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

GROUP CHAIRMAN'S FACTUAL REPORT OF INVESTIGATION

DCA08MA076

By
Joseph A. Gregor

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
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December 23, 2008

Cockpit Voice Recorder - 12

Group Chairman's Factual Report
By Joe Gregor

A. EVENT

Location:	San Francisco, CA
Date:	June 28, 2008, Approx. 1015 Pacific Daylight Time (PDT)*
Aircraft:	767, N799AX
Operator:	ABX Air, Flight 1611
NTSB Number:	DCA08MA076

B. GROUP A group was convened on July 8, 2008. The Group was re-convened on October 2, 2008 for the purpose of adding a 3-minute, 9-second section near the beginning of the recording.

Chairman:	Joseph A. Gregor National Transportation Safety Board
Member:	Captain Jim Hobart Manager, Flight Safety Programs ABX Air
Member:	Capt Ken Houghtaling Air Safety Committee Airline Pilots Association
Member:	Christine K. Soucy Air Safety Investigator FAA

* All times are expressed in Pacific Daylight Time (PDT), unless otherwise noted.

C. SUMMARY

On June 28, 2008, a 767, registration N799AX operated by ABX Air, caught fire just aft of the cockpit area while the flight crew were preparing to start the engines in San Francisco, CA. A solid-state cockpit voice recorder (CVR) was sent to the National Transportation Safety Board's Audio Laboratory for readout. The CVR Group meeting convened on July 8, 2008 and a partial transcript was prepared for the 2-hour, 4-minute, 15.2-second digital recording (see attached). On October 2, 2008, the CVR Group reconvened to capture approximately 3 minutes of additional audio related to ground maintenance activities just prior to the accident event.

D. DETAILS OF INVESTIGATION

On July 2, 2008, the NTSB Vehicle Recorder Division's Audio Laboratory received the following CVR:

Recorder Manufacturer/Model: **L-3 Communications FA2100-1020**
Recorder Serial Number: **000204038**

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 or 2 hours of CVR operation, depending on the CVR model. This model CVR, the L-3 Communications FA2100-1020, is a solid-state CVR that records 2 hours of digital cockpit audio. Specifically, it contains a 2-channel recording of the last 2 hours of operation and separately contains a 4-channel recording of the last 30 minutes of operation. The 2-hour portion of the recording is comprised of one channel of audio information from the cockpit area microphone (CAM) and one channel that combines two audio sources: the Captain's audio panel information and the First Officer's audio panel information. The 30-minute portion of the recording contains 4 channels of audio data; one channel for each flight crew and one channel for the CAM audio information.

Recorder Damage

Upon arrival at the audio 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.

Audio Recording Description

For the 2-hour portion of the CVR recording, each channel contained good quality[†] audio information. As shown in the table below, the 30-minute portion of the recording consisted of three channels of useable audio information. Each channel's audio quality[‡] is indicated in the table. Notably, channel number three did not contain any audio information (nor was it required by Federal regulations).

[†] See attached CVR Quality Rating Scale.
[‡] See attached CVR Quality Rating Scale.

Channel Number	Content/Source	Quality
1	Captain (CAPT)	good
2	Ist Officer (FO)	good
3	other	n/a
4	Cockpit Area Microphone (CAM)	good

Timing and Correlation

Timing on the transcript was established by correlating the air traffic control recording transmission time to the corresponding CVR event. Specifically, the CVR time of the final radio transmission from N799AX was linked to the corresponding ATC local time,[§] and all CVR events were offset to reflect the local pacific daylight time of the accident.

Description of Audio Events

The recording began at 20:07:17 and the transcript began at 21:02:25.4. From 20:02:25.4 to 21:19:05, the CVR captured the activity of ground personnel within the cockpit area of the aircraft. From 21:19:05 to 21:44:48, the CVR captured external radio calls and occasional sounds of movement and unintelligible conversation near the cockpit area. From 21:19:05 to 21:44:48, the CVR captured sound of the cockpit crew pre-flighting the aircraft. At 22:10:28 the FO stated that, "…there's something going on in the back." At 22:10:39 the CAM recorded the FO stating that, "we got a fire. got a big fire." At about 22:11:04, the FO contacted San Francisco ground control and reported that the aircraft had a cargo fire. At 22:11:23.5, ground control announced, "okay we're gonna roll the trucks right now." At 22:11:26.3 the CAPT announced, "okay parking brake set APU engine fire pu- override and pull and rotate." The recording ended shortly thereafter at 22:11:37.9

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.

Joe Gregor
Vehicle Recorder Division

[§] Memorandum, Mark J. Sherry, Support Specialist, SFO ATCT

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 L-3 Communications FA2100-1020 solid-state cockpit voice recorder, serial number 000204038, installed on an ABX Air 767 (N799AX), which crashed after caught fire just aft of the cockpit area while the flight crew were preparing to start the engines at the San Francisco International Airport in San Francisco, CA.

LEGEND

CAM	Cockpit area microphone voice or sound source
CLD	Radio transmission from the San Francisco clearance delivery
HOT	Flight crew audio panel voice or sound source
RDO	Radio transmissions from N799AX
GND	Radio transmission from the San Francisco ground controller
-1	Voice identified as the captain (CAPT)
-2	Voice identified as the first officer (FO)
-3	Voice identified as a ground crew person
-4	Voice identified as a ground crew person
-?	Voice unidentified
*****	Unintelligible word
#	Expletive
@	Non-pertinent word
( )	Questionable insertion
[ ]	Editorial insertion

Note 1: Times are expressed in pacific daylight time (PDT).

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		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT

20:07:17.0
Start of Recording

21:02:25.4
Start of Transcript

21:02:25.4
CAM-3 no paperwork (yet)?

21:02:27.5
CAM-4 yeah I got it already.

21:02:29.6
CAM-3 * * * * * downstairs?

21:02:31.6
CAM-4 (yup).

21:02:38.1
CAM-4 (yeah) they got it [sound similar to throat clearing].

21:02:53.8
CAM-3 oh #, look at that.

21:02:57.8
CAM-4 what.

21:02:58.4
CAM-3 look at the oxygen.

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:02:59.8 **CAM-4**	oh on the passengers?		
21:03:01.0 **CAM-3**	yeah.		
21:03:03.6 **CAM-4**	* like (reading) like nine hundred or something.		
21:03:06.3 **CAM-3**	it's eleven something.		
21:03:08.2 **CAM-4**	on ah, I pulled out the MEL on that.		
21:03:11.6 **CAM-3**	pull it out?		
21:03:24.2 **CAM-3**	like eleven ten, I can't believe they didn't # get that this morning.		
21:03:34.9 **CAM-3**	I mean I can pull it and service it you have a key to that, service shed over there?		
21:03:42.8 **CAM-4**	(on the ah).		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:03:56.6 **CAM-4**	where do you get that figure?		
21:04:04.7 **CAM-3**	'cause I know the service check * * it's low it's too (low).		
21:04:07.4 **CAM-4**	well the service check is higher than, the dispatch.		
21:04:12.5 **CAM-3**	yeah but it should have been done if there was a service check.		
21:04:14.7 **CAM-4**	why I I agree but.		
21:04:20.4 **CAM-3**	I don't know you think we should chance it or you think I should just service it?		
21:04:28.0 **CAM-4**	you think they're gonna *?		
21:04:29.4 **CAM-3**	yeah * *.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:04:30.1			
CAM-4	'cause I heard 'em say before that if it's (in) I mean like nine hundred or somethin'. but.		
21:04:37.7			
CAM-4	I'm a crew using oxygen I mean it's.		
21:04:43.5			
CAM-4	post flyin' was operative.		
21:04:47.2			
CAM-4	I mean as low as look at that it can even be much lower if you assume if you assume six crew members at fifty degrees Centigrade nine hundred and thirty nine and that's that's the most that's the highest requirement.		
21:05:03.4			
CAM-3	yeah I just know per the service check it's too low.		
21:05:08.5			
CAM-4	yeah 'cause they're not ga- they want you to get (it) well above that.		
21:05:15.7			
CAM-3	it's up to you if wanna do it.		
21:05:20.9			
CAM-4	[unintelligible vocalizations].		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:05:30.6 **CAM-3**	I'm gonna service it you have a key to that shed though?		
21:05:34.5 **CAM-4**	(I think it's) on the ah.		
21:19:04.2 **CAM-?**	* * (good).		
21:19:20.0 **HOT**	[electronic transient].		
21:20:47.1 **CAM**	[sound similar to electronic warning siren].		
21:20:57.5 **CAM-?**	[unintelligible vocalizations].		
21:44:48.3 **CAM-2**	kid sittin' out there on the tug said that he was under the impression that we make ah we only work three days a week.		
21:44:56.9 **CAM-1**	what?		
21:44:57.8 **CAM-2**	yup.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:45:00.5 **CAM-2**	he he had the salary basically right.		
21:45:06.6 **CAM-1**	hah.		
21:45:06.8 **CAM-2**	yeah he and he said your first year you probably make eighty grand, right?		
21:45:10.4 **CAM-2**	I said no your first year most places you make between twenty six and thirty four.		
21:45:17.5 **CAM-2**	and ah he, couldn't believe that.		
21:45:20.5 **CAM-1**	ah huh.		
21:45:23.7 **CAM-2**	said well believe it.		
21:45:33.9 **CAM-2**	do you have these in align? * * *.		
21:45:35.7 **CAM-1**	no no no I want 'em, there.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:45:36.9 **CAM-2**	oh okay.		
21:45:37.8 **CAM-1**	ahh it's I tried do a quick align and now it's not takin' the ah I guess I have to actu- oh okay I guess I have to put it in here where this is plot eleven here isn't it? * plot eleven or twelve?		
21:45:49.7 **CAM-2**	ah I believe yeah yeah.		
21:45:50.7 **CAM-1**	I think it's eleven.		
21:45:52.1 **CAM-2**	* *.		
21:45:52.4 **CAM-1**	you know if we're off.		
21:45:53.4 **CAM-2**	it is it is eleven.		
21:45:54.6 **CAM-1**	ah okay.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:45:57.3 **CAM**	glide slope pull up wind shear wind shear wind shear terrain ahead pull up [electronic voice].		
21:46:11.4 **CAM-1**	there we go.		
21:46:22.4 **CAM**	[sound similar to stick shaker].		
21:46:42.5 **CAM-2**	you want water @?		
21:46:44.0 **CAM-1**	yeah put it on thanks.		
21:47:01.5 **CAM-2**	* * * flight kit.		
21:47:03.8 **CAM-1**	thank you.		
21:47:04.6 **CAM-2**	* * * on.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:47:13.4 **CAM-1**	well you know these guys are jealous from their perspective they're bustin' their #. you know sweatin' loadin' this airplane and they see us sittin' up here in our shirt and tie.		
21:47:21.5 **CAM-2**	sure.		
21:47:22.1 **CAM-1**	readin' the paper and drinkin coffee.		
21:47:23.9 **CAM-2**	yeah.		
21:47:28.0 **CAM-2**	heck yeah.		
21:47:32.8 **CAM-1**	laying around all day in luxurious hotels.		
21:47:35.1 **CAM-2**	oh yeah.		
21:47:35.9 **CAM-1**	yeah and I would say and your point is?		
21:47:37.6 **CAM-2**	ah hah hah that's right.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:47:40.0 **CAM-1**	got that part right.		
21:47:43.4 **CAM-1**	(I know) * * * *.		
21:47:46.1 **CAM-2**	ah * it depends on the hotel.		
21:47:47.6 **CAM-1**	ah well this one's not bad.		
21:47:51.5 **CAM-1**	I've seen worse.		
21:48:01.0 **CAM**	San Francisco International Airport information Quebec zero three five six Zulu wind two niner zero at one zero visibility one zero few clouds at one thousand ceiling one five thousand broken temperature one four dew point one one altimeter three zero zero zero simultaneous charted visual flight procedures in use arrivals expect runways two eight left two eight right departing runways one left one right read back of all runway holding instructions is required advise on initial contact you have information Quebec.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
21:49:01.7 **CAM**	[unintelligible voices].		
21:50:47.2 **HOT**	[sound similar to fire warning test bell].		
21:51:45.1 **CAM**	TCAS systems test okay [electronic voice].		
		21:53:10.3 **RDO-1**	clearance ABEX ah sixteen eleven heavy to Wilmington Ohio with Quebec.
		21:53:18.2 **CLD**	ABEX sixteen eleven heavy San Francisco clearance good evening cleared to the Wilmington airport the Quiet Two departure ah Linden transition direct PEONS intersection direct INSLO intersection as filed maintain one five thousand expect flight level three seven zero ten minutes after departure, departure frequency will be one three five point one squawk three two five seven.
		21:53:47.3 **RDO-1**	okay ABEX sixteen eleven heavy cleared to Wilmington Quiet Two Linden PEONS INSLO as filed maintain one five thousand expect three seven oh in ten minutes one three five decimal one squawk three two five seven.

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
		21:53:59.6 **CLD**	ABEX sixteen eleven heavy your readback correct good night.
		21:54:03.5 **RDO-1**	*.
21:54:08.9 **CAM-1**	alright.		
21:54:24.3 **CAM-1**	okay we can figure one left.		
21:54:48.0 **CAM-?**	* * *.		
21:55:52.7 **CAM-2**	want me to build you a route two for the single engine out procedure while you do route one?		
21:55:57.9 **CAM-1**	oh thanks that'll help expedite things.		
21:59:48.3 **CAM-1**	I didn't activate it yet so let me know when it looks good to you.		
21:59:49.1 **CAM-2**	looks good to me.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:00:07.4			
HOT-2	[sound similar to oxygen mask test].		
22:01:45.6			
CAM-1	just in case we got a big map shift even though this is not an RNAV SID I'll ah get the lat longs here from the runway and we can plug it in if we have do a quick alignment (north) thirty seven thirty six point six West one twenty two point two nine. I'll leave that under the ah takeoff ah card there so if you need it you can just pull it out there * * quicker.		
22:01:53.8			
CAM-2	* * *.		
22:02:29.0			
CAM-2	in route two all I did was build ah San Francisco to San Francisco the San Francisco VFR ah VOR's anchored and that represents the zero eight zero at six point five DME.		
22:02:40.5			
CAM-1	okay.		
22:02:41.2			
CAM-2	that is ah how we get there is a at two DME a fifteen degree climbing right turn to hundred thirty heading.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:02:42.1 **CAM-1**	* it.		
22:02:49.1 **CAM-1**	okay.		
22:02:50.8 **CAM-2**	basically out over the water.		
22:02:54.6 **CAM-1**	fifteen degree climbing right turn at two DME to a magnetic heading of one thirty intercept track outbound San Francisco zero eight zero, okay, so that is the that first waypoint is the zero eight ah zero at six point five D- okay alright. very good, thank you. * * (need it).		
22:03:11.3 **CAM-2**	correct.		
22:03:14.5 **CAM-2**	*. and hopefully we won't.		
22:03:18.6 **CAM-?**	* * *.		
22:03:21.6 **CAM-1**	finish up few thing here get the # out.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:03:24.1 **CAM-2**	mask check		
22:03:24.2 **CAM-3**	and this is their copy I believe.		
22:03:27.5 **CAM-2**	yes.		
22:03:28.3 **CAM-1**	yeah doesn't matter.		
22:03:40.0 **CAM-1**	see they're projecting us at two ninety five. okay.		
22:03:43.9 **CAM-?**	* *.		
22:03:44.6 **CAM-2**	and we're comin' in a two eighty.		
22:03:46.0 **CAM-1**	yup. good.		
22:03:50.4 **CAM-2**	derate one region A.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:03:52.9 **CAM-1**	okay.		
22:03:57.5 **CAM-1**	thirty thirty three thirty seven.		
22:04:14.5 **CAM-1**	do you ah do you have the numbers already?		
22:04:16.1 **CAM-2**	I do have ah most of them I have not entered anything into the FMC.		
22:04:19.7 **CAM-1**	okay okay.		
22:04:20.9 **CAM-1**	ah FMC zero fuel weight is two one eight decimal eight.		
22:04:29.5 **CAM-1**	and I guess you got the takeoff weight CG and everything else right?		
22:04:31.8 **CAM-2**	yes.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:04:32.1 **CAM-1**	okay very good okay. let's see seventy eight * two eighteen.		
22:04:45.7 **CAM-1**	and ah * *.		
22:04:56.3 **CAM-1**	alright I'm ready whenever you are for the ah cross check.		
22:05:00.2 **CAM-3**	* * * compartment ten one two four six five compartment nine two six four eight zero compartment eight two six two one four compartment seven two five five seven five compartment six two seven (two) seven nine compartment five two four one eight five compartment four two three zero five zero compartment three two five seven zero five compartment two two three one five five compartment one two two five nine five belly one seven nine nine belly two seven nine seven belly three three zero six six belly four five (two) seven belly five six seven three fuel sixty (thousand) zero pax cargo secure * * * * * *.		
22:06:02.5 **CAM-1**	okay that looks good time is zero five zero six.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:06:10.1 **CAM-3**	(we) are.		
22:06:11.6 **CAM-1**	we have a few few things to do up here we'll probably be out in seven or eight minutes.		
22:06:18.9 **CAM-1**	okay I can I guess let's just do the checklist when you hav- when you can get to it and then and then we'll close the door so.		
22:06:26.4 **CAM-2**	alright.		
22:06:28.3 **CAM-2**	before start checklist, logbook manuals?		
22:06:31.4 **CAM-1**	seven nine nine check.		
22:06:33.0 **CAM-2**	gear pins checked?		
22:06:33.8 **CAM-1**	checked.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:06:34.2 **CAM-2**	accessory panel checked circuit breaker checked IRS?		
22:06:37.0 **CAM-1**	NAV.		
22:06:37.4 **CAM-2**	ignition start selectors?		
22:06:38.9 **CAM-1**	one auto.		
22:06:39.5 **CAM-2**	fuel quantity?		
22:06:40.3 **CAM-1**	sixty thousand eight hundred pounds.		
22:06:41.8 **CAM-2**	sixty thousand pounds, planned pressurization?		
22:06:43.8 **CAM-1**	set.		
22:06:44.1 **CAM-2**	oxygen checks?		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:06:44.9 **CAM-1**	checks.		
22:06:45.3 **CAM-2**	altimeters flight instruments three zero zero zero. set crosscheck.		
22:06:48.3 **CAM-1**	three triple zero set crosscheck.		
22:06:50.1 **CAM-2**	GPWS override.		
22:06:51.1 **CAM-1**	normal.		
22:06:51.4 **CAM-2**	EICAS.		
22:06:51.9 **CAM-1**	set.		
22:06:52.1 **CAM-2**	FMC?		
22:06:52.9 **CAM-1**	programmed.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:06:53.1 **CAM-2**	verified radar checked off.		
22:06:54.4 **CAM-1**	checked off.		
22:06:54.9 **CAM-2**	parking brake pressure?		
22:06:56.0 **CAM-1**	set check.		
22:06:56.5 **CAM-2**	fuel control switches.		
22:06:57.6 **CAM-1**	cutoff.		
22:06:58.0 **CAM-2**	before start checklist complete.		
22:07:32.1 **CAM**	[sound similar to cockpit door being closed].		
22:07:37.0 **CAM-1**	I guess we can L-NAV this one it's got the headings and everything in it so I'll just call L-NAV four hundred feet.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:07:42.1			
CAM-2	good.		
22:07:42.6			
CAM-1	this'll be a ah derate one, ah flaps fifteen takeoff two hundred eighty thousand pounds speeds are V-one one thirty rotate one thirty three V-two one thirty seven the ah Quiet Two departure as previously mentioned heading select to four hundred feet and ah fly out on the zero one one degree radial of ah San Francisco to the four DME that's off of SASLY intersection and ah then turn left heading three two zero to intercept the San Francisco ah three twenty I'm sorry that's ah three forty two so see how that works out probably you can just extend me off of REBUS maybe or if he gives us a heading to intercept whatever we can just extend off of REBUS .		
22:08:25.8			
CAM-2	okay.		
22:08:26.6			
CAM-1	and ah we are cleared to one five thousand we're going to three seven oh as a final if we have to come back we will ah declare an emergency we'll get out the book do whatever we have to do and come back get vectors for an ILS to runway ah probably two eight left.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:08:43.8			
CAM-2	alright. *.		
22:09:24.2			
HOT-2	oh @ in the past ah the only hiccups that I've ever had that I just my experience ah right around this area if they're busy for some reason.		
22:09:33.5			
CAM-1	yeah.		
22:09:34.1			
HOT-2	I've done a couple loopty-loops around Bravo one into Bravo two back out Q One every once in a while they'll they'll sequence us in here if there's traffic the other (way).		
22:09:43.0			
CAM-1	yeah this time of night unlikely but thanks for the heads up.		
22:09:46.1			
HOT-2	you bet.		
22:09:47.6			
CAM-1	okay so we're gonna be yeah they'll probably take us on Bravo all the way around hopefully Bravo takes us there.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:09:54.6 **HOT-2**	roger.		
22:09:55.3 **CAM-1**	I know it can get confusing right in the middle of the airport. * * *.		
22:10:00.2 **HOT-2**	you bet.		
22:10:01.4 **CAM-1**	alright. ah oh I don't know if I put the departure frequency in there, squawk wanna make sure we're all set up ah what the # did I do with that? Quiet Bridge, #. where did I write the clearance?		
22:10:27.9 **HOT-2**	hey there's something going on in the back.		
22:10:29.7 **CAM**	[sound of increased variable amplitude wideband background noise].		
22:10:32.7 **CAM-1**	uh oh.		
22:10:38.8 **CAM-2**	we got a fire.		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:10:40.6 **CAM-2**	got a big fire.		
22:10:40.9 **CAM**	[sound similar to cockpit door closing].		
22:10:42.4 **CAM-1**	* * #.		
22:10:43.6 **CAM-2**	whoa.		
22:10:44.2 **CAM**	[sound similar to direct-vision window being cranked open].		
22:10:49.2 **CAM-2**	declare an er- or a #.		
22:10:56.5 **CAM-1**	alright.		
22:10:56.9 **CAM**	[sound similar to lavatory smoke detector alarm].		
22:10:57.2 **CAM**	[sound of electronic alarm in background].		

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:11:00.1 **CAM-2**	want me to call ground roll the equipment?		
22:11:01.4 **CAM-1**	yeah absolutely.		
		22:11:04.3 **RDO-2**	San Francisco ground San Francisco ground ABEX sixteen eleven.
22:11:06.2 **CAM**	[sound similar to fire warning bell].		
		22:11:08.7 **GND**	ABEX sixteen eleven San Francis ground.
		22:11:11.4 **RDO-2**	yes sir we need a ah CFR over here at ah spot eleven a cargo aircraft fire.
22:11:16.5 **CAM**	[sound similar to fire warning bell].		
		22:11:18.9 **GND**	ABEX sixteen eleven you're you're reportin' aircraft fire?
		22:11:22.1 **RDO-2**	yes sir.

INTRA-COCKPIT COMMUNICATION		AIR-GROUND COMMUNICATION	
TIME and SOURCE	CONTENT	TIME and SOURCE	CONTENT
22:11:22.1 **CAM-1**	yup.		
		22:11:23.5 **GND**	okay we're gonna roll the trucks right now.
		22:11:25.5 **RDO-2**	thank you.
22:11:26.3 **CAM-1**	okay parking brake set APU engine fire pu-override and pull and rotate.		
22:11:26.5 **CAM**	[sound similar to fire warning bell].		
22:11:34.1 **CAM-2**	I gonna * * for ya.		
22:11:35.1 **CAM-1**	go ahead.		
22:11:36.8 **End of Transcript**			
22:11:37.9 **End of Recording**			