

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



GROUP CHAIRMAN'S FACTUAL REPORT OF INVESTIGATION

DCA16FR007

**By
Charles Cates**

WARNING

The reader of this report is cautioned that the transcript of a communications center 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

January 24, 2017

Recorded Radio and Telephone Communications

Group Chairman's Factual Report By Charles Cates

1. EVENT SUMMARY

Location: Chester, Pennsylvania
Date: April 3, 2016
Locomotive: Siemens ACS-64, Registration #627
Operator: Amtrak
NTSB Number: DCA16FR007
Summary: Refer to the Accident Summary report, within this docket.

2. GROUP

Chairman: Charles Cates
Mechanical Engineer
National Transportation Safety Board (NTSB)

Member: Ryan Frigo
Investigator in Charge
NTSB

Member: Stephen Jenner
Human Performance Investigator
NTSB

Member: Lou Tomassone
Federal Railroad Administration (FRA)

Member: Donald Hill
Safety Task Force Member
Brotherhood of Locomotive Engineers and Trainmen
(BLET)

Member: Shane Tuffy
Senior Manager Operating
Amtrak

3. DETAILS OF INVESTIGATION

The NTSB Vehicle Recorder Division received digital recordings of radio and telephone incoming and outgoing transmissions and calls recorded at the Amtrak Consolidated Electrification and Train Control (CETC) systems center. Radio transmissions and calls were between Amtrak dispatchers in the CETC and employees in the field.

3.1 Recording Description

Recordings prior to 7:15 am were radio transmissions. These recordings were of good quality.

After 7:15 am, the majority of the recordings were of telephone calls to and from the CETC. Telephone recordings were of excellent quality.

Radio transmissions were recorded again starting again at 7:50 am. These transmissions were primarily unusable, with one recording sample of poor quality, however still intelligible.

3.2 Timing and Correlation

Timing of the transcript was established by the timestamp embedded in the filename of each transmission. The timestamp was generated by the CETC master clock and was recorded in eastern daylight time (EDT). No assessment was made of how this clock synchronized with the forward facing video and event recorders.

3.3 Description of Audio Events

The first recording and the transcript began at 0710:54 and transcribed recordings ended at 0756:23.

At 0710:54, a radio communication between the night dispatcher and the night job site foreman approved the fouling of number one track. The recording ended at 0711:20.

At 0716:42, the day shift foreman telephoned the day shift dispatcher and stated that he would be relieving the day shift foreman and taking over the work on number two track. The call ended at 0717:26.

At 0724:09, the day shift foreman telephoned the day shift dispatcher and received Form D number A1401, with number two track out of service. They also discussed needing other tracks during the shift and that the night shift foreman would be clearing up fouls, which the day shift operator would pick up again. The call ended at 0727:03.

At 0727:23, an outgoing call was placed from the day shift dispatcher to an unidentified individual. He mentioned that number two track was out of service, and track numbers 1, 3, and 4 had fouls. The call ended at 0728:13.

At 0728:15, the day shift dispatcher received a call from the night shift job site foreman. They cancelled Form D number A1403 for number two track, and released the fouls on

numbers 1, 3, and 4 track. The night shift foreman said that the day shift foreman would pick up the fouls. The call ended at 0729:49.

At 0749:24, an outgoing call was placed from the day shift dispatcher to an unidentified individual. At 0749:52, after a momentary pause, the dispatcher stated that he just saw something he didn't like. He then stated, "I'm looking at a light came up on number four track I don't have nobody fouling out there".

At 0750:11, the radio recorded static similar to a garbled transmission from an unknown source. The content of the transmission was unable to be deciphered.

At 0750:18, the dispatcher stated on the phone, "Um, they fouling one, two, three, and, no, one, three, and four they got two track out of service".

At 0750:25 a radio transmission was received from an unknown source that said, "Emergency emergency emergency".

At 0750:35, the dispatcher stated on the phone, "I hope they weren't out there fouling and didn't say nothing. I got a train going through there on three track". At 0751:09, the dispatcher stated that he had an emergency and would call back. The call ended at 0751:15.

At 0751:34 the dispatcher received a call from the day shift foreman. The foreman asked if the night shift foreman had fouls on tracks three and four. The dispatcher replied that the night foreman had given up his fouls. The foreman said that the backhoe "got plowed" and that he needed ambulances. The call ended at 0752:12.

Transcript of radio and telephone communications recorded at Amtrak CETC relevant to the crash of Amtrak ACS-64 #627 in Chester, PA.

LEGEND

RDO	Radio transmission
TEL	Telephone transmission
CETC-1	Voice identified as CETC dispatcher 1, overnight shift
CETC-2	Voice identified as CETC dispatcher 2, day shift
FMN-1	Voice identified as job site foreman 1, overnight shift
FMN-2	Voice identified as job site foreman 2, day shift
-?	Voice unidentified
*	Unintelligible word
@	Non-pertinent word, in most cases an individual's name withheld for privacy concerns
()	Questionable insertion
[]	Editorial insertion

Note 1: Times are expressed in eastern daylight time (EDT).

Note 2: Only radio transmissions and telephone communications to and from the job site 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: Crosstalk refers to a time that both participants in the conversation are speaking at the same time.

Start of Transcript
7:10:54.2 EDT

RDO CETC-1 Amtrak c-tec 4 @FMN-1, Over.

7:10:59.4

RDO FMN-1 @FMN-1 answering four, over.

7:11:00.6

RDO CETC-1 @FMN-1, seven eleven in the AM, permission to foul number one, o-n-e, track, Baldwin to Hook, further notice, over.

7:11:11.1

RDO FMN-1 seven eleven in the a-m, @FMN-1 does have permission to foul number one track, between Hook and Baldwin, until further notice, over.

7:11:20.5

RDO CETC-1 roger @FMN-1, c-tec four out.

7:16:42.6

TEL CETC-2 Amtrak c-tec section four, @CETC-2 speaking.

7:16:47.2

TEL FMN-2 hello, you said @CETC-2?

7:16:48.8

TEL CETC-2 yes.

7:16:50.2

TEL FMN-2 @CETC-2, how ya doing today, @FMN-2.

7:16:52.0

TEL CETC-2 hey, @FMN-2, how ya doing?

7:16:53.7

TEL FMN-2 alright, you on, uh, you on for today?

7:16:56.8

TEL CETC-2 yes.

7:16:58.4
TEL FMN-2 its, its me and you then, huh?

7:17:00.7
TEL CETC-2 where are you?

7:17:02.3
TEL FMN-2 I'm going to be at Hook, I'm going to be taking, uh, two track out, uh, relieving @FMN-1.

7:17:07.8
TEL CETC-2 oh, you taking over for @FMN-1.

7:17:09.8
TEL FMN-2 yeah.

7:17:10.8
TEL CETC-2 alright, uh,

7:17:12.0
TEL FMN-2 [crosstalk] how you want to do it?

7:17:13.3
TEL CETC-2 give me a minute, call me back, and, uh, I'll give you, uh, I'll give you a Form D.

7:17:17.0
TEL FMN-2 ok.

7:17:17.7
TEL CETC-2 alright, call me back in about, two, three minutes.

7:17:20.9
TEL FMN-2 I'll give ya, I'll give ya two, three minutes.

7:17:23.0
TEL CETC-2 if that, yeah.

7:17:25.0
TEL FMN-2 yeah, I will, alright.

7:17:26.2
TEL CETC-2 alright, thanks.

7:24:09.5
TEL CETC-2 Amtrak c-tec section four, @CETC-2 speaking.

7:24:12.2
TEL FMN-2 @CETC-2, @FMN-2.

7:24:13.2
TEL CETC-2 Hey, @FMN-2, you ready, um, take your track out?

7:24:14.6
TEL FMN-2 I'm ready.

7:24:16.6
TEL CETC-2 I'm not, but I'm gonna do it in a second. I was running my mouth with @CETC-1, the guy that I relieved, he just left out of here, but, uh, ok I'm good. alright, let's see, section four, come on, get down here. ok, today is the third. are you ready to copy?

7:24:54.8
TEL FMN-2 yes.

7:24:55.7
TEL CETC-2 alright, Form D number a one four zero one, today's date is four three sixteen, its addressed to @FMN-2. you at Baldwin or Hook?

7:25:14.1
TEL FMN-2 * .

7:25:15.5
TEL CETC-2 I'm sorry?

7:25:16.6
TEL FMN-2 at hook, yep.

7:25:17.9
TEL CETC-2 @FMN-2 at Hook. line four encircled. p w line, number two t-w-o track, out of service between Hook and Baldwin, in charge of @FMN-2. train dispatcher is @CETC-2, over.

7:25:48.9
TEL FMN-2 that is Form D a fourteen zero one. date is four three sixteen. addressed to @FMN-2 at Hook. circle line four, p w line, number two track out of service, between Hook and Baldwin in charge of @FMN-2, dispatcher @CETC-2.

7:26:09.4
TEL CETC-2 form D number a fourteen zero one time effective seven twenty six in the am.

7:26:16.7
TEL FMN-2 Form D a fourteen oh one time effective is seven twenty six in the am.

7:26:22.7
TEL CETC-2 roger, tell, uh, @FMN-1 to give me a call whenever he's ready and I'll cancel his. um, are you going to need all four tracks, I mean all three tracks * *.

7:26:33.0
TEL FMN-2 yeah, I gotta check and see how much I got to do with this backhoe, cause yes he needs three and four, um, and one as much as possible for now, I don't know how much longer with that cause my backhoe operator should be getting out of here in about an hour or two.

7:26:50.2
TEL CETC-2 OK, now right now

7:26:51.6
TEL FMN-2 in the mean time [crosstalk] I'll tell @FMN-1 to give you a call.

7:26:54.0
TEL CETC-2 ok.

7:26:55.1
TEL FMN-2 and, uh, once he starts clearing his fouls up then I'll be uh, returning [crosstalk].

7:26:59.1
TEL CETC-2 taking yours, OK.

7:27:01.2
TEL CETC-2 alright, not a problem, I got ya.

7:27:03.0
TEL FMN-2 alright.

7:27:03.7
TEL CETC-2 alright here we go.

7:27:23.8
TEL [sound of outgoing phone ring tone]

7:27:32.2
TEL-? hello?

7:27:32.8
TEL CETC-2 hey.

7:27:33.4
TEL-? hey.

7:27:34.1
TEL CETC-2 I'm here and they already busting my butt.

7:27:37.2
TEL-? oh, what happened?

7:27:38.2
TEL CETC-2 oh, nothing, I just got two track out of service Baldwin to Hook, but they fouling on one, three, and four.

7:27:43.4
TEL-? oh, wow.

7:27:46.0
7:28:13.5 [non-pertinent discussion for remainder of call]

7:28:15.1
TEL CETC-2 Amtrak c-tec section four, @CETC-2 speaking.

7:28:17.6
TEL FMN-1 how you doing, @CETC-2, @FMN-1 [crosstalk] what'd you say?

7:28:22.2
TEL CETC-2 I said hey, how you doing there.

7:28:24.0
TEL FMN-1 alright and yourself?

7:28:25.0
TEL CETC-2 alright

7:28:25.3
TEL FMN-1 um, I was calling to knock down Form D number a fourteen oh three, uh, @FMN-2's taking over the track. I just want to release my Form D.

7:28:34.1
TEL CETC-2 I'm ready to cancel when you are, you ready?

7:28:36.7
TEL FMN-1 yes sir.

7:28:37.3
TEL CETC-2 alright Form D number a fourteen zero three, date four two sixteen. Form D cancel time is seven twenty eight in the am, today's date is four three sixteen, dispatcher is @CETC-2, over.

7:28:54.1
TEL FMN-1 alright. Form D number a one four zero three dated four two sixteen, Form D cancel time seven twenty eight in the am date four three sixteen dispatcher @CETC-2.

7:29:08.2
TEL CETC-2 roger. alright, well, get some rest man.

7:29:12.1
TEL FMN-1 uh, also, *, uh, release these fouls, and, uh, @FMN-2 is gonna pick them up. um, my fouls on number one, three, and four track between Hook and Baldwin.

7:29:24.7
TEL CETC-2 @FMN-1, I show you clear your fouls number one, three, and four track, Hook to Baldwin, seven twenty nine in the am.

7:29:32.7
TEL FMN-1 alright, seven twenty nine in the AM, @FMN-1 is all clear of his fouls, one, three, and four between Hook and Baldwin.

7:29:42.3
TEL CETC-2 roger.

7:29:43.2
TEL FMN-1 alright?

7:29:44.2
TEL CETC-2 alright.

7:29:45.2
TEL FMN-1 thanks a lot.

7:29:45.8
TEL CETC-2 you're welcome, be safe.

7:29:46.6
TEL FMN-1 you too. bye.

7:29:49.0
TEL CETC-2 later.

7:49:24.1
TEL [sound of outgoing phone ring tone]

7:49:36.6
TEL-? hey.

7:49:37.6
TEL CETC-2 hey. how you know it was me? it comes up Amtrak?

7:49:42.9
TEL-? no, it comes up a three oh two number.

7:49:45.5
TEL CETC-2 oh, ok.

7:49:46.8
TEL-? yeah, [crosstalk] I'm ok.

7:49:52.3
TEL CETC-2 yeah, um, I'm working, um, well you know where I'm working, but, uh, [background sound of radio static] [momentary pause] I just saw something I don't like.

7:50:03.0
TEL-? what's the matter?

7:50:04.0
TEL CETC-2 no, no, no, I'm looking at a light came up on number four track I don't have nobody fouling out there.

7:50:11.8
RDO-? [sound of radio static similar to a garbled transmission]

7:50:13.4
TEL-? [crosstalk] go ahead.

7:50:15.3
TEL CETC-2 unless you gotta go.

7:50:18.1
TEL-? *.

7:50:18.8
TEL CETC-2 no, I'm good. um, they fouling one, two, three, and, no, one, three, and four they got two track out of service [background radio transmission] * [background sound of radio static]

7:50:25.8
RDO-? emergency emergency emergency

7:50:31.5
RDO-? *

7:50:35.1
TEL CETC-2 I hope they weren't out there fouling and didn't say nothing. I got a train going through there on three track.

7:50:40.5
TEL-? well you want to find out what's going on?

7:50:44.6
TEL CETC-2 oh, I'm finding out.

7:50:47.1
TEL-? ok.

7:50:47.7
TEL CETC-2 nah, I'm saying, if they out there [crosstalk] if nothin happened I'll find out.

7:50:51.5
TEL-? oh, geez. [sound of loud sigh] mmm, mmm, mmm, mmm, mmm.

7:50:58.8
RDO-? *

7:51:05.4
TEL-? mmm. [sound of nervous utterance]

7:51:09.5
TEL CETC-2 I mean that's a good way to find out. let me see. [background sound of radio static] hold on I got an emergency (pl)* let me call you back.

7:51:14.6
TEL-? ok.

7:51:15.1
TEL CETC-2 alright. see ya.

7:51:34.3
TEL CETC-2 Amtrak c-tec section four @CETC-2 speaking.

7:51:36.3
TEL FMN-2 [sounding anxious] @CETC-2, its @FMN-2, man. * did, did, did, @CETC-2, did, did @FMN-1 have a foul on three 'n four?

7:51:43.8
TEL CETC-2 no, he gave up his fouls.

7:51:45.8
TEL FMN-2 oh my gosh! you've got to be kidding me! oh! man!

7:51:49.6
TEL FMN-2 [crosstalk] the backhoe got plowed, I can't believe it. [crosstalk] I need an ambulance, I need people down here, a mile north of Hook.

7:51:56.9
TEL CETC-2 hold on - the backhoe [crosstalk]

7:51:58.5
TEL FMN-2 oh my gosh.

7:51:59.3
TEL CETC-2 did anybody get hit?!

7:52:01.3
TEL FMN-2 the ba..., oh man, I need, I need, I need ambulances @CETC-2.

7:52:05.9
TEL CETC-2 ok.

7:52:06.1
TEL FMN-2 yes, people got hit.

7:52:07.2
TEL CETC-2 ok.

7:52:07.7
TEL FMN-2 unbelievable [crosstalk] unbelievable [crosstalk] I didn't know

7:52:10.9
TEL CETC-2 [with increased volume, as speaking to the room] alright. hey, hey, uh, yeah, we (ge)...

7:56:23.0
End of Transcript