UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

Investigation of:	*
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AMTRAK TRAIN 188 DERAILMENT NEAR PHILADELPHIA, PENNSYLVANIA MAY 12, 2015	* Docket No.: DCA-15-MR-010

Interview of: JOHN HINES

Sheraton Hotel
Philadelphia, Pennsylvania

Wednesday,
May 13, 2015

The above-captioned matter convened, pursuant to notice.

BEFORE: DAVID BUCHER
Railroad Accident Investigator

APPEARANCES:

DAVID BUCHER, Railroad Accident Investigator
National Transportation Safety Board

STEPHEN JENNER, Ph.D., Human Performance Investigator
National Transportation Safety Board

MICHAEL BULL, Operating Practices Inspector
Federal Railroad Administration (FRA)

DAVID NICHOLS, Chief Transportation Officer
Amtrak

EDWARD MRUK, Assistant General Trainmaster
Amtrak

WILLIAM BATES
National Safety Team
SMART Transportation Division

CARL FIELDS
Safety Task Force
Brotherhood of Locomotive Engineers and Trainmen (BLET)

I N D E X

I N T E R V I E W

(10:50 a.m.)

MR. BUCHER: This is Dave Bucher, Rail Accident Investigator for the National Transportation Safety Board. This is May -- the date is May 13th, 2015. Time is 10:50. The interview of Mr. John Hines. He's General Road Foreman for the -- for Amtrak, in Wilmington, Delaware. The interview is being conducted at the Sheraton Hotel in Philadelphia.

To my right, I have --

MR. BATES: William Bates, B-A-T-E-S, SMART Transportation Safety Team.

MR. NICHOLS: Dave Nichols, N-I-C-H-O-L-S, Chief Transportation Officer for Amtrak.

MR. FIELDS: Carl, C-A-R-L, Fields, F-I-E-L-D-S, Brotherhood of Locomotive Engineers and Trainmen, Safety Task Force.

MR. MRUK: Edward Mruk, M-R-U-K, System General Trainmaster with Amtrak.

MR. BULL: Mike Bull, B-U-L-L, Operating Practices Inspector with the FRA.

DR. JENNER: Stephen Jenner, human performance with the NTSB.

MR. BUCHER: Okay.

INTERVIEW OF JOHN HINES

BY MR. BUCHER:

Q. Dave Bucher again, and, John, if you could, give us an overview of the ACSES system as you see it might have related to the engineer and to the accident.

A. Okay. The ACSES system -- ACSES, first of all, stands for Advanced Civil Speed Enforcement System. That is ACSES. It is an overlay to the automatic train control system or the cab signal system on board. It works with a nine aspect cab signal. It enforces track speed limits, a positive stop at interlocking and control point signals. It enforces temporary speed restrictions and it enforces permanent civil speeds.

It uses a transponder base and radio network communication. The transponder gives accurate location for the locomotive or train, track designation as well. And it also gives direction. So it knows the direction the train is traveling. And transponders are used for permanent civil speed restrictions and for positive stop at home signals. The radio interfaces also with ACSES to allow for route speeds at interlocking. So, if I'm crossing over, it will enforce that crossover speed and any temporary speed restrictions that are on an adjacent track that you're crossing over to.

It also allows for a positive stop release, if we needed to -- if we couldn't display a signal for an engineer, the dispatcher will give authority to pass the signal and to also override the system.

Q. Okay.

A. So that's a quick overview of what the system does and how it works.

Q. Okay. Dave Bucher. Could you give us a little rundown, your knowledge of the ACSES system at the accident site? I understand it was in one direction and it was not in the other direction.

A. ACSES is not in service at that location for either direction.

Q. Okay. All right. Was ACSES in service anytime between 30th Street Station and Frankford Junction interlocking?

A. No.

Q. Okay. Okay. I'm just going to pass it off right now, to my right.

MR. BATES: No questions.

MR. BUCHER: Okay. You got to tell them who it is.

MR. BATES: William Bates. No questions.

MR. NICHOLS: Dave Nichols. No questions.

MR. FIELDS: Carl Fields, BLET.

BY MR. FIELDS:

Q. John, you said the ACSES system is not enforced or not enabled within 30th Street and Frankford interlocking. Is that correct?

A. There's no interlocking at Frankford. The interlocking approaching the derailment site is Shore interlocking. The location is called Frankford Junction -- of the derailment. And

ACSES is not in service between 30th Street and that location.

Q. Okay. Thank you. And where prior, leading up to eastbound and westbound, is it in service?

A. Okay. Between -- I'll give you all the locations. Between Washington and Philadelphia -- so the Mid-Atlantic subdivision at Perryville. Between Perryville and Reagan. And actually make that Prince interlocking, is the name of the interlocking that it begins at. So between Prince interlocking and Reagan interlocking is the location for the Mid-Atlantic subdivision. After 30th Street, between Trenton and New Brunswick is also a location, and the two interlockings that are used -- it begins at HAM interlocking and ends -- HAM, H-A-M -- and ends at County interlocking. And the last location is on the New England subdivision, and that's between New Haven, Connecticut, and all the way to Boston, South Station.

Q. Excuse me, New Haven, Connecticut, and --

A. Boston South Station.

Q. Thank you. So in the areas -- excuse me. So in the areas where it's not enforced or not in place, how many miles would that encompass approximately?

A. I'm going to have to do some -- well, about 170 miles. This is between New York and Washington. Roughly, we have about 60 miles of ACSES territory. It's 225, roughly, give or take a mile or so, miles between Washington and New York.

Q. Okay.

A. All of the railroad that we own between New Haven and Boston is equipped. Metro-North is not equipped, which is the other piece of the NEC. And then we also have the section between New York Penn Station and New Rochelle that is not equipped. And I believe that's roughly 20 miles.

Q. Is there a reason why it's not equipped in the -- where the point of derailment was?

A. That is a question I would defer to C&S, or those that make the decisions for the installation.

Q. Okay. That's all the questions I have at this time. Thank you.

MR. MRUK: Edward Mruk. I have no additional questions.

MR. BULL: Mike Bull. No questions.

DR. JENNER: Okay. This is Steve Jenner. A few questions, please.

BY DR. JENNER:

Q. Can you talk a little about the history of the technology? When did it first get implemented on Amtrak, and did you guys develop it yourselves?

A. It was developed with Amtrak, and working with PHW as the designer and also Bombardier, who designed the transponders and some of the system itself, the wayside. The system was placed into service in late '99, early 2000, I believe, when we put the high-speed train sets into service as part of raising the speeds to operate for the Tier 2 equipment.

Q. Was it required by law or regulation to implement that or was that an internal decision?

A. It was required by law.

Q. Okay. Right now, is there -- are there -- is it still being -- is the technology changing since '99, 2000?

A. Yeah. The technology has changed to -- some of the radio frequencies have changed with the equipment. Overall, the technology has remained the same, relatively.

Q. Okay. Currently, was there any plans to expand its implementation and -- let's just say, before the day of the accident, was it still being implemented on the Amtrak system?

A. Yes. They are installing the wayside equipment, and I believe the majority of the wayside equipment -- and I can't answer that to a full extent, but I would rely on C&S to answer that -- all over the Northeast Corridor, and the plan was to have it up and running as soon as they're completed with that.

Q. How many miles are we talking for the wayside equipment that --

A. All of the NEC, rest of what -- that I discussed.

Q. Okay. But are you aware of any dates for completion?

A. There has no date been given, other than the date required by law, which is the end of this year.

Q. Okay. When an engineer is operating, how does he know while he's operating if he's traveling over a territory where it has been installed or it is not installed?

A. Sure. So on the aspect display unit you have a portion for cab signals or ATC, and then you also have a portion that displays the civil speed for ACSES. And when you enter ACSES territory, there's an audible alarm that lets you know you have entered ACSES territory and the civil speeds will be displayed.

Q. Does the engineer have to acknowledge the audible alarm?

A. They do.

Q. How do they do that?

A. Through the acknowledgers, an acknowledger button that's used for the cab signals, ATC, and also for the alerter, all tied into one.

Q. Okay. So that's the audible part. The visual part has to do with the civil speeds you were mentioning. Is there anything else visually displays that they have to pay attention to now, that -- let's just say, is their workload changed at all if they're operating with ACSES implemented versus it's not implemented?

A. Other than the speed that is displayed for enforcement for civil speeds or temporary speed restrictions, no.

Q. Is there any type of training that they require just on ACSES and what to expect?

A. There is -- during new hire training, they are -- they receive training on ATC and ACSES. And also during their recertification, there's training and testing on those systems as well.

Q. If you know offhand, how long is the training? Is it a --

A. It's all part of a 4-day training program for recertification. For new hire training, I'd have to go and look in the curriculum to know -- tell you how many days it is.

Q. Okay.

A. I don't know off the top of my head.

Q. Well, in general, what would they be trained about? What do they need to know?

A. They're given an overview of how the system works. They are also provided training on testing the system and how the system functions. And then during new hire training, they also perform simulator exercises with the system enforcement. And they're also trained on failure of the system as well, and operation when a system fails.

Q. Okay. How have you found the reliability of the technology? Is there a lot of repairs that go on or have they been pretty reliable for you?

A. It's been pretty reliable. I would say it's pretty robust. In the beginning, I think, and because the technology was new, we saw some more failures than we do today.

Q. Uh-huh.

A. So, yeah.

Q. Okay. Okay. I think that's the questions I have.

MR. BUCHER: Okay. Dave Bucher again.

BY MR. BUCHER:

Q. Changing gears, John, could you give us just a little bit of a background on the cab signal system that was in service approaching the -- and just from the engineer's point of view, approaching the accident area? Because I know that there were cab signals involved.

A. Sure.

Q. You know, could you give us an overview of what he would have had, meaning the locomotive engineer, through the accident area and what effect it would've had on the train operation?

A. Okay. The cab signal that was displayed at the current location, current time was a clear cab signal. Clear is also -- the requirement for clear is operate maximum authorized speed. Maximum authorized speed approaching location was 80.

Q. Uh-huh.

A. But at the point of derailment, the required speed was 50. The cab signal at that time only required that he operate at maximum authorized speed. For that equipment type, the overspeed setting is at 125.

Q. Uh-huh.

A. And that is the enforcement that's going to -- that is when the cab signals were on force for that equipment type. Okay.

Q. Okay. And just as a follow-up question -- so he would not have gotten any less than a clear signal as he approached Shore interlocking?

A. No, unless there was a train ahead or there was something else on the blocks ahead.

Q. Okay. Okay. And there was no limitation -- and where I'm going here is, there was -- the system would not have limited his speed in any way?

A. No.

Q. Okay. Okay.

MR. BUCHER: I think that's all I have right now. To my right?

MR. BATES: William Bates.

BY MR. BATES:

Q. John, the only question I'd ask you is, we know that TSRBs -- they announce you're leaving the station. But any way that the engineer announces to the conductors whether they're in ACSES or non-ACSES territory? That's not required?

A. That's a qualification requirement. They should know that they're in that territory. That's part of the physical characteristics --

Q. For the conductor?

A. And for all --

Q. But he don't have to announce it?

A. No.

Q. Okay.

A. No requirement to announce to anyone.

Q. Okay. All right. That's all I had.

A. Yep.

BY MR. NICHOLS:

Q. John, do you know if they're going to put ACSES on the Harrisburg -- Dave Nichols, Chief Transportation Officer. Sorry. Are they going to put ACSES on the Harrisburg Line?

A. In one statement I did make, they are in the process of installing ACSES on the Harrisburg Line.

Q. Okay.

A. The line between Albany and New York, which is the Empire route, and the Springfield Line, they're also in the process of installing ACSES.

Q. Thank you.

MR. FIELDS: Carl Fields, BLEMT. Oh, I'm sorry.

MR. BUCHER: Observing --

UNIDENTIFIED SPEAKER: (Indiscernible) --

MR. BUCHER: We need to pause.

(Off the record.)

(On the record.)

MR. BUCHER: Okay. This is Dave Bucher, and we're back. And we're going with Mr. Nichols' question.

MR. NICHOLS: Okay. Dave Nichols.

BY MR. NICHOLS:

Q. John, do you know if there's any other way that an engineer knows that they're in -- or a conductor -- that they're in ACSES territory, other than the display on the ADU?

A. They're required as far as their physical characteristics to know where they're at for ACSES territory.

Q. Is it published in the timetables?

A. It is published in the timetable. That is correct.

Q. Thank you. That's all.

MR. FIELDS: Carl Fields, BLET.

BY MR. FIELDS:

Q. John, if you would, there's been some acronyms thrown around here that -- if you would, TSRB?

A. Sure. Temporary Speed Restriction Bulletin.

Q. ADU?

A. ACSES Display Unit.

Q. And that's --

A. ATC and ACSES Display Unit. Let me rephrase that.

Q. Okay. And that's displayed on the screen for the engineer?

A. It is displayed on its -- yeah, its own screen.

Q. Does Amtrak afford speed restriction signs along the right-of-way?

A. For the temporary speed restrictions or permanent?

Q. Either/or.

A. Temporary speed restrictions, yes, in almost all cases. Permanent speed restrictions, most locations are -- on the Northeast Corridor are up in either the catenary sign -- or up in the catenary, but not at all locations. There are in some.

Q. Were they -- was there a permanent speed restriction sign in place at the point of derailment or leading up to it on that curve?

A. Yes.

Q. There was. And that reflected what speed?

A. That would've reflected 50, and it's up in the overhead catenary.

Q. Thank you. Could the cab signal be used to limit the speed of the train prior to the accident?

A. In what way?

Q. Is it designed to enforce an application leading into that area if you're exceeding 50 miles an hour, as the posted speed was -- or the mandated speed was?

A. You could put -- you would have to put a section break in there or a cab signal code change point that would be permanent approaching that would have to be below that speed of that curve for it to enforce.

Q. So it's doable?

A. Possible, yes.

Q. And the last thing I have, if I could. Your qualifications being the senior road foreman, how long have you been with Amtrak?

A. I've been with Amtrak 20 years. I started off in the mechanical department, hired as a locomotive engineer. Worked as a locomotive engineer between Washington and New York and

Philadelphia and Harrisburg. Hired as a road foreman. Worked as a road foreman in Philadelphia and Wilmington. Hired as Assistant System General Road Foreman, worked as Assistant System General Road Foreman for 5 years. Became the System General Road Foreman in 2010, and I've been in this position since then.

Q. And how long as a locomotive engineer, performing?

A. Since 1998.

Q. To -- up to?

A. Till 2003.

Q. '98 to 2003. And you -- were you at any time as a locomotive engineer qualified on this territory of the accident site?

A. This was a territory I operated over.

Q. Thank you. That's all I have. I appreciate it.

MR. MRUK: Edward Mruk. I have no additional questions.

MR. BULL: Mike Bull. No questions.

DR. JENNER: Steve Jenner.

BY DR. JENNER:

Q. We had talked earlier about when someone is entering a territory portion with ACSES that they do get an audio and visual cue.

A. Uh-huh.

Q. What happens when they exit an area with ACSES? Are there any cues that way?

A. There is an audible alarm that -- when you leave the

ACSES territory that you have to acknowledge.

Q. Okay. If you know, or as detailed as you know, the maximum authorized speed approaching the curve was 80 miles per hour. Do you know the distance of that 80 miles per hour? How many miles was it authorized for 80 miles per hour before it turned to 50?

A. It was -- it's between North -- actually, Clearfield interlocking. And I'd have to look at the timetable to give you exact distance. But between Clearfield and Shore is 80. But there's a curve within that, that is -- that requires 65 miles per hour. It's fairly close to Shore, so you would never have gotten up to 80 just so -- most engineers just go in at 60 --

Q. Okay.

A. -- and not brake, so -- that distance -- Shore interlocking is 82, roughly 82.1, and Clearfield I'll tell you if you can give me one minute.

Q. Sure.

A. Clearfield is 84.5, Shore is 82.1, and the curve was just east of Shore interlocking.

Q. I'm sorry, Shore is --

A. 82.1.

Q. And Clearfield is 82 --

A. 84.5.

Q. 84. What are we calling the point of the -- the milepost of the point of the derailment? I'll ask it -- do you

have a determination of that?

A. No, I don't know what -- they actually didn't say. They just gave GPS coordinates yesterday.

Q. Right. Okay. Do you have an approximate location?

A. I think I would say it's around 81.4.

Q. Well, we'll just call that approximate for now. Okay. I think that's all the questions I have. Thank you.

MR. BUCHER: Okay. Dave Bucher, and I just have one more.

BY MR. BUCHER:

Q. And if you could, could you just give -- run through a scenario as you ran -- you would run a train approaching the accident site? And how would you operate a train with -- knowing that you have to control the speed through the area.

A. Uh-huh.

Q. And your experience as a road -- general road foreman and a past engineer, how would you operate a train through the area?

A. I'll give you between Clearfield and Shore.

Q. Thank you.

A. Leaving Clearfield, you're going to -- for me, I'm just going to get the train up to 65. There's a curve right there. Through the curve, and as I come out of the curve you're going to raise your track speed up to 80. I'm going to operate up to 80. Approaching Shore, there's a big -- a red bridge for the elevated

subway. And that's just a cue for me, as an engineer -- a cue for me, okay, get ready to put the brake on. I normally brake for that 50, west of Shore interlocking. And that gives you plenty of time to be down to 50 at the curve.

Q. Okay. And you're actually -- you've got the brake applied as you approach -- you approach Shore interlocking --

A. Uh-huh.

Q. -- you start to brake. And the brake is already applied as you go through the interlocking and then enter the curve?

A. Well, actually, it would be releasing before you enter the curve.

Q. Okay. You've made your brake application and then you're down --

A. Uh-huh.

Q. -- and you release the brake and let it roll through the curve?

A. Yeah.

Q. Okay. Thank you. That's all I have.

MR. BATES: William Bates. No questions.

MR. NICHOLS: Dave Nichols. No questions.

MR. FIELDS: Carl Fields, BLET.

BY MR. FIELDS:

Q. Just one, and -- is it 50 miles an hour for head end only or for the entire train set?

A. It's for the train, the entire train.

Q. Okay. Thank you. That's all I have.

MR. MRUK: Edward Mruk. No questions.

MR. BULL: Mike Bull. No questions.

DR. JENNER: Steve Jenner. No questions.

MR. BUCHER: Okay. Dave Bucher. And this concludes the interview of Mr. John Hines.

(Whereupon, the interview was concluded.)

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF:	AMTRAK TRAIN 188 DERAILMENT NEAR PHILADELPHIA, PENNSYLVANIA MAY 12, 2015 Interview of John Hines
DOCKET NUMBER:	DCA-15-MR-010
PLACE:	Philadelphia, PA
DATE:	May 13, 2015

was held according to the record, and that this is the original, complete, true and accurate transcript which has been transcribed to the best of my skill and ability.

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Jane W. Gilliam
Transcriber