Attachment 1

To Operations Group Factual Report

DCA12IA141

Interview Summaries

Interview and Phone Contact Schedule:

September 7, 2012

1400 Glenn Kramer, incident FO
1600 Steve Novak, incident captain

September 18, 2012

1600 Aaron Rocereta, assistant chief pilot
1730 Jeff Sharp, VP Operations, Era Aviation

Monday, September 24 2012

1000 Dave Senko, Era check airman – flew with event captain and FO
1300 Joe Ward, FO flew with captain
1400 Don Burand, FO flew with captain
1500 Paul Wells, former check airman who flew with both pilots

Tuesday, September 25, 2012

0900 Bill Kolstad, Era Aviation director of safety
1000 Jeff Mahar, chief pilot
1300 Ron Burkevitch, VP Safety Era Alaska
1400 Jeff Arnold, captain flew with event FO
1430 Don Burand, second interview
1500 Kelly Grauwunder, captain flew with FO
1530 Nick Miller, FO who flew with captain
1600 Blake Caudle, captain flew with FO

Wednesday, September 26, 2012

1000 Randy Smith, POI for Era
1100 Mike Alkana, former POI for Era
1300 Tamara Thompson, CMT Manager for Era
1400 Bob Christensen, CMO manager

Thursday, November 1, 2012

1300 Corey Howlett, FAA inspector

Wednesday, November 14, 2012

Austin Engebretson, current chief pilot of Grant Aviation

Thursday, November 15, 2012

1500 Robert Burke, FAA inspector

Monday, November 19, 2012

Patrick Sullivan, former chief pilot of Grant Aviation

Monday, December 3, 2012

Everett Leaf, DO of Era Aviation
Bob Hajdukovich, CEO of Era Alaska

Tuesday, December 4, 2012

David Fagre, former chief pilot of Frontier Flying Service
Troy Hinnig, former chief pilot of Frontier Flying Service

Interview:	**Glenn Martin Kramer, First Officer, Era Aviation**
Date/Time:	**September 7, 2012, 1405 EDT**
Location:	**Teleconference**
Present:	**Roger Cox-NTSB; Katherine Wilson–NTSB; Maryam Allahyar–NTSB; David Keenan-FAA; Bill Kolstad-Era Aviation**

During the interview, Mr. Kramer stated the following:

He was a First Officer at Era Aviation flying the Dash 8 and had been for approximately 2 years. He had been with Era Aviation for 2 years; however, he had been with Era Alaska since 2007. Prior to that, he was employed by Frontier Aviation flying Beechcraft 1900s for about 3 years before transferring to Era Aviation in the Dash 8 program. His previous experience also included flying Cessna 207s for Grant Aviation in Western Alaska for 2.5 years. He was 44 years old. His total flight time was approximately 6000 hours. He had 1600 hours in the Dash 8, which was a conservative estimate. As pilot in command (PIC) he had 3000 hours, but he did not have any PIC time on the Dash 8. He stated that he was commercial rated, for single and multi-engine land airplanes, instrument, Glider, Dash 8 SIC, and Beech 1900, with no limitations. He held a first class medical with no limitations. He stated he had a previous incident in 2009 on a Piper Navajo where shortly after takeoff there was a loss of an engine or turbocharger. The airplane was at maximum weight and he could not continue the climb out because of the surrounding terrain, so he put the airplane down on a river bank. There were no injuries as a result of this incident. Mr. Kramer stated that the Dash 8 was the newest airplane at Era Aviation but he did not know when they started flying the airplane.

He described the September 5, 2012, incident. They departed Anchorage (ANC) airport using runway 15. He thought the winds were relatively strong due to a storm the night before. They were given a vector of 200 degrees on the departure to 4,000 feet and eventually they were cleared for their final altitude of 10,000 feet. They reached the normal cruising altitude at 10,000 feet. They entered the clouds and noticed they were picking up light to moderate icing. They contacted Anchorage Center and informed them that they were getting moderate icing and the temperature was negative 9 degrees. They requested and received a block altitude of 10,000-14,000 feet in order to get out of icing conditions. As they were climbing he looked out the window at the de-icing system and noticed it was shedding ice from the spinner and the boots and working normally. The icing did not appear significant and the ice representation system on the windshield wiper had moderate mixed icing. He then proceeded to gather the paperwork and charts to get ready for the approach into Homer and also load planning for the next flight, and at the same time he continued to monitor the systems. At about 11,700 feet, they began to see blue sky and started to capture their altitude. As they were leveling off, they heard a faint vibration on one of the propellers. As they picked up speed, the vibration increased and quickly became intense. At that point the left wing dipped and they went nose down. There were many thoughts going through his mind. He was monitoring the airplane systems to understand their situation. He did not see anything mechanically wrong. He thought they needed to fly the airplane, navigate the airplane and keep thinking about what could be wrong with the airplane. They recovered the

airplane at an altitude a little over 7,000 feet and requested a vector and a safe altitude. The flight returned to ANC.

The pilot flying (PF) was Captain Steve Novak. Their clearance was to fly from Anchorage to Homer on Victor 438 at 10,000 feet. There was a forecast for icing and turbulence on the departure paperwork; however, he could not recall the details. He noted that there was nothing out of the ordinary on the paperwork for that time of year in Alaska. There were no MELs on the airplane. He recalled a few write-ups on the airplane but could not remember the details; however, he did not notice anything that would prevent them from flying the airplane.

The airspeed indicator on the event airplane was a round dial, but there was different equipment in different airplanes. The event airplane was a 103 model. For the most part, the systems were all analog but some systems were digital like the navigation systems and FMS (flight management system). He stated that the airplane was on autopilot during climb out which was not unusual unless the icing was severe. He did not believe the icing was severe. The normal procedure for engaging the autopilot would require selecting climb airspeed and a final capture altitude the airplane would level off at. While he could not recall what the captain did, he stated that everything appeared to be set up properly.

If they used the vertical speed mode, they would select a final altitude, and then select vertical speed in the climb. A dial would be used to select the desired vertical speed; then select the desired altitude to level off at. He said the vertical speed selector was called a wheel. The autopilot selector was on the glare shield. Mr. Kramer explained that the indicated airspeed and altitude select would adjust the airspeed to what was needed for the climb. The autopilot would then capture the altitude in the altitude selector. The altitude selector was on a different panel. For example, if you were set to climb to 10,000 feet, you select the altitude in the altitude selector, press indicated airspeed, adjust the wheel to the speed you wish to climb out at, and then press altitude capture. In their case, they selected 12,000 feet. When asked what would happen if the vertical speed was pressed instead of airspeed, Mr. Kramer responded that selecting the vertical speed would lead into problems and it was not a good practice. The safer practice was to use the indicated airspeed.

The climb speed would depend on the altitude but he thought their climb speed was about 160 knots. They could climb slower to get out of icing conditions; however, they would not want climb speed slower than 130 knots. He could not recall what the airspeed was during the climb out. As pilot monitoring (PM) he generally monitored the airspeed, but he was also tasked with taking care of paperwork, charts, looking outside at the de-ice boots, and calculating weight and balance. He stated that the full anti-ice and de-ice capabilities of the airplane were being used during the event flight. When he was asked whether there was a ref speed switch, he replied that he was not certain if such a system was on board this airplane.

He stated that with this type of airplane, it was common to get a little vibration when ice formed on the propellers. He said they had the same situation coming in from Cordova during the descent. They picked up ice and had a little bit of vibration that tended to be normal. The first vibration on the event flight was indicative of what was normal in those conditions. Mr. Kramer was asked if he was aware of other things that would cause vibration in this airplane. He stated

that prop imbalance, disruption of air flow over the airplane, and anything that would upset the normal flow of air or frequency would contribute to vibration. Regarding challenge/response required when the PF changes autopilot mode, he responded that under certain circumstances when making a climb and changing the altitude selector it may be done by the PF if the autopilot was on or by the PM. During the event flight, they got a climb to 14,000 feet. When he changed the altitude selector, he pointed to the selector and said 14 and the captain said check. The PF would also say autopilot engage and the pilot not flying would say "that checks" to make sure the crew was on the same page. He did not think there was a requirement for changing the vertical speed and airspeed during a climb out, but said they would normally say climb at a specified speed. He did not recall if the captain made that call out during the event flight.

The icing encountered on the event flight was light to moderate. Training for monitoring icing conditions included pneumatic and electrical systems and a panel to monitor icing. Pilots also needed to look outside and make sure the boots were inflating and deflating in the proper sequence, and look at other systems, the spinner, windshield wipers and the windshield. It was a whole mindset and crews did not just go on whether the systems were working or not.

Following up on why they would avoid using the vertical speed in climb, Mr. Kramer stated that using the vertical speed theoretically would put you out of control of the airspeed and the airplane could get too slow. It was common when a pilot set up the climb to do it by setting airspeed.

Mr. Kramer stated that it was normal to have multiple tasks to complete during the climb; however, the amount of workload changed depending on conditions and outside factors. For example, outside factors such as ice would make pilots have to think and this increased workload. On a scale of 1-10 (least to most amount of workload), he rated the event flight as a 5. Prior to the upset, he was trying to balance his preparation duties of getting ready to communicate with the station, and other duties, in addition to "looking outside, focusing on our icing conditions, focusing on whether the airplane was shedding the ice or not, and paying attention to a lot of different variables."

Mr. Kramer stated that he had flown with Captain Novak prior to the event flight and thought the last time they flew together may have been the day before when they went to the North Slope. He stated that communication with Captain Novak was easy and that he got along with the captain well. He stated that Captain Novak's mood was nothing out of the ordinary and there was no indication that there was anything wrong. He stated that Captain Novak was very thoughtful of others, personable, and cared very much about his job. He had not heard anything negative about Captain Novak from others and had a very positive impression of him.

He did not have any complaints about the company and equipment and added that the company had high standards with respect to training and he was impressed with the level of skill of pilots he flew with. They occasionally had issues with the airplane; it was not his favorite airplane. The maintenance department and staff were excellent. He stated that with the exception of normal operational complexities involved with a company, nothing set off an alarm in his mind. He did not know of any expansions or reductions in the company other than the merger which went very well. He added that he was impressed with company training and that ground

instructors and check airmen were very thorough. The FlightSafety facilities in Seattle, Washington, were top notch. When in that environment, the training was helpful and informative. They take training very seriously. CRM (crew resource management) was a topic in ground school. Crew resource management was also an ongoing topic in any crew environment and crew coordination was very highly trained. They received CRM training annually. Additionally they received training on fatigue awareness. The program and company encouraged pilots to call in sick if pilots were fatigued or to file the proper paperwork and not come in to work. Fatigue awareness was a topic covered in annual training every year. He stated that the corporate safety office did express their concerns and communicated with the employees via email when needed.

He did not have a normal schedule but he generally worked mornings. He tried to stick to that schedule and felt well rested. He tried to get as much asleep as he could. Lately his schedule had been better and allowed him to get plenty of sleep. His days off varied, sometimes having 2 days off and 4 days of work, however, there had to be flexibility in case a pilot called in sick. His schedule was tricky and he was not guaranteed a 9-5 job. He was not sure about overtime for pilots. It was part of his duty schedule to be available. He was given a duty time and he was supposed to prepare for that.

Mr. Kramer's recent activities were as follows:

On Sunday, September 2, 2012, he had the day off. He usually woke up about 0700 or 0800 and said he tried to keep his sleep schedule consistent. He did not recall how well he slept that night; however, he felt that he had been sleeping well the past few nights. He had a normal day of activities including walking a few miles for exercise and he ate a normal meal including coffee. He believed he went to bed before 2200. He stated that he normally fell asleep quickly.

On Monday, September 3, 2012, he had a Deadhorse flight. He thought he woke up about 0630 or 0700 for a 0900 flight. He tried to get enough sleep and said his career required that; he did his best to be healthy. He had no difficulties sleeping. The duty day was about 6.8 hours and he flew Anchorage - Fairbanks - Deadhorse – Fairbanks - Anchorage. He flew with Captain Novak that day. He had a normal meal and routine activity in the evening. He thought he went to bed around 2200-2230. He had no trouble falling asleep.

On Tuesday, September 4, 2012, he thought he woke up about 0530. He thought that one of the pilots was not able to show up. He thought he flew to Deadhorse again and his show time was earlier than the previous day. He thought he went to bed between 2130-2200, and 2230 at the latest.

On Wednesday, September 5, 2012, he thought he woke up about 0530 and showed up to work at 0650. He was scheduled to be on reserve and had called the night before to learn the details of his schedule. He treated it like a routine scheduled trip because they did not call him in the middle of a slumber. He planned for the flight the previous day. He was scheduled for a flight to Cordova, then Homer. The flight to Cordova was about 50 minutes each way. He had to shoot the approach and it went very well. The flight was fine and he thought they had about 30 minutes between the Cordova and Homer flights.

Mr. Kramer described his health as good with no changes in the past year. He had not suffered from any sleep disorders. He stated that his hearing and vision were good and he did not take any prescription or non-prescription medication. He rarely consumed alcoholic beverages and the last time he consumed alcohol prior to the event flight was one half glass of wine the day before. He had had no changes in his financial or personal life in the past year.

Mr. Kramer could not recall for certain what the indications were on the instrument panel prior to the upset, but he looked and believed everything looked right. He thought the airspeed was about 150 knots prior to the upset. He did not hear a stall warning and could not explain why the airplane would enter the roll. When asked if there were any other indications of an impending stall other than the airspeed showing the airplane was getting too slow, he responded there was not. The airplane was equipped with a stick shaker. He believed that the problem occurred after the airplane had leveled off. After the upset, he stated that the airplane leveled off around 7,000 – 8,000 feet. The captain executed the recovery maneuver. He recalled that the airplane's airframe shook and his immediate thought was whether it was a tail stall icing event. He did not think it was. They immediately pitched the nose down. He did not have his hands on the controls, and therefore did not know what control inputs were made by the captain. He had to have faith that the captain would recover the airplane. Mr. Kramer did his best to do his job. He was looking for anything abnormal, trying to figure out a safe altitude to maintain clearance. He believed the captain put control inputs to level the airplane, but he did not know what those inputs were. They were already at a power setting. He was not sure if the captain added power but wanted to say he did. He remembered the captain pushing the nose over and saying "Glenn, I can't get any response out of this." Mr. Kramer was not sure about what the airspeed read. His initial reaction was to get the nose down. He did not think it was a tail icing event. It was possible that pushing down the nose would have been wrong, such as in a tail stall event.

They received training for recovering from a tail stall due to icing and reviewed their procedures and watched related videos in ground school. He was not certain if they practiced the maneuver in the simulator. During the ground school training, the videos were from NASA on performance issues and they also discussed the Colgan incident. He did not think there was a procedure in their book that described recovery from a tail stall. In his opinion and general knowledge of a tail stall, pushing the nose down was not the appropriate action. He did think that the airplane may have been aerodynamically stalled. The procedure for recovering from a stall was to push the nose forward, kick in rudder, and pull back on the stick. The captain said none of his inputs were working. When asked as a PM, what would be the most important instrument to monitor to help the PF to recover from a stall, Mr. Kramer responded the airspeed. However, he was unable to recall the airspeed at the time of the event.

Mr. Kramer stated that he received training on the Dash-8 at Flight Safety in Seattle, Washington. They trained stall recovery in the simulator and the recovery procedure was to lower the nose and add power, depending on the situation, the situation being power on/off stall. During their training instructors would be looking for pilots to recover from the stall and minimize the sink rate according to the standards, and maintain directional control. During the check ride, recovery from a power on stall would be to lower the nose. For a power off stall, the

procedure would be to add max power, lower the nose, minimize sink rate, and maintain airspeed.

Mr. Kramer reiterated that they were leveling off, picking up airspeed to the best of his knowledge, and they picked up vibration. The whole airplane shook and the left wing dropped. That was when he thought they could be in a stall. He did not recall any G-loading except for when they leveled off after they had recovered the airplane. When asked if the G-load was unusual, he responded yes.

The flight leveled off at 10,000 feet prior to the crew requesting the block altitude of 10,000-14,000 feet. He could not recall the duration between leveling off and requesting the block altitude. He said they were leveling off, picking up airspeed, and they picked up a vibration that got progressively worse and then the wing dropped.

The Dash 8 was equipped with a stick shaker. He and Capt. Novak were surprised that they did not get a stick shaker. It was a confusing factor. He said there were a lot of variables to consider and he did not think it was a straightforward situation.

The airplane was not equipped with auto-throttles. He was very familiar with the area and the route. He could not recall when he had flown that route last. He stated there was no one in the jump seat. He also stated that they were tested for drugs and alcohol after the event flight. Regarding whether he heard or saw any other warnings or alerts during the event flight, he thought he heard a chirp which was a warning not to go into reverse on the throttle, but that was the only thing. They had the anti-icing and de-icing systems on almost the entire flight. He could not recall what setting the boot cycles were set at. He could not give a definitive answer whether there was turbulence. He stated that they leveled off and picked up a slight vibration, similar to what they had experienced coming back from Cordova.

There was a speed bug indicator on the attitude indicator but they were not set for this flight. He did not recall the stall speed for icing conditions. As PM, he would look at the speed indicator on the attitude indicator to see if they were approaching a critical speed. He did not recall seeing the speed indicator. The speed indicator was static depending on the condition of the wing and it would self-adjust.

Their sterile cockpit procedures would apply up to 10,000 feet. If the airspeed was dropping, the PM would tell the PF to watch the airspeed. Regarding the procedure they followed when flying in icing conditions, he said it was a good idea to get out of icing condition. Icing was a reality and they experienced it on a regular basis. If possible, they would request a block altitude to get out of the icing conditions.

Training for recovery of aerodynamic stalls in the simulator was required and they did it. Instructors would try to push the pilots' limits. They tried to upset you. He had been in heavily loaded situations and it was the goal of the instructor to make it as difficult as possible.

Asked what the PF was doing when the PM was doing paperwork, he said monitoring systems was a crew coordinated effort while the PM was involved in multiple tasks. A pilot would not

just focus on the flight instruments; he would glance at other systems. It was a “given” that that was what a pilot did. There was no formal hand over of tasks. He had not been involved in any other abnormal or emergency situations flying the Dash 8.

CRM training covered fostering a culture of pilots working together, personality characteristics, the relationship between the two pilots, working together, and use of checklists. One pilot flew and the other communicates or did what needed to be done. He did not think that he and Capt. Novak had any difficulties. He did not recall a separate section in CRM training for pilot monitoring.

The interview concluded at 1550.

Interview:	**Steven Granger Novak, Captain, Era Aviation**
Date/Time:	**September 7, 2012, 1606 EDT**
Location:	**Teleconference**
Present:	**Roger Cox-NTSB; Katherine Wilson–NTSB; Maryam Allahyar–NTSB; David Keenan-FAA; Bill Kolstad-Era Aviation**
Represented by:	**Jeff Mahar, Chief Pilot, Era Aviation**

During the interview Captain Novak stated the following:

He was a Dash 8 captain at Era Aviation, and had been in that position since May 2012. He held no other duties at the company. Prior to this position he was Beech 1900 captain and line check airman. He held that position for 4.5 years. He was hired by Era on November 27, 2000. There had been several changes in the ownership of the company; however, it always operated as Era Aviation. He was 41 years old. He had approximately 8000 hours total flight time, with 300 hours as captain in the Dash 8. He had flown the Dash 8 for about 2.5 years as a first officer and estimated that he had about 3000 hours in the Dash 8. He estimated his total PIC time to be between 3000 to 4000 hours. He held an airline transport pilot, single and multi-engine land certificate and was type rated in the Beech 1900 and Dash 8. He held a first class medical, dated May 17, 2012, with no limitations. He had no prior incidents, accidents or violations, and no letters of investigation.

On the day of the incident flight, he started his duty day at 0400 and reported to work at 0650. He flew from ANC to Cordova and returned to ANC. After the incident flight, which was scheduled to go from ANC to Homer, he was scheduled to return to ANC. After that the crew was scheduled to fly from ANC to Kenai and back to ANC. He was scheduled for three out and backs in one day.

The incident flight departed from ANC on a normal day of flying to Homer. They were cleared up to 10,000 feet. Flying through about 7,000 to 8,000 feet they encountered a cloud deck and turned on the de-icing system. They entered the clouds and began to accumulate ice on all visible surfaces. The de-icing system was functioning normally but it was not clearing all of the ice off the airframe; the airplane was within its capabilities for the rest of the flight. They requested a block altitude of 10,000-14,000 feet to try to get out of the icing conditions. When the block altitude was granted, he initiated a climb. Passing through about 11,500 feet, they reached the top of the clouds and continued to shed ice off of the airplane's airframe. He elected to level off at 12,000 feet. As the airplane leveled off and began to pick up airspeed, there was a shudder that the crew thought was an unbalanced condition of the propellers as they were shedding ice. The shudder increased rapidly and the airplane rolled to the left, followed immediately by a nose pitch down. He attempted to control the airplane by bringing it to wings level and nose up, but it continued to nose over. They were frantic in the airplane, progressing into "full on panic" as they were trying to regain control of the airplane. Despite application of various control and power inputs, he was unable to get control of the airplane. The airplane descended rapidly and around 8,000 feet, he felt he had control of the airplane back. He continued descending and was able to

slowly level off the airplane. He tried not to put undue force on the airplane or passengers. ATC cleared the flight to 7,000 feet and later to 6,000 feet. They received vectors back to ANC and were given lower altitudes where the temperature was above freezing. They completed their checklist, landed at ANC uneventfully. The crew declared an emergency but he did not know the time that had elapsed.

There were no MELs on the airplane. Capt. Novak used the autopilot during the climbout. To engage the autopilot, he turned on the flight director to get heading guidance and to hold the airspeed in the climb. He then pressed the altitude selector button so that once they reached the assigned altitude, the airplane would level off. Once he saw what he was looking for on the flight director, he turned the autopilot on, told the first officer "autopilot", let go of the controls, and allowed the autopilot to engage. When in a climb, the way to put the airplane in the proper climb mode was to press the indicated airspeed button. The display would show what the airspeed was when the button was pressed. The pilot could then change the airspeed by adjusting the wheel up or down. The pilot would then press altitude select so the airplane would initiate a level off at the altitude put into the altitude alerter.

Capt. Novak engaged the indicated airspeed button when he engaged the autopilot. The first time was during the initial climb to 10,000 feet and the second time was when they climbed from 10,000-12,000 feet. He believed he set the airspeed at 160 knots or possibly as low as 150 knots. They would only go slower if climbing up into the flight level and their rate of climb began needed to decrease, but on this flight they were not going that high. They would not use a vertical speed instead of IAS in a climb. Their training did not teach that. He did not recall using the vertical speed during the climbs on the incident flight.

When they initially experienced the shudder, he believed it was due to an unbalanced condition of the propellers due to shedding of the ice. They could hear the ice hitting the side of the airplane and also saw it coming off of the propellers; he also saw the deice system shedding ice. He had experienced a similar shudder like the one on the event flight during the flight back from Cordova that same day. He had experienced this on other Dash 8 airplanes as well. On the event flight, he did not remember the airspeed when the shudder began or when the wing dropped. He did not receive a stall warning. In the descent, during the panic of the moment, he could not recall what inputs he made. He was trying to keep the airplane upright and the wings level unsuccessfully. He made a combination of control and power inputs, pushing the yoke and power forward and back-. As they descended through 8,000 feet, he began to recover. He saw the blue on the attitude direction indicator (ADI). The ADI was indicating that they were leveling off and he saw the rate of descent decrease. He could not recall the airspeed. He also stated that he was trying to bring the nose up but could not recall accurately any back pressure. He did not receive any reports of injury during or after the event. The flight attendant told Capt. Novak after they landed that he was up servicing passengers during the event but was able to get into a passenger seat and fasten his seatbelt.

Capt. Novak stated that the indication on the airspeed indicator which alerted pilots that the airplane was nearing stall speed was a small orange color speed bug on the left hand side of the HSI (horizontal situation indicator). He then stated the bug was on the ADI (attitude director indictor). As the airplane approached stall speed, the small orange circle would move down the

scale and pass the five white stationary hash-marks which represented a ratio in relation to the stall. The top hash mark indicated 1.5 VSI (Vstall) and the bottom hash mark indicated 1.1 VSI. The hash marks were fixed and could not be set by the pilot. Both pilots have the ability to monitor this system. If at or near stall, this would be the instrument he would use; however, he was not looking at this instrument during the event. He was monitoring the icing situation outside of the airplane, monitoring the airplane leveling off at 12,000 feet, and making sure the autopilot was functioning normally and that the airplane was capturing the altitude.

The stall recovery procedures set by the company or the manual would be to break the stall by applying forward control forces, put the nose down, gain airspeed, apply rudder in the opposite direction of the airplane's roll, and add power.

During the event, he did not think he was experiencing an aerodynamic stall. He did not receive a stall warning nor feel a stick shaker. In retrospect, he thought it was possible that the airplane was in an aerodynamic stall. Up to the moment until the nose dropped, everything appeared normal. The crew was monitoring the icing, climbing up to an altitude, and there was no sense that the airplane was getting too slow to maintain flight; if there was an indication, they did not see it. Until the nose dropped, everything appeared normal to the crew.

He received company training at FlightSafety in Seattle, Washington. He had stall training in mid to late April 2012. Instructors rated them on procedures to recover from a variety of stalls such as flaps out, gear out, gear up, and no gear out and no flaps out together. The check airman verified recovery to a given altitude or maintaining the altitude at which the stall began. It was expected that they would maintain altitude as the airspeed decreased and then maintain altitude as they recovered. They also trained a few stalls when changing altitudes. He felt that he applied what he was taught at the time of the event but that it did not work.

As the pilot flying during the climb, Capt. Novak was responsible for monitoring the severity of the icing and making sure the airplane was able to handle the icing conditions. If not, he would exit that situation. Additionally, he was responsible for monitoring overall aircraft attitude, direction, and course. He stated that it was definitely a higher than normal workload due to the icing conditions and the request to change altitude. On a scale of 1-10 (least to most amount of workload), Capt. Novak rated the activities as a 7. He did not have any other issues with the airplane prior to the upset.

Capt. Novak had flown with First Officer Kramer prior to the event flight. Including their flight together on September 5, 2012, they had flown together four times. He described Mr. Kramer's ability to communicate as very good. He did not think they had any issues expressing themselves; they were very open about things they were seeing, thinking or feeling. He did not have any issues with the first officer during the flight.

His schedule was variable but normal for any pilot. They had "somewhat" consistent duty days. He normally worked anywhere from 3 to 6 days in a row with a minimum of one day off, but sometimes more. The morning schedule duty day usually began at 0400 and 0900 for others. He sometimes had an afternoon schedule. His recent activities were as follows:

On Sunday, September 2, 2012, he woke up about 0430. He, his wife, and his friends participated in a bicycling event which took up most of the day until dinner time. He went to bed about 2200 that night and did not have difficulty falling asleep.

On Monday, September 3, 2012, he woke up about 0800. He had the day off and had a long drive home from the bicycling event the day prior. In the afternoon, he engaged in routine family activities. He was back to his normal schedule for dinner and sleep. He went to bed about 2100.

On Tuesday, September 4, 2012, he woke up about 0600 and thought he reported to work that day; however, could not recall his schedule. He went to bed about 2100 and fell asleep quickly.

On Wednesday, September 5, 2012, he was on reserve. He received a call from the dispatcher about 0410 informing him he needed to report to work at 0650. He tried sleeping but tossed and turned for about 30 minutes and it was not restful. He had a restful sleep prior to the phone call. He got up and got ready for work. He had breakfast and two cups of coffee prior to the event flight.

Capt. Novak stated that the quality and quantity of his sleep was not affected by any factors. He did not smoke tobacco. He lived with his wife and children. He described his health as "pretty excellent." He exercised and was conscientious of his diet. He had not experienced any changes in his health in the past 12 months. He did not suffer from any diagnosed sleep disorders; however, he had gone through periods when he felt he was not getting restful sleep for weeks or even a couple of months. He mostly thought his sleep was fairly normal. He stated that he had good vision and hearing, did not take any prescription medications, and occasionally took vitamin supplements. He consumed alcoholic beverage occasionally. He thought the last time he had consumed an alcohol beverage was Monday, September 3rd. His financial situation had changed in the past year in that he received an increase when he became a Dash 8 captain. He did not have any other personal life changes in the past year.

He stated that Era Aviation had an excellent training program. The company provided CRM training, classroom and simulator. They encouraged the pilots to speak up when they saw something, to recognize different personality types, how to speak in a way that certain personality types would receive their comments in the best way, encouraged free flow of ideas, and to use all resources to handle a situation. They practiced using CRM in the cockpit in the simulator. The training was provided on an annual basis for general subjects recurrent training and in simulator training every six months. They also had fatigue awareness training on a yearly basis in classroom discussions. The discussions included keeping sleep patterns regular, techniques for falling asleep, and effects of fatigue on performance and being rational. Capt. Novak stated that he did a self-assessment of how he was feeling on the day of the event. He felt very good after the Cordova flight and thought the flight went really well. It was just a quick flight to Homer and then Kenai and he was happy with how he was feeling for the day.

Capt. Novak stated that when the autopilot was set to capture altitude, he left the throttles where they were until they reached normal cruise speed before reducing power. He did not recall the position of the throttles but he did not manipulate them once he initiated the climb or before the event occurred. He did not perceive any visual or aural alerts prior, during, or after the event

other than the display indicating he had disconnected the autopilot. As soon as the airplane began to behave abnormally, he disengaged the autopilot. He was completely caught off guard. If the stick shaker activated, he believed the autopilot would disengage automatically.

After the upset occurred, the first officer told him that just prior to the upset he was pulling out his charts for the approach, which was not unusual since it was an uneventful flight; the first officer was thinking ahead appropriately.

Capt. Novak had flown in the Alaska region area his entire piloting career. Icing was very common in the winter. He was experienced in handling icing situation. He stated that he was extremely familiar with that route and had flown it the previous week. He received drug and alcohol testing at an offsite facility, not at the company. He did not notice anything unusual about the weather packet he received before departing ANC, except the previous 12 to 14 hours before he showed up to work, Anchorage had experienced some very high winds and there was a SIGMET for the south west Alaska region. He characterized the ice accumulating on the airplane as the high end of moderate icing conditions to the point that they needed to get out of it in order to continue the flight. The flight did not experience any turbulence. He described the time lapse between the first time he felt the shudder until the left wing dropped as less than 5 seconds.

He stated that the airline provided classroom and simulator training regarding flight into icing conditions. He could not remember whether he had received any training for dealing with tail stall. He added that they did not have to know an exact number at which the airplane would enter a stall, but that the speed that the aircraft would stall at was determined by a wide range of variables for the Dash 8 airplanes. The computer would take those variables into account and symbolized it as the airplane approached a stall. He did not know whether the icing conditions were factored in when calculating the stall speed. Capt. Novak said that the sterile cockpit rules were to avoid irrelevant communication below 10,000 feet or until cruise flight. He stated that there were different call outs for the pilot monitoring. The pilot monitoring needed to call out anything that reduced the safety of flight. He had only experienced one other emergency in the Dash 8 when they were struck by lightning; however, it did not affect the control of the aircraft.

His commute to work was about an hour on a normal day. He clarified that his troubles with sleeping as he had mentioned earlier were not recent. He stated that he worked for an excellent company and was proud to be working for that organization. He did not have any concerns about the company. He had not formally reported any concerns about the equipment or the individuals he worked with. There were minor issues which were dealt with professionally and responsibly. He had never expressed any concerns about any of their aircrafts.

Capt. Novak felt that Mr. Kramer was at 100% the day of the event. Compared to other first officers he had flown with, Mr. Kramer was an excellent pilot, very conscientious, and quick to speak up when need be. He did think that Mr. Kramer almost spoke too much and he had to ask him to stop talking when they were returning to Anchorage after the upset. He had never heard anyone complain about flying with Mr. Kramer.

With respect to CRM training, it did include pilot monitoring but he could not recall the specific content. Training did discuss not being intimidated by an overly strong personality.

Mr. Novak was asked to recall the maximum bank angle and the maximum pitch during the upset. At the moment when they had reached the maximum bank angle and pitch, his panic level was such that he could not focus on anything outside of the ADI. He only saw brown on the artificial horizon. The only number that stood out was a nose pitch down of 30 degrees and he guessed they had 45-50 degrees of left bank. He did not recall seeing any speed during the event as he “never once” looked at the airspeed indicator. He did not recall any significant G-load except for when the event initially started and he felt light in his seat. He thought it was a fairly gentle recovery with nothing drastic on the airplane.

He did not believe the NASA tail stall video was used in their current training but recalled something about a tail stall video years ago. After the event, the possibility of the tail stall did cross his mind. During the event, he was focused on recovering the airplane. He did not know whether this aircraft was susceptible to tail stall. He stated that the event airplane was not equipped with a ref speed switch.

The interview concluded at 1749.

Interview:	**Captain Aaron Wesley Rocereta, Assistant Chief Pilot**
Date/Time:	**September 18, 2012, 1604 EDT**
Location:	**Teleconference**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Bill Kolstad-Era Aviation**
Represented by:	**Robert Michael Hajdukovich, President of Era Aviation and CEO of Era Alaska**

During the interview Captain Rocereta stated the following:

His title was Assistant Chief Pilot. His duties were assisting the chief pilot and fulfilling the chief pilot's duties and responsibilities in his absence, managing the flight ops training program, coordination with the POI, maintaining the pilots' training and checking records in accordance with the training program, managing classroom scheduling and instructor assignment for initial, recurrent, and Dash-8 training, and providing classroom instruction as need be for basic, initial, recurrent, general subject, and Dash-8. He also flew the 1900. Since the position of director of training did not exist at Era Aviation, he and the chief pilot made sure the flight-ops-training was up to date and compliant.

He had been in that position for approximately 2 years. Prior to his current assignment, he was a Dash-8 co-pilot (right seat) and ground school and procedures trainer and instructor. Prior to the Dash-8, he was a Twin Otter co-pilot. He began with Era Aviation on September 7, 2004. Prior to joining Era, he was a flight instructor with University of Alaska, Anchorage. He stated he was 30 years of age. His certificates included an ATP with Dash-8 and 1900 type rating as well as CFI- instrument. He stated that Era Aviation had been in business from 1948 – 2012, for 64 years and that the company had been operating the Dash-8 since the 1980's or mid 1990's. They operated six Dash-8s, three 1900B's, and three 1900C's. The Dash-8 fleet required differences in the flight ops training program due to air evaluation group's requirements on 103 and 106 training differences. There were also differences between the electromechanical flight control displays vs. the electronic flight instrument system (EFIS). Out of the six, five of the Dash-8's were electromechanical. Those with the EFIS were equipped with eADI's and eHSI's.

In response to a question regarding how the company training had addressed two Airworthiness Directives (AD) from 1996 and 1999 (regarding operation in icing conditions), Captain Rocereta stated that he had helped in revision of the manuals. The AD in question had been recently brought to his attention and he recognized the AD as one that had been ingrained in their training material. He continued to cite a section in the manual used in flight ops training program. He noted page 2-77, Dash-8 Maneuvers and Procedures (part of the FOTP), Operations for Severe Ice. He also stated that the section could also be easily found by looking at the Maneuvers and Procedures emergency section's table of contents, under severe ice. Captain Rocereta read a portion of this section from the manual. He added that in this section, they also had procedures for exiting icing conditions. In short, he believed the concerns of the AD's had been addressed in the manuals and the AD from 1999 had been annotated in the limitation section of the flight

standard manual (FSM), page 1-38; 01-55 (AD 99-19-18); line 11 addressed the limitations associated with the autopilot in which the autopilot had to be disengaged in severe icing.

Captain Rocereta agreed that the responsibility to make sure the AD elements were incorporated into company procedures was handled by the management including him. He stated that the current POI was very recent in his term of service. The current POI had started about 3 months earlier; however, two POIs earlier, about a year and a half to two years ago, was Charlotte Hansen. She had inquired about Dash-8 icing with no specific mention of the AD's. She had been more concerned with adding airspeed during approach in icing condition. They incorporated the information into their manual per her suggestion. He stated that in the descent in icing condition, the speed increment would be VRF + 15 used in the descent and throughout approach and VRF + 10 on landing. The information could also be found in the quick reference handbook on the flight deck as well as Maneuvers and Procedures, normal procedures section.

After Charlotte Hansen, Michael Alkana was the POI for approximately 14 months and was replaced by Randy Smith about 3 months ago. Captain Rocereta had received a letter a day earlier from Randy Smith raising the issue about icing handling procedures. He agreed the letter raised concerns about inadequate pilot training in icing conditions. However, he did not know why Randy Smith would be concerned with the training program for handling icing conditions. He felt that the pilots were well trained on how quickly the icing can form, how to recognize the signs, and how to get out of the icing condition. He did agree that the information provided is not clearly stated as a response to an AD; however, the information was being passed. He stated that Michael Alkana did not ask any questions about icing in Dash-8 or 1900, but that only Charlotte Hansen did. Alkana was not checked out in the Dash-8; however, Hansen was. As for Randy Smith, he had been in the Era office, discussing SAI's, inquiring about the company procedures and ATP requirements coming next August.

Up until this incident, Randy Smith had not asked any questions about icing condition training. Captain Rocereta added that in order to satisfy Dash-8 initial and recurrent training, in his training instructors were required to cover module 98 which had elements for instructors to sign-off. The last element on this module (Dash-8 ice and rain) was element number nine: the normal/abnormal/emergency procedures which took the instructors to the flight ops maneuvers and procedures emergency section on severe ice on page 2-77 as mentioned before. This module was covered in initial and recurrent training.

He stated that he was not a simulator instructor but that he was an "instructor in town" which meant he provided classroom instructions and procedures trainer instructions. There were other instructors in Seattle who provided the simulator instructions. When the pilot transitions to the Dash-8, he would come from the 1900. As a co-pilot of 1900, he would go through a two week ground course, followed by 8 or 9 days, eight hours a day of classroom on Dash-8 systems, modules 89 through 115. That gave enough time to review the material three times. Then they had three days of the procedure training. Day one usually was spent on the plane open to the instructors' discretion. They also had a PC trainer with caution lights, yokes, and power lever, so that they could work together as a team with call outs and checklist procedures, including emergency checklist procedures. The simulator ran on a Microsoft flight simulator which is well received because they can load the autopilot and run stall sequence maneuvers. The training

program calls for 20 hours of simulator training; however, they run 24 hours of it. Each session is four hours; therefore, they run one extra session. The instructors in Seattle are Era captains, check airmen, and they provide check rides as well. Flight Safety in Seattle only provided the simulators.

In training pilots for stall recognition and stall recovery, he used the Maneuvers and Procedures chapter 9, approaches to stall. They were trained to recognize the stall, changes in the flight control, buffet, and stick shaker. The airplane was docile. The recovery procedure was to reduce back pressure and stop shaker and minimize altitude loss. He then added that the first item for recovery was actually to add power, reduce back pressure to stop shaker, and minimize altitude mode; go-around mode may then be used. He stated that the standard altitude loss that was considered minimally acceptable was 100 feet. He was not aware of any plan to change stall training. Since he was uncertain about his response, he agreed to follow up on this at a later time. He felt the current procedure at this time was adequate.

In response to whether Era taught tail stall recover procedure, Captain Rocereta stated that they had watched the NASA video for regional and corporate pilots and briefly discussed it; however, it was not trained in a simulator or procedures trainer. The video was not part of the syllabus but it was a supplementary instruction aid that the instructor could use if he chose. He believed he had shown the video twice out of the ten sessions he taught last year. He would ask the class if they had seen the video, then they would talk about super-cooled large water droplets, and picking up ice more than the airplane can shed. If he noticed that his class had not seen it, then he would show the video. He stated that the former Twin Otter pilots had seen the video in every recurrent training class. He added that Era no longer had the Twin Otter aircraft.

With respect to Dash-8's susceptibility to being affected by icing related tail stall, he stated that anything would be possible when flying into ice for which the airplane was not certified or if there was a malfunction with the de-icing or anti-icing system. He stated that the Dash-8 could be susceptible to tail stall due to icing if flown into icing conditions outside of what it was certified for, such as super-cooled and large water droplets. For training purposes, he said he would not test the pilots on deciding what type of stall recovery they would use in icing conditions, instead he would briefly discuss that the tail stall would likely occur if the aircraft was outside of the aircraft certification and if they were at high airspeed and the nose dropped. He added that at slow airspeed it would probably be a wing stall. He stated there was no tail stall training in their program. The question had been raised about the accident in Buffalo and whether that was a tail stall. However, he had discussed in class that accident was not due to a tail stall, because the plane was at a slow airspeed and the pilot's recovery was incorrect.

Following up on the POI, Ms. Hansen's suggestion on implementing changes to manual on the increase in airspeed on descent, Captain Rocereta clarified the changes were implemented in revision 3 of the manual dated August 2011. The change was communicated to the pilots during ground school and he felt that over the past year all of their pilots had been informed of the change. He stated that he directly reported to the Chief Pilot.

He said he knew the event captain but had not flown with him. He knew him from his classes and had seen him on the line often. The event captain used to be a BE-1900 captain around the

same time as Captain Rocereta was a BE-1900 captain. In class, the event captain paid attention in class, asked questions, and interacted well with others in class. He had heard from other line pilots that he was a subpar captain and not the best of the best. He had heard that the event captain was a nice guy; however, they had to watch him carefully as his co-pilot. He wasn't unsafe but he could get behind the airplane. He also knew the co-pilot but had not flown with him either.

He stated that the co-pilot was one of his lower end students, he could pass the test and get by but he could tell that the he was struggling. The co-pilot had to work hard and he had to reiterate the questions with him, making sure he understood what was going on clearly. He had also heard from others that he was a weak co-pilot. He passed his check rides but some pilots would say, "Man, I've got to fly with this guy." He had the tendency to get behind the airplane. He had not heard of the co-pilot being unsafe or losing control of the airplane, but pilots would say that normally their co-pilot helped them throughout the day but in the case of this co-pilot, they felt they were helping him.

With respect to handing over control, he stated that was a hot topic between the FAA and the company. He said that, as stated in the general operations manual (GOM), the pilot flying would say "can you take the controls?" the pilot monitoring would say "yes [he] was ready". The pilot flying would say "you have the controls". Then the pilot now flying would say "[he] had the control".

He had not heard from other pilots any safety concerns that would lead to such an event as took place with the event crew. He learned about the incident when he was at Ops. He heard from others that the plane had become uncontrollable and went into a dive. He thought that it was a windy that day which could have led to a mountain wave or possibly an icing outside of the aircraft's certification.

With respect to the use of autopilot during the climb, Captain Rocereta indicated that the vertical speed should not be used when autopilot is engaged since the airspeed is not protected and that could lead to stalling. He discussed in class that the problem with vertical speed mode and pitch mode, if the pilot was not careful, the airplane would pitch up and go into a stall and if the pilot was complacent they could lose track of the airspeed. However, this was not a regular topic discussed in training for this airplane. He stated that if the autopilot pitch mode was pressed twice, the airplane would go into a pitch mode and hold the pitch the aircraft was in. Pitch mode was annunciated to the right of the captain and annunciated to the left of the co-pilot where if he extended his arm out, it would be at shoulder level. Captain Rocereta was given an example that if he saw pitch attitude increasing from 2 degrees to 12 degrees and the vertical speed was a constant of 875 feet per minute what mode would he think the autopilot was in. He responded vertical speed mode.

He stated that other than the stick shaker, there was also a gear horn which is a 130 knot gear horn and goes off if the power levers are in a lower position and the airspeed drops below 130 knots. However, the horn is canceled if the power levers are pushed forward as you would in a climb. It is easy in a Dash-8 to not worry about airspeed because every time you get to 130 knots, the horn goes off. It indicates that they were going too slow. The only warning in the

climb is high pitch attitude and the noise of the plane being quieter and the stick shaker. But if the pilot was paying attention, he would see the fast-slow indicator (donut) in the artificial horizon just to the left changing.

He would like to highlight the AD in his training and add it to his PowerPoint slide due to this incident. As for adding tail stall information he felt hesitant and he felt it was outside of his realm. He also added that he emphasizes with the pilots that they should not "check out" in route. That is, just because the auto pilot is on it didn't mean they should not be monitoring. He also added there was a strict rule that pilots were not to read non-company material during the climb.

He indicated that they had an ASAP program and the safety department was responsible for administering it. He indicated that the Medallion Foundation, a third party facilitator, would have the number of ASAP reports that had been filed.

The interview concluded at 1718.

Interview:	**Jeff Sharp, Vice President of Operations, Era Aviation**
Date/Time:	**September 18, 2012, 1725 EDT**
Location:	**Teleconference**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Bill Kolstad-Era Aviation**
Represented by:	**Robert Michael Hajdukovich, President of Era Aviation and CEO of Era Alaska**

During the interview Mr. Sharp stated the following:

Mr. Sharp was the Vice President of Operations and had been in that position for about 6 or 7 years, dating back to two company owners ago. He stated he was 53 years of age. His certificates included an ATP, with type ratings on the Convair 580, 340,440, and DC-3. He was not a current 119 position holder; however, he had been up until August 3, 2012. His replacement as the Director of Operations (DO) was Everitt Leaf, who had been accepted by the CMO and had been listed in the ops specs as the DO for about a week. Mr. Leaf had been involved in BE-1900 pilot training and had been with the company as Beech 1900 program manager.

Mr. Sharp explained his responsibilities as overseeing any department that touches the airplanes, including pilots, flight attendants, dispatchers, maintenance, inspections, and approximately five stations. He stated that the airline's certificate was a combination of 135 and 121 traditionally; however, their CMT took the unilateral step last Thursday and Friday to remove all part 135 ops specs from their authorization against company's wishes. The company had not been operating any 135 operations for the past two years and therefore this did not have an immediate impact on the company. The CMT had sent the company a letter earlier in the summer inquiring about the lack of 135 operations by the company. The company had conducted part 135 operations in Alaska for 35 to 40 years and he regretted the decision to remove that authorization. The CMT agreed to hold off on removing the 135 authorization for 90 days, but that period ran out last week.

He described the company's relationship with the Certificate Management Office (CMO) as an "incredibly active relationship." Era officials see them virtually every day on the premises and on the aircraft. Generally, everyone seems to get along, but the situation had become difficult over the past two years. He said that he tried to remain open minded and to listen to all the comments and advice; however, it had become trying to work with them. He used the part 135 de-authorization as an example of how any changes at the CMO would result in new interpretations of what they were told they were doing wrong. He further used the example of Ops Spec C 067 having to do with operating in non-standard airports. The POI from four years ago said that they had to list every gravel airport they operated at in Ops Spec 067. There were 250 + of those airports just in Alaska which they could operate at. The CMO later rescinded the plan and suggested that with their approval and on a handshake, the company could continue to operate in those airports. The newest POI had sent them an email two weeks ago indicating he intended to re-start the issue of ops spec C-067.

He indicated that the individuals in charge at the CMO were: Clint Reese, CMO manager, Tamara Thompson, CMT manager; Randy Smith, POI; James Helberg, PMI; John Harrington, PAI; ; and Beth Claiborne, Dispatch/Ops Inspector. There were also a variety of assistants under them but he lost track of who they were since they changed quite often. He characterized his relationship with the last three POIs (Hansen, Alkana, and Smith) as respectful. He said he and the individuals working under him all try to work with the POIs professionally, taking what they say into account. However, it has been very difficult particularly in the past 12 months in that one day they demand one thing and the next day they change their demand which made it perplexing and difficult to run an airline under those conditions. He added he did not know why that was the case and at one point he thought perhaps he was the problem.

Mr. Sharp characterized the experience level of their pilots and first officers on the Dash-8 as a moving target. They had individuals who were talented with a long tenure at the company. Three years ago Dash 8 captains averaged 16 or 17 years with the company and some even had 28 or 29 years with the company. Many people had described the Dash 8 left seat as one of the best airline jobs in the world, particularly for those who had resided in Alaska. In the last three years, similar to other airlines, they had suffered and lost some talent. The average captain on the Dash 8 now had 10 years of tenure and 10,000 or 12,000 hours. Recently, there had been a lot of turnover of first officers. They had been able to promote some from the right seat of the Beech. Post 9-11, there were first officers that would wait up to six years before promoting to the Dash-8. He thought Era had the highest paid Dash 8 FO's in the world.

He stated that the company began to operate the first Dash-8 in 1990. From what he could recall, they had not had a loss of control incident in their Dash-8 prior to the flight 874 event. He stated that he was familiar with accidents and incidents in the Dash-8 outside of Era Aviation and read industry publications; however, he did not consider himself a scholar on the topic. He thought staying familiar with Dash 8 issues was primarily a chief pilot responsibility.

With regards to Dash-8 susceptibility to tail plane stall, Mr. Sharp indicated that would be the chief pilot's responsibility. He was aware of plenty of information on icing characteristics in their training program. He stated that he was familiar with the history, guidance, and information on ice related tail stalls because of his 10,000 + hours in the Twin Otter. In the early 90's tail plane stall in the Twin Otter became a very big issue. He stated from his knowledge of the Dash-8, he thought the Dash-8 was "not even close" to being susceptible to tail stall. However, if operated outside its certification limits, it might be susceptible, but even so tail stall could be easily mitigated. He did not think that their pilots would have an issue recognizing the difference between an aerodynamic stall vs. a tail stall and their pilots would be able to understand it. He did not think that tail plane stall was a problem that they needed to train for.

Mr. Sharp stated that up until August 3rd of 2011, the chief pilot reported to him. The chief pilot was supposed to report to the Director of Operations. However, he was above the DO, and since the position had not been filled until recently, the Chief Pilot had continued to report to him. The Chief Pilot's duties were related to how to run a successful airline, train 75-80 pilots, and keep them stable and qualified. His office and that of the chief pilot adjoined and they had no privacy. He stated that they had been adding extra information to the training in an effort to maintain good standardization. Generally, their pilots were quality pilots but every once in a while, one

struggled. There had been one last week. He had seen some of the training; however, he had not sat in the aircraft initial systems course in the last seven or eight years. He had visited Flight Safety in Seattle and sat as an observer in a Dash-8 simulator a couple of times but not since he left the Chief Pilot position seven or eight years ago.

He stated that they had a robust safety reporting system for the pilots which they called WBAT. They also see the pilots and listen to them if they have any concerns. He did not hear any safety concerns from the pilots about flying the Dash-8; however, the pilots complain about refueling issues, which are not unique to Dash-8. The go/no go decision was given mainly to the pilots and dispatching. Their dispatching system was very robust and this was a mutual consent. It was not unheard of for him to tell dispatch that based on his observations they needed to stop flying, for example, due to high winds or turbulence. That would reduce the pressure on the crew. Rarely would he get involved with a single pilot or flight telling then no, they should not fly.

Mr. Sharp stated that the previous POI, Mr. Alkana, was there for about 16 or 18 months. He had expressed concerns, some of which seemed irrational or bizarre. Mr. Alkana had a concern about their operations on 139 airports. The following week he said that they had a round table discussion and that the 139 operations issue did not apply to them. Mr. Sharp asked him for something in writing, which to this date he had not received.

He stated he was familiar with Captain Novak. In general, over the course of 10 years that he had been with the company, Captain Novak was not among the top 10% strongest pilots but he had always tried hard. He said he knew little about the F.O. because he had joined them from a sister carrier about a year or 18 months earlier. He added that recently he had received a call from Captain Novak saying that he thought he had gotten complacent and forgotten his log book. They sent the flight log to him on an empty aircraft. It was a high profile event since he had to sit there with the airplane and 29-35 passengers waiting due to his complacency. To make matters worse, an FAA inspector was waiting to perform an inspection on his flight. He was "caught red-handed," and filed an ASAP report. He and the Chief Pilot were disappointed in this issue and he requested an administrative action to be taken against Captain Novak. The action was in process when the flight 874 event took place. There was also an altitude deviation a couple of years ago which Mr. Sharp thought involved Captain Novak. The captain said at that time he made the mistake because he was being overworked. He also added that that Captain Novak may have had some line check airman duties in the Beech 1900 in the past.

He had not personally made any changes to Era's training as a result of the flight 874 event. So far he had not identified airspeed awareness, duties of the pilot monitoring, or use of the autopilot as issues that needed to be addressed That would be the Chief Pilot and the DO's responsibility. However, the POI the day before had delivered a letter about their inadequate training based on the comments by the flight 874 event pilots. He was flabbergasted by the idea that Era pilots did not know how to operate in icing conditions. He responded that if there was a problem, then the company would see to it that it was fixed. The POI had asked Era to take appropriate action to immediately inform all their pilots about the event, including references to two Airworthiness Directives (AD) related to operations in severe icing conditions. Mr. Sharp had stayed at the office until 2100 preparing a bulletin about the AD information and had the pilots sign a signature document as they arrived at work indicating they had received the

information. He addressed the issue immediately and he continued to discuss the subject with the pilots as they reported in. Every single pilot he had talked to had stated that they were already trained on procedures for operation in severe icing He had not seen all the pilots yet. He did not understand what was driving this action by the FAA. He agreed to provide the investigation with a copy of the bulletin.

The interview concluded at 1830.

Interview:	**David Paul Senko, Captain, Line Check Airman Dash 8**
Date/Time:	**September 24, 2012, 1000 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; Bill Kolstad-Era Aviation**

During the interview, Captain Senko stated the following:

He was 43 years of age. He was hired by the company on 4/29/95 and his first check ride was April of 1996. He was designated as a line check airman a week earlier, on September 20, 2012. He had been captain on the Dash 8 since May 2004. Prior to Era, he was a college student working for Transamerica Glass working to be a warehouse supervisor. His certificates were ATP with a Dash 8 type rating. He had been with the company for over 17 years and really liked the company. He had his first check ride in April 1996 as first officer in Dash 6 (Twin Otter), then 3 years in the right seat of a Convair 580, and captain in Twin Otter in October of 2000. His total hours were about 11,100 and about 6,000 of that were in the Dash 8 type. He had had no prior accidents, incidents, or violations.

Captain Senko had recently flown with the F.O., Mr. Kramer. He could not recall the exact flight or the details of the last flight. He had flown with the F.O. a dozen times or more. He stated that Mr. Kramer was a morning (a.m.) guy and he was an evening captain. His general impression of Mr. Kramer was that he was not the strongest F.O. he had flown with and needed help. For example, on an approach to Aniak one day, when he was the pilot flying, they were below 10,000 feet on an RNAV approach and Mr. Kramer, the pilot monitoring, began to talk about the next leg of the flight to St. Marys. Captain Senko had to tell him to stop and pay attention to what they had on their hands at that time. Mr. Kramer had not done that before during any other flights. Captain Senko said it was the FO's overall performance which was subpar. Captain Senko felt that Mr. Kramer did the job as pilot monitoring better than actually as the pilot flying. He tried to stay on track monitoring but had a hard time doing both monitoring and flying. On a scale of 1-10, his flying would be 3 or 4. Captain Senko had nothing to say about Mr. Kramer's strengths as pilot flying; his weaknesses were being behind the aircraft and not prioritizing. He was never partnered with Kramer for training.

Captain Senko stated that Era's procedures for teaching the duties of pilot monitoring would be a long list. The training program was very thorough. He felt that he had a loud mouth, and he would have spoken up if he saw flaws in the program. The two event pilots must have gone totally against what they were trained to do, He thought the FO's lack of being able to prioritize things would lead him to miss what was needed to be done. Captain Senko also stated that the FO was going through many family issues. His wife lived in Florida and he had to travel back and forth to visit with her on his days off, which must have been stressful. He lived with his stepson from his first marriage and tried to make house payments here. He did not critique FO Kramer after the flight where he had to tell the FO to stop talking. He thought leading by example was good enough. Usually FOs learn what the captain wants from the tone of the cockpit. Had he flown with FO Kramer more often he would have been able to critique him

better. Flight debriefings were customary and he even critiques himself. He told the FO to stay focused and the FO said he understood.

Era expected pilots to recover from a stall at the first indication. He did not remember reading anywhere in the manual that a stall could occur prior to stick shaker. Common sense would say that there could be other indications. The Dash-8 was great on handling and control. In the flight operations training plan (FOTP) there was information on adjusting speed in icing conditions. Icing was common in Alaska flying. He was not aware that the later models of Dash-8 had a ref speed switch. As for stall recovery, the company's expectation on stall recovery procedure was that the pilot flying would have hands on the power levers, bring the power up to 112.5 % torque, max power, flaps 5, gear up, flaps up, climb power, and accelerate the aircraft. You must reduce pitch until the stall is broken (could not recall the exact pitch change required). You would try not to lose altitude, but break the stall, and pitch over to accelerate. Their training was not to descend but to accelerate. Excessive altitude loss would be unsatisfactory.

He was aware that the ATP PTS stall recovery standard had changed. Standards now allowed for loss of altitude in recovery. His last check ride in simulator was April 2012. His next one would be next month. He did approach to stall training in the simulator but could not recall if the check airman talked about the standard changes.

He had not been in any emergency situation with Mr. Kramer as his FO. He stated that the FO was not shy and he would speak up and make comments. He characterized the FO's personality as off and peculiar. He was going through a lot and was different. Captain Senko had heard from other captains that the FO was a high workload FO and 75% of the time he would be running back to the airplane to correct the logbook. He was not one of the favorite FO's to fly with.

Captain Senko was one of the first individuals to talk with the FO after the incident. He stated that the FO explained they were at 10,000 feet and there was some icing. They began to climb to the 10,000 to 14,000 altitude block and the icing was not that bad. He indicated that around 11,000 feet they broke out of the clouds and that was when they lost control and the left wing dropped. He said the autopilot was not engaged. He did not know what had happened but that the captain had done a hell of a job considering the circumstances. Captain Senko thought from the description that it was a stall. He left the conversation after that. He thought they had not brought the props full up. He was appalled.

Regarding pilot turnover at Era, he said most captains wanted to stay but many FO's planned to leave for other jobs. He was satisfied with the maintenance and the equipment at Era. The FAA observed training and was quite involved with the company. Pilot check ride failures did happen and he had been in a checking event where the other pilot was unqualified.

The basic minimum qualification for newly hired pilots was the multi-engine, instrument rated commercial certificate. He had seen new pilots fresh out of Embry Riddle. The hours give experience but there were some hot pilots fresh out of school. They went into the Beech so he had not flown with them since 2004. The entry level for the Dash 8 was two thousand hours plus and there was low turnover.

The training and preparation of new first officers coming on the Dash-8 overall was great but he wanted to polish the small things and that was why he wanted to be a check airman. He felt that the checklist should be read verbatim. He was thrown off when someone did the checklist a bit different. With respect to the autopilot, he would expect the pilots he was flying with to climb on indicated airspeed, as said in their manual. If he saw otherwise he would tell them he did not like it. As a captain he would insist on that. He had seen FO's using vertical speed. He did not know why they would use vertical speed, except because they did not understand the autopilot or they want to do things differently. He told them to just use indicated airspeed. If he saw an airplane climbing, on autopilot, airspeed gradually decreasing and pitch increasing, then he would say it was in vertical speed mode. In his experience he had never got the speed low enough to stall because even if the autopilot was engaged, you were still flying the plane.

Captain Senko had not done any instructor pilot or check airman duties in other aircraft. He had chosen to take the Dash 8 Captain position instead. Era did not have captain monitoring program prior to upgrading. They were not an AQP carrier. In an N and O, there was a waiver authority that the check airman had the authority to waive two of the three stalls when the pilot had a high level of proficiency. They took the "training in lieu" using Title 14, 121.441 in which PIC must have a proficiency check every 6 months or "training in lieu." In their training, they did all three stalls and the check airman did not waive it. "In lieu" events depended on the instructor. Senior instructors asked what the pilots wanted to see. It was a fast paced 4 hours of training. They could also do a hot topic that the instructor chose. They expected to see icing conditions without the visual cues in the simulator.

There was an internal process for pilots to report issues online and anonymously called WBAT. It was not ASAP but it was an internal reporting system. He had never filed an ASAP report.

Captain Senko had flown with the event captain. He had been his FO in the twin otter and later in the Dash 8. The last time he had flown with him was just before Captain Novak was upgraded to Captain. They had an emergency in a Twin Otter coming back from French Valley. They lost oil pressure and had to shut down engine number 2. He was the non-flying pilot and the flight was a part 91 flight. Captain Novak gave the brief and Captain Senko reminded him not to use reverse. However, upon landing, Novak used reverse. During the briefing Novak was receptive but post landing because Captain Senko had used an obscenity, Novak was not receptive.

Captain Novak as an FO sometimes did the job right and other times he did not. Other pilots would say he "did not show up for work" mentally at times, and some pilots said his nickname was "space." This was some time ago when his experience level was less. Novak would speak up if needed be.

Captain Senko had not had any recent direct interaction with Captain Novak in the past year and he avoided him because he did not respect him. There were no specific examples, but he tried not to be in the same room as Captain Novak and since he felt he did not have the need to fly with him anymore, there was no need to maintain a professional relationship. Captain Senko had not talked to other pilots lately to hear anything about Novak, but he felt Novak was a lot of work to fly with. He was angry that Captain Novak had made check airman but did not discuss it with anyone. He was not in the training department and had already expressed his opinion but no one

listened. He thought maybe the company was in need of people due to loss of pilots and that was the reason for making Captain Novak a check airman.

He began work at Era in 1995 as number 26 of potential pilots working the ramp. The company's philosophy was that they wanted to know you because they could train you to fly but they could not change your personality. He made first officer in the Twin Otter in April of 1996 and then became first officer in the Convair for a couple of years. He was a captain in the Twin Otter beginning in October of 2000 and transitioned to the Dash 8 in May of 2004. There was a master seniority list and positions were now bid. It was a small company, so sometimes people got positions without a bid.

Captain Senko had observed the FAA raising objections or insisting on changes. The QRH (quick reference handbook) was ripped out of their hands. The POI said it was not an FAA accepted document and could not be used. If it was found in the pilots' flight bag, it would have been considered a violation. Another action from the FAA was a redundant action on the AD regarding icing. They wanted to make sure everyone was current on it even though they had seen it many times in class and training before. In class they had the AD and went over it and asked everyone if there were any questions or whether they needed any extra training. But everyone said they had already had it many of times. They signed a roster. There were other small things. Charlotte (former POI) had added other things such as the challenge on oxygen system. He had interacted with Mr. Alkana also. Mr. Alkana was the one that pulled the QRH and flight standard management. Other things were affected as a result. His understanding was that it was never an FAA approved document and should not have been in the aircraft since it was not blessed by the FAA. He could not recall any other examples but he knew there were other small changes. There was a lot of grumbling over the QRH from the other pilots. He thought it should have been phased out rather than just showing up one day and removing it from the aircraft.

The interview concluded at 1135

Interview:	**Joseph Carl Ward, First Officer, Era Aviation**
Date/Time:	**September 24, 2012, 1300 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Senko -Era Aviation**

During the interview, Mr. Ward stated the following:

He was 27 years old. He had been first officer in the Dash-8 for approximately two years and prior to that he flew the BE-1900 with Frontier for 4 years as PIC. His certificates included ATP, single engine commercial, with type rating in Beech 1900 and CFI and CFII. His total flying time was about 6800 hours and 1500 of it was in the Dash 8.

Mr. Ward indicated that he had flown with Captain Novak about a week before the incident. He had flown with him approximately 15 times. Captain Novak ran the cockpit professionally, with good CRM. He always felt included. They were able to make decisions together and he was happy to work with Captain Novak. He also stated that Captain Novak ran his checklist in a formal and professional manner. He never missed anything on the checklist. As far as focus and attentiveness, Mr. Ward rated Captain Novak as a 10, with full briefs and always checking the weather. If Mr. Ward was the pilot flying, Captain Novak did a good job being proactive. Mr. Ward did not remember if they ever flew in icing conditions. He had not been in training with Captain Novak either. He had not had an observer or and FAA inspector jump seating when he and Captain Novak flew together.

Era pilots were taught to use airspeed mode with altitude select on when using autopilot. He had not talked with other FO's about Captain Novak, nor had he heard anything bad about him from others.

Mr. Ward had also flown with Kramer a couple of years ago on the Beech 1900 while at Frontier. He was the captain and Kramer the FO. They only flew a handful of times together. He was in Fairbanks and Kramer was in ANC. He described the FO as a good pilot and super prepared and had the charts out early. He was far ahead of the plane and planned ahead. He had concerns about Mr. Kramer's ability to focus on what was going at a given time and felt that he got ready too soon and plans could change. He also added that it had been too long and he could not recall if Mr. Kramer had ever been behind the plane. He had not heard much from other pilots about Mr. Kramer except that he was a good guy.

Mr. Ward stated that his last simulator training was October or November of last year. They practiced unusual attitudes, stalls, and discussed special airports such as Valdez and Kodiak. To recover from the stall they would use max power, lower the nose and recover with minimal altitude loss. The standard for allowable altitude loss was 100 feet.

In severe icing, they were taught to get out of it, push props up and full power with all anti-icing systems turned on. He had been in severe icing in the 1900 but couldn't recall if he had

experienced that in the Dash. The icing was bad but not severe. He stated that if the icing went beyond the boots, he would know it because it would be visible particularly the excess around the windshield and the windshield wipers in Dash-8. In the past two years, he had not had any concerns with the Dash-8 in icing because it seemed to shed the ice well. He stated that when the ice begins to come off, there is vibration around the prop. The vibration would not be similar to a stick shaker.

Mr. Ward had not been in an emergency situation with either Captain Novak or Mr. Kramer. The last time he spoke with Captain Novak was during their last flight and the last time he spoke with Mr. Kramer was just passing him by in the building.

Mr. Ward stated that they learned CRM in ground school. They discussed personalities about how to keep people involved, work as a team, and to speak up. At least a day was also spent in the simulator practicing the same work together as a team. He said the curriculum was in the GOM.

He liked the company and thought they operated professionally. There were no complaints, but pilot morale was a mixed bag. The morale of the pilots was mainly due to the merger which had been tough on people. More time off was one of the other pilots' concerns. There were no concerns about maintenance or equipment and they could report any unsafe situation without fear of negative repercussions from the company. He had once reported a wheelchair situation but nothing big that he could think of.

Mr. Ward indicated that setting up the ice panel was the captain's duty and therefore, he would not touch that. The setup, however, would be the windshield heat, elevator horn heat, props, +5 in the air, and with visible moisture in the air, anti-icing would come on. When the lights were all illuminated, that would be an indication that the system was working. He was unable to recall if there was a way for him to tell whether the boots were fast or slow. The switch would be set to above for -10 degrees Celsius and higher and it should be below for less than -10 degrees. He would not be making any suggestions for a new setting to the captain. That would be the captain's job.

When asked why the thought the event plane was had lost airspeed, the replied he would not know why and couldn't explain it. His best explanation was that perhaps the autopilot was on altitude hold and due to icing that was the outcome. He added that if he were in a similar situation, in order to get out of the icing condition, he would be watching the airspeed and altitude, climbing to get out of the icing, shedding the ice, and increasing the airspeed. He would use 1050 to 1200 RPM and 90 torque but just for climb setting. He also added that the Max power would be 97.5 for takeoff and 112.5 for 5 minutes.

Mr. Ward said that he had had FAA inspectors in the jump seat almost once a month, mostly from the local office. He knew most of them such as the POI. Every once in a while there was a person from a different company. He had not had Mr. Randy Smith but had Mr. Alkana in the jump seat. Mr. Alkana was there to make sure they were following procedures. He had never had any comments for him. He had been nice and professional. Mr. Alkana may have asked a few questions in the GOM on icing and if he had any concerns he would express them to the boss.

Mr. Ward had not heard anything more on the de-icing, except for the retraining they had with the memos. He had heard far more on the de-icing before the incident. He hadn't learned anything new from the retraining.

Mr. Ward thought that no one benefited from the merger with regards to pilot seniority because it was based on the hire date. He started with Frontier in 2006 with 500 hours as a flight instructor. As for the number of pilots that had remained since he was hired, Mr. Ward thought that perhaps a couple of the individuals who came in before him were still around. Most from his class of six were gone. About 25% stayed and the other 75% built some time and had other career choices after 1000 or 1500 hours, going to work for Horizon or SkyWest. He stated that Mr. Kramer came in a class after him. He thought Mr. Kramer liked it there and was there by choice and wanted to stay in Alaska.

The interview concluded at 1355.

Interview:	**Donald Jay Burand II, First Officer, Era Aviation**
Date/Time:	**September 24, 2012, 1400 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Senko -Era Aviation**

During the interview, Mr. Burand stated the following:

He was 25 years of age. His certificate included commercial pilot with instrument rating aircraft multi-engine land, and private pilot glider. He also held an SIC type rating in the Beech 1900 and Dash 8. His total flight time was 2700 hours, of which 150 hours were in the Dash 8. He had been an FO for 3.5 years with Era Aviation. After he got his ratings, he worked for two sky diving operations. He had begun with Hageland in March of 2009 and had been with Era Aviation since September 2009.

He flew with Captain Novak often in the Beech 1900 and a couple of times in the Dash. The last time was a couple of months ago. Nothing stood out from the last flight and he had never been in an emergency situation with him. He described CRM with Captain Novak as very good and approachable. He felt comfortable talking to Captain Novak if there was an unsafe situation. On a scale of 1-10, he would place him towards the higher end, either 9 or 10. He thought Captain Novak was personable with respect to his strengths and he could not come up with anything he thought Captain Novak could improve on. He had not heard anything negative from the other first officers. The last time he talked to Captain Novak was the last time they flew together. They did not socialize outside of the company.

Mr. Burand said he liked working for the company. He enjoyed flying the aircraft and being able to go home every night. He stated that the morale was good but sometimes poor due to scheduling if someone was getting burned out. He had generally heard good things and pilots were happy. He thought the training was good. The last time he was in general subjects training was August of 2012. In CRM they covered communication between the two pilots, being able to speak up, the role of the FO presenting options to the Captain, and taking personality tests to learn how to deal with different personalities. In the simulator, they would put what they had learned into practice. The FAA had sat in a couple of the ground schools. He had heard that some folks had not made it through the simulator training but it was not that often. He thought the maintenance and equipment were very good at the company.

He stated that as a first officer, as a pilot monitoring, he would be dealing with the radio, monitoring the general situation such as airspeed and altitude and also making sure the icing situation was manageable.

He was fairly new on the Dash-8. He went through training for the Dash -8 in the second half of May 2012. He stated that stall recovery was covered in ground school and the procedures trainer. They discussed how a stall should be recognized and what actions needed to be taken. In the simulator, they followed the company training program with clean, departure and approach and

landing stall. When they saw a stall, the initial procedures were to apply power and reduce AOA. They would strive for minimum loss of altitude without inducing a secondary stall. They talked about icing in general subjects. With ice on the plane they were taught that there was more weight. Stall performance of the aircraft would be deteriorated with ice and there would be a higher stall speed. For example, he stated he would have to add speed in increments to approach airspeed to counteract the higher stall speed. The approach speed increment was 15 knots. He could find that information in the normal procedures in the Dash 8. Icing could be forming back on the propeller. He had not been in severe icing. He felt the subject was adequately addressed in their training and nothing new was added in the new training that was done a few days ago. Hageland pilots essentially would be around Aniak and the Bush pilots would be more around the North Slope. He stated that the friction in the company had to do with the morale of the pilot group because of the merger. Integrating the procedures was the biggest issue but now after 3 years the major issues had been addressed. One example of different procedures was how de-icing was done on the ground.

Mr. Burand was not sure how long it would be before he upgraded. He thought it took about seven years. He was at the bottom of the seniority list of Dash 8 FO's. He felt that the FAA was not applying more pressure to Era prior to the incident than to other operations up there. He saw the FAA there often. He did not know why they had had three different POI's in the past 3 or 4 years.

As a pilot flying, he would expect the pilot monitoring giving max power. Before getting into the situation, he would expect an announcement of "hey you're getting a little slow". Recovery should be at the first indication of the stall. They had done full stall recovery in the simulator and the recovery technique was not different for the different phases of stall.

He stated that if he had any concerns about working with a pilot which could not be resolved, he could go to the assistant chief pilot or chief pilot or file a company safety report. The WBAT was the safety report they would fill out for hazards and incidents. He had not filed one before. As a response to one of these concerns, he had noticed a larger sticker on the flight can of the logbook to better identify the right can for the tail number.

If he flew with a pilot who did not have a good checklist procedure, he would talk with him first then go to assistant chief pilot or chief pilot and discuss the issue. He could not think of anyone who was like that.

He got his rating from different places and got his college degree in aeronautics from Embry Riddle. He rated Novak as a 9 or 10, as a top pilot. He did not notice any distractions in Captain Novak when flying with him. He liked captain Novak because he was approachable and he felt safe flying with him.

The interview concluded at 1443

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Second Interview:	**Donald Jay Burand II, First Officer, Era Aviation**
Date/Time:	**September 25, 2012, 1430 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Senko -Era Aviation**

During the interview, Mr. Burand stated the following:

Mr. Burand was airborne at the time of the Era flight 874 event and heard several radio transmissions from that aircraft. There were two to four initial transmissions and then several additional radio calls to get clearance back to Anchorage. He heard a rattling sound and a horn sounding in the background during the first transmission from the aircraft. On the next transmission he heard a statement about flying a heading of 270 degrees, and on the third transmission he heard the term "emergency procedures." He thought the rattling sound was similar to a stick shaker and the horn was like a gear warning horn.

At the time of the event Mr. Burand was enroute from Anchorage to Kodiak at FL200. The flight had encountered light icing and was flying along about the same track as the Homer flight would have been on, perhaps 5 degrees different. They had entered icing conditions at 7000 to 8000 feet and had been in VMC on top at FL 200. After landing at Kodiak he called Operations for a FAT (flight authorization time) and in response to a request for a ride report, he said there had been no turbulence. He did not report the sounds he had heard on the radio. He did not make a report because he guessed there would be an investigation. He had not mentioned this when interviewed the previous day because the subject did not come to mind.
He had filed an ASAP report about 1 ½ years earlier and the results were satisfactory. He would use the ASAP system again if he needed to. He did not file an ASAP report regarding the Flight 874 event because he believed ASAP should only be used when your make a mistake yourself.

Interview:	**Paul Eric Wells, former check airman, Era Aviation**
Date/Time:	**September 24, 2012, 1500 ADT**
Location:	**Era Aviation conference room, Anchorage, Alaska**
Present:	**Roger Cox – NTSB; Maryam Allahyar – NTSB; David Senko – Era Aviation; Steve Albert – FAA**

During the interview, Mr. Wells stated the following:

He was 49 years of age and a former Dash 8 check airman at Era Aviation. He was currently employed as a manager at Diamond Center Mall. He was last employed by Era in June, 2012. He was first hired by Era December 11, 1988, After 6 months working on the ramp he progressed to other positions and worked at the company for 23 ½ years. After flying the Twin Otter for two years he spent the remainder of his career flying the Dash 8. He had been a system trainer and was a check airman for 16 or 17 years. His total flight time was 14,500 hours and his time in the Dash 8 was 12,900 hours.

Mr. Wells conducted the initial Dash 8 training and proficiency check for the Era flight 874 event captain. He stated that the captain's performance in training was standard and he had normal progression. There were no areas of substandard performance that he could recall. The event captain had flown as FO for Mr. Wells on several occasions. When asked if the captain had ever displayed questionable judgment or performance, Mr. Wells stated that the captain had generally performed well but occasionally seemed arrogant. For example, he questioned Mr. Wells' decision not to fly to Valdez airport when winds at the airport were 60 knots.

Mr. Wells had also flown with the Era 874 event FO, but could not recall anything unusual about him.

Mr. Wells was asked about flying the Dash 8 in severe icing conditions. He stated that he recalled being in severe icing conditions 5 or 6 times, and had one occasion of extreme icing. On a flight to Kodiak ice began to accumulate rapidly. He climbed to above 19,000 ft. He followed two rules: get above the icing layer and avoid pitch attitudes above 10 degrees. He found that the airplane could only maintain 130 knots at 23,000 feet. Climbing at the best angle of climb, 130 knots, was known as a type I climb. He would not allow airspeed to fall below 130 knots, so he descended to 8000 feet and the ice began to shed. Radar returns did not work because of the unheated radome. He thought that the Dash 8 was a very good performer in icing conditions. He was not aware of a situation in which the airplane could stall in icing conditions before the stall stick shaker activated. The primary means of stall avoidance was watching the airspeed indicator. The airplane also had a fast-slow indicator driven by an angle of attack vane on the wing.

Mr. Wells stated that when conducting stall training and checks in the Dash 8 he required pilots to maintain altitude during the recovery to within 100 feet.

Mr. Wells stated that during the times he flew with the event captain they had never experienced an emergency. On one occasion he recalled the event captain attempted to land three times at an airport where crosswinds exceeded 40 knots before diverting to another airport. He did not know why the captain chose to make these attempts, but he speculated that the current system of pay encouraged pilots to fly to a marginal airport rather than to decline the flight. He felt there was a conflict between the paycheck and doing the right thing.

Mr. Wells said the event captain performed well in the simulator but some copilots had expressed concerns that he sometimes lacked focus and attention and was not always "in the moment." He couldn't think of an example but his nickname was "space." The captain was not the strongest copilot but Wells had no concerns about flying with him.

Mr. Wells loved flying at Era but decided to leave following the latest change in ownership. Pay and benefits changed and appreciation for the individual declined. There was a "push" mentality. For example, pilots were asked to fly during volcano activity and "just skirt around it." He had an experience where he was called to take a flight that another pilot refused and the company did not tell him that it had been refused. Another pilot had flown to Valdez and wound up in an emergency because he had not received appropriate SIGMET information. On another occasion a pilot was encouraged to dispatch to an airport with a "nil" runway condition report. He believed experienced pilots were being pushed into adverse situations. He quoted Archie Trammel as saying "if you keep loading the gun something will happen." Wells would have stayed at the airline if policies were different. He thought the company had developed a "bush mentality," meaning assume greater risk, and that the company was undoing the progress they had made in safety as a part 121 carrier.

One saving grace at the company had been their maintenance, which was absolutely the best. However, the director of maintenance, who had been there 20 years, had left 3 to 4 months before Wells left.

CRM training emphasized open communications. He described a split controls exercise that could be done in the Dash 8 simulator which was a classic teamwork scenario.

Mr. Wells stated that the safety reporting culture was good. The company had instituted an electronic reporting system which replaced a hazard report and suggestion program. He felt the older system had the advantage that you always received a reply to a suggestion, whereas there didn't seem to be much feedback with the electronic system.

He thought that the local FAA Certificate Management Office (CMO) had made some unreasonable demands on the company. For example, they had required that the company Dash 8 Quick Reference Handbook (QRH) be removed from the airplanes and replaced by the DeHavilland QRH with no advance notice or explanation to the pilots, and that the Flight Standards Manual (FSM) be altered substantially without good reason. He felt the resulting guidance was a "crazy hodgepodge." The FSM had been replaced around November of 2011. The FAA said the old FSM and QRH had never been accepted by the FAA and could not be used. Examples of procedures that changed "overnight" were overspeed prop abnormal, multiple generator failure procedure, engine shutdown check and several memory items.

Mr. Wells stated that by “bush mentality” he meant intentionally being “right on the edge of legality” and operating in a “wild west” manner.

Interview:	**William Joseph Kolstad, Director of Safety, Era Aviation**
Date/Time:	**September 25, 2012, 0915 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Senko -Era Aviation**

During the interview, Mr. Kolstad stated the following:

He was the Director of Safety at Era Aviation and had been in that position since July 1, 2010. He retired from the U.S. Air Force in 2010 after a twenty five career which included work as a mechanic, ground safety representative, flight engineer and aircraft maintenance manager. He reported directly to the president of Era Aviation and was responsible for the health, safety, and environmental programs, and the security certificate and the hazard reporting program. He was responsible for investigating accidents and incidents, the emergency response plan, the Health, Safety and Environment manuals and supported other safety and training departments, including Hageland Aviation. He supervised a staff responsible for the WBAT reporting program, ground training, ground safety and recurrent training. He was also an auditor under the Internal Evaluation Program (IEP).

New pilots at Era Aviation were hired primarily from Hageland, with a Cessna 207 or BE-1900 background, or from outside the Era group of companies, and the entry level position for pilots was first officer (FO) on the BE-1900. Minimum flight experience for pilots was 500 hours but most new pilots had thousands of hours. Pilot manuals were kept in a publications bag in the aircraft "can," a storage container, but certain manuals, including Jeppesen charts, were carried by pilots.

He was notified of the Era flight 874 event through the dispatch report system. Part 119 directors were notified of diversions via an email to their phones within 24 hours after an event. The initial report was the flight had experienced "severe icing" and loss of altitude. The pilots of the event flight were debriefed together for ½ hour by the chief pilot and Mr. Kolstad was not included in that debriefing. He escorted the pilots to have drug testing done, which was recorded on "ops" forms, not DOT forms. The event pilots had no personal or social relationship with the chief pilot.

Era Aviation used a safety reporting system known as WBAT (web based application tool), provided by a company called UTRS, which was funded by the FAA. The system, which Kolstad said functioned the same as an ASAP program, was begun at Era in September 2012, and so far had about 600 reports in its database. The three types of WBAT reports were irregularities, hazards and fatigue issues. Reports could be sent to ASRS. There was a memorandum of understanding (MOU) with Medallion Foundation to manage the data for ASAP. They had an ASAP program which was approved by the FAA. Era's vice president of operations or chief pilot were on the ASAP team along with Medallion representatives, and the FAA had two representatives. Information could be retrieved from the Medallion website. Pilot reports were managed by three people: a person who catalogued reports, the director of safety at the other

airline (Hageland), and Kolstad. There were two independent reporting systems, WBAT and ASAP.

The WBAT system was used to track air turn backs. Kolstad briefed pilots about WBAT in recurrent training and had conducted 2 safety meetings during recurrent. He thought future safety meetings would be held monthly, and this would be stated in the operations manual. He thought that no pilot should be jeopardized by safety reporting but flight operations did their own investigations and he had seen management fire people for things that had occurred. It was an "at will" company. For example, an employee in Fairbanks ran a de-ice truck into a prop and the blades hit the bucket with the operator in it. It was a second occurrence for the employee, and Fairbanks management fired him.

Kolstad said the flight 874 pilots were on unpaid administrative leave.

Of the 600 WBAT reports filed from the 800 employees of the company, about 1/5 were filed by pilots. One example was a report of a company flight attempting to land at Kodiak and passing in close proximity to another flight. There had been several TCAS reports. There had been no reports from other pilots regarding the flight 874 event pilots.

The company was studying FOQA (flight operations quality assurance) and was considering adding this capability to two airplanes, but there was no target date set for this. Oil companies that charter Era flights required FOQA. The company was developing a safety management system (SMS) and had completed level 1. They anticipated having a full SMS within three years. They targeted level 2 to be completed by October of next year. Oil companies also wanted a LOSA (line operational safety assessment) program, but they did not have such a program in place. Oil companies chartering Era flights included Shell, Conoco Philips, Exxon Mobile, and BP, and the Department of Defense (DOD) and Medallion also wanted safety programs in place. Other oil companies of interest were ENI, Repsol and Norwegian companies, and they all had contract auditors. The company had about one oil company audit per month.

There were negative findings from some audits. For example, Shell, which required higher standards than the FAA, expected all FO's to get an annual line check. Their audits were geared toward SMS. Another example was a requirement for foam in mechanic toolboxes. Witnesses to the flight 874 event were pilots Burand and Caudle.

The most recent IEP check was one year ago and it was now due. The WBAT reports were not protected by an MOU with the FAA but the company president signed a letter saying it was protected.

Kolstad stated there had been 3 ASAP reports in the last year, but later corrected the figure and said there had been 14 ASAP reports in 2012 and 10 in 2011. He said there had been 21 ASAP reports at Hageland in 2012. He said the ASAP plan included dispatchers, mechanics, and flight attendants, but there were no reports from these groups. A few years ago a pilot filed an ASAP report and later lost his certificate to FAA action. As a result there was "bad blood" at Era about ASAP. Pilots were reluctant to file reports for fear of retaliation. Medallion was trying to improve and increase awareness but the FAA was perceived by pilots to be "a bully."

Era had not done an IOSA audit. They were overwhelmed with audits. Kolstad intended to see if he could transfer responsibility for audits to another person.

The interview concluded at 1030.

Interview:	**Jeffrey Aaron Mahar, Chief Pilot, Era Aviation**
Date/Time:	**September 25, 2012, 1045 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Senko -Era Aviation**

During the interview, Captain Mahar stated the following:

He was 53 years of age and his title was Chief Pilot of Era Aviation. He had been in that position since January 21, 2005. He previously flew the Dash 8 and Convair 580 as a line captain. He was first employed at Era August 26, 1985. Before that he had been a flight instructor at Merrill Field. He held an ATP and type ratings on the CNV-340, 440, DHC-8 and DC-3. His total flight time was 18,000 hours and his time in the Dash 8 was 1000 hours. His responsibility was to be the leader of the pilot group.

Captain Mahar described the pilot hiring process. The assistant chief pilot found leads on recruits from various sources including flight schools. One favorite was the aviation program at the University of Alaska. They collected resumes, did a phone interview, conducted a knowledge test and practical test with the PC based procedures trainer, and identified an applicant's basic instrument skills. They evaluated how readily he accepted training as a crewmember. Once in class they wanted teamwork, not cut throat competition. They expected to graduate the same number of pilots as began a training class. The minimum qualifications were 300 hours total time, commercial, instrument and multi-engine certificates, a first class medical, and no certificate action within the previous 36 months. The entry level position was BE-1900 FO. They had been "going up" in qualifications in the last few years, and now most new pilots had 1000 hours. They had revised the requirement in the last 60 days to 1500 hours.
Two year ago new pilots had 300 to 400 hours, but some had much more, 2500 to 3000 hours. They did not expect to hire exclusively college graduates because they liked experience and wanted to avoid "pigeon holing" recruits. They looked for pilots amenable to being trained "our way." They used a team setting, using their procedures, callouts, checklists, SOP's, operational control, and GOM.

The chief pilot used a variety of tools to track pilot performance. These included training and proficiency check records, additional training records, and feedback from instructors. He heard a lot but filtered the information. If a pilot had a problem in training they talked about it and provided an extra simulator day if needed. They did not have a formal remedial training program. One day is devoted to getting used to the simulator. Specific task that are difficult in training were controlling asymmetric thrust, such as occurred with overspeed prop, flame out and engine shutdown. They evaluated PF and PNF duties and performance by evaluating crew performance in the simulator. The term used was CRM, but this was part of it all, not a separate skill. Line checks were also of value to check CRM.

He had received a report that the flight 874 event FO was not attentive to PM duties, but Mahar flew with him and found the opposite to be true. He felt the event FO was not caught behind the

situation and was an excellent “babysitter” for a management pilot such as himself. He may have had personality conflicts with some pilots.

Regarding stall recognition and recovery training, he was not aware of a change to the PTS standards for performance of that maneuver. He believed that stall training should be more real life and not an exhibition maneuver. They tried to generate real life training in the simulator and used LOFT style training, including surprises and distractions. Their initial simulator course set the PC on the seventh day and the LOFT on day 8. Scenarios had to be approved. They had no leeway for the instructor to capitalize on a student weakness. If allowed, he would make all training LOFT style instead of element style. He had given time to study AQP but abandoned it because he couldn’t fully understand it and he was too busy to work on it.

Go/no go decisions were made by the pilot and dispatcher and had to be unanimous. One person could stop a flight. He was sometimes asked for advice and may “put the kibosh” on a flight. An example was a flight to Wainwright when the runway condition was not clear. He thought the pay system could be distracting and affected some pilots but not others. The pay was done by flight hour but he couldn’t dictate that policy and he expected professional conduct.

He flew with the flight 874 event captain when Mahar was a new captain and Novak was an experienced FO. Novak had been a good “babysitter” and made him look good. Good FO’s had helped him transition to the Dash 8, which was more advanced than the Convair 580 he had flown. He had some difficulty because the Convair had no autopilot or FMS and he needed to get extra help with the new airplane. He had received no reports on Novak. He had received 2 or 3 reports on Kramer.

Following the flight 874 event he spoke with the crew about 20 minutes. He knew they would get a lot of questions and he helped them to calm down. He thought from what they said that they had failed to monitor airspeed in the climb and may have not had ice protection on. He thought they allowed the airplane to stall itself, failed to recognize the stall, and reacted inappropriately.
The event FO had explained a personal situation involving a stepson and Mahar felt for him. The FO did not let a personal issue affect his professional performance. He had a rough start fitting in, but had adapted and was figuring out the two pilot routine. Mahar had written a letter of recommendation for the event captain for a position at Alaska airlines and sent it to the Anchorage chief pilot for Alaska. It had been 2 to 3 months since that time. He did not socialize with the event pilots.

There had been no training issues with the event pilots. CRM and judgment was graded on check rides. The PTS standard was not used in checks. He sometimes received FAA SAFO’s and INFO’s from inspectors but did not know if anyone at Era was on the automatic distribution for those documents. LOFT was not done in recurrent training, only initial.

He had received no comments from FO’s about the event captain. Mahar was not aware of the FO’s chronic problem leaving paperwork incomplete 75% of the time. The pay system was purely based on flight time and there was no overtime or trip guarantee.

When stalling the Dash 8 in icing conditions the shaker was rigged to activate at 1.1 Vstall based on angle of attack. There was a lift transducer on the wing and the stall formula was changed with ice on the wing. He did not know the exact change caused by ice. In icing speed adjustments were made to approach speeds which varied with flap setting. The speed adjustment was in the flight manual. Basic airmanship was needed during climb. They had three climb profiles but there was no stated minimum speed for climb. They showed the tail stall video because they used to fly the Twin Otter. He felt every pilot should know about tail plane ice but they did not train them on it.

The FAA' s recent concern about having verbatim severe icing AD information in the FSM was perceived by them as a liability which would reflect badly on them, but did not address a real safety concern. He did not know of any requirement for AD's to be directly referenced in pilot manuals.

To use the autopilot in climb in the Dash 8 you should set the flight director altitude, pick a vertical pitch mode and set climb power. The pitch wheel can be used but you cannot read the increments in units. The advisory display on the right side displays the pitch mode and it could be fine-tuned. He thought the event pilots pulled back during the stall because they panicked. The noise level in the cockpit increases by a factor of 3 when power is advanced from low cruise to METO. The trim wheel in the cockpit moves with the autopilot change but makes no noise. He understood that the event flight attendant had felt the pitch on the flight had become steep.

Interview:	**Ronald Burkevich, Vice President of Safety, Era Alaska**
Date/Time:	**September 25, 2012, 1330 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Paul Senko -Era Aviation**

During the interview, Mr. Burkevich stated the following:

He reported to the board on all aviation safety activities of Era, Frontier, and Hageland Aviation. Era Aviation, Frontier, and Hageland had the Aviation Safety Action Program (ASAP) in place. In the past year, there were only 3 ASAP reports at Era. He did not know how long ASAP had been in place for Era Aviation. He mostly facilitated Frontier and Hageland's issues. Hoth LLC, the company that had bought the 3 air carriers, had acquired the ASAP for about 3 years. Mr. Burkevich stated that the ASAP at Era was designed to encourage pilots to report safety issues; however, at one point a report had been used for disciplinary action taken against a Hageland employee.

Mr. Burkevich began working in 2006 in record safety for Hageland. In 2006 or 2007, Medallion began its involvement with Hageland. Initially, the ASAP program in Alaska did not include the 135 operation. Medallion worked on having 135 operations included by bringing it under the umbrella of Medallion Corporation. They were able to include the 135 operations for a year, only in the state of Alaska. He became the facilitator for Hageland as Kent Adams was for the entire Medallion Corporation. Whenever Medallion gave him any information, he and Kent would talk to Martina Sawttelle and Jim Topper, the two Event Review Committee (ERC) individuals in the region. Since he became a moderator, he did not sit on the ERC any longer. He added that in the beginning it was a very ambitious program mainly for pilots; however, once the ERC management changed, the FAA representatives said they would accept any information coming in through ASAP as the truth. Locally, the FAA thought they had set up a "get out of jail free card". The CMT thought that was a good way to encourage pilots to do an ASAP report when the pilots felt they may have done something wrong. Due to internal FAA conflicts, the 3 member ERC grew to 5, 6, or 7 people from the FAA and people all the way from the region to the FSDO who were replacing Martina Sawttelle and Jim Topper.

Mr. Burkevich stated that the disciplinary action taken against the Hageland employee was not very elaborate. It was a Cessna 207 in St. Marys during dark morning hours. The crew did a preflight but decided to turn the plane off because the oil temperature gage was not up. The captain wrote up the problem and proceeded to another plane to preflight. A mechanic looked at the log and fixed the issue before the captain was done with the preflight of the second plane. The captain was told to go back to the first plane. The captain sat in the plane and told the mechanic who was sitting in the right seat that if they took off, it was possible that the gage would come up faster. They took off, went around, and came back just to realize the cowling was not on the engine. The mechanic filed an ASAP report. Jim Topper accepted that the pilot would not fly without the cowling intentionally but that he knowingly flew the plane without the logbook and without signing it off. The pilot was suspended for 90 days on that certificate. The

news of that incident got out in the pilot community in Alaska. There was a period of 3-6 months that no reports were filed. The company had to talk to the FAA to improve their image if they were going to use the system as a “get out of jail free card”. This incident took place in the winter months sometime between January and March of 2008 or 2009.

In theory the company did not have its own ASAP program but that they had it through Medallion. The WBAT and ASAP were similar in many ways; however, the ASAP was used for the purposes of SMS. The FAA in Alaska had agreed to it being used for SMS program. Medallion wanted everyone who was working on their SMS to develop their ASAP. On the company site, employees filing an ASAP report would access it through Medallion. UTRS was used for Hazard reporting.

Individuals on the ERC were Sharp, Mahar, and maybe Torrey as the DOM. Topper and Sawttelle were representatives from the FAA. Era ran its own program independently. There was also a 6 to 7 month period in which Pen Air did not file ASAP reports either. The Northern Air Cargo (NAC), Hageland, Frontier, Era, Pen Air, Warbelos, Linden Air Transport, Everts Air Cargo, and Smokey Bay Air were part of this program which started up around 2005.

The interview concluded at 1355.

Interview:	**Jeffrey Jay Arnold, Captain, Dash 8, Era Aviation**
Date/Time:	**September 25, 2012, 1407 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Paul Senko -Era Aviation**

During the interview, Captain Arnold stated the following:

He was 46 years of age and had been in his current position as a Dash 8 captain for about 5 years. He had been employed by Era Aviation on June 6, 1996.

He had most recently flown with Glenn Kramer within a week before the incident. He had flown with Mr. Kramer many times, since Era was a small company and pilots had the opportunity to see the same FOs often. In his opinion, Mr. Kramer was not among the top tier pilots as far as his skills were concerned. There was not anything solidly unsafe or spectacular about him. He thought FO Kramer could not do a lot of things at once and you couldn't hurry him and he needed time to get his ducks in a row. He took criticism well. Captain Arnold recalled an instance when he was looking out at passengers and called for the before start checklist. Mr. Kramer stopped in the middle of calculating weight and balance in order to run the before start checklist and then lost his place and had to recalculate the weight and balance. That was not urgent and he did not need to interrupt his work. In Captain Arnold's opinion, Mr. Kramer tried to please everyone. Captain Arnold recalled another instance where FO Kramer had added a checklist item to ensure the cockpit door was locked. Apparently, he had forgotten the door before and that was the reason he added to the checklist.

FO Kramer was unusual in that he came from Frontier and most Era FO's were old Era pilots. He was new to Era and its operations. Most of the FOs would have finished their weight and balance check first and then done the checklist but Mr. Kramer interrupted his work. He did follow procedures and guidelines well. He just had trouble with outside distractions.

Captain Arnold stated that Mr. Kramer's situational awareness was weaker than that of other pilots. He as a captain would have to tell a person such as Mr. Kramer to pay attention by saying for example: "it isn't nice here, pay attention to me, game's on". He felt an occasional reminder was necessary with the Mr. Kramer but it was not necessary all the time. He was also aware that Mr. Kramer had some personal problems that may or may not have influenced him and that it was possible for outside influences to distract him. He did not know if Era Aviation had a place for pilots to go for help when facing stressful personal situations. He thought company insurance may have covered something along those lines. Captain Arnold knew that if he needed to take care of a situation, the company would give him time to go "fix" the problem. He did not know if Mr. Kramer was aware of Era Aviation's flexibility with employees who would need time to take care of their personal problems.

Captain Arnold stated that Mr. Kramer's stick and rudder skills were acceptable and did not do anything to make him nervous. Mr. Kramer was progressing well but not at a point to upgrade to a captain.

Captain Arnold felt comfortable using the ASAP system to report if he had any concerns; but would use the WBAT too. Mainly, if there was a serious concern, he would go to the chief pilot.

The interview concluded at 1430.

Interview:	**Kelly Grawunder, Captain, Era Aviation**
Date/Time:	**September 25, 2012, 1450 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Paul Senko -Era Aviation**

During the interview, Captain Grawunder stated the following:

She was 41 years of age and had been a captain on the Dash 8 for 5 years. She was hired by Era Aviation on Jan 17 1995.

She had flown with FO Kramer last month. They had flown together as often as 4 or 5 times a month. In her opinion, Mr. Kramer's CRM was good and he was easy to get along with. She could not recall any huge deficiencies on Mr. Kramer's part; however, he could get flustered and become easily overwhelmed with routine tasks such as weight and balance. Mr. Kramer used his iPad for calculating the weight and balance. She had not seen anyone else do that. Others use a hand calculator for calculate the weight and balance. She believed Mr. Kramer was using the calculator program on the iPad. She did not think the iPad was necessarily helping but Mr. Kramer thought it did. She had pointed out the use of iPad to Mr. Kramer and thought it was amusing. Mr. Kramer thought it helped him out.

On a recent flight, she really couldn't say anything that stood out. She had thought that his personality was like he was doing too many things, but couldn't recall anything specific. She thought sometimes she had to get his attention. His situational awareness was fair, but not the best pilot he had flown with.

Captain Grawunder had made comments to Mr. Kramer about keeping up. He had made radio calls without input from her several times on approach. On one instance he made traffic calls to Aniak about which runway they would use before discussing it with her. She talked to him about it saying "I like your plan but maybe we should talk about it". Captain Grawunder stated that the company CRM policy was to speak up but it felt like it had gone far the in the other direction where the captain wasn't able to say anything. Mr. Kramer's behavior was at its worst irritating but not a safety issue. He seemed to be in a hurry and a little rushed in doing his job. She couldn't think of other copilots who would make radio calls before discussing it with her. If she did think of it as a problem and if there was a problem, she would talk to Mr. Mahar.

Captain Grawunder thought there were possibly 4 other pilots who shared the same general consensus about Kramer's flustered behavior.

She had never done an ASAP report but had done a WBAT. If there was a true safety issue, she would first use the WBAT. She would also evaluate how bad the issue was before choosing which system she would use for reporting.

Her view on Captain Novak was that he had the reputation of being nice, good, and conscientious.

The interview concluded at 1510.

Interview:	**Nicolas Patrick Miller, First Officer, Era Aviation**
Date/Time:	**September 25, 2012, 1522 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Paul Senko -Era Aviation**

During the interview, Mr. Miller stated the following:

He was 32 years of age and a first officer on Dash 8 since December 2011. Prior to becoming a first officer on the Dash 8, he was a first officer on Beech 1900. He was hired by Era Aviation in July of 2007. He had also worked for Honeywell in Seattle prior to joining Era Aviation.

He had flown with Captain Steve Novak but had not flown with Mr. Kramer. The last time he flew with Captain Novak was in late August. He had mostly flown with Captain Novak in the Beech. They were both morning guys with similar schedules. In his opinion Captain Novak had a very friendly attitude for starting at 3:30 a.m. He was a solid guy who left the outside problems outside of the cockpit. They did not socialize outside of the company but talked about camping. They had good CRM and could see eye to eye with any issue that came up. They made decisions as a dual crew. Captain Novak was good at briefing him and the flight attendants when it came to weather and delays.

Mr. Miller could not think of anything negative about Captain Novak. He thought that perhaps when they talked while in cruise they had to pay attention to prioritizing their tasks. They would have to stop talking so that they could prioritize the mission. Nothing ever got neglected or missed, it was just prioritizing that they had to take care of. He had not heard anything from other pilots about Captain Novak having a nickname. They had done multiple winters in the Beech where they briefed the icing forecast and flew the plane accordingly. They had good communication.

Captain Novak was not more likely than other captains to go to airports when conditions were marginal, particularly when he was given the proper amount of information. It could happen that the weather would not look too optimistic on paper, but using all the resources and discussing it with dispatch, Captain Novak would be willing to take the flight. And if Captain Novak thought it was ok to go, he was OK with it too.

He personally felt that the pay system was fair, even though others may not think that. He started making very little money and had to work hard to make a paycheck. Some people enjoyed not having to work and getting paid and others liked to work to get paid. The system made the employees work for their money. It also allowed for pilots to take a reserve month if they so desired; though that had not been common lately. He stated that the point of contention between Frontier and Era was that at Frontier he could fly more hours and up to 1400 hours a year. When the company merged it was hard to find common grounds between the two cultures.

Mr. Miller had flown with all of the Frontier captains. With the exception of one or two, he was normally comfortable completing the mission. Many of the Frontier pilots were in the right seat training on Dash 8. Many had moved on after making the transition, and several quit after the merger mainly because the Fairbanks base was slowly diminishing.

Mr. Miller was familiar with the ASAP system and had filed one in the past. He had received a satisfactory result. He was also familiar with the WBAT system. He thought the difference between the two was that WBAT was mostly for safety hazard reporting and a way to improve safety within the company whereas the ASAP was reporting faults with the crew and safety issues.

Mr. Miller had never experienced any emergency situations with Captain Novak and did not question his decisions.

Mr. Miller stated that in an altitude change on autopilot he was trained to use indicated airspeed and altitude select. He had not seen pitch mode but had seen vertical speed used mostly in descent. Vertical speed may have been used in altitude cruise in a block.

Mr. Miller learned about Captain Novak's new job opportunity with Alaska Airlines when Captain Novak came back from vacation. He was talking about the interview process to another pilot. Mr. Miller stated that changing of a job could have possibly been on Captain Novak's mind. Captain Novak had come back from vacation in late July and he went on vacation after that. They talked about their vacations and that was around the time Captain Novak told him about preparing for the interview.

Mr. Miller flew the incident plane after it came out of the maintenance and it performed fine.

The interview concluded at 1550.

Interview:	**Blake A Caudle, Captain, Era Aviation**
Date/Time:	**September 25, 2012, 1555 AKDT**
Location:	**Era Aviation, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Paul Senko -Era Aviation**

During the interview, Captain Caudle stated the following:

He was 49 years of age and had been a captain in the Dash 8 since February 2012. He was hired by Era Aviation in 2000. He had flown with Captain Novak once or twice in the Beech 1900 several years ago. He had flown with FO Kramer about 10 times more recently and his last flight with him was within two weeks of the date of the event.

Captain Caudle stated that Mr. Kramer was conscientious about complying with rules and regulations. No outstanding cons came to Captain Caudle's mind about Mr. Kramer's performance. He never had to correct Mr. Kramer but he had not had much flying time with him either. Mr. Kramer may have seemed to be forgetful, generally not remembering their casual conversations when they would run into each other. In his opinion, Mr. Kramer was not abnormally forgetful. Captain Caudle would not consider Mr. Kramer among the top half of the FOs, nor did he place him at the bottom. He was an average pilot. He could not recall Mr. Kramer having difficulty with situational awareness.

Captain Caudle recalled Mr. Kramer using his iPad to calculate the weight and balance. Mr. Kramer had told him that he had data preloaded into the iPad such as max zero fuel weight for his calculations. He thought that may have been quicker. The FO's signed the weight and balance sheet. In a 37 seat plane min/max was used. For the weight and balance of less than 37 seat airplanes, the CG calculator was used.

Captain Caudle recalled hearing on the frequency the incident crew checking in, and being handed off from departure to center. He was flying ahead of the incident plane. The crew of the incident plane asked for a block of 10,000 to 14,000 feet, and then transmissions were chaotic. They wanted a lower altitude and asked for a westerly heading of 300. He only heard Mr. Kramer's voice on the transmissions. He also heard anywhere from 1 to 3 audible horns, possibly stall warning horn, in addition to a rattling sounds. He knew there was ice in that area, having flown that altitude. He could not explain why they needed to descend. He could not recall if he was the pilot flying at the time when he heard the transmissions. He was at 20,000 or 21,000 feet and probably 15-20 miles ahead of incident crew. There was one block of clouds where the bases were about 8000 to 9000 feet. He could not recall the temperature in the middle of that block. The most icing was around 10,000 feet. Above and below 10,000 feet, the icing was not significant. He did not have the radar on for that flight. He was stepped down and leveled at 9000 for a while where there were some icing on and off. They were told there was some virga in the area. There was no virga on top of the layers but only in the middle. That was a good indication there would be icing. He did not think he was in severe icing conditions during the climb but if he hung there for some time that could have happened, particularly at 10,000 feet.

In Captain Caudle's opinion, Mr. Kramer seemed happily married and had a good story about his wife's kid and that she was in Florida. He had seen Mr. Kramer checking his math on the weight and balance and fixing it.

During his flight on the day of the incident, Captain Caudle's cockpit was very quiet. He said to his FO that noise on the transmission sounded bad. His FO agreed. Captain Caudle may have discussed what had happened with his FO afterwards. They thought the incident plane had leveled off at 12,000 feet and accelerated. They also thought a sudden abrupt loss of altitude would have been due to a tail plane stall. A tail stall would have been possible if the deicing boots were not working properly.

Captain Caudle could not recall what rate or pitch angle they used in their climb out, but stated that flying slower than one should when climbing in ice would result in ice behind the boot. A high angle of attack would result in that. Even though they were approved for 130 knots in icing climb, he preferred 160 knots.

The interview concluded at 1645.

Interview:	**Randall Scott Smith, Principal Operations Inspector, FAA**
Date/Time:	**September 26, 2012, 1000 AKDT**
Location:	**Denali Certificate Management Office, Anchorage, AK**
Present:	**Roger Cox, NTSB; Maryam Allahyar-NTSB Steve Albert, FAA; David Senko-ERA Aviation**

During the interview, Inspector Smith stated the following:

He was 47 years of age. He was hired by the Federal Aviation Administration in September 2010. He was an Aviation Safety Inspector assigned as the Principal Operations Inspector (POI) on the ERA Aviation certificate. Prior to the FAA he was an Air Force pilot and an Instructor pilot on C-130 aircraft. He also instructed in the BE-400 at Vance AFB and at Randolph AFB. He retired from the Air Force in 2008. He was a squadron safety officer in the Air Force. From October 2008 until September 2010 he was an instructor for a private Texas company instructing Afghan pilots prior to the start of their formal training. Prior to assuming the duties of POI he was on the certificate for a year, as the assistant POI, after completing FAA training.

He stated there are five 121 certificates in the CMO. He originally was considered for the Lynden Air Cargo certificate because they fly L-382 which is the equivalent of the C-130. Another inspector with C-130 experience was assigned the certificate and he bid for the ERA certificate.

He was type rated in the DHC-8 aircraft at FlightSafety International in Toronto, Canada in November 2011. He was selected for the rating when the previous POI, Charlotte Hansen, left the certificate creating a need for a DHC-8 FAA type rated inspector. The new POI for ERA was type rated in the BE-1900 not the DHC-8.

He stated that his general view of ERA was that it is a viable operator. He has conducted 10 type ratings and assessed the training and checking as good. He said that ERA is receptive to suggestions. He stated that his observation is the part 119 management is heavily tasked with additional duties. As an example, he stated that Director of Operations Sharp is responsible for the writing of the General Operations Manual (GOM) and assists in the writing of the Flight Attendant manual.

He felt the pilots follow the policies and procedures but the out-stations have issues. ERA uses contractors at out-stations but when he brings up issues they are receptive and he does not receive push back and has good interaction.

During his training in the DHC-8 he received stall training. He stated that the aircraft has a stick shaker that causes the pilot to recognize an approaching stall. When asked to describe the stall recovery technique he stated: Release back pressure, power up, roll wings level, and roll to the horizon. He stated that he did three types of stalls; Straight clean, configured and turning stall. He stated the grading criteria was to maintain altitude of + or – 100 feet. He stated that the Practical Test Standards (PTS) are used. He also stated that ERA uses the PTS for all events and

the PTS will be adhered to. He stated he was familiar with the PTS but was unaware of the change in April 2012 of the new stall requirements. He was also unfamiliar with the new Advisory Circular on stall training and recovery.

When asked what method the FAA used to inform inspectors of changes he stated they have quarterly safety meetings. He also stated the Events Based Currency Program (EBC) was part of the currency process. He does EBC training at FlightSafety in Seattle. Notification of pending changes also comes through the Flight Standards Information Management System (FSIMS). He stated he was active in observing line flights due to the nature of travel in Alaska. With limited roads the only way to travel was via air. He also does Initial Operating Experience (IOE) checks on ERA pilots and recurrent check airman observations. He estimated he had done 20 en routes and 10-12 specific event flights such as IOE and recurrent observations. From Aug 2011 to Sept 2012 he estimated he has done 30 + en routes of various types.

He had not observed any pilot failures. He had no memory of any poor pilot performance during the en routes. When probed he said he occasionally asked about the availability of charts for review during flight operations. He had also queried the pilots on the use of the abbreviated check list but did not state any shortcomings. He stated that when looking for how a pilot performs the pilot flying or the pilot not flying duties he looked for verbal and non-verbal clues. If a pilot is overly quiet he questions if the pilot is disengaged. He judged that the ERA pilots were engaged in their duties.

Inspector Smith conducted the type rating check on the incident captain, Captain Steve Novak, in May 2012 and did his IOE observation. His first interaction with the incident First Officer was during an IOE ride in a BE-1900. He also conducted a ramp check on Capt. Novak. He interviewed Capt. Novak on 12 Sept 2012 regarding the incident and First Officer Kramer on 13 Sept 2012. He stated his interview will be provided to the Board.

He expressed concern with the information that flight dispatch is providing to the pilots. As an example he stated that the incident pilot's first flight of the day was to Cordova, AK. During the flight to Homer, AK dispatch did not note any significant changes in the reported weather. They did not ask for any information from the pilots. Since there were no significant changes no new weather information was given to the pilots on the next leg. Asked if this was a prior issue he answered yes and no. When pressed to explain he said it was not because of lack of specifics. He stated this was the first time the information was inadequate for a flight. He had asked both of the incident pilots if they had gotten any PIREPS on turbulence or icing on departure and was told they had not gotten any. There were no changes to the weather from 05:00 to 09:00 on the day the incident occurred.

He has not conducted any interviews beyond those of the pilots at the company. He did have other inspectors in the CMT contact some of the passengers. One passenger noted ice on the cowl and those that responded noted hearing ice impact the side of the aircraft. He will provide these statements to the board.

When he interviewed the incident pilots he asked them how they knew if they were in severe icing. They stated that as soon as the boots on the wing shed the ice it came back immediately

and that ice was forming further back on the propeller spinner. He did not detect anything about the pilots not being able to detect severe icing.

When asked about the related icing AD's associated with the aircraft he said his review noted that the wording in the AD's was more specific then the information contained in the General Operations Manual. In conjunction with ERA management it was decided to have all pilots review the AD's to ensure understanding of the content. ERA management made the decision to use a pilot acknowledgement form as a control to ensure all pilots had read the information.

In discussing the working relationship with ERA he felt that there is no lack of trust. He explained that the former POI had left to manage a certificate in Fairbanks where he lives. The POI preceding this most recent change left to fill a different position. He was unaware of any personal issues between the former POI and ERA.

He stated the recent changes were due to requirements related to certificate management. By way of example he stated the change in Operations Specification C-067 was required because giving blank authorization to operate at any gravel runway was not in accordance with FAA directives. The removal of authorization for the FAR 135 certificates was due to lack of use and they had no aircraft which could be used for 135 operations. Another point of contention was the use of deployed weather program observers. When authorizing these observers it takes the FAA longer than ERA expects and this causes issues with contract flying.

He has had no company specific training on the DHC-8 and has not observed the company specific ground training curriculum. He has not seen the company Crew Resource Management training module.

As part of his assigned duties he accepts and approves manuals. He has noted a high workload increase and is looking forward to a new assistant. The load with the former POI was shared 50% but now he has the entire load. With the new changes required for Second in Command Airline Transport Pilot ratings and type ratings he anticipates a high workload tempo. With pilot turnover this will add to already high workload.

He was aware of the tail-plane icing video and its use in the training program but did not know its relationship to ice training as it relates to the DHC-8.

The interview ended at 1115.

Interview:	**Michael Kim Alkana, POI Tatonduk Outfitters LTD**
Date/Time:	**September 26, 2012, 1130 AKDT**
Location:	**Denali CMO Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Senko -Era Aviation**

During the interview, Mr. Alkana stated the following:

He was an air safety inspector (ASI) and the POI for Tatonduk Outfitters, known as Everts Air Cargo, since May of this year. He had been the POI for Era Aviation previously for almost two years. He was 61 years old. He had been with the FAA for 15 ½ years. He was not qualified in the Dash 8. He was qualified in the Beech 1900. He was the POI for Frontier Flying service before Era and before that was with the Oklahoma FSDO as a POI and then with the FAST team. Before this he was with Everts. He moved to Alaska in 1972.

He did testing and checking on the BE-1900 and he did enroutes on both the BE-1900 and the Dash 8. He had done 30 to 40 enroute inspections. He had never unqualified anyone at Era. They were professional, had good CRM, and positive exchange of controls. He had no recollection of flying with Steve Novak or Glen Kramer. He probably did enroute checks on them. He did not think Era pilots would have a problem identifying icing conditions and handling it. Their cold weather/deice program seemed adequate.

His relationship with the crews and the assistant chief pilot was good, but a bit adversarial with the chief pilot and sometimes Sharp. Sharp would push back a bit. Management oversight was deficient. The DO was way too involved with business practices. He provided information about duties and responsibilities of management out of the FAA 8900. He wanted them to be more proactive. They should not wait for the FAA to tell them their deficiencies.

He gave the FSM[1] as an example. After being the POI for 6 – 8 months he found the FSM in the BE-1900 was not approved or accepted by the FAA. The Beech FSM was sent to John Vetter (AEG Kansas City). After a 3 month discussion with Vetter, the CMT decided to remove the FSM and QRH on both the BE-1900 and the Dash 8. Long Beach AEG did not provide any assistance. Era refused to remove the QRH and FSM until they were threatened with certificate action. Era was given 5 days to remove them from the cockpit.

There were not adequate facilities at some of the gravel strips Era was operating. They lacked proper deice equipment. Era should have been more proactive and not wait for the FAA to point this out. He put a limitation on flying into Kiana when the temperature was between 40 degrees F and -20 degrees.

The company was in flux. It had been taken over by Hoff Corporation. There was turnover, people leaving and more type ratings required. Most people went on to bigger and better equipment. There were morale issues with seniority. There were no red flags for safety. He came

[1] Flight standards manual

down from Fairbanks one week every two weeks, and when in Fairbanks he was at the Era station once or twice a week. He checked the quarterly check airman report and had never seen a failure. He said his workload was fair but he was tied to the desk doing SAI and EPI work. His assistant was of limited use.

Era management cannot be relied on to provide oversight. They rely on the FAA to provide the oversight. He has never seen Era management in the flight deck.

The interview concluded at 1200.

Interview:	**Tamra Lynn Thompson, Frontline Manager, FAA**
Date/Time:	**September 26, 2012, 1315 AKDT**
Location:	**Denali Certificate Management Office, Anchorage, AK**
Present:	**Roger Cox, NTSB; Maryam Allahyar-NTSB Steve Albert, FAA; David Senko-ERA Aviation**

During the interview, Manager Thompson stated the following:

She was 51 years of age. She has been the Frontline manager (FLM) in the Denali Certificate Management Office (CMO) for three years. She was an FLM in the Anchorage Flight Standards District Office for two years prior to her duties in the CMO. She has worked for the Federal Aviation Administration (FAA) for 22 years.

She described her duties and responsibilities as, in part, to ensure the employees she supervises are qualified to do their jobs in accordance with current order and regulations and to keep them will trained within budget constraints. The certificate management team members she supervises are those inspectors assigned to the ERA certifShe is assigned additional duties when the need arises.

When asked how the Principal Avionics Inspector could have missed the requirement for an enhanced cockpit voice recorder to be installed in the aircraft by April 2012 she replied that the operator is responsible for the requirement not the FAA. There was not a flag on the CVR requirement in the system.

Asked how the FAA becomes aware of these requirements she stated that during surveillance the inspector's research documents for appropriate guidance. One such source is the Flight Standards Information System (FSIMS). This system notifies the inspector when changes have occurred in the past 30 days. She pointed out that Advisory Circulars (AC) are provided to the operators as a type of method to comply with certain FAA requirements but does not represent a requirement. Another vehicle used for notification is the FAA notice system. The notice may direct certain specific action on the part of the FAA but she was unaware of any such notice related to stall warning. Era did not consistently monitor documents that applied to them.

When asked about ERA's compliance posture she thinks that ERA management has an attitude but complies when it is pushed on them. She thinks they are able but are a very slim organization with each responsible party wearing too many hats. Asked if she thought that ERA had the concept of what it takes to be a 121 operator she replied this is a subjective observation. They have the potential but need to be fully compliant. As an example she stated that Era needs to create an organization with sufficient people doing the right thing at the right time.

As an example of an organizational problem, she said that production control is a maintenance program. Maintenance can be overridden by somebody who doesn't know anything about maintenance. It should be overseen by the director of maintenance. The organization chart is done by personality not by job function.

She felt that they have many policies but few procedures. The manuals need to be designed to support the operation. Workload has tripled but they haven't been cognizant of this. The POI has tried to communicate what they lack in procedures and manuals. They need compliance with regulations, the highest degree of safety now, and an SMS. There have been a lot of changes in the last 5 years, and they have done reasonably well for a carrier in Alaska with a direct line to congress.

Workload at Era has tripled. They have received one airplane this year and two more are scheduled in the next 6 to 12 weeks. They have 12 new hire pilots and by august 2013 they need to have 30 plus SIC's get type ratings or an ATP. The manuals are not well designed and a rewrite would be a major step in the right direction.

She did not voice any concern regarding the low number of filed Aviation Safety Action Program (ASAP) reports. She felt the low number reflected on the certificate holder's administration of the program. She also described the significant differences in the administration of the ASAP program in Alaska versus the lower 48. She noted the lack of CMT involvement and that the FAA Event Review Committee (ERC) representative is a regional person and not a CMT person.

She felt ERA's attitude was archaic, and described it as a 20 year old attitude. She also described it as adversarial but did not want imply the airline was unsafe. As an example of this attitude she offered that when the FAA brings up something for correction ERA's first reaction is denial and must go through all of the stages of adjustment until they reach acceptance.

She personally went to Era with the CMO manager at least once a year to meet with top management, and had visited 4 times last year due to being in the pilot program for SMS. If there were any complaints about her staff she would directly get involved and talk to both sides and even to observers and witnesses if need be to resolve the situation.

She feels the POI is following FAA process and procedures but that ERA resents the FAA's input, specifically in manual input. She felt the removal of ERA's flight standards manual was appropriate because it did not conform to the aircraft flight manual. The CMT sought input from the Aircraft Certification Office and the Aircraft Evaluation Group and they concurred with this decision.

When asked what prompted the urgent need to start an investigation prior to the NTSB starting its investigation she stated it was not with the intent to degrade the NTSB investigation. She was unsure of the NTSB intent due the time lag between the event and the start of the NTSB inquiry. She felt the FAA's response is clearer when it is an accident versus an incident.

Interview:	**Robert E. Christensen, FAA, Denali CMO Manager**
Date/Time:	**September 26, 2012, 1450 AKDT**
Location:	**Flight Standards, Anchorage, AK**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert-FAA; David Senko -Era Aviation**

During the interview, Mr. Christensen stated the following:

He was 66 years of age. He was the Manager of the Denali CMO for the previous three years. He was employed with the FAA 32 years ago. He had four front line managers under him, one in Fairbanks and three in Anchorage. He had 45 employees working at the CMO.

He did not know why Era did not have the correct CVRs in their aircraft. He stated it was the certificate holder's responsibility. He knew about it since April of 2008. It was effective two years later with a two year extension after that. He stated the FAA was not quality assurance. He did not have an answer to why Era was not aware of the new stall training procedures and the change to the PTS.

He thought the CMT (certificate management team) had a positive relationship with Era Aviation. Era volunteered to join the SMS and was done with level one. The only negative he noted was the removal of the 135 ops specs from the certificate due to lack of use. He thought it was a waste of energy for Era.

He thought the ADE (aircrew program designee) program would benefit both Era and the CMT during the expected rapid growth in the flight crews needed in the near future. He had been talking with Era about the program. He was responsible for 5 carriers and the other carriers had the program in place.

When asked about the ASAP program at Era he thought they used it because Bob Hajdukovich was on the Medallion Foundation. He said the program was based on trust and it needed to be supported by the management on down. The management uses VDRP (voluntary disclosure reporting system). He said there was some mistrust, but that was years ago. Era uses the system about the same amount as the other operators at the CMO. The pilots of this event used the ASAP program. Their regional office ran a comprehensive trend assessment program with the air carriers. In comparison to other carriers, Era was average in reporting if they looked at the number of reports.

The interview concluded at 1515 AKDST

Interview:	**Corey West Howlett, FAA aviation safety inspector**
Date/Time:	**November 1, 2012, 1305 EDT**
Location:	**Teleconference**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Steve Albert – FAA; David Senko-Era Aviation**
Representation:	**Brooke Lewis**

During the interview, Mr. Howlett stated the following:

He was 43 years of age and was the acting program manager for the UPS CMO for the 747-400 program in Alaska. He had been in his current position for 2 months. He was formerly the assistant program manager for the UPS CMO for about one year. Prior to that, he was the Hageland Aviation POI about 4 years. He was assigned to that position around the fall of 2008 and had been with the FAA for 5 years as of last September. His initial assignment after training at the FAA was the Hageland certificate. Era Aviation, Frontier Flying Service, and Hageland Aviation were three Part 135 operators that had merged and were now owned by the same group of individuals. Era Aviation was now a Part 121 operator. Prior to working for the FAA, he was a first officer for Polar Air Cargo but left the job due to family issues. Attending to family and traveling was sometimes difficult.

Mr. Howlett was familiar with the PA-31 accident involving the event FO, Mr. Kramer. As an inspector in the Anchorage (ANC) Flight Standards District Office (FSDO), he was involved in quite a few accident investigations. He was not certain if he had been the investigator in charge (IIC) on that accident or had just been involved as a subject matter expert because of his experience in flying the PA-31. He had flown the Navajo (PA-31) a lot in Alaska. In one year's time while he was at the ANC FSDO he had conducted 15 to 20 "709" check rides, including the one he conducted with FO Kramer.

Mr. Kramer was flying for Frontier Flying Service at the time of the accident. The accident took place on his first day of flying after he had completed his initial operating experience (OE). He took off from Aniak airport, which had a long runway, lost power on takeoff and crash landed on a gravel bar in 3 to 5 feet of water in a river. Mr. Kramer told Mr. Howlett that he had retracted the landing gear and feathered the propeller, but the airplane was found to have the gear down and propeller not feathered. Mr. Kramer could not explain how the propeller became un-feathered. When the engine was tested, it showed some loss of power, but after the turbocharger was replaced it produced full power.

Mr. Howlett scheduled a re-examination (709 check ride) of Mr. Kramer. Howlett showed a copy of the 709 letter to the Operations/Human Performance Group. Mr. Kramer chose to do the ride in Fairbanks, which was the base for Frontier Flying Service. Although Mr. Howlett had a lot of time in the Navajo, he had not flown that airplane recently, so he sat in the back seat during the re-examination flight and a Frontier check airman sat in the right seat. Mr. Howlett had a suspicion that the check ride might not go well, but he gave the examinee the benefit of the doubt and hoped to give him credit for any areas he accomplished successfully. The ride did not go

well in three areas: taxiing, precision approach, and missed approach. Mr. Kramer conducted the pre-takeoff check list and wrote down his clearance while the aircraft was in motion. This was not what was expected on a check ride. His precision approach was flown considerably faster than it should have been, 20 to 25 knots above proper approach speed, and beyond what is indicated in the manual and the FAA practical test standard (PTS). On the missed approach he brought the power in but lingered at 200 feet for half of the runway length, somewhere between ¾ of a mile to a mile. After this late climb, Mr. Howlett called the ride off and said they needed to go back, land and talk about it. He felt Kramer's competency was in question. Mr. Howlett was frustrated with the check airman because he had been the designated examiner who had signed off Mr. Kramer previously.

The FSDO office management did not want Mr. Howlett to be the person to conduct a "second look" check ride in order to avoid any political issue. The next check ride would be conducted by the FAA Fairbanks office, but Mr. Kramer was hesitant about that option and thought the Fairbanks office would not be fair to him. He asked for other options and was told he would have to be re-examined or surrender his ATP. Frontier was not willing to provide the additional training he needed. Mr. Kramer agreed to surrender his ATP and was terminated by Frontier. Mr. Kramer stated that he would be going to the lower 48 States for other opportunities and possibly to get his ATP back and that was the last Mr. Howlett heard from him. Mr. Howlett had the assistance of FAA legal staff and Mr. Glen Brown of the FAA regional office to ensure that the surrender was done properly.

Mr. Howlett later saw Mr. Kramer getting off a Frontier Beech 1900 and realized that he had gone back to work for that company. Mr. Howlett spoke to Hageland's director of operations and was told that Kramer had gone to work for "the other company" and that he would not be in the left seat anytime soon. Mr. Howlett indicated that if Kramer were ever brought over to Hageland that he would observe his training and flight checks.

Mr. Howlett added that Mr. Kramer had several issues in addition to speed control on the 709 ride, including failing to tune and identify his navigation receiver properly before the precision approach. Tuning and identifying was very important in the Alaska non-radar environment.

At time of the August 2008 accident, the purchase of 3 sister companies (Hageland, Frontier and Era) had been made and aircraft and crews were being moved from certificate to certificate. Mr. Howlett had no responsibility for oversight of the Frontier certificate, which was managed by the Fairbanks FSDO. However, he had 2000 hours in the Navajo flying in the "bush," and the Aniak accident fell under the geographic boundaries of the Anchorage FSDO, which was why he was asked to help investigate that accident.

Mr. Howlett defined a 709 ride as a re-examination of a pilot's certificate when his competency was in question.

The DO of Hageland at the time of the accident was Patrick Thurston, and he was still in that position.

Bob Hajdukovich and Ron Burkevich were in charge at Frontier. Hajdukovich "did not want to let Glenn (Kramer) go" and provided him several hours of training. When Kramer did not do well, he was terminated. However, Hajdukovich was the person who would have re-hired Mr. Kramer. That may have been due to the culture of "taking care of our guys" and "loyalty". Mr. Howlett had no responsibility for the Frontier certificate but he had been around flying in Alaska for 25 to 30 years and felt that he was not ready "to let Mr. Kramer go." He was not surprised that Kramer had been rehired but he was concerned.

In Howlett's observation, Mr. Kramer was extremely nervous. During the oral part of the exam, he was shaking. Howlett was compassionate and tried to "mellow him out." He was one of the more uptight airmen Howlett had ever dealt with. Asked how Kramer compared to the other airmen Howlett had examined on 709 rides, he said he would put Kramer's competency at the bottom. He had done a lot of tailwheel 709 rides and he had an instinct for when a pilot was going to have problems.

Howlett had a full page of concerns by the time they were done with the 709 ride, including altitude control issues. For someone who had gone through a full 121/135 training program, a check ride and OE, and then an accident and more training, he had significant issues. He had been given all the tools he needed and Howlett wanted to get him through, but he couldn't allow him to put the public in danger. His overall competence was doubtful. In Howlett's opinion, Mr. Kramer should have been in a different career path. Mr. Kramer had also indicated that changing career paths may be a good idea.

The FAA report of the 2008 accident was kept at the FAA regional office. The check airman on the 709 ride was Sean Bogart. Bogart had subsequently moved from Frontier to Hageland and then to Lynden Air Cargo, and he had a good reputation.

For Kramer to receive further training on the Navajo, Frontier would have had to spend about $500 per hour to operate the airplane. Kramer called Howlett several days after the check ride to discuss his options. Howlett's statement about Mr. Burkevitch supporting Kramer was only a supposition. Of the 709 rides that Mr. Howlett conducted, most were part 91. He had done about 5 part 135 709 rides. The one he conducted with Mr. Kramer was the only one for Frontier Flying Service. Howlett did not believe that Kramer and Bogart were friends.

The only thing Howlett knew about the event captain, Mr. Novak, was that he had a class date with Alaska Airlines.

Howlett was aware from checking Kramer's training and checking records that he had some previous unsatisfactory events. One involved a glider, and he thought there were some on his part 135 record as well. The PA-31 was very difficult to fly IFR in Alaska and a pilot must have a very high level of ability and judgment. Kramer had "none of the above." The question was how did he get here? Perhaps he had political pull of some kind.

Asked about an Arizona flight school that Kramer had attended, Howlett said there were "certificate mills" out there. He had attended one such school to get a "barebones" multiengine ATP and when he graduated he felt "in no way competent." He commented that Hageland had

begun a program of having all new pilots fly in the right seat of the Caravan, which was a single pilot airplane, and observe and assist with loading and other duties. The typical new pilot had 300 hours but the typical captain in the Caravan had 10,000+ hours. Everyone was required to get 500 hours in the right seat before going to the Cessna 207. Specific experienced PIC's were paired up with new pilots, and he thought this was worthwhile. Another operator, Bering Air, required 100 hours of safety pilot time for new pilots.

Asked why the ANC FSDO decided to require Kramer to take a 709 ride, he said the most common pilot error was engine failure after takeoff and there were many accidents as a result. The office decided a check was needed, but this decision was not unusual.

At the time of the accident, Hageland had about 45 airplanes, including C-207, C-208, Be-1900 and C-406. Frontier had 6 BE-1900's and 12 Navajo's flying out of Fairbanks, and Era had 4 Dash 8's. Most of the flights were single pilot, taking off and landing on short runways, and the flying was demanding. The BE-1900 could be flown single pilot, but not with passengers.

Record of telephone call
Austin Engebretson – DO of Grant Aviation
Roger Cox
11/14/2012
DCA12IA141 – Era 874

Glenn Kramer had been at Grant when he arrived, flying the Cessna 207 out of Emmonak. After one or two years he left and went to Frontier Flying Service. He left September 22, 2007. He flew the C172 as well as the C207. He had two training flights in the Navajo which were not satisfactory, but he had no check ride. Patrick Sullivan was chief pilot at the time. Sullivan is now assistant POI at Era.

11/19/2012

Austin sent me the Grant Aviation flight training record for Kramer's two days of training on the PA-31 on May 25-26, 2007. They show multiple N (unsat) maneuver grades. The instructor was Audrey Ricks, who now flies at Alaska Airlines.

Interview:	**Robert Burke, FAA aviation safety inspector**
Date/Time:	**November 15, 2012, 1500 EST**
Location:	**FAA headquarters, Washington, DC**
Present:	**Roger Cox-NTSB; Maryam Allahyar–NTSB; Robert Drake-FAA; David Senko -Era Aviation**

During the interview, Mr. Burke stated the following:

He was an aviation safety inspector (ASI) in AFS-210, the Air Transportation Division – Air Carrier Training and 142 Training Center Branch of the FAA. He had been in that position since 2009, about 40 months. Prior to that, he had been a Principal Operations Inspector (POI) in Detroit for 2 years, and prior to that he was a captain, check airman and chief pilot for Spirit Airlines. He was hired by the FAA in 2006 and by Spirit Airlines in 1997. His duties at AFS-210 were to provide guidance to inspectors, support rule making, and write advisory circulars (AC's), INFO's, and SAFO's. He also helped draft guidance in the FAA's 8900.1, which provided policy and guidance to inspectors.

He provided the Operations Group with a written statement regarding FAA guidance and rulemaking relative to stall training, which is attached to this interview summary. He had been on working groups and two Aviation Rulemaking Committees (ARC's) which considered elements of stall training. He drafted SAFO 10012, an early product about "minimum altitude loss" in stall recovery to emphasize that loss of 50 or 100 feet as a standard was not appropriate. He was involved in drafting the change to the Airline Transport Pilot (ATP) practical test standards (PTS) issued in April 2012. He also drafted the AC on stall and stick pusher training which provided scenarios and templates for training and emphasized reduction of angle of attack.

He was on the first working group considering changes to stall training in 2009. They reviewed and considered best practices and considered how to evolve stall training. He was a member of ICATEE (International Committee for Aviation Training in Extended Envelopes), associated with the Royal Aeronautical Society. He was the designated federal officer (DFO) for the Stick Pusher and Adverse Weather (SPA) ARC on section 208 of PL 111-216, which directed that stall training be revised. That group morphed into an upset recovery ARC, which had international participation, including EASA, China, UK, France and Australia and ICAO. That ARC concluded in September 2012 and final recommendations to the FAA were expected by the end of November 2012. The chairman of the "208" ARC was Lou Nemeth, vice president of CAE, and he was later joined as co-chairman by Philip Adrieu of Boeing. The purpose of the ARC's was to validate upset training recommendations to FAA for rule making. They explored all avenues.

Implementation of the changes to the PTS and stall training was to be done in phases. The first phase was the change to the PTS in April 2012. The second phase was the AC in August 2012. The next phase was a notice to all inspectors that these changes were to be implemented. That notice would include a requirement for feedback from all POI's as to whether or not the changes were made at their carrier. The notice will go out to all part 121 and 135 operators, Training Center program Managers (TCPM's), part 91K and part 125 operators. The AC was directed at

the carriers and the notice will be directed to the POI's. They expected POI's to work in collaboration with carriers to implement changes to stall training.

With regard to changes made to stall training in 2012, these ideas were "still pretty new," but they had no negative feedback from the carriers so far. One carrier which was active in implementing the changes was Pinnacle Airlines. Paul Kolisch at Pinnacle was Regional Airline Association (RAA) training co-chairman and he had focused on angle of attack and use of autopilot in stall training for some time. Burke expected that other airlines would begin to explore specific training for each fleet type in the next phase of implementation.

Working Groups developed the basis of the materials used in the AC, and some of the working groups participants were early adopters of the new guidance.

He had been POI of Aerodynamics Inc., which operated one airbus. ICATEE was an open working group which included FAA and non-airline participants. In their stall recovery guidance they had not differentiated between straight wing and swept wing aircraft, but the primary focus had been on transport category aircraft, most of which were swept wing. The ARC's he was on did use Aviation Safety Reporting System (ASRS) data but not Aviation Safety Information Analysis and Sharing (ASIAS) data.

POI's were responsible to know what was in the 8900.1. PTS standards applied to certification of airmen and were applied when a check for an FAA certificate was done, but airline training and checking standards were approved by the airline's POI and might differ from the PTS. POI's should know what was in the PTS.

November 15, 2012

Update on FAA guidance and rulemaking relating to stall training:

As a result of accident and incident data, the FAA amended its guidance on stall training and is also initiating changes to regulations for the training of pilots. Prior to the issuance of this guidance, approach to stall training for airline transport pilots had become a precision flying maneuver which emphasized power (or thrust) for recovery. Some training programs also inappropriately emphasized maintaining altitude during recovery and arbitrarily assigned a predetermined value (in feet) as an evaluation criterion. To provide guidance to training providers, the FAA issued a Safety Alert for Operators (SAFO), revised the Airline Transport Pilot (ATP) Practical Test Standards (PTS), and issued an Advisory Circular (AC).

The FAA issued a Safety Alert for Operators (SAFO) 10012 in July 2010, which emphasized that the reduction of angle of attack required to initiate recovery will likely result in altitude loss and the amount of altitude loss will be affected by the operational environment. The SAFO also emphasized that "minimum altitude loss" should not be interpreted to be a predetermined value (eg. 50' or 100').

In April 2012 the FAA then amended the approach to stall task in the Practical Test Standards (PTS) for airline transport pilots. This amendment eliminated the language referring to "minimum loss of altitude" and states, "evaluation criteria for a recovery from an approach to stall should not mandate a predetermined value for altitude loss and should not mandate maintaining altitude during recovery." Additionally, the PTS recommends one of the three required approaches to a stall should be accomplished by commands to the autopilot, if installed. The revised PTS also notes that when published, the aircraft manufacturer's procedures for the specific make/model/series airplane take precedent over the identification and recovery actions herein.

In August 2012, the FAA issued Advisory Circular 120-109, Stall and Stick Pusher Training. The AC provides guidance on the training of the approach to stall maneuver and demonstration of stick pusher for transport category aircraft. The AC provides comprehensive guidance on the development of an effective stall recognition/recovery training program using scenario-based training. The AC also offers a generic stall recovery template which could be used by operators of aircraft which has no manufacturer's recommended procedure. Core principals of this Advisory Circular include:

- Reduction of angle of attack is the most important response when confronted with a stall event.
- Evaluation criteria for a recovery from a stall or approach-to-stall that does not mandate a predetermined value for altitude loss and should consider the multitude of external and internal variables which affect the recovery altitude.
- Realistic scenarios that could be encountered in operational conditions including stalls encountered with the autopilot engaged.
- Pilot training which emphasizes treating an "approach-to-stall" the same as a "full stall," and execute the stall recovery at the first indication of a stall.
- Incorporation of stick pusher training into flight training scenarios, if installed on the aircraft.

Record of Telephone Call
Patrick Sullivan – Former chief pilot of Grant Aviation
Roger Cox
11/19/2012
DCA12IA141 – Era 874

Sullivan had been chief pilot at Grant when Glenn was there. He said Glenn was "a nice guy but a very substandard pilot." Grant put new pilots into the Emmonak base first because it was easy but boring. Grant had high turnover and new pilots needed to progress to more challenging flying. The next station pilots went to was Bethel, which was more challenging. Glenn stayed in Emmonak for 2 ½ years. He couldn't move up. Glenn demanded an upgrade to the Navajo and Sullivan let him try even though he knew he wouldn't pass. Glenn did not pass the Navajo upgrade. "He couldn't do two things at one time."

Glenn got a job at Frontier even though he had "failed miserably" at Grant. Sullivan does not know how he got the job or who hired him. He was not involved in Glenn's accident investigation but he heard he lost a turbocharger, shut down the engine and didn't feather it. If he had just done nothing it would have been okay.

He thinks Frontier would have run a standard background check. Also, Grant handled Frontier's turns at Bethel so they knew him. Sullivan has no idea how he passed Navajo training.

Pilots at Grant needed an ATP. He had a friend who got his ATP in Kingman and the friend could have left the same day. The whole thing was 3 hours and he barely landed.

Sullivan recently became assistant POI at Era. He was in the FSDO for 5 years. He had 13,000 hours of single pilot flight time.

Record of Telephone Call
To Everett (Rett) Leaf, former director of training, Frontier, and DO of Era Aviation
Roger Cox
DCA12IA141
December 3, 2012

I called regarding who the management personnel were at Frontier Flying Service when Glenn Kramer was hired and re-hired.

Bill Fisher was chief pilot (CP) at Frontier until August of 2007, and Glenn was hired the following month. Troy Hennig became the new CP just when Glenn was hired. Troy is now flying for Virgin America. Rett had spoken with Troy and told him I wanted speak with him. Rett gave me his phone number. Rett had been hired by Bill Fisher and was director of training at the time Glenn was hired. New hire pilots were interviewed by a group, including an HR person, a line pilot, the manager of training and a check airman. They had just purchased a nice flight training device which they used to evaluate basic instrument work. Rett does not remember the interview with Glenn.

Rett recalls that Glenn progressed very well, did a nice job in the Beech 1900C. They had 10 "C" models. Glenn upgraded to the PA-31. He thinks Glenn did a fine job "as I recall." Rett became CP January 2008 and then moved up to DO (part 119 position). The CP at the time Glenn came back (after his accident in 2008) was Dave Fagre. Fagre is now in Fairbanks and Rett will contact him and advise him to call me.

He recalls Glenn had his 709 ride the last part of 2008. He took a month or two off, went back to Colorado, then called and asked to come back. They would have had a program to evaluate his progress. Bob Hajdukovich would have been involved in the decision to bring Glenn back. Rett will have Bob H contact me to discuss this.

I told Rett I did not see any flight time summary or flight experience on either pilot's original employment application. He said it should have been there and he would research this. He said he knows where he can look at Frontier's files and might find Kramer's resume, but he doubts there would be anything for Novak from 12 years back.

I reminded Rett that I had sent Kolstad a copy of a document in captain Novak's file prohibiting him from operating a company vehicle. I wanted to know what this was about.

Record of Telephone Call
Bob Hajdukovich, CEO of Era Aviation
Roger Cox and Maryam Allahyar, NTSB
December 3, 2012, 4:25 PM EST
Ref - DCA12IA141, Era 874 incident

Hiring and training history of incident FO Glenn Kramer

Mr. Hajdukovich was the president of Frontier Flying Service in 2007 when Kramer was hired. He said they hired pilots into the right seat of the Be-1900 and they "hired for personality." New pilots typically stayed for 2 ½ to 3 years and got plenty of flying time, 1200 to 1300 hours per year, and had 3000 to 5000 hours before they got into the left seat. He recalled that Kramer had been at Grant Aviation and had some glider experience, perhaps flew the C-207 in a typical rural Alaska location like Bethel. It was typical to bring in crews to Frontier from the smaller carriers. Kramer was hired into the right seat of the Be-1900.

Transition from the right seat of the two pilot airplane to the left seat of the single pilot twin was not ideal because it was hard to train single pilot operations and they (the company) were really cautious. Pilots were not entitled to upgrade to the Navajo and some were content to stay in the right seat of the Beech. For career major airline people there was no value to flying the PA-31 (Navajo).

Kramer had 1500 hours in the Be-1900 when he was considered for the PA-31. An upgrade committee looked at his qualifications. He had to have 5 captain recommendations and he was planned to have more than normal IOE. Minimum IOE was 10 hours, 40 to 50 was common, and they planned for Kramer to have 100. They had turned down several copilots for the PA-31 position but Kramer was acceptable. Kramer had been based at Aniak and on his first takeoff after his 100 hour IOE he had a turbocharger failure at liftoff. He thought he had a right engine failure. At 200 feet in a Navajo at gross weight you don't have a lot of leeway, and it was unfortunate. He misdiagnosed the failure, went to feather the engine, was losing altitude, tried to restart the engine and saw a sandbar in the river ahead. He elected to put the gear down and land. Mr. Hajdukovich felt that was the right decision and that led him to support having Kramer return to work, but not in the Navajo. The accident was a non-event to the company except for the scrap metal, and he supported Kramer and had no complaints. When Frontier acquired Era, crews could apply to move and Kramer elected to go to Era. He was simulator trained and had a fresh start with training and checking.

They recognized that the Navajo was a critical position and they washed plenty of people out of training on it. He felt conflicted about putting Kramer on the Navajo. He believes that Kramer reacted within his limitations. They do not have a remedial program for pilots at Era but he thinks it makes sense to have one. They are entering a period of high turnover. The transfer to Era was not an "entitlement program."

The upgrade committee was composed of the chief pilot, a line pilot, the DO and the president. Mr. Hajdukovich personally met with every new captain in the Navajo and always told them "don't go outside your abilities." Even if you were outstanding in sim and IOE it was okay to

refuse a flight and try again tomorrow. Mr. Hajdukovich encouraged the chief pilot to re-evaluate Mr. Kramer.

Pilot hiring policies

The minimum flight time required in 2007 and today is 250 hours. Be-1900 copilot is the entry level job and they expect new pilots to get about 3500 hours in the position. In 2012 a lot has changed. The new regulations on flight time are next to impossible to meet. Hageland feeds Era on a handshake and provides strong training. Hageland has an entry program that puts pilots in the right seat of a Caravan for 1000 hours. They get 1500 hours in the C-207, go to the right seat of the Be-1900 and get at least 1000 hours there. The Hageland chief pilot Jason Wilson can explain it better. It is a tough path and will take 4 to 5 years.

Era Alaska history

Frontier and Hageland combined in March 2008. They didn't merge, each company took the others' stock and a holding company, HoTH, was created. They spoke to Era to see if it was for sale. Era sold its Convairs and Twin Otters to finance additional Be1900's and Dash 8's. The holding company bought Era and combined 5 companies: Frontier, including Cape Smyth, Arctic Circle, which had two Sherpas, Hageland and Era. They phased out Arctic Circle in December 2011. They went from 3 employees to 230 employees and from 30 million dollars revenue to 80 million and more recently 130 million dollars.

Record of Telephone Call
David Fagre, former chief pilot Frontier Flying Service
Roger Cox and Maryam Allahyar, NTSB
December 4, 2012,
Ref - DCA12IA141, Era 874 incident

Captain Fagre was employed as chief pilot at Frontier from August 2008 to May 2011. Mr. Kramer's accident at Aniak was August 4, 2008, 3 weeks prior to Fagre's arrival at Frontier. At the time he arrived, the FAA had scheduled Kramer for a 709 ride. After his unsatisfactory performance of the 709, Kramer was shaken and not sure if he wanted to continue flying. Kramer's 709 ride was in early September following the Aniak accident. Fagre was chief pilot there when Glenn Kramer returned to work in November 2008.

Fagre was uninvolved with Kramer himself until he came into the office to discuss his situation with Fagre and the DO. He, the DO and the president of the company suggested Glenn take some time off, but Glenn was not removed from the seniority list. He was not paid but was considered on leave of absence. Company policy allowed 30 day personal leave without loss of seniority.

Frontier and Hageland were joined under a single holding company prior to Fagre's arrival at Frontier and that company was planning to buy Era. After the Era purchase, the decision was made to dismantle Frontier completely with Era surviving as part 121 and Hageland surviving as part 135. The company wanted to dismantle the Frontier part 121 operations, which he helped to do. He became DO at the dropping of part 121 operations and then eventually "there were no more chairs for me." After he last B1900 aircraft transferred to Era, there was only one SD3-30 aircraft on the Frontier part 135 certificate, which Fagre was not qualified in.

Within his first week there they did a taproot analysis of the Aniak crash to understand the root cause. The airplane should have been able to fly "by the book". A later study was performed by the Frontier maintenance department regarding the performance of the airplane engine with a turbo charger failure and the following of the manufactures procedures. Everyone survived. Glenn was not ready for the 709 ride. Frontier questioned the FAA handling of this particular event, particularly prior to probable cause. Frontier was "resource short" of FO's. Fagre was following the lead of the DO and Bob Hajdukovich and they were looking at staffing and the need for FO's. They felt they could plug Glenn in and he would be a natural fit as an FO, a position he previously held. He had the character and the skill to do it. He was not a guy who was on the radar as a training or attitude problem, and was not in "the 10%" who cause problems. He did not know Glenn before he worked at Frontier.

Frontier had a table in their FOM stating minimum hours for new hires. They had hired low time pilots and some were not satisfactory He recalled only one case while he was at Frontier. Fagre and DO Leaf made the decision to terminate based on unsatisfactory training progress. They had no further new hire classes in the Be1900 when he was there because there was no need. The only "initial" kind of training was when they transitioned some Arctic Circle pilots. Finding new pilots at Frontier was hard in that who would want to go to work for a downsizing company, and for the most part Frontier was not looking or needing pilots due to planned downsizing. They were not expanding and there were better opportunities at Hageland and Era.

Record of Telephone Call
Troy Hinnig, former chief pilot Frontier Flying Service
Roger Cox and Maryam Allahyar, NTSB
December 4, 2012,
Ref - DCA12IA141, Era 874 incident

He was chief pilot at Frontier in September 2007 when Glenn Kramer was hired. He was in that position about 8 months. He did not recall the interview with Kramer. Typically they did a phone screen first with new pilots, looking for flight time, Alaska time, and ability to be happy there. Glenn was already in Alaska at that time, not in Fairbanks. They began to mandate a sim check in an AATD (advanced aviation training device) using a standard profile to test basic instrument skills. They washed out a lot of candidates. He could not recall if Glenn went through that. They did round table interviews with the chief pilot, DO, director of training and they had to be unanimous to hire someone.

It was likely that he did some of Glenn's training. He recalled giving him a line check on a flight to Barter Island, but he did not recall specifics. What he did recall about Glenn was he was astute and concerned about always doing the right thing. He thought highly of the job and respected the position. Hinnig remembered those that he disapproved and Glenn was not one.