

(Audio Transcription) for Investigation of the 10 March 2015, Class A Accident, UH-60M, 13-20624, Case No. 20150310_2022_13-20624.

The audio data from the CSMU was first downloaded via the Internet Explorer (IE) – Crash Damage Recovery Equipment for the Multi-Purpose Flight Recorder IE page. There were no anomalies noted during the download processes. The following data files were downloaded in this order:

Audio Files

- 1) CH1 (cv1.cvr) – 24,233 kilobytes (KB); Length: 2 hours, 4 minutes, 49.504 seconds
- 2) CH2 (cv2.cvr) – 24,428 kilobytes (KB); Length: 2 hours, 5 minutes, 49.888 seconds
- 3) CH3 (cv3.cvr) – 24,455 kilobytes (KB); Length: 2 hours, 5 minutes, 58.208 seconds
- 4) HQC (hqc.cvr) (CH4) – 45,171 kilobytes (KB); Length: 2 hours, 1 minute, 55.456 seconds

NOTE: CH = Channel and HQC = High Quality Channel.

Channels 1, 2, 3 and 4 files were then converted to .wav files using the Wave Converter Software Program, version 1.07.01, in 8 bit output format.

Analysis of Audio Data.

- 1) Channel 1 (CH1) – cv1.wav: Left Seat Intercom Communication System (ICS).
- 2) Channel 2 (CH2) – cv2.wav: Right Seat Intercom Communication System (ICS).
- 3) Channel 3 (CH3) – cv3.wav: Left/Right Crew chief (CE) and rear Intercom Communication Unit (ICU).
- 4) Channel 4 (CH4) – hqc.wav: High Quality Cockpit Area Microphone (HQC).

Audio files were played back using the Sound Forge SW program, version 9.0e; the cv1.wav (8 bit) (CH1) and cv2.wav (8 bit) (CH2) files contained audible speech and sounds. The cv3.wav (8 bit) (CH3) file contained some audio data but was mostly static noise and the hqc.wav (8 bit) (CH4) contained audible cockpit area microphone speech and ambient aircraft noises and sounds.

The Sound Forge SW program was used for playback and time stamping of CH1, CH2, CH3, and CH4 audio files. CH1 was used to create this audio transcription.

Aircrew Member Positions:

<u>Crew Position</u>	<u>Rating</u>	<u>Transcript ID</u>
Left Front:	PC	P1
Right Front:	PI	P2
Left Rear:	CE	CE1
Right Rear:	CE	CE2

The complete audio file indicated normal intra-cockpit radio transmissions to and from the accident aircraft and ground based station transmissions. Most of the crew conversations are of good quality and could be accurately and easily understood. The ability to differentiate the intra-

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cockpit communication from the other communication was made by the lack of side tone, static noise, transmission volume, and voice identification during the communication.

Warnings, Cautions, and Advisory (WCA) audio annunciation messages were also recorded.

NOTE:

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.

The following is the CH1, 12 minutes 3.808 seconds audio transcript. The transcript indicates several words and/or phrases that were not intelligible due to multiply radio calls recorded at the same time, resulting in RTS. Annotation by (...) indicates a pause and/or break in audio voice recording.

Audio Transcription

00:00:43.854	P2	'Lance, you up buddy?'
00:00:45.096	CE1	'Yes.'
00:00:46.020	P2	'Clear, Are we clear the P?'
00:00:46.524	P1	(Unintelligible)
00:00:47.694	CE1	The P is clear.
00:00:48.666	P2	'P's coming on guys.'
00:00:49.992	P2	'Ready P.'
00:00:51.366	CE2	'Ready'
00:00:52.824	CE1	'I'm ready'
00:00:53.46	P1	'You ready?'
00:00:54.888	P2	'Let's get some A/C power going get that HUD fired up.'

00:00:59.190 CE1 'Up left rear'

00:01:11.352 P2 'All right, starters dropped guys, we got a good start, we got pressure, pressure coming hot on two'

00:01:15.498 CE2 'Clear on two'

00:01:20.256 P2 'Engage *expletive*'

00:01:26.796 P2 'I'm going to dump fuel you ready boss, here we go'

00:01:28.332 P1 'I'm ready'

00:01:39.600 P2 (Unintelligible) and enter.

00:01:43.548 P2 'Pressures on the rise guys we got it good, there she goes, about 60 starter dropped out. Hey, were above sixty-three, within three, without avoidance ranges, 20, 40, 60, 90 we have adequate oil pressure, transmission oil pressure, two hydraulic lights are extinguished, backup pump is coming to auto, guys if you all would..'

00:01:58.004 CE1 'Coming in on left'

00:01:59.600 P2 Coming auto.

00:02:00.664 P2 Chocks, droops and doors

00:02:02.460 CE1 Roger

00:02:10.776 (Unintelligible)

00:02:12.656 CE2 'There goes the droop'

00:02:13.708 P2 'Roger bro (unintelligible)'

00:02:14.004 CE1 'Pull the chock'

00:02:21.432 CE2 'Coming in right here'

00:02:24.432 P2 'One and two to fly, we're in direct, were at 1335 on the fuel'

00:02:53.895 Squelch click

00:02:55.821 CE1 'Well, we're all ready to rock in the back'

00:02:58.440 P1 'Alright'

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00:02:59.901 P2 'Mic'

00:03:01.188 P2 'Brakes whenever you're ready G-Wayne'

00:03:03.105 P1 'Brakes to release, waiting on number uh, Chalk 2 to start they still haven't, they're still (expletive) off over there'

00:03:09.300 P2 'Right, before takeoff, still good.'

00:03:10.692 CE2 'Secure right rear'

00:03:12.486 CE2 'Pax secure'

00:03:14.869 CE1 'Ready left rear'

00:03:24.040 P1 'Clear the FCC flight codes, Dave.'

00:03:26.952 P2 'All right, I'm sorry'

00:03:27.704 P1 'All right, I did it'

00:03:58.428 P1 Alright, they are starting to turn now.

00:04:04.860 P1 'Dave, can you get that APU off?'

00:04:10.716 P1 'Not the generator, there you go'

00:04:34.020 P2 'Hey, we got the same guy on the headset we've had all day, guys?'

00:04:38.964 CE2 'Yeah, [REDACTED] on headset'

00:04:39.996 P2 'Okay, [REDACTED] on'

00:04:43.908 Pax 'Yep, I'm here'

00:04:46.212 P2 Ah, (Inaudible)

00:04:47.592 P2 'It's gonna be a little slower I'll give you a thirty-, and a one minute and thirty if your cool with that'

00:04:52.476 Pax 'Yep, sounds good'

00:04:56.064 P1 'We got flames coming outta that exhaust man'

00:05:18.000 Pax 'And if you can again, just like the other night, about fifteen feet off the water'

00:05:21.648 P1 'Bout fifteen feet, roger'

00:05:40.656 Squelch break

00:05:43.248 CE1 'That's purdy'

00:05:49.872 CE2 'Sand is making some sparks in that rotor system over there'

00:05:52.680 P1 'Yeah it is'

00:05:55.560 CE2 'St. Elmo's fire'

00:06:02.616 P1 'Aww, they blew it all away'

00:06:15.432 P2 'Okay G-Wayne your 126.5 that is, uh'

00:06:18.264 P1 'That's Hurlburt tower'

00:06:19.248 P2 'Hurlbert tower, roger'

00:06:21.072 P1 'Number two is [REDACTED]'

00:06:22.699 CE2 I'm in.

00:06:22.720 P2 What?

00:06:23.424 P1 'Number three is tower'

00:06:24.768 P2 'You wanna get in touch with tower once we start moving around?'

00:06:27.024 P1 'Once we, uh, not till we start down the beach ...back toward uh Destin if we decide to make that move'

00:06:30.196 P2 (Inaudible)

00:06:32.952 P2 'Gotcha my brother'

00:06:46.128 Aircraft Squelch break

00:06:48.072 Aircraft Squelch break

00:06:51.360 P1 'Bail looks up to me'

00:06:58.080 Chalk 2 'We're ready to give it a go'

00:07:00.138 P1 All right, I'm gonna pick up and turn around then I'm (inaudible)'

00:07:03.270 Chalk 2 'Roger'

00:07:04.842 CE2 'Clear right, up'

00:07:06.258 CE1 'Clear left and above'

00:07:08.022 P2 'Straight up'

00:07:08.634 P1 'Tails comin right'

00:07:09.354 CE2 'Tails clear right'

00:07:11.106 CE1 'Nose left'

00:07:20.934 CE1 'Wow, that's a lotta sparks'

00:07:35.538 P2 'Gee, its dark as (expletive). That don't help none.'

00:07:40.230 CE2 'No, it didn't'

00:07:52.878 CE1 'Wow, it's really dark'

00:07:55.338 P2 'It's really shitty'

00:08:00.882 Aircraft Audible tone

00:08:05.280 P2 'We gonna take it real slow guys'

00:08:07.068 P1 'Yeah'

00:08:09.768 CE1 'Probably be hard to find them boats'

00:08:27.960 Aircraft Audible tone

00:08:33.858 CE2 'There's wires somewhere over here next to the road, correct?'

00:08:36.810 P2 'Yep, were passin over the road' (Additional inaudible in background)

00:08:38.544 CE2 'Roger'

00:08:42.690 CE1 'Yeah, I got 'em in sight'

00:08:44.826 CE1 'We are,, high enough for the wires'

00:08:47.814 P1 'Yep'

00:08:50.862 CE1 'Passin almost right over a pole'

00:08:54.467 P1 'Roger'

00:08:56.664 Chalk 2 'Let me know when you all pass up those poles'

00:08:59.862 Chalk 2 'What altitude we got?'

00:09:01.296 CE1 'Alright, you're clear of the wires'

00:09:04.206 P2 'We're at 90 feet guys'

00:09:07.218 CE1 'By the way I got Chalk two stag left'

00:09:11.706 CE1 'Uh, let's call em, uh, 8 o'clock. One and a half to one.'

00:09:16.782 Aircraft Audible tone

00:09:16.782 P2 You got us descending...

00:09:17.544 P1 'Yeah'

00:09:17.778 Aircraft Audible tone

00:09:18.078 P1 'Coming down'

00:09:20.591 P1 (Inaudible) say I'm gonna come down and uh, just for passes, uh past those poles over there

00:09:24.798 P2 'Yeah, you just (Inaudible)'

00:09:33.348 P1 Hey [REDACTED], there's some trees out there, out my left door watch out for those'

00:09:37.152 Chalk 2 'Put your search light on real quick'

00:09:40.182 Chalk 2 'Gotcha'

00:09:43.800 P2 'Oh no you kill (inaudible)'

00:09:44.172 Aircraft Audible tone

00:09:44.520 Unk Inaudible

00:09:45.168 Aircraft Audible tone

00:09:45.540 P2 'Oooh'

00:09:47.598 P2 'We got poles right under those trees okay'

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00:09:50.040 P2 'We're over the water in five guys'
00:09:54.162 P1 'Alright, just keep a look on my radar altimeter'
00:09:57.024 P2 'Roger that'
00:10:01.410 CE1 'We're over the water'
00:10:04.126 P2 Thank you'
00:10:05.838 P1 Yeah, it's too dark to see the expletive water'
00:10:10.554 CE2 'Tell him to uh, get his, take his uh, po- position lights
outta flash, put 'em on steady'
00:10:15.030 P2 'Turn your position lights out of flash if you would'
00:10:20.418 Chalk 2 'Do you want them on?'
00:10:22.056 P1 'Hey, were coming back to the right, uh, uh, I'm pulling
back to the east.
00:10:25.716 P1 'Hey, put in, uh, four..... Dave put in 482 in our, uh,
00:10:30.660 Chalk2 'Uh, we're putting our uh, position light on really quick'
00:10:32.658 P2 '482?'
00:10:33.486 P1 'Yep'
00:10:34.962 P1 'Can you still see me [REDACTED]?'
00:10:36.576 Chalk 2 'Nope'
00:10:42.966 P1 'Yep'
00:10:48.528 P1 'Is it in there?'
00:10:48.822 P2 'Ya, I don't have anything bro'
00:10:50.316 P1 '482 and nothing not there
00:10:52.158 P2 'Yeah, you should be in'
00:10:54.258 CE2 'I can't see anything outright'
00:10:56.316 P2 'We climbed up in it G-Wayne, we're gonna have to'

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00:10:57.810	P1	'Oh yeah'
00:10:59.142	P2	'Where's our airspeed?'
00:11:00.032	P2	'I got the altimeter setting (Inaudible)'
00:11:02.792	P2	G-Wayne'
00:11:03.980	P2	'G-Wayne, what are you doin?'
00:11:04.324	Aircraft	Beginning of 5 hZ audio tone
00:11:05.276	P1	'I don't have anything'
00:11:06.544	P2	'Climb, Climb, Climb, Climb.'
00:11:09.152	P1	'Oh, stop, stop, stop, stop'
00:11:10.696	Boat crew	Mojo 69, [REDACTED]
00:11:13.844	Aircraft	End of 5 hZ audio tone
00:11:15.508	P2	'You got it?'
00:11:16.020	P1	'Yeah'
00:11:18.952	CE1	'I got nothin'
00:11:20.580	P2	'Okay, I got your alt p set (inaudible)'
00:11:25.068	Aircraft	Begin 5 hZ audio tone
00:11:23.200		(Inaudible)
00:11:24.444	P2	'Where you at G-Wayne?'
00:11:25.924	P2	'Can I put my light on'
00:11:26.780	P1	'I'm climbin up'
00:11:27.092	Aircraft	End of 5 hZ audio tone
00:11:27.680	Boat crew	'Mojo 69, [REDACTED]'
00:11:31.844	P2	'Watch your map, bird, watch your map, your spinnin'
00:11:33.592	P1	'I got it, I got it'

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00:11:35.060	P2	'G-Wayne, don't fight it'
00:11:36.072	P2	'G-Wayne'
00:11:36.520	P1	'Ah, ah,,, you, take the controls Dave'
00:11:39.77		Inaudible
00:11:40.986	P2	'I got it'
00:11:41.561	P1	'Watch the, watch the collective Dave'
00:11:43.511	P2	'Okay, I'm flyin'
00:11:44.067	P1	'Watch the collective Dave'
00:11:45.237	P2	'All right'
00:11:46.436	P2	'G-Wayne, engage auto-pilot'
00:11:48.069	P1	'I got... Yeah
00:11:49.653	P2	'Watch out, we're in a bad right turn'
00:11:51.355	P1	'Yep'
00:11:51.954		Audio tone
00:11:52.471	P2	'G-Wayne, look down'
00:11:53.782	ATC	(Inaudible) would you like to, uh-'
00:11:53.651	Aircraft	Begin 5 hZ audio tone
00:11:54.899	ATC	Good day'
00:11:55.557	P2	'Watch your altitude, attitude G-Wayne attitude, level'
00:11:58.930	P2	'Level'
00:12:00.022	P2	'Level'
00:12:00.695	P2	'Climb, climb'
00:12:03.354		End audio

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P2 – Dave Strothers (RS – PI)

P1 – Wayne Griffin (LS – PC)



DEPARTMENT OF THE ARMY
HEADQUARTERS, 7TH INFANTRY DIVISION
OFFICE OF THE STAFF JUDGE ADVOCATE

JOINT BASE LEWIS-MCCHORD, WASHINGTON 98433-9500

AFZC-AIB

25 March 2015

MEMORANDUM FOR RECORD

SUBJECT: Cockpit voice recorder review

1. Background: The accident investigation board looking into the crash of the UH60 tail number 13-20624 on 10 March 2015 requested the audio of the cockpit voice recorder from the lead and tail aircraft. The U.S. Army Combat Readiness/Safety Center cannot, due to internal policies, allow release of the audio of aviation mishap cockpit voice recordings. On 24 March 2015 [REDACTED] of the Combat Readiness/Safety Center came to Jackson Barracks, Louisiana and played the voice recordings. This board was allowed to listen to the recording several times and compare it to the transcript we had already received.

2. Audible tones: The technical experts appointed to the board believe that the tones referenced in the transcript represent the following:

- a. 00:09:16.782 Audible tone – this was a low altitude warning
- b. 00:09:17.778 Audible tone – this was a low altitude warning
- c. 00:09:44.172 Audible tone – this was a low altitude warning
- d. 00:09:45.168 Audible tone – this was a low altitude warning
- e. 00:11:04.324 Beginning of 5 hz audio tone – this was a stabilator automatic mode failure warning. This ended at 00:11:13.844
- f. 00:11:24.444 Beginning of 5 hz audio tone – this was a stabilator automatic mode failure warning. This ended at 00:11:27.092
- g. 00:11:51.954 Audio tone – this was a low rotor rpm warning
- h. 00:11:53.651 Beginning of 5 hz audio tone – this was a stabilator automatic mode failure warning.

3. Voice inflections and tone: The members of the board, while listening to the recording, believe the following voice inflections and tones were present:

AFZC-AIB

Subject: Cockpit voice recorder review

a. At 00:06:58 one of the pilots in chalk 2 states, "We're ready to give it a go". He sounds doubtful of this course of action.

b. 00:10:25.716 P1 (CW4 Griffin) states: "Hey, put in, uh, four.. ... Dave put in 482 in our, uh," CW4 Griffin is beginning to sound stressed at this point.

c. From 00:11:00 onward both pilots, CW4 Griffin and CW4 Strothers, are both sounding very stressed. From 00:11:31 onward the stress level has obviously increased.

4. POC this memorandum is the undersigned at 


Encl
as

UH-60M / Chalk 2 / Transcript

20150310

1:49:00

[Battery Rebooting]

: Radio check

: Loud and clear

PC: Alright. Uh, Whitingfield which is about-

PI: Let me ask you a question. Can you see that tower anymore?

PI: I cannot.

PC: I can tell you what I can see...ah, I can't see the tower right now but I can definitely see farther outside of my window.

CE: I can't see the tower either.

PC: Let's get the AP cranked. AP clear?

CE: AP clear.

PC: All this shit is, uh, extremely isolated to hear. Pensacola is only about 7 miles and 900 and Whitingfield is like 1600 and 9.

PI: Where is Whitingfield at?

PC: It's about 4 miles, 4-5 miles back towards our back left.

PI: K.

UH-60M / Chalk 2 / Transcription

20150310

1:45:31

PC: There's my ILS, my RNAV line, (inaudible)

PI: Just definitely don't wanna come to face with unlit towers.

PC: No. The only towers that we got, I mean I have, looking at the map is these two. The ones that's right on our left – the 331 foot one. Hotels...and hotels. And that's it.

CE: Does it have the smaller ones that are umm, in our current heading in the distance?

PC: Yes, um, the space tower?

CE: No sir, beyond that one

PC: The light poles?

CE: Yes sir

PC: No..uh..

CE: There's a couple unlit towers by one of those, uh, would appear to be low and possibly unlit towers that are by one of those little, uh, concrete buildings.

PC: Oh yeah, uh those two then. Those to, uh, telephone poles. Yeah right there at 11 and just in the corner of the LZ where whatever that little box thing is...to the left of that?

CE: Uhh no, If we were to keep this direction and go between the space needle and Destin over this little island or whatever the hell we are over this peninsula thing we are on...there's a couple of unlit, or at least lower towers.

PI: Yeah, uh, we won't...we aren't going to be able to get much higher than about 100 feet.

CE: How much?

PI: 100.

PC: Yeah, 1, 150..

PI: 100 will clear them I just don't want to...you want to see them and it's just...yeah, that's all