

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



GROUP CHAIRMAN'S FACTUAL REPORT OF INVESTIGATION

DCA06MA022

WARNING

The reader of this report is cautioned that the transcription 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
Washington, D.C. 20594

June 13, 2006

Cockpit Voice Recorder - 12

**Group Chairman's Factual Report
By Erin Gormley**

A. EVENT

Location: Philadelphia, PA
Date: February 7, 2006, 23:59 EST*
Aircraft: DC-8-71, N748UP
Operator: UPS Airlines, Flight 1307
NTSB Number: DCA06MA022

B. GROUP

Chairman: Erin Gormley
Aerospace Engineer
National Transportation Safety Board

Member: Michael Bruington
Assistant Chief Pilot
UPS Airlines

Member: Tony James
Air Safety Investigator
Federal Aviation Administration

Member: William Johnson
Senior Safety Pilot
Boeing Company

Member: Michael Moody
Deputy Director, Airline Safety
Independent Pilots Association

C. SUMMARY

On February 7, 2006, a DC-8-71F, registration N748UP operated by UPS Airlines, as flight 1307, landed at Philadelphia International Airport (PHL), Pennsylvania, after the crew reported a cargo smoke indication. A tape cockpit voice recorder (CVR) was sent

* All times are expressed in Eastern Standard Time (EST), unless otherwise noted.

to the National Transportation Safety Board's Audio Laboratory for readout. The CVR group meeting convened on February 14, 2006, and a transcript was prepared for the 31 minute, 17-second tape recording.

D. DETAILS OF INVESTIGATION

The NTSB Vehicle Recorder Division's Audio Laboratory received the following CVR on February 8, 2006:

Recorder Manufacturer/Model: **Fairchild Model A-100**
Recorder Serial Number: **928**

Recorder Damage

Upon arrival at the audio laboratory, it was evident that the exterior of the CVR had sustained heat damage. The outer case was removed and the interior crash-protected case did not appear to have any heat or structural damage (see Figures 1 and 2). The magnetic tape was retrieved from within the crash-protected case and was successfully downloaded.



Figure 1: CVR Exterior



Figure 2: Tape recording medium

Recorder Description

Per Federal regulation, CVRs record a minimum of the last 30 minutes 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 30 minutes of CVR operation. This model CVR, the Fairchild Model A-100, records 30 minutes of analog audio on a continuous loop tape in a four-channel format: one channel for each flight crew and one channel for the cockpit area microphone (CAM).

Audio Recording Description

The 31-minute and 17-second recording consisted of four channels of useable audio information. Each channel's audio quality[†] is indicated in the table.

| Channel Number | Content/Source | Quality |
|----------------|----------------|---------|
| 1 | Captain | Fair |
| 2 | CAM | Good |
| 3 | First Officer | Fair |
| 4 | Second Officer | Good |

Timing and Correlation

Timing on the transcript was established by correlating an air traffic control (ATC) recording transmission time to the corresponding CVR event. Specifically, the CVR time of one of the final radio transmissions from N748UP was linked to the corresponding ATC local time, as obtained from a partial transcript prepared by the FAA's Philadelphia ATC Tower. All CVR events were offset to reflect the local eastern standard time of the accident.

Description of Audio Events

The recording began at 2328:28 and the transcript began one second later with the aircraft, in cruise, being transferred to Washington Center. At 2334:39, the First Officer makes a comment about a wood burning smell. The three crewmembers discuss the smell over the next 10 minutes. At 2344:14, the Second Officer starts the approach checklist. About 3 minutes later, the Captain asks the Second Officer if it still smells and the crew again discuss the odor with the First Officer commenting it "smells like cardboard burning". At 2347:29, the cockpit door is operated and the Second Officer notes that the smell "is definitely stronger in the back", but there is no apparent smoke or haze.

At 2354:42, the Second Officer comments "we got cargo smoke" and the First Officer (pilot flying) indicates shortly thereafter, he is turning into the airport. When the Captain calls tower at 2355:19, he asks for the equipment due to a cargo smoke indicator in the cockpit. At 2355:45, the First Officer asks for gear down and has his oxygen mask on. At 2355:57, the Second Officer remarks, with his mask on, that they "have a lower aft cargo fire section C". The Second Officer indicates, at 2357:19, that there is smoke in the back. The aircraft touches down about 2359, the Second Officer says 13 seconds later that there is "smoke in the cockpit". At 2359:38, the aircraft calls tower to say they are evacuating the aircraft. The recording ended shortly thereafter at 2359:45.

[†] See attached CVR Quality Rating Scale.

As part of the Safety Board's accident investigation process, the flight crew was invited to review the CVR transcript and suggest corrections or additions. They have not responded to the invitation.

Erin Gormley
Aerospace Engineer
Vehicle Recorder Division

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 Fairchild Model A-100 tape cockpit voice recorder, serial number 928, installed on an UPS DC-8-71 (N748UP), which landed at Philadelphia International Airport (PHL), Pennsylvania, after the crew reported a cargo smoke indication.

LEGEND

| | |
|-------------|--|
| CAM | Cockpit area microphone voice or sound source |
| RDO | Radio transmissions from N748UP |
| CTR | Radio transmission from ATC center controller |
| APR | Radio transmission from the Philadelphia approach controller |
| TWR | Radio transmission from the Philadelphia Local East airport tower controller |
| O2 | Transmission using oxygen mask |
| RO2 | Radio transmission using oxygen mask |
| A10 | Airport 10, Philadelphia Airport Duty Officer |
| ARFF | Airport Rescue and Firefighting |
| -1 | Voice identified as the Captain |
| -2 | Voice identified as the First Officer |
| -3 | Voice identified as the Second Officer |
| -? | Voice unidentified |
| -A | Radio transmission from Atlanta center |
| -B | Radio transmission from first controller at Washington center |
| -C | Radio transmission from second controller at Washington center |
| * | Unintelligible word |
| @ | Non-pertinent word |
| [] | Editorial insertion |

Note 1: Times are expressed in eastern standard time (EST).

Note 2: Generally, only radio transmissions to and from the accident 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.

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2328:28
START of RECORDING

START of TRANSCRIPT

2328:29
CAM-1 we went down to *.

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

2328:30
CTR-A UPS thirteen oh seven contact Washington center on one two six point eight seven.

2328:35
RDO-1 two six seven UPS thirteen oh seven good day.

2328:38
CTR-A good day.

2328:59
RDO-1 and Washington good day its ups thirteen zero seven with you level three three zero.

2329:03
CTR-B UPS thirteen zero seven Washington center roger cleared direct Woodstown direct Philly.

2329:07
RDO-1 direct Woodstown direct Philly UPS thirteen oh seven.

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2329:14
CAM-?

* O-O-D.

2330:04
CAM-2

well that was nice of 'em.

2330:06
CAM-1

yes.

2330:44
CAM-2

two four zero.

2330:45
CAM-1

cleared.

2332:33
CAM

[non-pertinent conversation between three crew members regarding Jet Blue stocks and company until 2334:39.]

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

2330:30
CTR-B

UPS thirteen oh seven descend at pilot's discretion to flight level two four zero.

2330:35
RDO-1

discretion two four zero UPS thirteen oh seven.

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2334:39
CAM-2 smells like wood burning smell that?

2334:42
CAM-3 ** yeah.

2334:43
CAM-3 I smelled it for a couple of seconds.

2334:45
CAM-? ***.

2335:03
CAM [sound similar to increase in air noise]

2335:40
CAM-2 its pretty strong now.

2335:43
CAM-1 **.

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

2333:44
RDO-1 eh Washington eh UPS thirteen oh seven is out of three
three zero for two four zero.

2333:49
CTR-B UPS thirteen oh seven roger thank you.

INTRA-COCKPIT COMMUNICATION

**TIME and
SOURCE**

CONTENT

2335:49
CAM [sound similar to cockpit door or seat operating]

2335:54
CAM-3 its more in the back.

2336:01
CAM-2 * temp.

2336:04
CAM-1 no eh yeah it was a little in the yellow but uh.

2336:08
CAM-2 what were you looking at?

2336:12
CAM-1 I was looking at it at one of the high.

2336:13
CAM-2 manifold temp?

2336:15
CAM-1 high stage was on.

2336:20
CAM-1 on one side.

AIR-GROUND COMMUNICATION

**TIME and
SOURCE**

CONTENT

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2336:39
CAM-1 you might try turning like a pack off uh @ see if that makes any difference.

2338:58
CAM [sound of tone similar to altitude alert]

2339:00
CAM-2 twenty five twenty four.

2339:01
CAM-1 twenty five twenty four.

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

2336:23
CTR-B UPS thirteen oh seven contact Washington center one two five point four five.

2336:28
RDO-1 two five four five UPS thirteen oh seven thank you.

2336:31
CTR-B good day.

2337:18
RDO-1 uh center good day its uh UPS thirteen oh seven with you passing two seven five for two four zero.

2337:23
CTR-C UPS thirteen oh seven Washington center roger.

INTRA-COCKPIT COMMUNICATION

**TIME and
SOURCE**

CONTENT

2339:16
CAM-?

why would it *.

2339:17
CAM-2

smell like wood.

2339:19
CAM-3

yeah it does smell like wood.

2339:22
CAM-3

it doesn't smell electrical smells *.

2339:25
CAM-1

uh.

2339:26
CAM-2

that's just duct that's just duct work but there's no wood.

2339:30
CAM-1

yeah.

2339:30
CAM-2

there's no brace around any of that stuff is there?

2339:34
CAM-1

no.

AIR-GROUND COMMUNICATION

**TIME and
SOURCE**

CONTENT

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2339:36
CAM-2

like a wood burning kit.

2340:30
CAM-1

might need to increase that flow on the left side @.

2343:18
CAM-1

might try those bleeds uh switches too @.

2343:22
CAM-3

*** fume evacuation.

2343:26
CAM-1

yeah.

2343:27
CAM-3

said put the pack to max flow.

2343:28
CAM-1

okay.

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

2341:04
CTR-C

UPS thirteen oh seven cross ten miles south of Woodstown at and maintain one one thousand Philly altimeter three zero zero five.

2341:11
RDO-1

ten south of Woodstown at one one thousand UPS thirteen oh seven.

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2343:29
CAM-3

set pack to max flow.

2343:32
CAM-3

recirc fan off? recirc fan off.

2343:34
CAM-1

it may be coming from one of those bleeds you know.

2343:46
CAM-2

I got go around set in there.

2343:53
CAM-2

visual backed up with the I-L-S two seven right one oh eight ninety five eleven touchdown zone * * *.

2344:06
CAM-?

***.

2344:09
CAM-2

three zero zero five approach check.

2344:14
CAM-3

approach checklist. pressurization set.

2344:20
CAM-3

reverser shut off switch?

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2344:22
CAM-1 open.

2344:22
CAM-3 P-T-C?

2344:23
CAM-1 override retracted.

2344:25
CAM-3 airspeed bugs?

2344:27
CAM-1 thirty nine set.

2344:29
CAM-3 N one bugs.

2344:31
CAM-? *

2344:38
CAM-2 thirty nine set.

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

2344:34
CTR-C UPS thirteen oh seven contact Philly approach one two four point three five.

2344:39

INTRA-COCKPIT COMMUNICATION

**TIME and
SOURCE**

CONTENT

2344:45
CAM-1 eighty seven one set.

2344:48
CAM-3 okay. approach brief?

2344:49
CAM-2 complete.

2344:50
CAM-3 altimeter?

2344:52
CAM-1 thirty oh five set.

2344:54
CAM-2 thirty oh five set.

2344:55
CAM-3 thirty oh five set approach checklist complete.

AIR-GROUND COMMUNICATION

**TIME and
SOURCE**

CONTENT

RDO-1 two four three five ups thirteen oh seven good day.

2344:42
CTR-C good day.

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2347:02
CAM-1 can you still smell it in the back there @?

2347:06
CAM-3 yeah its uh *** smells like it was more to the back there.

2347:12
CAM-? **. .

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

2344:59
RDO-1 And Philly approach good day its UPS thirteen oh seven heavy with you passing one five five for one one thousand with Charlie.

2345:19
APR UPS thirteen oh seven heavy Philly runway two seven right altimeter three zero zero four.

2345:25
RDO-1 thirty oh four two seven right UPS thirteen oh seven heavy.

2346:29
APR UPS thirteen oh seven heavy fly heading of zero five zero and descend and maintain six thousand.

2346:33
RDO-1 zero five zero down six thousand UPS thirteen oh seven heavy.

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2347:13
CAM-?

**.

2347:14
CAM-1

smell like it more (strong) back there.

2347:18
CAM-2

smells like cardboard burning doesn't it? you didn't see
smoke though something like that?

2347:29
CAM

[sound similar to cockpit door operating]

2347:58
CAM

[sound similar to cockpit door operating]

2347:59
CAM-3

it is definitely stronger in the back.

2348:01
CAM-1

is that right?

2348:02
CAM-3

yeah it is definitely stronger in the back.

2348:04
CAM-1

huh.

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2348:07
CAM-3

well does not appear to be any smoke or haze.

2348:10
CAM-1

what's that?

2348:10
CAM-3

I just shined my light back there I can't see any haze or anything.

2348:14
CAM-1

no *.

2348:21
CAM-1

did you did you try all the bleeds?

2348:23
CAM-3

well I tried the second one off now maybe another one off.

2348:27
CAM-1

okay.

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

2348:27
APR

UPS thirteen oh seven heavy fly heading zero six zero descend and maintain four thousand.

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2348:41
CAM-2

four thousand *.

2352:30
CAM-1

does it seem to get any better with the packs smoke uh checklist?

2352:35
CAM-2

flaps ten please.

2352:38
CAM

[sound of click and beep similar to configuration horn]

2352:41
CAM-3

pack smoke warning.

2352:42
CAM-1

yeah that what I am doing under the pack smoke.

2352:46
CAM-1

** fumes evacuation.

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

2348:31
RDO-1

zero six zero down to four thousand UPS thirteen oh seven heavy.

2348:52
RDO

[sound of beeps similar to IPDP Morse code identifier for I-L-S two seven right approach]

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2352:47
CAM-3

** smoke yeah? no smoke detectors.

2352:52
CAM-1

yeah yeah no smoke detectors going off.

2352:54
CAM-3

**.

2352:57
CAM-?

fumes evacuation because the packs ** the packs **
off **.

2353:05
CAM-?

***.

2353:07
CAM-?

***.

2353:09
CAM-?

***.

2353:19
CAM-2

flaps twenty five.

2353:21
CAM

[sound of three clicks, similar to flap handle movement]

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2353:52
CAM [sound of tone similar to altitude alert]

2353:56
CAM-1 five for four.

2354:20
CAM-2 two thousand one hundred.

2354:42
CAM-3 okay we got cargo smoke.

2354:45
CAM-1 you got cargo smoke?

2354:47
CAM-3 **.

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

2353:27
RDO [sound of beeps similar to IPDP Morse code identifier for I-L-S two seven right approach]

2354:07
APR UPS thirteen oh seven heavy turn left to zero one zero descend and maintain two thousand one hundred.

2354:12
RDO-1 zero one zero down to two point one UPS thirteen oh seven heavy.

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2354:50
CAM-1 let's do that checklist if you got time.

2354:52
CAM-2 all right I am turning into the airport then.

2354:57
CAM [sound of tone similar to altitude alert]

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

2354:59
RDO-1 and ah UPS thirteen oh seven heavy has the field in sight.

2355:01
APR UPS thirteen zero seven heavy cleared for the visual approach runway two seven right contact the tower one eighteen five.

2355:06
RDO-1 eighteen five seeya.

2355:11
RDO-1 tower good day it is UPS thirteen oh seven heavy with you visual for two seven right.

2355:15
TWR thirteen oh seven heavy two seven right wind two six zero at six cleared to land.

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2355:41
CAM [sound similar to autopilot disconnect]

2355:45
O2-2 gear down.

2355:46
CAM-1 gear.

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

2355:19
RDO-1 cleared to land and uh listen we just got a cargo smoke indicator come on can we have the equipment meet us?

2355:27
TWR okay I'll do that for you. cargo smoke indicator. [sound of ARFF alarm in background] uh uh just souls on board amount of fuel sir.

2355:34
RDO-1 uh three souls uh two hours of fuel.

2355:37
TWR two hours of fuel roger that sir uh we are bringing them out now.

2355:40
RDO-1 thanks.

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2355:48
CAM [sound similar to landing gear operation]

2355:48
O2-2 landing checklist.

2355:57
O2-3 okay its showing that we have a lower aft cargo fire section C.

2355:57
CAM [sound similar to altitude alerter]

2355:58
CAM-1 oxygen masks on if you don't have 'em and uh run through that checklist @ by yourself okay?

2356:03
O2-3 okay lower and uh or main cargo fire. oxygen masks on a hundred percent.

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

2356:12
TWR UPS thirteen oh seven heavy is cleared to land runway two seven left the wind is uh two six zero at six.

2356:18
RO2-1 cleared to land two seven left UPS thirteen oh seven.

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2356:22
O2-3

okay I got.

2356:24
O2-3

I got packs one off one on min flow. recirc fan is off. off.
oxygen air diffuser valve open...

2356:48
O2-2

flaps thirty five.

2356:50
O2-3

okay main cargo air shutoff valve is closed I gotta go in
the back and do that.

2356:56
CAM

[sound similar to cockpit door operating]

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

2356:22
TWR

I am sorry last call on ground say again.

2356:35
TWR

and uh when you get a chance I know you are busy thirteen
oh seven heavy can you give me fuel in pounds please?

2356:44
RO2-1

twenty one thousand seven hundred.

2356:46
TWR

thank you.

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2356:57
O2-2

smelling pretty good now.

2356:58
O2-1

yeah.

2357:02
O2-2

flaps full.

2357:04
CAM

[sound similar to cockpit door operating]

2357:05
O2-2

prepare to get that uh prepare to get that uh paperwork.

2357:09
O2-3

yeah were going to have to do an evacuation 'kay. tell them we are going to have to do an evacuation when we get down.

2357:19
O2-3

ok I got that valve shut off back there. there is smoke. radio pack blower switch off.

2357:19
O2-2

I got it **.

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

INTRA-COCKPIT COMMUNICATION

**TIME and
SOURCE**

CONTENT

2357:33
O2-3 cabin differential pressure maintain at point five P-S-I.

2357:39
O2-3 we are almost on the ground.

2357:44
O2-3 land as soon as possible.

2357:47
O2-2 landing checklist when you get a chance.

2357:51
O2-2 cleared to land?

2357:57
O2-3 landing checklist.

2357:59
O2-1 five hundred feet on speed sink is eight.

2357:59
O2-3 flight instruments and radios.

2358:03
CAM glideslope. [GPWS voice]

AIR-GROUND COMMUNICATION

**TIME and
SOURCE**

CONTENT

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2358:04
CAM five hundred. [GPWS voice]

2358:06
O2-3 ignition. gear. anti-skid.

2358:23
CAM glideslope glideslope glideslope. [GPWS voice]

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

2358:08
TWR and thirteen oh seven heavy just confirmed you are lined up for the left side it appears you are lined up for the right.

2358:13
RO2-1 I'm sorry I thought we were cleared for the right uh are we cleared to land on the right?

2358:16
TWR uh you are cleared to land on the right we will just tell fire.

2358:20
RO2-1 okay.

2358:27
TWR uh Foxtrot nine tower just be advised the aircraft is going to landing twenty seven right short final twenty seven right if you are on tower.

INTRA-COCKPIT COMMUNICATION

**TIME and
SOURCE**

CONTENT

2358:40
CAM glideslope. [GPWS voice]

2358:46
O2-3 landing checks complete.

2358:50
CAM one hundred. [GPWS voice]

2358:54
CAM fifty. [GPWS voice]

2358:55
CAM thirty. [GPWS voice]

2358:56
CAM twenty. [GPWS voice]

2358:57
CAM ten. [GPWS voice]

AIR-GROUND COMMUNICATION

**TIME and
SOURCE**

CONTENT

2358:51
A10 Philadelphia tower airport ten.

2358:52
TWR airport ten if you can just let the uh fire departments know we cannot reach them on the frequencies. the aircraft is landing twenty seven right.

INTRA-COCKPIT COMMUNICATION

TIME and SOURCE

CONTENT

2359:00
CAM [sound similar to spoiler handle movement]

2359:02
O2-3 okay we got smoke in the cockpit now.

2359:05
CAM [sound similar to reverser deployment and engine acceleration]

2359:11
O2-1 eighty.

2359:13
O2-3 tell 'em we have smoke in the cockpit we are evacuating.

2359:14
O2-1 seventy.

2359:18
CAM-2 you have the aircraft.

AIR-GROUND COMMUNICATION

TIME and SOURCE

CONTENT

2359:00
TWR he is rolling out flaring as we speak.

2359:01
A10 airport ten copies.

INTRA-COCKPIT COMMUNICATION

**TIME and
SOURCE**

CONTENT

2359:21
CAM [sound similar to window(s) being operated]

2359:25
CAM-2 okay emergency evacuation.

2359:26
CAM-1 evacuation checklist.

2359:29
CAM [sound similar to coughing]

2359:30
CAM-1 parking brake set.

2359:33
CAM-2 fuel shut off levers off.

2359:35
CAM-1 battery switch battery.

AIR-GROUND COMMUNICATION

**TIME and
SOURCE**

CONTENT

2359:27
ARFF Philadelphia tower can we show two seven right closed and allow ARFF vehicles to the runway?

2359:32
TWR ah two zero nine proceed onto runway two seven right.

INTRA-COCKPIT COMMUNICATION

TIME and
SOURCE

CONTENT

2359:40
CAM-? * right to be closed.

2359:41
CAM-2 fire handles full forward.

2359:45
End of transcript

AIR-GROUND COMMUNICATION

TIME and
SOURCE

CONTENT

2359:38
RDO-2 UPS thirteen oh seven evacuating the aircraft.

2359:41
TWR two seven right is closed and the aircrew is evacuating the aircraft.