

**NATIONAL TRANSPORTATION SAFETY BOARD
Office of Research and Engineering
Vehicle Recorder Division
Washington, D.C. 20594**



GROUP CHAIRMAN'S FACTUAL REPORT OF INVESTIGATION

DCA20MA002

**By
Michael Portman**

WARNING

The reader of this report is cautioned that the transcript of a cockpit voice recorder audio recording is not a precise science but is the best product possible from a Safety Board group investigative effort. The transcript or parts thereof, if taken out of context, could be misleading. The transcript should be viewed as an accident investigation tool to be used in conjunction with other evidence gathered during the investigation. Conclusions or interpretations should not be made using the transcript as the sole source of information.

NATIONAL TRANSPORTATION SAFETY BOARD
Vehicle Recorder Division

December 15, 2020

Cockpit Voice Recorder

Group Chairman's Factual Report
By Michael Portman

1. EVENT SUMMARY

Location: Unalaska, Alaska
Date: October 17, 2019
Aircraft: Saab 2000, Registration N686PA
Operator: PenAir, Flight 3296
NTSB Number: DCA20MA002

On October 17, 2019, about 1740 Alaska daylight time, Peninsula Aviation Services Inc. d.b.a. PenAir flight 3296, a Saab 2000, N686PA, was landing at Unalaska Airport (DUT), Unalaska, Alaska, when the airplane overran the end of the runway, passed through the airport perimeter fence, crossed a road, and pitched down over shoreline rocks with its nosewheel in Dutch Harbor. Two flight crewmembers, one flight attendant, and 39 passengers were aboard the airplane; 1 passenger sustained fatal injuries. The airplane was substantially damaged. The airplane was operating as a regularly scheduled passenger flight under the provisions of Title 14 *Code of Federal Regulations (CFR)* Part 121. Visual meteorological conditions prevailed at the time of the accident. The flight had departed from Ted Stevens Anchorage International Airport (ANC), Anchorage, Alaska, at 1523. A solid-state cockpit voice recorder (CVR) was sent to the National Transportation Safety Board (NTSB) Vehicle Recorder Division for evaluation. The CVR group meeting convened on October 29, 2019 and a transcript was prepared for the 2-hour, 5-minute, 7-second digital recording (see attached).

2. GROUP

Chairman: Michael Portman
Aerospace Engineer – Recorder Specialist
National Transportation Safety Board

Member: David Keenan
Senior Air Safety Investigator
Federal Aviation Administration

Member: Dennis Fisher
Captain/Line Check Airman
PenAir

Member: Ulf Andersson
Service Engineer/Air Safety Investigator
Saab

3. DETAILS OF INVESTIGATION

The NTSB Vehicle Recorder Division received the following CVR:

Recorder Manufacturer/Model: **Honeywell 6022**
Recorder Serial Number: **CVR120-03713**

3.1 CVR Carriage Requirements

Per federal regulation, turbine engine powered aircraft operating under 14 CFR Part 121 must be equipped with a CVR that records a minimum of the last 2 hours of aircraft operation; this is accomplished by recording over the oldest audio data. When the CVR is deactivated or removed from the airplane, it retains only the most recent 2 hours of CVR operation.

3.2 Recorder Description

This model CVR, the Honeywell 6022, is a solid state CVR that records 120 minutes of digital audio. Specifically, it contains a 2-channel recording of the last 120 minutes of operation and separately contains 3-channel recording of the last 30 minutes of operation. The 120-minute portion of the recording is comprised of one channel that combines three audio panels sources and a second channel that contains the cockpit area microphone (CAM) source. The 30-minute portion of the recording contains 3 channels of audio information: one channel for each flight crew and one channel for a cockpit observer.

3.3 Recorder Damage

Upon arrival at the laboratory, it was evident that the CVR had not sustained any heat or structural damage and the audio information was extracted from the recorder normally, without difficulty.

3.4 Audio Recording Description

Each channel's audio quality is indicated in Table 1.¹

Table 1. Audio Quality.

Channel Number	Content/Source	Quality	Duration (hh:mm:ss)
1	Captain	Excellent	00:30:20
2	First Officer	Excellent	00:30:20
3	Observer/Public Address	Excellent	00:30:20
4	CAM	Good	02:01:08
5	Combined Channels 1-3	Excellent	02:05:07

¹ See attached CVR Quality Rating Scale.

3.5 Timing and Correlation

Timing on the transcript was established by correlating the CVR events to common events on the flight data recorder (FDR). Specifically, the last five radio transmissions that the aircraft made were correlated to the radio transmit microphone key parameter from the FDR. Each of the five radio transmissions acted as an anchor point for a linear interpolation between the remaining CVR events. Once a correlation between the two recorders was established, a reference to local time was determined. The CVR and FDR times were offset to reflect the local Alaska daylight time of the accident.

3.6 Description of Audio Events

The recording began at 15:36:30, at around top of climb after departure from Anchorage, and the transcript began at 15:44:13. Throughout the cruise and descent portions of the flight, approximately 102 squelch click sounds were recorded, identified by the crew in the recording as squelch clicks from a company radio frequency. The transcript was broken into multiple sections, as the intervening times contained significant durations of non-pertinent conversation. The first, approximately three-minute section from 15:44:13 to 15:47:07, contains discussion of the approach into Unalaska, commonly referred to as Dutch Harbor or Dutch. The second, approximately 30-second section from 15:53:49 to 15:54:16, contains discussion of flap usage at Unalaska. The third, approximately one-minute section from 16:01:16 to 16:02:30, contains discussion of turbulence in the vicinity of Unalaska. The fourth, approximately six-minute section from 16:23:04 to 16:29:47, contains further discussion of the approach into Unalaska, including landing distance calculations. The final section, from 16:57:28 to the end of the recording contains the descent into Unalaska, first approach to go around, second approach, and landing. The touchdown occurred at approximately 17:39:54. At approximately 17:40:20, the captain's side microphone and cockpit area microphone ceased recording. The entire recording ended shortly thereafter at 17:41:37.

Attachment I

CVR Quality Rating Scale

The levels of recording quality are characterized by the following traits of the cockpit voice recorder information:

- Excellent Quality** Virtually all of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate only one or two words that were not intelligible. Any loss in the transcript is usually attributed to simultaneous cockpit/radio transmissions that obscure each other.
- Good Quality** Most of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate several words or phrases that were not intelligible. Any loss in the transcript can be attributed to minor technical deficiencies or momentary dropouts in the recording system or to a large number of simultaneous cockpit/radio transmissions that obscure each other.
- Fair Quality** The majority of the crew conversations were intelligible. The transcript that was developed may indicate passages where conversations were unintelligible or fragmented. This type of recording is usually caused by cockpit noise that obscures portions of the voice signals or by a minor electrical or mechanical failure of the CVR system that distorts or obscures the audio information.
- Poor Quality** Extraordinary means had to be used to make some of the crew conversations intelligible. The transcript that was developed may indicate fragmented phrases and conversations and may indicate extensive passages where conversations were missing or unintelligible. This type of recording is usually caused by a combination of a high cockpit noise level with a low voice signal (poor signal-to-noise ratio) or by a mechanical or electrical failure of the CVR system that severely distorts or obscures the audio information.
- Unusable** Crew conversations may be discerned, but neither ordinary nor extraordinary means made it possible to develop a meaningful transcript of the conversations. This type of recording is usually caused by an almost total mechanical or electrical failure of the CVR system.

Transcript of a Honeywell 6022 solid-state cockpit voice recorder, serial number CVR120-03713, installed on a PenAir Saab 2000 (N686PA), which crashed after landing at Unalaska Airport in Unalaska, Alaska.

LEGEND

CAM	Cockpit area microphone voice or sound source
CTR	Radio transmission from Anchorage center
DOP	Radio transmission from Unalaska airport ground operations
DWX	Radio transmission from Unalaska airport weather observer
EGPWS	Enhanced Ground Proximity Warning System annunciation
HOT	Flight crew audio panel voice or sound source
INT	Intercom transmission
MOB1	Radio transmission from the Unalaska gate controller, Mobile 1
N546LM	Radio transmission from nearby traffic, King Air N546LM
PA	Public address system voice or sound source
RDO	Radio transmission from N686PA
-1	Voice identified as the captain
-2	Voice identified as the first officer
-3	Voice identified as the flight attendant
-A	Voice identified as the first Anchorage center controller
-B	Voice identified as the second Anchorage center controller
-C	Voice identified as the third Anchorage center controller
-?	Voice unidentified
?	Unidentified source
*	Unintelligible word
#	Expletive
@	Non-pertinent word
()	Questionable insertion
[]	Editorial insertion

Note 1: Times are expressed in Alaska daylight time.

Note 2: Generally, only radio transmissions to and from the incident aircraft were transcribed.

Note 3: Words shown with excess vowels, letters, or drawn out syllables are a phonetic representation of the words as spoken.

Note 4: A non-pertinent word, where noted, refers to a word not directly related to the operation, control, or condition of the aircraft.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
1536:30.0			
	START OF RECORDING		
	START OF TRANSCRIPT		
15:44:13.4			
HOT-1	but it's supposed to be one...the way they (put/wrote) it here.		
15:44:14.9			
HOT-2	so one twenty seven's the approach speed.		
15:44:16.6			
HOT-1	yeah but...uh...we use ten plus one twenty six...so...		
15:44:19.7			
HOT-2	ok. so it's gonna be one twenty six...one thirty six...one forty eight.		
15:44:22.7			
HOT-1	yeah.		
15:44:23.3			
HOT-2	okay.		
15:44:24.6			
HOT-2	well I'll put that in.		
15:44:40.1			
HOT-1	mainly for like pilot purposes...		
15:44:42.7			
HOT-1	in what we're doing.		
15:44:45.9			
HOT-1	really *** until you can do this.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
15:44:48.8 HOT-1	I dunno...		
15:44:51.1 HOT-1	so I can go...like...runway analysis...just go right to runway analysis here.		
15:44:54.5 HOT-2	yeah.		
15:44:55.9 HOT-1	and then what I would do *** — [voice cut off by radio transmission]		
15:45:02.2 HOT-1	yeah...and then I'd just do arrival...Dutch...I don't have weather...but I can select my runway.		
15:45:10.2 HOT-2	we will have weather though as we get closer in...I'll have it...but...		
15:45:14.7 HOT-1	but if I...even if I didn't...I can *** nav *** here *** Dutch. [voice cut off by radio transmission]		
15:45:24.0 HOT-1	oh I have it on my phone...I got the latest one on my phone...before we left.		
15:45:37.7 HOT-1	Rommel.		
15:45:42.3 HOT-1	so temperature...let's see...so they want wind was one nine zero at eight so wind...one nine zero zero eight...		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
15:45:52.1 HOT-2	the...uh...temperature.		
15:45:56.4 HOT-1	seven...done...'timeter...two nine five zero...two nine...five zero...point five zero...done. then I just need my weight...so then I gotta go over here to get my weight...gotta get my calculator here is four five two one three...four five two one three done. here's the numbers. and now...what's really cool about it...is I can go...flaps thirty five... *** and when you land...thirty...thirty five would be one seventeen one twenty seven one forty eight...if you wanna go twenty... *** one nine er...say you wanna go one three — [voice cut off by radio transmission]		
15:46:55.7 HOT-1	if you wanna go back here to twenty ***...twenty six twenty seven and there's forty eight...so...		
15:47:05.0 HOT-2	cool.		
15:47:05.9 HOT-1	last minute changes...ya know.		
15:47:07.4 HOT-2	yeah.		
BREAK IN TRANSCRIPT			
15:53:48.9 HOT-1	I haven't seen (dude)...I-I-haven't heard of-but I have...well maybe I have heard...that some guys actually do full flap landings into Dutch even though it's not recommended.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
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15:53:58.4 HOT-2	uhhh...first couple times I went in there with @ [company pilot] and um...uh-@ [company pilot] they both did thir-flaps thirty five.		
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15:54:09.9 HOT-2	well @ [company pilot] did a flaps thirty five into Bethel.		
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15:54:13.5 HOT-1	*		
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15:54:15.6 HOT-2	he asked me if I wanted to do it...and I was like...eh...I'll do twenty — I'm good.		
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BREAK IN TRANSCRIPT

16:01:16.4 HOT-1	bumps comin'.		
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16:01:17.9 HOT-2	what's that?		
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16:01:19.8 HOT-1	according to this thing we're gonna get a few bumps here.		
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16:01:22.3 HOT-2	yeah *.		
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16:01:29.9 HOT-2	we're outside what it was...the AIR-MET for it.		
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16:01:34.6 HOT-1	*		
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Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
16:01:35.2 HOT-2	but I mean...this obviously is not perfect so it could probably extend to us...and we're gonna hit more down through here...all AIR-METs for turbulence.		
16:01:43.7 HOT-1	but they're low aren't they?		
16:01:46.4 HOT-2	surface winds on that one yeah.		
16:01:50.6 HOT-2	sss-surface winds yeah...what about this one?		
16:01:57.4 HOT-2	surface winds okay...yeah they're all surface winds.		
16:02:04.9 HOT-2	the other day...when I was flying out there with uhh...		
16:02:11.4 HOT-1	@ [company pilot].		
16:02:12.2 HOT-2	@ [company pilot] yeah.		
16:02:14.0 HOT-2	we had em all along the route for flight level two seven to three six or somethin' like that.		
16:02:25.0 HOT-1	we were down...we were to MORDI we didn't get that many bumps.		
16:02:27.5 HOT-2	no?		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
16:02:29.5 HOT-2	yeah we got some it wasn't too bad.		
BREAK IN TRANSCRIPT			
16:23:04.4 HOT-1	oh plan this one for now I guess one three.		
16:23:07.2 HOT-2	okay.		
16:23:08.1 HOT-1	so...plan on...we're familiar with it...sounds good...twenty one April seventeen the date on my chart...um...		
16:23:17.8 HOT-2	same on mine.		
16:23:19.0 HOT-1	* G-P-S one three...field elevation is...twenty *...I keep going back and forth between these Jepps gonna get me pissed off...twenty four...touchdown zone twenty four feet...uh...go uh MORDI to ROFZU...technically we won't do it but it's...you're good to twenty three hundred feet...after ROFZU...twenty three hundred feet we're good to after EWSER good down to sixteen hundred feet and after IRUWU *** [enunciating IRUWU]...after IRUWU good down to five hundred...gonna put five hundred in there...no longer high mins.		
16:24:04.3 HOT-2	five hundred on my side.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
16:24:05.4 HOT-1	alright...(if we didn't) turn outside of OWGIM where we can make a visual approach from there...to the airport...right now it's only eight knots of wind so we can go straight in...from what I can see...*** [voice cut off by radio transmission] we'll get weather in just a second...so we can either go straight in if not we can make an early decision.		
		16:24:19.8 CTR-A	Peninsula thirty two ninety six in five minutes contact Anchorage Center one two five point four five g'day.
		16:24:26.0 RDO-2	twenty five forty five in five minutes Peninsula thirty two ninety six.
16:24:29.9 HOT-1	twenty five forty five.		
16:24:36.6 HOT-1	five minutes.		
16:24:36.9 HOT-2	I'mma start a minute timer so I don't forget.		
16:24:39.5 HOT-1	so...uh...		
16:24:42.0 HOT-1	...yeah we'll make that decision to go through the back door off of this approach if we have to...uh we did that the other day...right?		
16:24:49.5 HOT-2	yeah I think we did.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
16:24:50.3 HOT-1	and so...		
16:24:51.1 HOT-2	actually...I think we ended up going the back end...uhhh...we've done...yeah we've done both sides...yeah we did the front door and the back door together.		
16:25:05.6 HOT-1	yeah so this time we'll see...if we can't make in the front we can't we can't...[therefore] go around the back.		
16:25:10.3 HOT-2	all right.		
16:25:10.8 HOT-1	keep me honest with the mountains and don't forget the terrain thing we discu...		
16:25:15.2 HOT-2	okay		
16:25:16.1 HOT-1	uh...but...uh...other than that it's a missed approach so we'll do...if we can't do it or go around or whatever we have to do a climbing left turn to twenty three hundred to ROFZU and hold...caution do not exceed ground track of one point five nautical mile...and if we *...try it again or we're gonna...yeah then we're gonna go to Dillingham.		
		16:25:36.7 ?	(roger) [unclear source, possibly traffic, PIC or SIC]

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
16:25:39.4 HOT-1	bingo fuel...twenty-five...thirty...four thousand...one hundred and fifty...sixty two pounds...one hundred sixty two pounds is min...and we start.		
16:25:55.8 HOT-2	*** bugg-ed.		
16:25:57.4 HOT-1	bugg-ed fuel...we be bugg-ed.		
16:26:02.6 HOT-1	bugg-ed now.		
16:26:04.7 HOT-2	roger.		
16:26:12.0 HOT-1	[sound similar to (yawn/sigh)]		
16:26:27.8 HOT-1	oh...eh...airport...eh...wind was...what on your thing...what from your thingy was three one zero at six...six knot tailwind I don't really care about that too much...er...there's ten.		
16:27:06.8 HOT-1	here...three one zero.		
16:27:30.1 HOT-1	all right...unfactored landing distance would be five...three thousand fifty eight feet.		
16:28:30.8 HOT-1	***. [sound similar to unintelligible discussion]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
16:28:32.0 HOT-2	***. [sound similar to unintelligible discussion]		
16:28:50.0 HOT-1	yeah...saves about three hundred feet for unfactored landing distance if we did a flaps thirty five...unless you float...doesn't do you any good.		
16:29:01.5 HOT-2	haha.		
16:29:03.3 HOT-1	that's the thing I noticed like with full flaps landing with this plane and the Dashes...you...you don't just plant it...you float.		
16:29:11.6 HOT-2	yeah.		
16:29:18.4 HOT-1	if you try to grease it on...not a good...normally doesn't work out well for short landing (strips).		
16:29:25.0 HOT-2	hah...you just gotta drop and...chop and drop...get right down to it and you go ert...boom.		
16:29:31.6 HOT-1	yeah.		
16:29:38.2 HOT-1	huh huh. [sound similar to yawn]		
		16:29:43.5 RDO-2	Anchorage Center...Peninsula thirty two ninety six flight level three zero zero.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
		16:29:47.8 CTR-B	Peninsula thirty two ninety six Anchorage Center roger.
BREAK IN TRANSCRIPT			
16:57:28.1 HOT-2	ah...we should be getting...uh...directions here to descend soon...I'm gonna see if I can't get weather...twenty five and uh...man...I'll be on two for a sec.		
16:57:41.2 HOT-1	yeah it's changed...the weather's updated...three zero...uh...three one zero at one one.		
16:57:46.4 HOT-2	m'kay.		
16:57:48.6 HOT-1	startin' to favor the back door a little more.		
16:57:57.2 HOT-2	welp...we've done that before.		
16:58:08.2 HOT-2	eh...tell em that we'll be there...thirty after? give em a couple extra minutes on that?		
16:58:16.7 HOT-1	yeah.		
		16:58:19.8 RDO-2	Dutch Ops thirty two ninety six.
16:58:24.0 HOT-2	no specials?		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
16:58:26.9 HOT-1	got an infant...that's it...or child.		
16:58:30.6 HOT-2	we might be too...too far out.		
16:58:32.6 HOT-1	yeah I think it's too early still.		
16:58:35.7 HOT-2	I'll stay on one for a bit...well once we're closer to twenty miles...or twenty minutes out I'll give em a call...try again.		
16:58:49.5 HOT-2	ah.		
16:59:27.7 HOT-?	[sound similar to yawn]		
17:00:16.4 HOT-?	do do do do do do. [sound similar to humming]		
17:00:23.0 HOT-1	that's gotta be a long trip out here in a nineteen hundred.		
17:00:26.5 HOT-2	oh yeah...yeah I should ask my buddy about it...he flies for Ace.		
17:00:32.9 HOT-1	oh.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:00:37.7 HOT-1	I know it's...it is in a Dash...but man it's just more comfortable plane.		
17:00:42.5 HOT-2	yeah.		
17:00:43.4 HOT-1	but yeah.		
		17:01:03.6 CTR-B	Peninsula thirty two ninety six descent pilot's discretion maintain flight level two niner zero.
		17:01:08.5 RDO-2	pilot's discretion two niner zero Peninsula thirty two ninety six.
17:01:11.4 HOT-2	pilot's discretion two niner zero.		
17:01:13.7 HOT-1	check.		
17:01:16.0 HOT-1	but uh...the only difference between the Dash is that we'd have to circumnavigate some of those tops over there.		
17:01:23.7 HOT-2	yeah.		
17:01:26.3 HOT-1	I see that little bit.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:01:39.3 HOT-1	yeah there's always a lot of dodging in the Dash cause it just...it...that ya know...that extra six thousand foot makes a difference.		
17:01:45.3 HOT-2	yeah.		
17:02:06.0 HOT-1	I wonder who keeps keying the mic.		
17:02:11.9 HOT-2	it's not me.		
17:02:12.7 HOT-1	yeah.		
17:02:29.5 HOT-?	do do do do do. [sound similar to humming]		
17:02:35.5 HOT-2	[sound similar to clearing throat]		
17:03:02.3 HOT-2	it won't update.		
17:03:04.4 HOT-1	*** what's your time?		
17:03:06.5 HOT-2	(fifty-five/sixty-five) minutes ago.		
17:03:08.7 HOT-1	mine's at four...fifty six on my side.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:03:14.2 HOT-2	yeah.		
17:03:20.1 HOT-2	[sound similar to clearing throat]		
17:03:38.7 HOT-1	yeah somebody on company keying the mic.		
17:03:41.9 HOT-2	is it?		
17:03:42.7 HOT-1	yep.		
17:03:51.6 HOT-1	I just turned the volume all the way down...and it stopped doing it.		
17:03:59.3 HOT-2	yeah.		
17:04:18.2 HOT-1	and see this...here...that dark cloud...see it?		
17:04:22.5 HOT-2	yeah.		
17:04:23.1 HOT-1	see all the white clouds behind and in front...below.		
17:04:25.9 HOT-2	yeah.		
17:04:26.6 HOT-1	we got that one dark one.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:04:29.4 HOT-1	that's...that's the remnants of...it kinda looks like an ash cloud...just sayin'.		
17:04:46.9 HOT-1	and it is comin' from the right direction.		
		17:04:49.0 CTR-B	Peninsula thirty two ninety six contact Anchorage Center one two one point four.
		17:04:52.6 RDO-2	one two one point four Peninsula thirty two ninety six thanks.
17:04:57.0 HOT-2	two two point.		
17:04:59.3 HOT-1	one two one point four...oh.		
17:05:00.5 HOT-2	two two six is the C-TAF.		
		17:05:08.5 RDO-2	Anchorage Center Peninsula thirty two ninety six flight level three zero zero pilot's discretion flight level two niner zero.
		17:05:14.9 CTR-C	Peninsula thirty two ninety six Anchorage Center amend altitude pilot's discretion maintain one zero thousand Dutch Harbor altimeter two niner five zero.
		17:05:22.7 RDO-2	two niner five zero pilot's discretion to one zero thousand Peninsula thirty two ninety six.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:05:27.2 HOT-2	all right.		
17:05:31.9 HOT-1	and we're good to...		
17:05:32.2 HOT-2	pilot's discretion to ten thousand.		
17:05:34.5 HOT-1	okay.		
17:05:42.1 HOT-2	eh...we are twenty four miles out or twenty four minutes...eh...I'm gonna give em a try again.		
17:05:47.9 HOT-1	okay...you'll probably get em this time.		
17:05:50.7 HOT-2	yeah.		
17:05:52.4 HOT-1	eh- I dunno...maybe...oh my butt.		
		17:05:56.9 RDO-2	Dutch Ops thirty two ninety f-six.
		17:06:04.1 DWX	hello thirty two ninety four...right now the winds um...two one zero at six gusting up to fourteen visibility's ten...um...except ops to the north says there's a shower in the vicinity...um...visibility in that direction is probably I would say seven right now...um your...your ceiling is four thousand three hundred broken temperature eight dewpoint one altimeter two niner five zero.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
		17:06:33.6 RDO-2	alright copy the weather and we'll...uh...be there in about twenty-five minutes thirty two ninety six.
		17:06:40.8 DWX	copy that we'll see you in twenty five.
17:06:43.4 HOT-1	what she say the wind was?		
17:06:44.9 HOT-2	wind was two one zero let me conf-make sure of that.		
		17:06:49.1 RDO-2	and Dutch Weather Peninsula thirty two ninety six we wanted to confirm the we...winds are two one zero at six gusting fourteen?
		17:06:57.9 DWX	yes that's affirmative they are two one zero but they've come down quite a bit um if they pick up again and come out right out of the um...across the runway there at like two four zero I'll let you know.
		17:07:08.0 RDO-2	okay sounds good thank you.
17:07:09.1 HOT-1	direct crosswind...yeah it's pretty much a direct crosswind.		
17:07:12.9 HOT-2	rog...alright.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:07:14.8 HOT-1	we had that the other day too...I did that with @ [company pilot]... ***...we're like a...half mile final when she says out of two four zero at two five...I went...the # do you want me to do about it now?		
17:07:26.6 HOT-2	yeah hah.		
17:07:28.8 HOT-1	ahem...landed it on the ground (per about)...		
17:07:32.6 HOT-2	all right I'll request a R-NAV three...uh one three .		
17:07:35.8 HOT-1	alright.		
		17:07:38.2 RDO-2	Anchorage Center Peninsula thirty two ninety six request the R-NAV one three eh Dutch Harbor we have the current weather.
		17:07:43.5 CTR-C	Peninsula thirty two ninety six you can expect that.
		17:07:55.9 DOP	Peninsula thirty two ninety six copy that twenty five minutes out.
17:08:23.4 HOT-1	yep...pretty much a direct crosswind there.		
17:08:46.6 HOT-?	[sound similar to sh]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:08:58.1 HOT-1	yep...I guess we can go ahead and start heading down.		
17:09:00.3 HOT-2	alright.		
17:09:01.2 HOT-1	in range when you get a chance.		
17:09:02.0 HOT-2	roger.		
17:09:03.1 CAM	[sound similar to double single chime]		
		17:09:05.5 RDO-2	Anchorage Center Peninsula thirty two ninety six in the descent.
		17:09:09.3 CTR-C	Peninsula thirty two ninety six roger.
17:09:11.9 HOT-2	A-TIS.		
17:09:14.0 HOT-1	uh...		
17:09:18.1 HOT-2	check.		
17:09:18.6 HOT-1	check yeah.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:09:19.1 HOT-2	hahaha...the E-F-Bs.		
17:09:20.7 HOT-1	wasn't really an A-TIS but okay just how my brain was going...** bravo configured...*** bugs are twenty six one thirty six and I have one forty eight — [continuing to read checklist] [overlapping HOT mic, PA, and ATC]		
17:09:23.8 PA-3	ladies and gentlemen we have begun our gradual descent into...Dutch Harbor please remain seated with your seatbelts securely fastened for the duration of the flight in just a few minutes I'll be coming through the cabin to * any remaining service items...thank you.		
17:09:45.9 HOT-2	checked.		
17:09:46.5 HOT-1	checked.		
17:09:47.7 HOT-2	F-M-S.		
17:09:49.6 HOT-1	checked.		
17:09:49.8 HOT-2	checked.		
17:09:50.5 HOT-2	flight attendant's been notified A-P-R is off...in range checklist complete.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:09:55.0 HOT-1	thank you.		
17:09:58.8 HOT-1	there we are...ah...butt check.		
17:10:04.7 HOT-2	checked...right?		
17:10:06.9 HOT-1	yeah.		
17:10:14.2 HOT-?	[sound similar to pilot whistling]		
17:10:28.5 HOT-1	so if it's...oh that was the other thing...if we touchdown...if it's squirrely...weird...creepy in any way...you...uh...give it ** even if it's before eighty knots ***...go into reverse...** gonna be on tiller and brakes. [voice cut off by radio transmission]		
17:10:42.2 HOT-2	all right yeah I'll—I'll get on the uh tops early.		
17:10:45.7 HOT-1	yeah.		
17:10:48.1 HOT-2	I had to do that yesterday.		
17:10:50.1 HOT-1	yeah cause it just...you you gotta use everything in it.		
17:10:52.7 HOT-2	yeah.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:10:52.9 HOT-1	just give it a push on the nose so I have traction.		
17:10:53.9 HOT-2	yeah.		
17:11:00.1 HOT-2	oh my butt.		
17:11:01.4 HOT-1	yeah.		
17:11:12.7 HOT-2	I'm gonna get the rudders pushed out a little bit further.		
17:11:15.9 HOT-1	yeah I'm gonna get an adjustment here in a minute. ** a little lower...* a little further along.		
17:11:59.2 HOT-1	oh it's the Alaska Airlines frequency...oh no that's it...yeah.		
17:12:03.5 HOT-2	twenty nine five?		
17:12:05.0 HOT-1	yeah.		
17:12:55.0 HOT-2	ahem.		
17:13:01.3 HOT-1	[sound similar to pilot humming]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:13:20.1 HOT-1	[sound similar to pilot humming]		
17:13:25.6 HOT-1	you alright?		
17:13:26.3 HOT-2	yeah I just need to stretch my legs out more.		
17:13:28.5 HOT-1	yeah.		
17:13:32.0 HOT-2	I'm good now...I got all...got the rudder pedals all the way out.		
17:13:36.3 HOT-1	haha.		
17:13:37.9 HOT-2	and seat's all the way back as well...as far back as I can get it with as much recline as I can get.		
17:13:42.6 HOT-1	uh huh.		
17:13:46.6 HOT-2	ya know for a six foot guy this plane doesn't...I mean it...you can give yourself plenty of legroom which is pretty nice.		
17:13:53.2 HOT-1	yeah.		
17:14:21.3 HOT-1	[sound similar to pilot humming]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:14:35.7 HOT-1	huh.		
17:14:40.2 HOT-1	[sound similar to pilot whistling]		
17:14:48.5 HOT-2	all right...on to ROFZU.		
17:14:52.0 HOT-1	MORDI to ROFZU.		
		17:14:56.8 CTR-A	Peninsula thirty two ninety six advise (if/for) Dutch Harbor zero zero five six METAR or more current I have it if you need it...the runway one three and three one field condition code five five five one hundred percent wet observed at one six two six.
17:15:08.7 HOT-2	um...okay...(should we—)what do you want me to just say understood?		
17:15:11.1 HOT-1	all right we have current weather thank you.		
17:15:12.6 HOT-2	all right.		
		17:15:13.1 RDO-2	all right we have the current weather at Dutch Harbor Peninsula thirty two ninety six.
		17:15:16.9 CTR-A	Peninsula thirty two ninety six are you planning on R-NAV runway three one?

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
		17:15:20.4 RDO-2	affirmative...uh negative...we want the R-NAV one three Peninsula thirty two ninety six.
		17:15:26.0 CTR-A	Peninsula thirty two ninety six roger cleared R-NAV runway one three approach Dutch Harbor airport at ROFZU change of advisory frequency approved report cancellation of I-F-R on this frequency.
		17:15:34.1 RDO-2	cleared for the R-NAV one three and change of frequency at ROFZU we'll report back with you to cancel Peninsula thirty two ninety six thanks.
17:15:40.9 HOT-2	okay.		
17:15:42.3 HOT-1	shift over at ROFZU.		
17:15:44.6 HOT-2	clear for the R-NAV.		
17:15:45.3 HOT-1	and just like the other day if there's any major changes in wind then we'll just—		
17:15:48.3 HOT-2	we'll switch.		
17:15:49.4 HOT-1	call her back...if we have it in sight we're gonna take the visual.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:15:52.6 HOT-2	rog'.		
17:15:56.8 HOT-1	that way we're on the up and up legal.		
17:15:58.4 HOT-2	yeah.		
17:16:06.3 HOT-2	[sound similar to clearing throat]		
17:16:51.1 HOT-2	so...		
17:16:52.4 HOT-1	I was hoping that the daily schedule thing would have stayed on my phone without the internet.		
17:16:57.1 HOT-2	oh.		
17:17:07.5 HOT-1	[sound similar to yawn]		
17:17:42.3 HOT-1	and coming up on transition...let's do the descent checklist.		
17:17:48.7 HOT-2	roger.		
17:17:51.9 HOT-2	cabin pressure's checked. altimeter two niner five zero.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:17:55.9 HOT-1	two niner five zero left center and crosscheck through.		
17:17:58.8 HOT-2	and right cross check eighteen eight.		
17:18:01.2 HOT-1	eighteen eight.		
17:18:02.4 HOT-2	cross check complete. descent checklist complete.		
17:18:09.6 HOT-1	[sound similar to pilot whistling]		
17:18:13.2 HOT-1	I didn't realize I was that much older than @ [company pilot]...huh.		
17:18:16.3 HOT-2	how old is @ [company pilot]?		
17:18:17.2 HOT-1	@ [company pilot]'s like fifty three.		
17:18:18.6 HOT-2	how old are you?		
17:18:19.5 HOT-1	fifty seven.		
17:18:20.4 HOT-2	oh.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:18:22.8 HOT-2	you still got plenty of time to keep flying with us...you don't need to retire again.		
17:18:29.9 HOT-1	ehhh don't wanna do it and don't wanna do that...unless it's fun — if it's still fun then I'll keep doin' it but...at a point where it's just like...yeah...not fun anymore...done...then I'm done done...I can give instruction and stuff would be fun just to (go down/get out) and do somethin'.		
17:18:50.0 HOT-2	yeah.		
17:18:50.5 HOT-1	but.		
17:18:51.6 HOT-2	I—I mean...as a former flight instructor...I enjoy it...um...ya know I like seeing people learn and...		
17:19:00.6 HOT-1	yep.		
17:19:01.1 HOT-2	succeed.		
17:19:02.5 HOT-1	yep.		
17:19:03.6 HOT-2	but uh...I enjoy the fact that no one's trying to kill me right now.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:19:11.8 HOT-1	heh...yeah ***. [voice cut off by radio transmission]		
17:19:15.8 HOT-2	what's that?		
17:19:17.3 HOT-2	yeah...don't have people bombing me in the practice area you know just...		
17:19:22.8 HOT-1	oh yeah.		
17:19:27.9 HOT-1	aright that's just it then...that's what makes it un...sometimes unpleasant especially when there's guys who are like real #.		
17:19:35.9 HOT-2	yeah.		
17:19:36.9 HOT-1	yeah...but uh...		
17:19:43.6 HOT-2	and I enjoy...I mean...I've enjoyed flying with everybody so far.		
17:19:47.7 HOT-1	yeah me too.		
17:19:49.7 HOT-2	so it makes this job easy for me.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:19:55.2 HOT-1	what was the temperature that she gave us? do you remember?		
17:19:57.9 HOT-2	it is...eight.		
17:20:05.9 HOT-1	yeah...all right.		
17:20:30.8 HOT-1	[sounds similar to pilot whistling and humming]		
		17:20:40.1 N546LM	and Dutch Weather King Air five four six lima mike.
17:20:45.6 HOT-2	what'd I tell ya...five four six lima mike.		
17:20:47.3 HOT-1	oh yeah that's life med.		
		17:20:47.6 DWX	hello lima...lima mike...um right now your winds are one eight zero at seven visibility ten showers in vicinity by Eider um restricting visibility over there to I would say eight miles right now their ceiling is three thousand nine hundred broken temperature eight dewpoint one altimeter two niner five zero.
		17:21:07.8 N546LM	hey my kind of weather @ [DWX] we'll uh...we'll se ya in about I dunno thirty five minutes...um...do you know is @ [airport services] still uh available?

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
		17:21:21.8 DWX	yeah I'm sure he's still here but their flight is right before you so you'll have to wait 'till he's done with them.
		17:21:28.2 N546LM	oh yeah I just kinda wondered if we could leave the airplane parked over on the other side and he could get to us.
		17:21:37.3 DWX	I'll ask her...um what time are you due in exactly?
		17:21:42.0 N546LM	I'm thinking about thirty five minutes.
		17:21:45.3 DWX	copy that I'll let her know.
17:22:01.3 HOT-1	[sound similar to pilot whistling]		
17:22:22.3 HOT-1	(q ops)...guess I'm ready to turn this # on...um left engine...on...check. right engine...on...check. make sure we turn it off...and I'll probably go into high rpm.		
17:22:40.6 HOT-2	okay.		
17:22:41.1 HOT-1	that's a @ [company pilot] thing...I like it...haha...I think @ [company pilot] does that...I'm not sure...pretty sure he does...he's the one who showed it to me so...we'll go with that.		
17:22:55.6 CAM	[sound similar to altitude alert]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:22:58.1 HOT-2	uh we can set lower...can we?		
17:22:59.9 HOT-1	did she...she—		
17:23:01.7 HOT-2	she cleared us for the R-NAV.		
17:23:02.3 HOT-1	oh yeah if we're cleared we're good.		
17:23:03.4 HOT-2	to twenty three.		
17:23:04.1 HOT-1	to twenty three yeah.		
17:23:07.9 HOT-1	and she said cancel on the ground with her.		
17:23:09.9 HOT-2	yeah.		
17:23:11.4 HOT-1	ten thousand.		
17:23:16.2 HOT-2	all right.		
17:23:18.4 CAM	[sound similar to double single chime]		
17:23:19.8 HOT-2	ten thousands are complete.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:23:21.5 HOT-1	thanks.		
17:23:29.7 PA-3	ladies and gentlemen in order to prepare the cabin for landing please ensure that all hand carried items are stowed completely beneath the seat in front of you...your seatbacks and tray tables must be in their upright and locked position...armrests in the down position and your seatbelts securely fastened...thank you.		
17:24:11.2 HOT-1	[sound similar to pilot whistling]		
17:24:19.3 HOT-1	does anybody ever *...does this...this turbulence mode do anything?		
17:24:22.6 HOT-2	it eases the...it dampens the...uh autopilot's response a little bit so it smooths things out.		
17:24:29.0 HOT-1	have you ever seen it work?		
17:24:30.8 HOT-2	yeah I've seen um...who's put it on...um...who have I flown with lately.		
17:24:36.4 HOT-1	I think it turns on ***.		
17:24:38.7 HOT-2	do what?		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:24:39.4 HOT-1	I think it turns on a light and a button.		
17:24:40.8 HOT-2	I've seen @ [company pilot] turn it on...I've seen uh...uh...@ [company pilot] turned it on.		
17:24:47.4 HOT-1	'kay.		
17:24:48.3 HOT-2	somebody else.		
17:24:51.1 HOT-1	well...okay I'm gonna test it...is that all right?		
17:24:52.6 HOT-2	yeah.		
17:24:53.9 HOT-1	just curious...I'm sure we'll get a bump somewhere.		
17:24:59.9 HOT-2	goin' through that for sure.		
17:25:01.5 HOT-1	[sound similar to yawn]		
17:25:03.7 HOT-2	a little vertical development right there.		
17:25:06.0 HOT-1	yeah.		
17:25:45.9 HOT-1	'kay my engine anti ice is on.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:25:53.4 HOT-1	** now... * deal with it later.		
		17:26:02.3 RDO-2	Dutch Harbor traffic Peninsula thirty two ninety six thirty miles north of the airport and uh descending out of six thousand one hundred R-NAV one three Dutch Harbor.
17:26:43.1 HOT-2	ROFZU.		
17:26:44.6 HOT-1	there's ROFZU still good to twenty three check.		
17:26:47.3 HOT-2	roger.		
17:26:49.9 HOT-1	[sound of breathing]		
17:26:59.4 CAM	[sound similar to PA chime]		
17:27:03.4 INT-2	yes ma'am...hello...yes.		
17:27:15.2 INT-3	cabin secure.		
17:27:16.2 INT-2	copy thanks how's the temperature?		
17:27:18.1 HOT-1	eh...doesn't matter.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:27:19.2 HOT-2	whatever.		
17:27:21.8 HOT-2	cabin secure.		
17:27:22.8 HOT-1	roger thanks...so before landing checks all we got to go on that right? already did everything else?		
17:27:30.1 HOT-2	uh...yeah...flight attendant...we just need the flaps and the gear.		
17:27:30.6 HOT-1	*		
17:27:33.2 HOT-1	all right.		
17:27:37.7 HOT-2	cabin's already been notified.		
17:27:39.2 HOT-1	check.		
17:28:08.7 HOT-1	[sound similar to pilot humming]		
17:28:46.0 HOT-1	there's a shower over EWSER just to the left of it so...two bumps here.		
17:28:53.5 HOT-2	rog'.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:28:56.2 HOT-1	unless they're bouncing off the water which I don't think is...		
17:29:00.0 HOT-2	not at that tilt.		
17:29:01.9 HOT-1	I hope not...eh I could be...no maybe not uh...		
17:29:14.2 CAM	[sound similar to altitude alert]		
17:29:15.8 HOT-2	thirty three for twenty three.		
17:29:17.8 HOT-1	thirty three for twenty three. thousand to go checks.		
17:29:19.6 HOT-2	rog'.		
17:29:23.3 HOT-2	we'll be...setting sixteen here in a minute.		
17:29:26.5 HOT-1	okay.		
17:29:44.8 HOT-2	all right...sixteen.		
17:29:46.8 HOT-1	and...sixteen sure...checks.		
17:29:51.1 HOT-2	sixteen set.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:30:00.6 HOT-1	there's that shower I was tellin' you about.		
17:30:02.1 HOT-2	yep.		
17:30:05.7 HOT-1	how's that look?		
17:30:06.7 HOT-2	clean.		
17:30:07.6 HOT-1	good.		
17:30:12.3 HOT-2	it's above freezing.		
17:30:14.0 HOT-1	yeah...it's good...eh.		
17:30:21.3 HOT-2	here we go.		
17:30:22.0 HOT-1	**		
17:30:26.2 HOT-1	the island over here off to the left.		
17:30:27.9 HOT-2	yep...I can see...can almost see through that.		
17:30:32.6 HOT-1	got Split Top...so if we have to go the other way...		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:30:38.7 HOT-2	I can...just barely make out...what is that...Point Eider?		
17:30:44.3 HOT-1	Eider Point.		
17:30:45.1 HOT-2	yeah...I don't think...I don't think I can see it yet.		
17:30:47.0 HOT-1	right...twelve o'clock.		
17:30:47.8 HOT-2	actually it's right there.		
17:30:48.0 HOT-1	you'd better be lookin' at it...haha that's it...you are lookin' at it.		
17:30:55.2 HOT-2	uh...sixteen hundred.		
17:30:56.9 HOT-1	sixteen hundred. leveling.		
17:31:01.1 HOT-2	what are we about...not quite ten to the north?		
17:31:06.2 HOT-1	and flaps...just about...hold on...and flaps fifteen.		
17:31:13.0 HOT-2	all right speed check. flaps fifteen.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:31:27.9 HOT-1	Eider Point...got the end of Hog Island there.		
17:31:31.9 HOT-2	I got em I wouldn't...I'm not calling it yet haha.		
		17:31:36.5 RDO-2	Dutch Harbor traffic Peninsula thirty two ninety six one thousand six hundred ten miles to the north R-NAV one three Dutch Harbor.
17:31:43.7 HOT-1	just (dim).		
17:31:44.4 HOT-2	what?		
17:31:44.8 HOT-1	a little fuzzy right there.		
17:31:45.9 HOT-2	yep.		
17:31:47.8 HOT-1	well who's on this side.		
17:31:50.8 HOT-1	'kay uh gear down.		
17:31:53.2 HOT-2	gear down.		
17:31:58.1 HOT-1	and our next altitude is...		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:31:59.9 HOT-2	five hundred.		
17:32:03.8 HOT-2	* come on...five hundred set.		
17:32:06.4 HOT-1	thanks.		
17:32:08.7 HOT-1	flaps twenty final checks...before landing checklist...sorry.		
17:32:14.2 HOT-2	all right flaps twenty...before landing checklist.		
17:32:17.9 HOT-2	flight attendant is secure.		
17:32:19.0 CAM	[sound similar to double single chime]		
17:32:20.5 HOT-2	flaps set twenty. indicating twenty. gear.		
17:32:23.9 HOT-1	down three green.		
17:32:24.8 HOT-2	down three green. before landing checklist complete.		
17:32:27.3 HOT-1	then we got...oh there's Hog.		
17:32:28.6 CAM	[sound similar to altitude alert]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:32:29.8 HOT-1	***.		
17:32:30.8 HOT-2	all right...fifteen for five.		
17:32:32.4 HOT-1	all right...wind check from her real quick if you don't mind.		
17:32:35.3 HOT-2	all right.		
		17:32:37.7 RDO-2	Dutch Weather thirty two ninety six wind check.
		17:32:43.5 DWX	actually right now um...two seven zero at ten.
		17:32:49.6 RDO-2	copy thanks.
17:32:50.5 HOT-2	two seven zero at ten.		
17:32:51.7 HOT-1	whad'ya think? straight? left?		
17:32:54.1 HOT-2	mmm.		
17:32:55.0 HOT-1	how bout we give it a shot?		
17:32:57.1 HOT-2	two seven's gonna be...		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:32:59.6 HOT-1	autopilot's off.		
17:33:00.6 CAM	[sound similar to cavalry charge, autopilot off]		
17:33:01.4 HOT-2	rog'.		
17:33:01.5 EGPWS	one thousand. [electronic voice]		
17:33:02.2 HOT-2	uhh...whatever you feel comfortable with.		
17:33:05.0 HOT-1	eh...we'll go straight.		
17:33:05.7 HOT-2	all right.		
17:33:06.2 HOT-1	screw it.		
17:33:08.2 HOT-1	ah...bump...get a little bit of a bump here too.		
17:33:08.5 CAM	[sound of button click]		
17:33:12.1 HOT-2	yeah.		
17:33:20.4 HOT-1	yeah there ya go...mhm.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:33:27.9 HOT-2	yeah...it's gonna be ugly in here isn't it?		
17:33:30.2 HOT-1	little bit.		
17:33:35.1 HOT-2	all right...we are at OWGIM.		
17:33:37.4 HOT-1	eh...OWGIM...Hog Island...		
17:33:39.8 HOT-2	five hundred above.		
17:33:40.9 HOT-1	runway end in sight.		
17:33:42.1 HOT-2	roger.		
17:33:56.1 HOT-1	[sound similar to pilot humming]		
17:34:02.3 HOT-2	I'll call mo...call mobile one here in a minute.		
17:34:04.5 HOT-1	m'kay.		
17:34:06.4 HOT-1	there's seven hundred.		
17:34:20.1 HOT-1	all right...there's six...holdin' there.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:34:24.1 HOT-2	plus twenty.		
17:34:25.6 HOT-1	roger plus twenty.		
17:34:26.9 HOT-2	do you want your wipers?		
17:34:28.0 HOT-1	nah...we're good.		
17:34:28.7 HOT-2	rog'.		
		17:34:30.6 RDO-2	Mobile one clear the deck close the gate.
		17:34:34.7 MOB1	copy.
		17:34:43.0 DWX	and em...visibility over by Eider has dropped quite a bit um I would say we're at four miles over there right now...ten miles everywhere else.
		17:34:47.8 ?	[nine sounds similar to clicking mic key]
17:34:50.4 HOT-1	that'd be about right.		
17:34:52.1 HOT-?	[sound similar to sneeze]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
		17:34:52.9 RDO-2	sounds about right we have the er...runway in sight.
17:34:55.9 HOT-1	all right...if it gets too sheer-y just say go around we'll go out the back door.		
17:34:58.4 HOT-2	rog'.		
17:34:59.2 EGPWS	five hundred. [electronic voice]		
17:35:01.0 HOT-1	all right.		
17:35:02.9 HOT-1	give me speed and altitude callouts.		
		17:35:03.0 MOB1	all right thirty two ninety six lights on gate closed deck is cleared.
17:35:04.3 HOT-2	I will.		
17:35:06.3 HOT-2	ready to copy ***.		
17:35:07.6 EGPWS	four hundred. [electronic voice]		
17:35:08.4 HOT-1	everything you can think of ***.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:35:09.3 HOT-2	roger you are plus fifteen.		
17:35:11.9 HOT-1	high R-P-M.		
17:35:12.2 HOT-2	down eight.		
17:35:13.5 HOT-1	bleeds comin' off.		
17:35:18.9 EGPWS	three hundred. [electronic voice]		
17:35:19.9 HOT-2	plus fifteen down three.		
17:35:21.5 HOT-1	all right.		
17:35:23.5 CAM	[sound similar to altitude alert]		
17:35:24.8 HOT-1	#.		
17:35:26.8 HOT-1	whad'ya think?		
17:35:27.2 HOT-2	go around.		
17:35:27.9 EGPWS	two hundred. [electronic voice]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:35:27.9 HOT-1	goin' around.	17:35:28.8 DWX	now three zero zero at eight.
17:35:28.9 HOT-1	max power.		
17:35:30.4 HOT-1	go around power.	17:35:32.2 RDO-2	Dutch Harbor traffic Peninsula —
17:35:33.0 HOT-1	positive rate...flaps...positive rate...gear up...flaps seven.		
17:35:35.7 HOT-2	flaps seven. positive rate. gear up.		
17:35:39.5 HOT-2	we can set back up for it.		
17:35:40.6 HOT-1	yeah...and just tell her we're comin' around for a visual.	17:35:44.1 RDO-2	Dutch Harbor traffic Peninsula thirty two ninety six goin' around we're gonna come back around for a visual.
17:35:46.8 HOT-1	climb power.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:35:48.7 HOT-2	climb power set...ah.		
17:35:52.6 HOT-2	all right flaps up.		
17:35:54.0 HOT-1	and flaps up.		
17:36:04.9 HOT-1	and reduce the power for me.		
17:36:05.5 CAM	[sound similar to altitude alert]		
17:36:07.4 HOT-2	whad'ya want it at?		
17:36:08.8 HOT-1	uh...just bring it back to about fifty.		
17:36:12.6 HOT-1	and get me on a thousand...I think we'll be —		
17:36:16.1 HOT-2	on the altitude?		
17:36:16.9 HOT-1	yeah.		
17:36:17.8 HOT-2	thousand set.		
17:36:18.6 HOT-1	yeah...we're gonna go out here and do a one eighty and come back in.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:36:20.4 HOT-2	rog'...all right you're at a thousand feet.		
17:36:23.7 HOT-1	'kay.		
17:36:23.9 HOT-2	fifty.		
		17:36:24.8 ?	[three sounds similar to clicking mic key]
17:36:24.9 HOT-1	altitude.		
17:36:27.0 HOT-2	alts.		
17:36:30.1 HOT-1	heading.		
17:36:30.7 HOT-2	heading.		
17:36:31.1 HOT-1	keep punching my bug.		
17:36:32.4 HOT-2	yep.		
17:36:32.9 HOT-?	[sound of sigh]		
17:36:38.5 HOT-2	set you up...we'll fly a heading of three four zero for now.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:36:41.3 HOT-1	yeah.		
17:36:41.4 CAM	[sound similar to altitude alert]		
17:36:43.3 HOT-2	twelve hundred...you're two hundred above.		
17:36:44.9 HOT-1	'kay.		
17:36:48.4 HOT-1	oh *.		
17:36:49.4 HOT-1	slow me up...back off on power.		
		17:36:51.2 N546LM	Peninsula thirty two ninety six this is King Air five four six lima mike are you on the ground yet?
17:36:56.1 HOT-1	nope.		
		17:36:56.9 RDO-2	negative we're circling around to come back in for a visual.
17:37:00.7 HOT-1	yep.		
		17:37:01.4 N546LM	uh...okay...he's gonna land on three one? we're uh we're we're held up at eleven we're wondering what altitude you're at.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
		17:37:04.2 DWX	we have thirty now two nine zero at um sixteen gusting to thirty.
		17:37:08.6 RDO-2	we're at twelve hundred comin' back around for uh one...the visual one three.
		17:37:13.3 N546LM	okay you're at twelve hundred thanks.
17:37:14.9 HOT-1	three one. three one.		
17:37:16.4 HOT-2	three one?		
17:37:16.9 HOT-1	back door?		
17:37:17.8 HOT-2	I thought we were doin' one three.		
17:37:18.8 HOT-1	oh okay...sure...we'll try again.		
17:37:22.1 HOT-1	okay.		
17:37:22.5 HOT-2	alright.		
17:37:23.2 HOT-1	gear down.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:37:24.7 HOT-2	gear down.		
17:37:25.0 EGPWS	one thousand. [electronic voice]		
17:37:26.5 HOT-1	flaps fifteen.		
17:37:27.8 HOT-2	speed checks...flaps fifteen.		
17:37:34.7 HOT-1	and put five hundred in again.		
17:37:36.0 HOT-2	roger.		
17:37:38.9 HOT-2	five hundred's in.		
17:37:40.9 HOT-2	you okay with this?		
17:37:42.1 HOT-1	eh...I was thinking about going the other way (might be better) * shear.		
		17:37:43.1 N546LM	and Dutch Weather King Air six lima mike.
17:37:46.9 HOT-2	we just got (twenty).		
		17:37:47.5 DWX	go ahead lima mike.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
		17:37:49.0 N546LM	uh yeah given what I'm hearing you say does it look okay for three one?
17:37:49.9 HOT-2	twenty.		
17:37:53.7 HOT-2	do you want the before again?		
17:37:54.7 HOT-1	yeah.		
		17:37:55.0 DWX	there's showers just moving through um right at the moment it is perfect for three one but I'm I'm thinking it might switch back to where it was before this...once this shower moves through...I'll let you know as soon as PenAir gets in here...if it's changed.
17:37:55.3 HOT-2	all right flight attendant secure. flaps set twenty. indicated twenty. gear.		
17:38:03.0 HOT-2	gear.		
17:38:07.6 HOT-2	@ [captain]...gear.		
17:38:07.7 HOT-1	(down/yeah) three green.		
		17:38:08.8 N546LM	okay thanks.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:38:08.8 HOT-2	down three green.		
17:38:09.8 HOT-2	before landing checklist complete.		
17:38:10.7 HOT-1	aight.		
17:38:11.5 HOT-2	all right.		
17:38:12.2 HOT-1	all right.		
17:38:14.6 HOT-1	that's good.		
17:38:15.6 HOT-2	hahahaha.		
17:38:21.3 HOT-1	(set turn/trim)...# son of a #.		
17:38:25.1 HOT-1	okay...get a wind check from her again.		
17:38:26.9 HOT-2	rog'.		
		17:38:32.6 RDO-2	Dutch Weather thirty two ninety six another wind check.
		17:38:36.4 DWX	right now...midfield winds at three zero zero at twenty four.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:38:40.1 HOT-2	oh God.		
17:38:40.8 HOT-1	ah #.		
		17:38:43.3 RDO-2	copy that.
17:38:44.8 HOT-2	#...do you wanna...back out...do it again?		
17:38:47.8 HOT-1	uh...		
		17:38:48.6 DWX	yeah it picked up and moved pretty quickly.
17:38:50.0 HOT-2	I think —		
17:38:51.0 HOT-1	keep talking to weather.		
17:38:55.1 HOT-2	aright...we'll try it again.		
17:38:56.7 HOT-1	aright...last try.		
17:38:57.8 HOT-2	rog'.		
		17:38:59.8 RDO-2	Mobile one...clear the deck close the gate.

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
		17:39:03.3 MOB1	copy.
17:39:05.6 HOT-2	you got it.		
17:39:06.0 EGPWS	five hundred. [electronic voice]		
		17:39:08.2 ?	[seven sounds similar to clicking mic key]
17:39:08.6 HOT-1	give me speed —		
17:39:09.1 HOT-2	aright you are...yes rog'...you are uh plus fifteen.		
17:39:13.6 HOT-2	down seven.		
17:39:14.7 HOT-2	plus ten...plus fifteen down seven.		
17:39:16.9 EGPWS	four hundred. [electronic voice]		
		17:39:19.5 MOB1	all right thirty two ninety six lights on gate is closed deck is cleared.
17:39:21.1 HOT-1	light shear. it might be easier (if you) apply the power just up and down for me to maintain speed.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:39:22.8 HOT-2	okay.		
17:39:23.9 HOT-2	rog'.		
17:39:25.5 HOT-1	I need both (hands) ** so...		
17:39:25.9 HOT-2	I got this.		
17:39:27.5 HOT-2	all right...I'm gonna keep you about plus ten plus fifteen here plus fifteen.		
17:39:28.4 HOT-1	*		
17:39:28.9 EGPWS	three hundred. [electronic voice]		
17:39:31.3 HOT-1	rog'.		
17:39:31.6 HOT-2	down six.		
17:39:32.6 HOT-1	okay.		
17:39:33.1 CAM	[sound similar to altitude alert]		
17:39:34.7 HOT-2	we're plus ten down six.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:39:39.0 EGPWS	two hundred. [electronic voice]		
17:39:41.3 HOT-2	plus ten.		
17:39:43.1 HOT-2	you got it.		
17:39:43.2 HOT-1	* down.		
17:39:43.6 HOT-1	got it.		
17:39:44.6 EGPWS	sink rate. [electronic voice]		
17:39:45.4 HOT-1	yeah I know.		
17:39:46.0 EGPWS	sink rate. [electronic voice]		
17:39:47.5 EGPWS	fifty. [electronic voice]		
17:39:48.0 HOT-2	you're plus five.		
17:39:48.8 EGPWS	forty. [electronic voice]		
17:39:49.0 HOT-1	altitude.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:39:49.5 EGPWS	twenty. [electronic voice]		
17:39:49.8 HOT-2	ref.		
17:39:50.7 EGPWS	ten. [electronic voice]		
17:39:54.0 CAM	[sound similar to touchdown]		
17:39:54.0 HOT-2	down.		
17:39:54.9 HOT-1	okay you got the yoke.		
17:39:54.9 CAM	[sound similar to engine reverse]		
17:39:55.3 HOT-2	I got it.		
17:39:56.8 HOT-2	[sound of (respiration)]		
		17:39:58.2 ?	[three sounds similar to clicking mic key]
17:39:59.3 HOT-2	(yeah we're) down there.		
17:40:00.6 HOT-2	eighty knots.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:40:01.5 CAM	[sound similar to Master Caution]		
17:40:02.6 HOT-1	*		
17:40:04.2 HOT-2	brakes.		
17:40:04.7 HOT-1	I got em all the way.		
17:40:06.3 CAM	[sound similar to Master Caution]		
17:40:07.5 PA-3	on behalf of PenAir and Alaska Airlines we'd like to welcome you to...Dutch Harbor.		
17:40:08.4 HOT-1	hang on.		
17:40:08.5 CAM	[sound of two thumps]		
17:40:11.4 HOT-1	I'm sliding.		
17:40:11.5 CAM	[sound similar to Master Caution]		
17:40:13.4 HOT-1	#.		
17:40:13.9 HOT-2	# # # # #.		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:40:15.3 CAM	[sound similar to exhale]		
17:40:16.1 HOT-2	# # #.		
17:40:16.5 CAM	[sound similar to Master Caution]		
17:40:17.8 HOT-2	# # #.		
17:40:19.1 CAM	[sound of multiple low frequency thumps and thuds]		
17:40:19.8 HOT	[sounds of rattling]		
17:40:20.0 HOT	[sound similar to PA chime]		
17:40:20.6 CAPTAIN SIDE MIC AND CAM STOP RECORDING			
17:40:21.8 HOT	[sound similar to Master Caution]		
17:40:21.9 HOT	[sound similar to rapid ticking/brushing]		
17:40:23.4 HOT-2	# # #.		
17:40:24.4 HOT	[sound similar to Config Warning]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:40:24.7 HOT-?	[sound of groan/exhale/unintelligible speech]		
17:40:25.5 HOT	[sound similar to three FA call chimes]		
17:40:26.7 HOT	[sound similar to Master Warning]		
17:40:27.8 HOT-2	# # #.		
17:40:31.5 HOT-1	(evacuate.)		
17:40:31.8 HOT	[sound similar to Master Warning]		
17:40:36.8 HOT-2	#.		
17:40:36.9 HOT	[sound similar to Master Warning]		
17:40:37.7 HOT	[sound similar to Engine Fire Bell]		
17:40:39.9 PA-1	evacuate right hand side evacuate right hand side...(all people) evacuate right hand side get out get away.		
17:40:41.9 HOT	[sound similar to Master Warning]		

Time and Source	Intra-Aircraft Communication	Time and Source	Over-the-Air Communication
17:40:46.9 HOT	[sound similar to Master Warning]		
17:40:51.9 HOT	[sound similar to Master Warning]		
		17:40:52.3 RDO-1	Dutch Harbor PenAir thirty two ninety six we're off the runway uh...(just * get out) ** (emergency) equipment.
17:40:56.9 HOT	[sound similar to Master Warning]		
17:41:00.4 HOT	[sound similar to Config Warning]		
17:41:25.2 HOT	[sound of three switches actuating]		
17:41:27.0 HOT	[sound similar to DCU Startup/Restart]		
17:41:27.9 HOT	[sound similar to mic key]		
		17:41:28.6 RDO-1	and Dutch Harbor Radio we need uh - crash fire rescue...uh...crash fire rescue.
17:41:29.4 HOT	[sound similar to Master Warning]		
17:41:30.9 HOT	[sound similar to Config Warning]		

Time and
Source

Intra-Aircraft Communication

Time and
Source

Over-the-Air Communication

17:41:34.4

HOT

[sound similar to Master Warning]

17:41:36.9

HOT

[sound of switch actuating]

1741:37.2

END OF TRANSCRIPT

END OF RECORDING