

Transcripts from SAA Flight 295 Cockpit Voice Recorder (CVR) and Communication with Mauritius Approach Control (MRU)

The cockpit voice recorder (CVR) is designed to continuously record sounds in the cockpit to assist in the investigation of accidents or incidents. The tape capacity is limited, so the CVR on the SAA airplane was designed to continuously write over earlier portions of the tape so that at any given time, only the most recent 30 minutes of activity would be available for playback. Unfortunately, the CVR recovered from Flight 295 stopped recording about eighty seconds after the cockpit aural smoke alarm can be heard on the tape due to damage from the fire. So most of the tape content (more than 28 minutes) covered cockpit activities before the smoke alarm. The tape did not cover the estimated twenty minutes of the flight just prior to the crash.

At some point after the cargo fire caused the CVR to malfunction, the flight crew radioed Mauritius Approach Control (MRU) and advised them of the on board emergency. The conversation between Flight 295 and MRU was recorded by MRU. The time between cut out of the CVR and radio contact with MRU was likely short, on the order of a few minutes.

Transcripts of the eighty second CVR recording and the recorded conversation between Flight 295 and MRU are provided below. These transcripts were provided in Republic of South Africa "Report of the Board of Inquiry Into the Helderberg Air Disaster." The flight data recorder (FDR) was not recovered from the crash site.

CVR Recording

Actual time of the recording could not be determined, although presumably this occurred a matter of minutes prior to the flight crew's radio contact with MRU regarding the smoke that had been detected. Most of the CVR tape content (more than 28 minutes) covered routine cockpit activity just before the aural fire alarm sounded in the cockpit.

<u>Time (sec)</u>	<u>CVR Recording</u>
0	Fire alarm bell (stopped very quickly by the crew).
4	Intercom chime.
5	Flight engineer: <i>"What's going on now?"</i>
6	Unknown: <i>"Huh?"</i>
9	Flight engineer: <i>"Cargo?"</i>
11	Flight engineer: <i>"It came on now afterwards"</i>
14	Strong click sound.
14	Unknown: <i>"And where is that?"</i>
15	Click sound.
17	Possibly flight engineer: <i>"Just to the right"</i>
18	Unknown: <i>"Say again(?)"</i>
21	Flight engineer: <i>"Main deck cargo"</i>

26 Flight engineer: *"Than the other one came on as well, I've got two"*

30 Flight engineer: *"Shall I (get/push) the (bottle/button) over there"*

31 Unknown: *"Ja (yes)"*

34 Captain: *"Read the check list there for us please"*

34 Double click sound.

37 Unknown: *"The breaker fell out as well"*

38 Unknown: *"Huh"*

38 (Two click sounds).

41 Captain: *"Yes"*

41 Sounds of movement can be heard with clicks and clunks.

62 Captain: *"___ it is the fact that both came on – it disturbs me"*

65 Intercom chime (while captain is speaking).

67 Unknown: *"Aag ___"*

69 800 Hz TEST TONE signal commences.

70 Captain: *What the ___ is going on now?"*

73 Sudden loud sound.

75 Large and rapid changes in amplitude of test tone start.

80 End of test signal, very irregular near end.

81 End of recording.

Several minutes likely elapsed after the CVR malfunctioned before the conversation with MRU commenced. It is likely that during this time, the flight crew continued to accomplish their procedures associated with fire and smoke.

Recorded Conversation Between Flight 295 and MRU

The following is a transcript of the communications between Flight 295 and MRU that were recorded by MRU. At some points in the recording, communications between cockpit crewmembers can be heard. Times identified below represent local time in Mauritius. Transmissions are in English except as noted.

<u>Time</u>	<u>Who</u>	<u>Recording</u>
23:48:51	Flight 295	<i>"Eh, Mauritius, Mauritius, Springbok Two Niner Five"</i>
23:49:00	MRU	<i>"Springbok Two Niner Five, eh, Mauritius, eh, good morning, eh, go ahead"</i>

<u>Time (cont'd)</u>	<u>Who</u>	<u>Recording</u>
23:49:07	Flight 295	<i>"Eh, good morning, we have, eh, a smoke , eh, eh, problem and we're doing emergency descent to level one five, eh, one four zero"</i>
23:49:18	MRU	<i>"Confirm you wish to descend to flight level one four zero"</i>
23:49:20	Flight 295	<i>"Ya, we have already commenced, eh, due to a smoke problem in the aeroplane"</i>
23:49:25	MRU	<i>"Eh, roger, you are clear to descend immediately to flight level one four zero"</i>
23:49:30	Flight 295	<i>"Roger, we will appreciate if you can alert, eh, fire, eh, eh, eh, eh"</i>
23:49:40	MRU	<i>"Do you wish to, eh, do you request a full emergency?"</i>
23:49:48	Flight 295	<i>"(Okay Joe, can you ... for us)," spoken in Afrikaans.</i>
23:49:51	MRU	<i>"Springbok Two Nine Five, Plaisance"</i>
23:49:54	Flight 295	<i>"Sorry, go ahead"</i>
23:49:56	MRU	<i>"Do you, eh, request a full emergency please a full emergency?"</i>
23:50:00	Flight 295	<i>"Affirmative, that's Charlie Charlie"</i>
23:50:02	MRU	<i>"Roger, I declare a full emergency, roger"</i>
23:50:04	Flight 295	<i>"Thank you"</i>
23:50:40	MRU	<i>"Springbok Two Nine Five, Plaisance"</i>
23:50:44	Flight 295	<i>"Eh, go ahead"</i>
23:50:46	MRU	<i>"Request your actual position please and your DME Distance"</i>
23:50:51	Flight 295	<i>"Eh, we haven't got the DME yet"</i>
23:50:55	MRU	<i>"Eh, roger and your actual position please"</i>
23:51:00	Flight 295	<i>"Eh, say again"</i>
23:51:02	MRU	<i>"Your actual position"</i>
23:51:08	Flight 295	<i>"Now we've lost a lot of electrics, we haven't got anything on the on the aircraft now"</i>
23:51:12	MRU	<i>"Eh roger, I declare a full emergency immediately"</i>
23:51:15	Flight 295	<i>"Affirmative"</i>
23:51:18	MRU	<i>"Roger"</i>

<u>Time (cont'd)</u>	<u>Who</u>	<u>Recording</u>
23:52:19	MRU	<i>"Eh, Springbok Two Nine Five, do you have an Echo Tango Alfa Plaisance please"</i>
23:52:30	MRU	<i>"Springbok Two Nine Five, Plaisance"</i>
23:52:32	Flight 295	<i>"Ya, Plaisance"</i>
23:52:33	MRU	<i>"Do you have an Echo Tango Alfa Plaisance please"</i>
23:52:36	Flight 295	<i>"Ya, eh, zero zero, eh eh eh three zero"</i>
23:52:40	MRU	<i>"Roger, zero zero three zero, thank you"</i>
23:52:50	Flight 295	<i>"Hey Joe, shut down the oxygen left"</i>
23:52:52	MRU	<i>"Sorry say again please"</i>
00:01:34	Flight 295	<i>"Eh Plaisance, Springbok Two Nine Five, we've opened the door(s) to see if we (can?)...we should be okay"</i>
00:01:36	Flight 295	<i>"Look there (?)"</i> (Exclamation by somebody else, and is said over the last part of the previous sentence)
00:01:45	Flight 295	<i>"(Close the bloody door)"</i> spoken in Afrikaans.
00:01:57	Flight 295	<i>"Joe, switch up quickly, then close the hole on your side"</i>
00:02:10	Flight 295	<i>"Pressure (?) twelve thousand"</i>
00:02:14	Flight 295	<i>"(is enough ... otherwise our flight could come to grief!)"</i> Spoken in Afrikaans.
00:02:25	Flight 295	Carrier wave only
00:02:38	Flight 295	<i>"Eh Plaisance, Springbok Two Nine Five, do (did) you copy"</i>
00:02:41	MRU	<i>"eh negative, Two Nine Five, say again please, say again"</i>
00:02:43	Flight 295	<i>"We're now sixty five miles"</i>
00:02:45	MRU	<i>"Confirm sixty five miles"</i>
00:02:47	Flight 295	<i>"Ya, affirmative Charlie Charlie"</i>
00:02:50	MRU	<i>"Eh, Roger, Springbok eh Two Nine Five, eh re you're recleared flight level five zero. Recleared flight level five zero"</i>
00:02:58	Flight 295	<i>"Roger, five zero"</i>

<u>Time (cont'd)</u>	<u>Who</u>	<u>Recording</u>
00:03:00	MRU	<i>"And, Springbok Two Nine Five copy actual weather Plaisance Copy actual weather Plaisance. The wind one one zero degrees zero five knots. The visibility above one zero kilometers. And we have a precipitation in sight to the north. Clouds, five octas one six zero zero, one octa five thousand feet. Temperature twenty two, two, two. And the QNH one zero one eight hectopascals, one zero one eight over."</i>
00:03:28	Flight 295	<i>"Roger, one zero one eight"</i>
00:03:31	MRU	<i>"Affirmative, eh and both runways available if you wish"</i>
00:03:43	MRU	<i>"And two nine five, I request pilots intention"</i>
00:03:46	Flight 295	<i>"Eh, we'd like to track in eh, on eh one three"</i>
00:03:51	MRU	<i>"Confirm runway one four"</i>
00:03:54	Flight 295	<i>"Charlie Charlie"</i>
00:03:56	MRU	<i>"Affirmative and you're cleared, eh direct to Foxtrot Foxtrot. You report approaching five zero"</i>
00:04:02	Flight 295:	<i>"Kay"</i>
00:08:00	MRU:	<i>"Two Nine Five, Plaisance"</i>
00:08:11	MRU:	<i>"Springbok Two Nine Five, Plaisance"</i>
00:08:35	MRU:	<i>"Springbok Two Nine Five, Plaisance"</i>
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