was in December 1988. The first year of operation was very time consuming because of trying to learn how to apply the information. In the beginning of the second year, issues were retargeted. Again, in January 2000, there was a planning meeting with the Certificate Management Team to include the Geographic Inspectors attached to the Certificate.



There is not a lot of data in ATOS to fully develop the trends. It will get better with more data collection.

There are 3 training blocks for the CMT members: ATOS, Aircraft Specific and Air Carrier Specific. Everyone has that.

There has been a standardization seminar and everyone has attended with the exception of the Alaska principal inspections. The standardization seminars (3 day) were what he was referencing. They have all attended the one-day standardization seminar.

The airline has grown to include changes in route structure and number of airplanes. Changes included an increase in domestic operations and the cancellation of the routes to Russia. He questions the “bush mentality” of Alaska Airlines. He does not agree with that idea.

In April of 1997, Captain. Swanigan talked to him and to the office manager about how he wanted to distance Alaska Airlines from the FAA. Captain Swanigan wanted to get out of the AQP program and perhaps return to appendix based training. There were issues of frustration. It was tied to dealings with the CMS. Since Ms. Diefenderfer left, the relationship had improved dramatically.

The operational problems between the POI and the company did not translate over to the PMI/maintenance and the company. That relationship was not friendly but it was business-like, cordial and productive. There were maintenance issues such as short-term escalation of time component changes. When asked about the PMI, Mr. Hubbard, he stated he had a very strong personality. You would see it his way or you didn't see it. The PMI was strong-minded, saw issues in black and white, and tended not to negotiate.

When asked about the policy of rotating jobs, he stated that this was more common at the senior supervisory level to be transferred than at the lower levels. It was not unique to see these rotations. It also happens at stations other than Seattle FSDO.

He stated that no employees at the SEA FSDO had relatives who worked for Alaska Airlines. However, further questioning disclosed that his sister and brother-in-law had a contract to provide training to the company. He did not know what type of contract or training.

The Director of Safety was now an independent position. Prior to the accident, it was Mr. Trimberger and was not an independent position. His position was not purely devoted to safety. He wore three hats. When asked about the Vice President of Flight Operations (Captain Swanigan), Mr. Hoy stated that his last day as vice president was on January 31, 2000. Captain Swanigan had actually returned to line flying on January 1, 2000, but was still carrying the title of vice president of flight operations.

He stated when Ed Duchnowski, left the FAA office to join Alaska Airlines, he worked in the Seattle office. He said he thought it was unethical to take the job and there was no action taken against him by the FAA.

He suspected that Mrs. Diefenderfer got information about Alaska Airlines since she had left the FAA from one of her friends still in the FAA. He suspected Mr. Franklin and perhaps it was through her husband who still worked for the FAA.

When he became the CMS supervisor, and Mrs. Diefenderfer returned as POI, he wanted to be sure there was no supervisory intervention against her. He did not have any detailed conversations with her previous supervisor, Mr. Baldwin. He said he told her that both he and she would start with a clean slate and at ground zero. He should have counseled her up earlier as opposed to turning the other cheek every time she attacked him.

He proposed disciplinary action against Mrs. Diefenderfer at one point, however his supervisor did not approve it. There had been disciplinary action taken against Mr. Gibson regarding jump seat problems at the ticket counter and the resultant complaint by the company. Also Mr. Franklin, the APM, was given a disciplinary action regarding jump seat issues. This was after Mr. Gibson was disciplined for the jump seat issue.

In 1997, there were 6 hotline complaints, 9 discrimination complaints and 19 grievances that Mrs. Diefenderfer or the union filed on her behalf. She did not prevail in the hearing about these issues or on the grievances. No one in the FAA expects her to prevail on appeal. Management had approached him about a mental evaluation recommendation to her, but he never acted on it.

He stated that as long as Mr. Franklin wants to stay as APM, he would support him. If he wanted to leave, he would also support him. Mr. Hoy had earlier management interactions with Mr. Franklin prior to his disciplinary action regarding the jumpseat issue.

He knew Mr. Baldwin and they got along well. He talked to him occasionally.

He stated that there were no significant issues found during the white glove inspection. The National Safety Inspection (NSI) team performed the inspection.

**James A. Winkleman Jr.**  
**Director of Regulatory Compliance**  
**Alaska Airlines**

Mr. Winkleman, interviewed on June 6, 2000, beginning about 1600, by the entire operations group. Michael W. Kerns, attorney for Alaska Airlines, represented him. [Captain John Bentley rejoined the group.] He provided the following information:

Held position for 4 years.

He was hired on February 24, 1989. He held commercial, Instrument, and multiengine ratings. He said he had about 4,000 hours flight time as CFI, 6,000 hours total flying time.

He was hired as a flight operations instructor, then became an auditor for internal evaluations. He developed pro-active programs to help with operational compliance.

He audits training records, crew records, dispatch, AQP compliance, and pilot qualifications. He was authorized to sign operations specifications Parts A, B, and C.

He was the FAA liaison for flight operations. There were scheduled meetings with FAA bi-weekly, and unscheduled meetings 3-4 times per week. He spoke with Dennis Harn, the POI, the APM's, the APOI, and PMI. He rarely interacted with supervisors. He did not need to. He met with field level workers. Supervisors met with VP of Flight Operations, 1990 on interface with FSDO.

Relationship with FAA has always been open. FAA accessible always. All LOI's and self-disclosures come through his office.

He worked with Mr. Lloyd during life raft and water training in the Russian operation.

He was an auditor and worked with Ed Duchnowski (Director of Flight Standards and Safety) and with Mary Rose.

During her time period, there were a lot of inefficiencies and it took a lot of time to get things back. Still open, professional, agenda items were discussed.

Currently, very open, more efficient. Standards have increased in compliance. More knowledge in the areas of RNP (Required Navigation Performance). More response in training programs.

The POI's have been fair. There have been instances of a not level playing field. He had voiced complaints about other airlines but for the most part they [Alaska Airlines] would comply.

AQP has changed the way they do business radically. Examples of changes were crew concept, data management and collection, and electronic data. AQP is heavily laden with complex rules to get a pilot through programs.

To revert back to Appendix training would be too costly. He stated that the FAA does not use the AQP data. He doesn't believe the FAA has had AQP standards set to use the de-identified data.

He would give them data to substantiate requirements. They have worked with AFS-230. In February 1999, they got the program to set standards and access data.

He likes ATOS. He believes regulatory compliance is not a safety issue. It is possible to be compliant but not safe, and safe but not compliant. ATOS tends to bring compliance and safety together.

He thinks ASA principal inspectors are used to ATOS and understand. Maybe not all the geographic inspectors are knowledgeable.

The biggest issue in compliance is the flight operations training manual. Earlier it was generic, now much more specific with a lot less problems. Manual was completed in 1999 (January-March). Alaska Airlines was held to higher standards. Part 91, for example.

Alaska Airlines shared an irregularity report with the FAA and 3 days later received an LOI.

The FAA issued an LOI due to allowing a retired employee to ride jumpseat. This was during the retirement of the B-727's. This was after a company newsletter came out. An LOI came out soon after.

He had concerns about AQP and maintaining compliance due to data. The negatives were the complexity. The good part was the monitoring of training. CRM is now a measurable objectives.

The company looked at data (e.g. circling approaches) and decided to keep them in the program. This was shared with FAA.

Mary Rose's management skills were lacking. Her leadership was based on lack of skill.

Under ATOS, the inspectors were trained in Alaska Airlines procedures and could provide input to him regarding procedures and changes.

Under Ms. Diefenderfer some of her assistants were less than forthright. He felt he was lied to in one example where the inspector said everything was OK and later that afternoon an LOI arrived.

**Michael A. Swanigan**  
**B-737 Captain**  
**Alaska Airlines**

The entire operations group interviewed Captain Swanigan, on June 6, 2000, about 1700. Michael W. Kerns, attorney for Alaska Airlines, represented him. He provided the following information:

He was hired April 7, 1980. Total flight time 10,100 hours. Air National Guard, flew T-37, T-38, C-130. B-727 (Captain, F/O, F/E), Captain B-737-200, -400, -700. ATP with B-727 and B-737 type ratings, single-engine, commercial Flight Engineer with turbojet rating.

January 31, 2000 was first day back on line as B-737 captain. Prior, he was Vice-President, Flight Operations. In January 1999, a personal tragedy made him decide to return to the line. His replacement was Captain Kevin Finan. When he left, there was not an immediate replacement. The replacement came in March or April 2000.

He became VP Flight Operations in October 1995. He replaced the VP who became CEO of Horizon Air.

He would deal with the APM's, the POI, or Phil Hoy, the CMS Supervisor. Overall, the FAA was cordial, yet there were some struggles. They were always business-like, even though sometimes on opposite sides.

The biggest problem was with Mr. Gibson, the B-737 APM. He appeared at the ticket counter to conduct an en route and he became abusive to gate agent and her supervisor in Seattle. Mr. Swanigan requested the CMU to remove Mr. Gibson from the certificate.

There were heated discussions at times with other principals. The FAA was fair overall. He felt sometimes there was not a level playing field; FAA regulation

interpretation was sometimes a tougher standard for Alaska Airlines than other airlines. He stated he had worked professionally and also had a personal relationship with Ms. Diefenderfer. She was fair for the most part in her dealings.

He never contacted the FAA supervisor except over an issue involving Reno airport training associated with an engine out missed approach. Ms. Diefenderfer was holding Alaska Airlines to a training restriction that was not applied to any other air carrier.

Ms. Diefenderfer told him that Mr. Baldwin had removed her as POI (the first removal) as a result of records violations and her blowing the whistle. He recommended an attorney to her. After she got her job back, Mr. Baldwin was moved and Mr. Hoy came in. Mr. Swanigan was chief pilot at this time. He never felt that the FAA was being too hard on Alaska Airlines.

The company entered a partnership with FAA for altitude awareness modeled after USAir Program, and he flew to USAir with Mary Rose during the startup preparations. The program lasted about one year. The FAA put a moratorium on ASAP programs around 1994-95. The program expired.

Mr. Gibson was removed after a second issue dealing with multi-level marketing. Selling magnets during simulator periods.

Changes made by the company after the training issue falsification: the instructor was to "x" out below the last name on the roster.

He only dealt with Mr. Hoy a few times. It was cordial.

There was a turf war going on over two camps in the FAA. He wanted Alaska Airlines to stay out of internal FAA politics. It was a no win situation.

When Duchnowski came to ASA, Mr. Swanigan was a B-737 check captain and check airman.

He saw a letter from an attorney representing Ms. Diefenderfer that if she were offered employment as a consultant, then adverse publicity and proposed legal action would not be pursued. The letter did not request employment as a pilot.

He also decided to step down as vice president as he was going to report to a different person, John Fowler, who had a drastically different management style.

His working relationship with maintenance was at times strained. He would have to resolve disputes on flight tests between maintenance and check pilots evaluating the airplane who felt it was not yet ready for return to service.

Ms. Diefenderfer got the job done as POI. Rulings on issues had extremely long turn around times. He believed she was struggling with workload with her staffing level. He felt she was not treated fairly by her FAA management.

He would have been more severe on punishment if he had been in the FAA regarding the falsification of training violation.

He had not talked to Ms. Diefenderfer since the second removal. She e-mailed him to intervene on her behalf, however, he did not respond to her letter.

AQP increased quality on training. Pilots liked the training and it was the real world. Under AQP, a new computer system was purchased to track the data. AQP development was new to everyone. There was some local resistance to AQP. He thought the local FAA was happy with AQP. Flight Operations spent one million dollars developing it. He threatened to pull out of AQP because he did not want a partnership with FAA on AQP or APD because of the distrust created by Inspector Gibson over what

Mr. Swanigan perceived was a typo printing error on the form that caused dozens of reevaluations of line checks.

The FAA investigated the Gibson issue involving the customer service agents. This was the first problem with Mr. Gibson (the jumpseat).

**James C. Trimberger**  
**Director of Quality Control and Training**  
**Alaska Airlines**

The entire operations group conducted the interview on June 7, 2000. Mr. Michael W. Kerns, Alaska Airlines attorney represented Mr. Trimberger.

Mr. Trimberger stated he held the position of Director of Quality Control and Training at Alaska Airlines.

He had held the position for 8 years. He was hired at Alaska Airlines on May 26, 1992, and was hired into that position

His background included the USAF, Braniff Airlines as an airplane mechanic, and Ryan International, as the manager of maintenance and director of quality control, planning, and records. He was employed at Aero Corp in New Mexico prior to coming to Alaska Airlines.

Quality control was the maintenance inspection departments in the SEA and OAK facilities. Maintenance training was formal training programs presented to the maintenance staff. Quality assurance was the auditing department that reported to him until recently

He became the Director of Safety about 1995 or 1996. It was an additional responsibility. There was an Internal Evaluation Board (IEB) that was established for safety and compliance. The IEB met monthly and minutes were kept. Initially, the members included himself, the Director of Regulatory Compliance (Duchnowski), the Manager of Regulations (Winkleman), two representatives from customer service and one representative from in-flight.

Messrs. Winkleman and Duchnowski represented the flight operations group. The FAA was not invited and did not attend the meetings. Two additional representatives were added to the IEB to include one customer service representatives, and one maintenance/engineering representative. Currently the makeup of the IEB was three customer service representatives, two flight operations representatives, one maintenance / engineering representative, one in-flight representative, and himself.

In 1999, the company had been looking for a Director of Safety. The position was not filled at the time of the accident. Since the accident, a Vice-President of Safety had been hired. When the IEB was set up in 1995, it reported to the chairman of the company. In

1998, it later changed, to report to the president of the company. In late 1998, it was once again changed to report to the executive vice president of the company. The IEB was advertised and any employee could come to the board or go directly to the chairman on safety issues. He did not know of any employee who had gone directly to the chairman. He stated, he was the chairman of the IEB except for one year in which Mr. Duchnowski held the position. The company did not have a safety hotline. There was an email address for the IEB and two phone numbers listed in which calls could be placed. The phone numbers were to his office.

He dealt with the FAA primarily on the maintenance side. He did not deal with the principals on the operations side of the FAA. The maintenance and engineering relationship with flight operations had been good. They had coordinated efforts on issues such as MELs, and cold weather operations. They coordinated with flight operations and the principals. The IEB also handled letters of investigation. He stated he was involved in the NASIP and Department of Defense investigations. He coordinated the inspections to include both in and out briefings, and serving as the point of contact during the inspections.

He stated no inspections were pre-announced. It was customary to announce a couple of weeks ahead that a NASIP would occur. He said there were NASIP inspections conducted in 1992 and 1995. There had never been any special inspections by the CMS outside of normal surveillance.

The airline was growing and the executive vice president and he both thought they needed a full time Director of Safety, hence the search for a director began in the summer of 1999.

The IEB historically, had 80% flight operations/CSR issues and 20% maintenance issues. The officers of the company were briefed quarterly. Annually, the other officers were briefed.

He is still the chairman of the IEB. The company had hired a vice president of safety and an interim director of safety. He did not know why an interim director was hired. The interim was a pilot within Alaska Airlines.

He felt he had the independence required in safety through the IEB. The development of the IEB was to bring in the various groups of the company together. It was formed in the mid 90s. The IEB was formed within the company and not mandated by the FAA. The six members organized the IEB and he was elected chairman of the IEB.

When he came to work, they had 68 airplanes. The airline was growing. It was gradual, then there was a spurt in 1998-1999.

Issues the IEB has looked at included airplane loading for example. They got the customer service representative group involved to include how to load the airplanes, and

weight and balance information. The CSR group went back to their people and got Sandia Labs involved from a systems safety approach.

He did not have any dealings with Mrs. Diefenderfer. The PMI relationship was good. There were areas they agreed to disagree. An example included the stretcher installation over seats in the airplanes. The PMI believed it to be a major alteration and he did not. A legal interpretation was given to determine if it was an alteration. It was found to be a major alteration and required a logbook entry. They appealed to Washington, D.C. for an exemption and it was denied

There were weekly meetings with the PMI to work on issues. The PMI brought up about a year ago, that safety should be an independent position. Alaska Airlines started looking for an individual to fill the safety position. Company growth has kept us busy. Technical equipment requires a lot of modifications and training.

He was not aware of any flight operations maintenance issues as reported by Captain Swanigan. Contract maintenance had increased. Five or six years ago, contract work was first used to do overflow work, about five or six airplanes per year. Now contract work is 40 % of the maintenance. He was not aware of financial incentives for delivery of airplanes ahead of schedule from maintenance.

He was one of two or three people who can sign certificates for ferry flights.

Quality control was maintenance inspection in SEA and OAK and performed required inspection items (RII)s. Quality Assurance was to conduct audits of the contract facilities to ensure maintenance levels. About 500 audits were performed each year to make sure maintenance was done properly.

Regarding the flight operation/maintenance relationship, airplanes were brought out of heavy maintenance and required pilots to perform flights in order to return them to service. If there were reports of problems between the two groups, he was not aware of them. He reported to the vice president of maintenance and engineering.

Captain Clark replaced Mr. Duchnowski on the IEB when he left the board. He served only as a member not as the chairman. He thinks the vice president of safety will take over the responsibilities of the interim Director of Safety.

The IEB does periodic audits of company areas by cross division audits. Examples include duty times of pilots, training programs, and records.

He tried to attend the quarterly safety meetings. Captain Clark used to chair those meetings. There is no formal communications between the IEB and the quarterly meetings. He got the minutes, attended the meetings and dealt with the issues as necessary.



He felt he worked 6 days a week early to late in each day. He was always working long days and the 3 jobs he held kept him busy.

No notice inspections by up to five people had been performed. He had an open door policy with the FAA. If we do the job right, they should be able to come and go. FAA meetings were held every Tuesday and lasted for several hours. It was not unusual to see the FAA walking through on one of the floors of the buildings. They would check records, work card, etc.

He had a good working relationship with the PMI. He was the first point of contact with the PMI. The new PMI replaced Mr. Hubbard, who retired last year. He had a good working relationship with the new PMI. He had worn three hats and tried to divide his time equally. However, his time was based upon priorities. The IEB was the staff for the issues of safety. The IEB did not receive any issues related to the compliance of the maintenance program conducted in Oakland.<sup>48</sup> He did not interface with Captain Swanigan.

**Captain Terry Clark**  
**MD-80 Captain**  
**Alaska Airlines**

The entire operations group interviewed Capt. Clark, on June 7, 2000, beginning about 1600. Michael W. Kerns, attorney for Alaska Airlines, represented him. He provided the following information:

From May 1, 1995, he held the position of Manager of Flight Safety, and prior to that worked as an ALPA Safety volunteer for 3 ½ years.

He stated he was hired on April 17, 1989. Flight hours, all civilian, were about 14,000 hours. He held a DC-9 type rating, with 5,000 hours in type, 1,000 as PIC.

At time of the accident he was Director of Flight Safety. He was promoted to director in September 1998 when Alaska Airlines changed the title of the position from manager to director of flight safety. The manager position went away with the director position. An individual was hired initially as an administrator to enable him to fly more often as a captain. The workload continued to build and flying was reduced due to the full time requirements of his position.

At present, one administrative assistant and one engineer were assigned to his office. The position was created after Mr. Duchnowski came on board. The FAA was moving towards the position of Safety Director and Alaska Airlines wanted to pre-empt the mandatory requirement by the FAA.

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<sup>48</sup> See Maintenance Group Chairman's Factual Report for additional information.

He was appointed to the Internal Evaluation Board (IEB) 1 ½ years after he became Flight Safety Manager. Initially, the IEB was flight operations, customer service, and maintenance. The function was to coordinate manuals to insure commonality among different divisions in situations such as evacuations. Mr. Clark served on the IEB for three years.

In reference to FAR 119.65, which mandated a Director of Safety for airlines, Mr. Kelly (CEO) appointed himself as Director of Safety. Later, the position was reassigned to the IEB to serve as the safety arm of the airline.

His duty as Director of Safety ended when he became the NTSB Coordinator for the Flight 261 accident. He had planned to step down May 1, 2000. He had brought a first officer in to prepare him to assume the Director of Safety position.

The IEB met on the first Thursday of every month. Action issues were assigned and previous issues were resolved. Mr. Trimberger, Director of Safety, was a co-worker and not a supervisor. They did not report to the same individuals. Mr. Clark reported to VP Flight Operations. Mr. Trimberger, Director of Quality Control and Training, reported to the VP Maintenance.

Capt. Clark's primary responsibility was safety, and flying the line was secondary. Flight operations issues were worked out daily. Issues not worked out were looked at quarterly with the President and CEO at the quarterly safety meetings.

Mr. Trimberger's primary focus was maintenance, followed by safety. FAA didn't interface with the IEB.

Capt. Clark was not aware of any problems between flight operations and maintenance regarding aircraft not being ready coming out of heavy maintenance.

He interfaced with the FAA at weekly or bi-weekly meetings.

Since 1995, while the company was growing, there was a fairly turbulent time within the FAA and a degree of friction between ASA and FAA. For example, pyrotechnic signaling devices on aircraft was an issue of contention. Today, Alaska Airlines carry them on board while other carriers are not required to. Captain Clark had no first hand knowledge of personal problems between FAA personnel within the Seattle FSDO.

There were different management styles within the airline. Capt. Swanigan's management style was to bring in qualified people and have confidence in the individual. He was charismatic i.e. statesmanlike. No micro managing. By contrast, there was a very different style in the maintenance department under John Fowler that was more data driven. Collect data, formulate action items, and present the data for approval. Captain Swanigan felt frustrated with his interaction with the other divisions. The conflicts between Mr. Fowler and Capt. Swanigan management styles would put them at opposite ends.

Mr. Fowler was promoted to Senior VP of Technical Systems and Operational Control. The three major divisions – operations, maintenance, and customer service -- would report to him. Capt. Swanigan would try to meet flight operations demands but could not get sufficient support.

He spent three days off-site with Mr. Fowler regarding goals. His direct interaction had been very positive. Mr. Fowler was articulate, educated, and treated him with respect. He tried to establish a FOQA program with ALPA and maintenance support, and got support from John Fowler. He was given a part time engineer, due to budgetary constraints.

He was aware of various dissatisfactions with maintenance by pilots. He has received reports. Pilots have had pressure placed on them to fly aircraft with problems. For example, a captain refused an aircraft with a bad standby attitude indicator. Another captain refused an aircraft because of bird strikes in an engine. Maintenance control said the engine was OK. It was not proper.

The role of both maintenance control and dispatch was to push aircraft. Pilots determined if the aircraft was flyable. This was the philosophy and always has been.

His responsibilities as the Director of Safety include: communications between pilots and flight operations management regarding any hazards; track and trend irregularities presented by captain irregularity reports; manage flight operations, QA program (FOQUA); look at simulator and line data and provide input to training department; manage and direct critical incidents response program (CIRP); form program and train accident investigators; provide readiness status to senior management; and attend IEB meetings.

He wished the FAA would have taken suggestions from ATA, ALPA and others to spell out the requirements of Safety Manager as a full time position for one person in Part 191:65, but they did not. Eventually, the airline's interpretation was that it was too big a position for one person and, therefore, assigned it to the IEB. He advocated a single VP of Safety.

The general mindset of pilots is to stand back and look at the issues. In maintenance it is different. It is go or no-go. Good or bad. A black or white mindset. Flight Operations tended to look at the total picture.

Regarding Ms. Diefenderfer, he had both good and bad experiences. A example of a good experience involved a tail strike departing Orange County. The pilot reported it to him. He contacted the FAA and sat down with Ms. Diefenderfer and Mr. Gibson to see what they needed to do to correct problems from the event, including checklists changes. They worked with us well.

A negative example was when he left a 20-page program for ASAP for approval to send to Washington, D.C. He reviewed it with Ms. Diefenderfer to send to David Harrington for approval in D.C. She lost the first copy and later he delivered it to FAA Headquarters. The delays resulted in him pulling the ASAP program for approval.

He had a personal good relationship with Ms. Diefenderfer. However, he had published a safety publication within the company and, once, an LOI was received with the same wording as the safety publication. That was the only time, he, Ms. Diefenderfer, and Steve Franklin had a disagreement.

There was a lot of tension between Alaska Airlines and FAA. This was when AQP and ATOS were being developed.

Flight Operations Quality Assurance included downloads of FDR data to see abnormalities or atypical operations. The software also flagged exceedances. For example, a 5,000 foot rate of descent below 3,000 in altitude.

He had no first hand knowledge of the Gibson gate affair other than having read the agents' report.

There were many ways for pilots to know how to contact him with safety issues. The Safety Department was listed in the flight operations manual. He briefed new hire and recurrent training classes, and his safety articles were in the bid package.

No other division -- maintenance or customer service -- had the same recognition as the safety department.

Submitted by:

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Air Carrier Operations

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