NATIONAL TRANSPORTATION SAFETY BOARD

IN RE:	
THE HEAD ON COLLISION THAT OCCURRED ON BNSF RAILWAY IN PANHANDLE, TEXAS ON JUNE 28, 2016	NTSB Accident No. DCA16MR008

Interview of: AARON RATLEDGE

Wednesday,
August 31, 2016

Panhandle, Texas

BEFORE:

TOMAS TORRES, NTSB
RYAN RINGELMAN, BNSF
AARON RATLEDGE, BNSF
STEVE FACKLAN, BLET
KAMRON SAUNDERS, SMART TD
CHRIS MARTINEZ, FRA
JIM SOUTHWORTH, NTSB
RICK NARVELL, NTSB

This transcript was produced from audio provided by the National Transportation Safety Board.

P-R-O-C-E-E-D-I-N-G-S

JIM SOUTHWORTH: Okay, we'll start again. We're going to do a se

cond interview. Again, my name is Jim Southworth, S-O-U-T-H-W-O-R-T-H. I am the investigation charge for the investigation of the head-on collision that occurred in Amarillo -- sorry, Panhandle, Texas on June 28, 2016. The NTSB number is DCA16MR008. We are still at the Wingate Hotel in Amarillo and our interview for this session is with Aaron Ratledge.

Aaron, we spoke earlier and you consented to having this interview recorded, is that correct?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: And you were told of your allowance to have a representative with you if you felt needed to be?

AARON RATLEDGE: Yes.

JIM SOUTHWORTH: And you do not have a representative, so I guess you're waving that and don't feel the need for one?

AARON RATLEDGE: Correct.

JIM SOUTHWORTH: Okay, thank you.

We'll handle this the same as we did in the earlier interview. We will quickly go around the room,

again, identify who we are, spell your last name and your affiliation with your -- your corporate identification or affiliation and for the labor unions if you can mention the task force that you're a member of.

We'll start to my left and we'll go to my right after that. So, go ahead.

TOMAS TORRES: Tomas Torres, NTSB. T-O-M-A-S, T-O-R-R-E-S.

JIM SOUTHWORTH: And again, I'm Jim Southworth. Then we'll go to my right.

STEVE FACKLAN: Steve Facklan, F-A-C-K-L-A-N. The primary investigator, BLET Safety Task Force.

RYAN RINGELMAN: Ryan Ringelman, R-I-N-G-E-L-M-A-N. BNSF System Safety.

CHRIS MARTINEZ: Chris Martinez, M-A-R-T-I-N-E-Z. FRA.

KAMRON SAUNDERS: Kamron Saunders, K-A-M-R-O-N, S-A-U-N-D-E-R-S. Smart TD, National Safety Team.

RICK NARVELL: Rick Narvell, N like in Nancy, A-R-V like in Victor, E double L, with NTSB.

JIM SOUTHWORTH: And, Aaron, is it okay that we go on a first name basis?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: Okay, and if you wouldn't

mind start with a little bit about your history with the railroad leading up to your current position, and then give us a little bit more detail about what you currently do. Then also spell your first and last name, and then we'll begin our first round of questioning.

AARON RATLEDGE: Okay, double A, R-O-N, Ratledge, R-A-T-L-E-D-G-E. I first started for the railroad with one of BNSF's predecessor railroads, the Sante Fe Railway in Clovis, New Mexico. Hired out in November of 1994 as a brakeman/conductor/switchman, was on the ground so-to-speak for three years, and then in 1997 acquired my Locomotive Engineer's certificate and then ran trains for approximately three years. Then began my entry-level management career at Clovis as an Assistant Trainmaster for ten months, and then was promoted to a Trainmaster in Saint Louis, Missouri. I was in that capacity for a little over two years, and then I was promoted to a Road Foreman of Engines in Birmingham, Alabama.

I was in that capacity for 18 months, and I had responsibilities of a line segment between Memphis and Birmingham with several locomotive engineers and also some division trainmaster responsibilities. At that point in time I was promoted to a Senior Manager

of Train Handling in Forth Worth, Texas, a lot of operating practices, specific duties with that, a lot of event record analysis, train accidents, crossing accident investigation, a lot of derailment scenarios, accident analysis with event recorders. I was in that capacity for about three years and then I was promoted to a Superintendent of Operating Practices in Kansas City. I was in that capacity for about five months, and then promoted to a Superintendent of Operations in Kansas City.

I was in that capacity for about three years, and then I became the Director of Train Handling for BNSF in Fort Worth in 2010. I was on that position for about two years -- excuse me, three years. For the last three years I've been serving in the capacity of General Director of Operating Practices for BNSF. Essentially what my role is, is all things train handling, air brake and train handling rules. My responsibility includes making those rules, assuring that we comply with the federal regulations as their codified and translating those into applicable rules for our engineers and conductors to be able to carry those out accordingly. I do a lot of event recorder analysis, post derailment, and so on and so forth.

Does that adequately answer it?

JIM SOUTHWORTH: Yes, that was good. I appreciate the detail, and for the record he's not on a teleprompter, a good bit of information there. I appreciate it.

So, we'll start with Tomas. Go ahead.

TOMAS TORRES: Okay, Mr. Ratledge, or Aaron, can you explain the BNSF discipline policy?

AARON RATLEDGE: We have a, not in great detail, we have a policy that's called the PEPA Policy and I can't remember exactly what the acronym stands for. It's Personal -- I can't recall what the acronym stands for, but yes, in short we do have a discipline policy. And essentially it is tiered into serious rules violations and non-serious rule violation. And it's progressive. I mean, if there's a rules infraction, then we have what we call an investigation process that's established with a collective bargaining agreement with labor where we carry out those investigations.

TOMAS TORRES: Okay. In regards to the engineer on the striking train the police filed on June 28, I guess task failures and disciplines from all the way from 2012 to 2016, June of this year, how had that policy been implemented? Because on the third paragraph under "Discipline Policies," the way it

reads, it says, "Rule compliance is essential to a safe operation and we expect everyone at BNSF to consistently comply with our safety and operating rules. For those rare cases where an employee shows a marked disregard for BNSF rules, procedure and safety, this policy provides a process to enforce BNSF and federal safety rules."

So, would this had addressed this type of work history?

AARON RATLEDGE: If I understand your question properly, the question is with Mr. Owens past history, which you described, would it have been handled through the type of policy, and my answer to that would be yes.

TOMAS TORRES: Yes. So, he would have been allowed to continue with his pattern of not being consistent in complying with rules and regulations year after year?

AARON RATLEDGE: I would have to get into the details of what each exception would be to be able to say this exception follows this part of the PEPA Policy and this exception pertains to this part of the PEPA Policy to be able to accurately answer that question, and I apologize.

TOMAS TORRES: Well, my question is, too, is

this like your normal work history? I mean, will this be your average? Would you consider it your average work history for an engineer or a conductor?

AARON RATLEDGE: With his -- to what regard, though?

TOMAS TORRES: You know, as far as testing failures, his decertifiable events that he had here from 2012 to 2016?

AARON RATLEDGE: I can speak more to the decertification piece because I'm closer to that, but as far as the rules and testing and procedures, that's really kind of out of my realm of responsibility. But what I can say is that from a decertification standpoint, we have -- I'm not going to quote a number, but we have several engineers across BNSF that have had decertifications and we handle them consistently through the PEPA Policy. Now, some of those decertifications can qualify for alternative handling and some can't. Which ones can and which ones can't, I can't explain. That is a lot of that's dependent upon the field, but I'll call the field the general manager and the upper levels of management from that point.

But what I can say is that we've had several decertifications across BNSF, and for me to sit here and say that Cody was an outstander or someone who

stood out part and above from everybody else, I can't say that.

TOMAS TORRES: Does BNSF have a program in place to identify employees that are a challenge with complying with the rules and regulations? Do they identify individuals like that? Do they have remedial actions for something like that? Other than, you know, like how do they keep track of somewhere?

AARON RATLEDGE: Well, we have databases. Again, I don't want to get caught up talking about those databases because I don't own and manage those, so what I say may not be current or up to date, just to preface it that way. But we do have tracking databases. For example, operations testing. Whenever we have operations testing passes or exceptions or failures, we track that and we document that. For another system that's tackled onto that, I cannot sit here and say specifically what that is and what is intact.

We do have an engineer scorecard, per se, where we actually look at an engineer and based upon several factors we actually rate our engineers. And that is for the field to go out and understand who may need a little more attention more than others. We also, when an individual does undergo a

decertification, we have a remedial training class that we actually send him or her to in Kansas City. It's a two-day class, if they qualify for the class. If it's their first-time decertification, we actually send them, we pay them to go to this two-day class in Kansas City. It's not a rules class, we don't want to be a rules class, the employees should know the rules.

It is a class that we put together that talks more about proactive cab communications, how to talk to your fellow conductor, engineer in the cab to try to prevent a decertification from setting in. Again, we didn't want to go down the rules path, the rules class for this retraining class. The second half of the day is we put them in the locomotive simulators in Kansas City and we take them through unusual scenarios where they can actually practice what they've just learned over the previous day and a half to take what they've learned and practice it in semi-real life and some of the other. A lot of positive feedback we received from that class.

And we've taken pieces of that class and plugged it into several other parts of our enhanced safety training, locomotive engineer training classes, so a lot of the positive nugget's we've taken out of that we plugged it into other spots, so we don't have

to have an employee be decertified to actually go into this class to reap the benefits of it.

TOMAS TORRES: Could BNSF have done anything different with this employee to get him back on track?

AARON RATLEDGE: Not that I'm aware of.

TOMAS TORRES: So, once he's decertified, he goes through that program, then he comes back to the field, what happens when he's back in the workforce?

AARON RATLEDGE: So, when he's back into the field, and again, some others that will be interviewed today can probably explain a little bit better than what I can in the field. What I can say is that when they come back from this training class in Kansas City, they come back to the field with a fresh and new perspective on how cab communications are to be carried out and to practice those.

Typically when they go to this class it's only a 30-day suspension for revocation of their certification. A lot of the times it's reduced down to a 15-day revocation. Railroads have that right under the regulations to be able to shorten that to half the time actually served.

TOMAS TORRES: Now, do you know if this employee went through that program?

AARON RATLEDGE: I do not know.

TOMAS TORRES: Okay. Can you explain --

AARON RATLEDGE: We can find out. I just can't recall right off the top of my head.

TOMAS TORRES: Can you explain the alternative handling and how that works?

AARON RATLEDGE: Yes. Again, I'm going to go back to my previous experience as a superintendent six years ago in Kansas City. The Alternative Handling Plan is a collective bargaining agreement with the railroad and both sides of the labor with BLET and SMART TD and it is a proactive form of alternative handling just like it says in lieu of discipline. For employees who do qualify who are eligible for alternative handling and are candidate and it's a proactive process to where we develop Alternative Handling Plans with labor and management together to help benefit the employee, or as opposed to having a discipline assessed.

But once the rules infraction is incurred, an investigation is issued. If an investigation is issued due to the nature of the sensitivity of the violation, then it's the responsibility of the local chairman to request alternative handling, if wanted. Sometimes alternative handling is not requested and we proceed to an investigation format. Once it is

requested and granted, then that's what executes or kicks off the alternative handling formation for that employee to follow and adhere to.

Once completed, it's documented, it's not made part of their personal record, it's maintained in another database for record-keeping.

TOMAS TORRES: And once the railroad makes a plan, an alternative plan for that specific individual, what's the duration for that plan?

AARON RATLEDGE: It's variable, Mr. Torres. It can last two days, two weeks. It just depends on what the plan has developed. I mean, some of the plans that we created back in 2010 were -- I mean, for minor violations that was -- we had certain computer-based modules that the employee had to take. There were some events where we included that employee and their peers in a peer-to-peer marathon where we had employees at the crew location talking to crews and explaining what the violation was and how they got into it, but others are essentially maybe even coming up with drawing of a safety briefing that can be brought up in explaining the event to be able to be communicated throughout the rest of their peers to try to avoid similar infractions, as that employee was given.

TOMAS TORRES: Here on Section C of the

alternative handling, in one part it reads that the Alternative Handling Plan role in general be less than ten days. For somebody that's struggling, will ten days be sufficient to have remedial training or corrective action? When you go back two, three years and you see that he's been struggling, is ten days sufficient?

AARON RATLEDGE: I think for the Alternative Handling Plan of course a ten-day period is sufficient, but it's the follow-up that we have. I mean, the follow-up (inaudible) 16:55, the follow-up contact rides that we have with that employee is just as much as important that we talk with the employee, check with him, how's it going, any issues, can you share some recent examples of where you polished your training and habits and noticed considerable differences in how you were handling (inaudible) 17:17.

TOMAS TORRES: I'll pass it onto Rick.

RICK NARVELL: I'm sorry, apologies. Good morning, Mr. Ratledge. I have a few questions here based on what Mr. Torres, if I may ask more clarification and additional information, and then I'm going to ask you about Trip Optimizer.

For the record, Mr. Ratledge was able to provide me, last evening the 23rd of August, some

information on Trip Optimizer or TO which I found very useful. I had a chance to go to preliminary and look this morning, and I have that for us here on scene if anybody wants to look at that. So, thank you for that.

Can you talk a little bit more, if you can, about this engineer scorecard? What are the elements in this scorecard, if you know?

AARON RATLEDGE: We look at the train handling events that may have surfaced, we look at testing scores, we look at operations tests from the field that the employee may have had exceptions with, but we also look at the passes. It's a point reduction system, we don't continue to take points away to where an employee over time can't build them back. So, everybody starts out with 100 and they work from there as to how those points come off or go back on.

RICK NARVELL: Okay. Would we be able to get like an exemplary, a clean copy of the scorecard?

AARON RATLEDGE: Yes.

RICK NARVELL: Okay. So I can request to get that at some point from the BNSF.

How many engineers are employed throughout the system on the BNSF, roughly?

AARON RATLEDGE: We roughly have about 9,000 certified locomotive engineers.

RICK NARVELL: Okay. And if you know, could you give us a percentage or a number, or both, of how many of those have utilized the alternative handling program or policy, if you will?

AARON RATLEDGE: I sure can't.

RICK NARVELL: Okay.

AARON RATLEDGE: I apologize, but I can't.

RICK NARVELL: That's fine. So, that 9,400 total, or no? Is that right?

AARON RATLEDGE: Approximately 9,000.

RICK NARVELL: About 9,000, okay. You mentioned this two-day class up in, I guess is that Overland Park over in the schoolhouse up there?

AARON RATLEDGE: Yes, sir.

RICK NARVELL: Which a number of us, including myself, have been to. And one of the things you talked about for the day and a half is the, I believe you used the words "enhanced communication" or "improved communication" between the, a standard scenario of a conductor and an engineer. Are you familiar with the term "crew resource management" or CRM?

AARON RATLEDGE: I've heard the name, but I couldn't give a lot of specifics or details behind it.

RICK NARVELL: Okay. The reason I'm asking

is that in a traditional sense that CRM, it sounded something like that because one component of the CRM is enhanced communication between all individuals in an environment. So, that's what I wanted to clarify, this is something akin to or a variation of resource management?

AARON RATLEDGE: I can tell you its development was not derived from a CRM or any type of a program that you may be aware of, this was an in-house development program.

RICK NARVELL: Okay, good. Thanks. And I guess the last area for now before we get into Trip Optimizer is alternative handling. When did this come into existence between the railroad and the labor? You got a year for us?

AARON RATLEDGE: Don't catch me guessing, but it's going to be early 2000's.

RICK NARVELL: So, it's been around for 16 years and some change roughly?

AARON RATLEDGE: Yes, sir.

RICK NARVELL: Okay. Has alternative handling ever been I guess evaluated or assessed either internally with all the stakeholders and/or externally by an outside entity?

AARON RATLEDGE: Not to my knowledge.

RICK NARVELL: For effectiveness and efficiency.

AARON RATLEDGE: I can't comment on that. I just don't know.

RICK NARVELL: Okay. All right. Trip Optimizer, yesterday, again, just for the record, I had an opportunity to ride in with a train crew on the outskirts of Amarillo with Mr. Ratledge and to observe a working, if you will, Trip Optimizer unit or system, and that in concert with the literature he provided was helpful.

I'm just going to start general and then we'll work down. Can you just tell us, for the record briefly, what the purpose of Trip Optimizer, TO, is and when it became first operational in the BNSF?

AARON RATLEDGE: Correct. So, back in early 2010 time frame, don't quote me on the specific month, the genesis of a Trip Optimizer -- it was first called Trip Adviser. Whenever I came back to Fort Worth from Kansas City in 2010, a Trip Adviser program was being worked on between operating practices and General Electric Transportation Systems out of Melbourne, Florida. And what that was, was essentially a prompting system for enhanced train handling and also a fuel conservation-based play.

So, Trip Adviser, again, was a prompting system, very comparable to New York Air Brake's product called LEADER. But it was shortly thereafter we started to transition over to an automated fuel efficiency, train-handling based tool for locomotive engineers called Trip Optimizer, which was the automatic control of a train's throttle. Automatic control of the dynamic brake was not incorporated at that point in time yet, so in the genesis it was thought to be a fuel conservation tool for locomotive engineers and also to assist with train handling techniques over certain territories of the railroad. But, essentially, it has developed and matured into a product to where it's not only a fuel efficiency program, but it also has benefits inherent to Form A speed restrictions, Form B restrictions and a decertification or mitigation, a decertification or a rules violation mitigation component.

It has the ability to show engineers and actually automatically run through slow orders automatically without a potential violation or a crew overlooking a temporary slow order. Not just temporary slow orders, but we have all the permanent speed restrictions actually backed into the program to where if used in auto, the system cannot speed, or it will

not allow an engineer to get into a speeding scenario, hot or overspeed. It also has the Form B's across the route within the system and it will not allow the system to run in auto through Form B limits. It prompts the engineer to take back manual control of the train 2 miles in front of a Form B.

So, essentially, just before the red flag it will prompt the engineer to take it back into auto control -- I'm sorry, manual control. Again, the genesis was all about fuel, but an inherent safety benefit that's come out of it is decertification mitigation. We can't quantify the amount of decertifications that have been avoided by the use of auto control for engineers that may overlook a slow order or a permanent slow order where we see a lot of our decertifications occur.

RICK NARVELL: Okay, thank you. A couple specific questions based on that. Again, similar to the question for alternative handling, has this technology been evaluated for its efficiency or efficacy and by anyone either internally for the BNSF or an outside entity?

AARON RATLEDGE: So, in the very beginning once we started early on our implementing Trip Optimizer, we relied upon General Electric with their

HMI doing machine interface graphics, displays, just like they've done since the beginning of microprocessor-based locomotives when we introduced computer screens to locomotives back in the late 90's. So, once they started developing those graphical representations, we relied upon them to essentially design and develop those. And we would tweak based upon our experiences with locomotive engineers in the railroad of items that we liked and what we didn't like, and we also got the input from locomotive engineers in the field.

We wanted their input, because they're the ones that's going to be using the system. We want to know what they like, what they don't like, because like I said, I'm not going to use it all the time, they are. So, we want them to make sure that the prompts, the actual icons and the indications on the screen, the rolling map, the topography layout was something that they were going to be able to use from a practicality standpoint. So, at that point in time we relied upon GE. Since then and since PTC, it's been mandated for its integration. We also are going to integrate Trip Optimizer within PTC. We have had an outside HMI firm called (phonetic) Daedalus 27:25 that has done an independent study of the HMI factors with an integrated

and a non-integrated state of Trip Optimizer. And also integrated in the PTC screen, and also integrated left on the OEM or the General Electric or the locomotive control screen, as opposed to combining the two systems into one.

We have had that study done and it came back very favorable.

RICK NARVELL: Oh, so the (phonetic) Daedalus 27:52 study has been completed?

AARON RATLEDGE: Yes, sir.

RICK NARVELL: Okay. And just to be clear, briefly, if you can share, what were the results of that, or can you share that?

AARON RATLEDGE: I mean, there were some very, very minor suggestions as to what they would put it. There was no show-stopping events that were found by their analysis, just minor tweaks, I think was the verbiage that they used. But overall, it was a clean concept where they didn't see any major issues.

RICK NARVELL: What kind of feedback are you getting from engineers in the field on TO?

AARON RATLEDGE: I'm in the field a lot. Part of my responsibilities, for the whole system at BNSF, is to get into the field, is to get on trains, actually run trains, talk with crews, interact with

crews, not just about Trip Optimizer, but about operating practices across BNSF as a whole. As I'm out and riding trains and running trains with those engineers, those conversations include, "Tell me what you like. Tell me what you don't like about anything." And Trip Optimizer is included. And I'm not going to paint a rosy picture, not everybody likes Trip Optimizer, but the majority of people that I do talk to have liked it. They didn't like it in the beginning, because, again, when you first start out with something new, it has to be refined, it has to be perfected.

And in the beginning, I mean, Trip Optimizer had its gaps and since then we have filled numerous of those gaps from a train handling standpoint, from the algorithms in the back office, et cetera, et cetera. But it is clear to me in my journeys across the entire railroad that more and more have embraced it, than have not.

RICK NARVELL: Okay. Certainly a fully engaged, fully functional takes away some of the traditional aspects of an engineer's job. For example, throttle and braking, because it's all put into the computer, unless he or she wants to take into manual. Is that accurate?

AARON RATLEDGE: So, to clarify that a

little bit, all of the air braking is still done with the locomotive engineer. So, the automatic braking and the independent braking, or the engine braking, or the train braking, for transcript clarification, is done by the engineer. The only braking that is done by the system is dynamic braking.

RICK NARVELL: Okay.

AARON RATLEDGE: It can transition from power to dynamic braking automatically. But when an engineer needs air, he or she has the complete autonomy, the complete control of when they need that air and when they don't need air.

RICK NARVELL: Okay. And the throttle, just to be clear, is run by, for lack of a better term, the engaged TO?

AARON RATLEDGE: Yes, sir.

RICK NARVELL: Okay. So, what I'm getting at with this line of questioning is, is there -- when you take the certain, I guess, traditional elements of an engineer's position or skill away from them, the opportunity is there, and I'm not saying it does, the opportunity is certainly there for complacency and possible disengagement. Have you seen or heard anything about complacency, disengagement from the people that are on the front line using this stuff,

this technology?

AARON RATLEDGE: We have heard that there are some cases where some engineers believe that it does cause complacency, but when followed up and drilling into deeper questioning and examples, please provide us with examples of that, we never got anything firm from it. It was more or less just a comment, a general comment that they were making.

But, again, I'll reiterate, we have heard numerous pro's about it than what we have heard con's, or the negativeness behind it. Each one of those have been followed up on to try to understand the employee more as to what they found that was causing complacency or something to that regard.

RICK NARVELL: Okay.

AARON RATLEDGE: But, again, the engineer has complete control of the train. You take it out of auto, you place it back into manual at any point in time he or she feels the need to. It's their discretion.

RICK NARVELL: Okay. I'll go one step further with the complacency and I'll use another word that we're all familiar with here is "fatigue." Has there been any indication or documentation or discussion from engineers that this thing could be

something that could either promote or cause, if you will -- that's maybe not the right term -- or exacerbate a fatigued person?

AARON RATLEDGE: Not to my knowledge, no.

RICK NARVELL: Okay. So, just to summarize here, you've heard kind of anecdotal things about complacency, but when you dug a little further, it was nothing specific came back?

AARON RATLEDGE: Specific to fatigue.

RICK NARVELL: Okay, but and complacency?

AARON RATLEDGE: And complacency, correct.

RICK NARVELL: Okay. That's the two things, complacency and fatigue. Nothing specific has come back on either of those from the users?

AARON RATLEDGE: No. Yeah, just to reiterate, we try to dig a little deeper to try to find out and gain more understanding as to what the employee is inquiring about. We could not get down to the specifics that would actually firm up the employee's confidence.

RICK NARVELL: Okay. And, of course, you yourself have operated this and I saw it yesterday afternoon. From your perspective as a, you started off as a locomotive engineer and now your current position, just for the record, what's your take on TO?

AARON RATLEDGE: I wish we had TO back in 1997 when I was going through the program. I mean, the benefits of the tool that it provides locomotive engineer with the rolling map in front of them -- I mean, giving them their location to a tenth of a mile resolution, benefits them and helps them to understand where their train is at. I mean, when we get -- in the past when we get called, the dispatcher says, "What's your head-end location," we would have to wait until we pass that next mile post before we were able to get a head-end location. We can look at the Trip Optimizer screen and say, "We're at Mile Post 356.3."

RICK NARVELL: I don't want to put words in your mouth, what we're talking about here is establishment and enhanced situation awareness?

AARON RATLEDGE: Yes, sir.

RICK NARVELL: Is that accurate?

AARON RATLEDGE: That's accurate. So, we had essentially put the railroad, a digital track chart if you will, on board the locomotive for engineers to have their toolbox so that they can not only see the upcoming permanent speed restrictions, but also the Form A's and the Form B's that they're going to be encountering that we have typically have had a lot of issues with in the past. Speed violations and Form B

violations we believe have been reduced considerably with the technology of Trip Optimizer.

RICK NARVELL: Okay. The last area of questioning for now for TO is can you give us an overview of what an engineer's training would include when he or she goes down and activates the TO, the training aspect of this?

AARON RATLEDGE: You bet. So, engineers that have not been trained on TO cannot run Trip Optimizer until they've been properly trained. And that training entails, when coming on duty, we give a thorough briefing just like the demonstrative devices that we show in the training packet. We show all the training, we show all the features, we show how to initialize the system, what to expect, all the graphics, step by step setup, initialization, how to check their GTB's with the Form A's and the Form B's that show up in the computer system. We show how the system operates, how to put in manual, how to take it out of auto.

We also do, it's either a train ride evaluation with the employee or we have a NETSIM run that we have the employee go through. They cannot operate Trip Optimizer without going through a train ride or a NETSIM training session.

RICK NARVELL: Okay. For the record, can you just further elaborate on what the NETSIM is?

AARON RATLEDGE: Sure. NETSIM is another tool that's been allowed by the FRA for us to be able to train our locomotive engineers, not only from a TO standpoint or Trip Optimizer standpoint, but allows us also to re-certify our locomotive engineers on a network simulator basis to where an engineer can actually sit behind a computer with a simulator that is laid out very similar to the cab on the locomotive where the engineer actually manipulates the controls and handles the train just like he or she would out on the railroad. And it has all the computer screens, the throttles, the air brake handles, the bells, the whistles, if you will, for an engineer to accurately display his or her capability to run a locomotive and to be able to re-qualify or re-certify under the federal guidelines to maintain certification.

And we have taken that simulator to the next point and the next level and have incorporated the Trip Optimizer software within that. So, the enhancement with the NETSIM is we can actually go through several scenarios with a network simulator that we couldn't necessarily do on an over-the-road train ride. We can actually bake in scenarios to where the engineer will

be faced with that to be able to see all the effects and the -- excuse me, I'm at a loss of words here.

RICK NARVELL: That's all right.

AARON RATLEDGE: The features of Trip Optimizer we can actually have that pre-planned into that scenario from a simulator base for him or her to experience, so they may not be able to get it on over-the-road operations.

RICK NARVELL: Okay. Is there any component of this training that is taught at the schoolhouse in Overland Park or is this all in the field?

AARON RATLEDGE: I need to verify it for sure. I am under the assumption that this has been somewhat rolled out into our locomotive engineer training program. The first three weeks they spend up in Overland Park, but it is very much so a part of the locomotive engineer training program where they're actually in the field with on-the-job training where they're actually out there running the technology. We don't have them run Trip Optimizer every single time, we want them to learn how to run a train first, and then we have them learn the technology. The first priority is how to learn to run a train, second priority is to learn how to run the system.

RICK NARVELL: Are there qualified and

certified individuals within BNSF that may -- I'm kind of taken some liberties here -- have a title of TO Trainer or someone who is knowledgeable that they can impart that knowledge?

AARON RATLEDGE: We have under my umbrella within BNSF, we have Manager of Operating Practices, Fuel Conservation, and they are the TO Trip Optimizer owners across the field. So, they are spread out across the field, they are decentralized, so they have territories, large territories where they manage and carry out the technology of Trip Optimizer. So, they have the responsibility of training and they have the responsibility of overseeing the mentors, the daily team mentors that we have from that group to be able to help and train their peers while they're doing Trip Optimizer training. But they essentially are the owners of that, and they also have PTC responsibility, and they're rolling that out across our system.

RICK NARVELL: Very good. Great, thank you. That was very helpful. That's all I have for now.

JIM SOUTHWORTH: Okay, I got a few. Jim Southworth. Just for the record, the PEPA is a policy for employee performance accountability?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: And that basically

describes it as encouraging all employees to have safe work behaviors, which is an area that we kind of touched upon with Cody Owens, and a safe work environment itself. The class you're talking about, again, just for the record, what was the class called?

AARON RATLEDGE: It's called the engineer decertification retraining class.

JIM SOUTHWORTH: Decert retraining class?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: So, when they're in that class, they're already on a suspension of some sort (inaudible) 40:23, maybe up to 30 days?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: On completion of the class, then the suspension gets possibly chopped down to 15 days or less?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: Okay. Are you familiar with the LEADER system?

AARON RATLEDGE: Yes.

JIM SOUTHWORTH: Okay. And at some time did BNSF consider the LEADER system with Trip Optimizer?

AARON RATLEDGE: Yes, sir. We did.

JIM SOUTHWORTH: And my next question is obvious. And you felt that the corporate feeling was

that TO was better for the BNSF?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: Okay. You talked a little bit about mentors.

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: Is Josh Roberson one of those mentors?

AARON RATLEDGE: No, a mentor is a BLET locomotive engineer.

JIM SOUTHWORTH: Okay, that's been trained and chosen?

AARON RATLEDGE: Yes, trained and chosen by agreement.

JIM SOUTHWORTH: So, person within the craft?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: Good. I, too, got the opportunity to ride a train yesterday and one of the things that I picked up on, and I'll make a couple of comments about fatigue. We've used the word "fatigue" a few times here, and I just want to make it clear, we or BNSF or you let's say do not seem to believe that just the use of Trip Optimizer en route and the daily duties of the engineer is fatigue, causes fatigue?

AARON RATLEDGE: I definitely never

suggested that, and have no knowledge to make me believe that.

JIM SOUTHWORTH: All right. And then we talked about complacency and Rick had some very pertinent questions about the effects this might have on an engineer. If an engineer is fatigued because he hasn't had enough sleep or something like that, there's personal things in his life that kept him from getting enough rest or whatever, then is there a possibility that Trip Optimizer might contribute to the effects of fatigue en route, in place with an engineer in operation, when he's had those types of problems prior to getting on the train and taking control of the locomotive?

AARON RATLEDGE: I can't answer that.

JIM SOUTHWORTH: Okay, that's fair answer. I just wasn't sure if you had any feelings on that or not.

And I understand just from some of the literature I've read about Trip Optimizer, and it has some benefits from an operating standpoint and efficiencies as it relates to the components on a train, the locomotive power, and certainly the consumption of fuel. Is it safe to say or would you say that Trip Optimizer is more about the efficiency of

the operation of the train that might actually save money in fuel and isn't really designed or is it designed to make things safer?

AARON RATLEDGE: So in the beginning, like I said, the genesis of it was to save fuel.

JIM SOUTHWORTH: Right.

AARON RATLEDGE: But an inherent benefit that has evolved, it has been realized that with the incorporation, with the enhancements over time, when we're putting in Form A's and Form B's and permanent speed restrictions, it has been realized that it is a rules violation mitigation engine, if you will. You got to be able to understand that employees while in auto, they cannot get into a speeding event, because the system has got all that and it drives to those speed limits to where it cannot overspeed.

JIM SOUTHWORTH: Okay. And what I'm getting to, also, with that is it gives a little bit more enhanced knowledge in a situation whereas where they're trained is, and I recognize your comments on that about being able to pick out a mile post immediately versus searching for (inaudible) for a few minutes, that type thing.

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: One of the things I did

notice yesterday, and I was looking for this actually, not to come back to others opinions about complacency and what effects it might have on an engineer, negative effects that is, is I did notice and asked some questions while on the ride that anytime I come to a control point, am I required then to at least tell the system what track I'm on?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: So, I look at that and I'm wondering if that's an additional task that's put into the cab for locomotive engineers to accomplish because there's TO?

AARON RATLEDGE: That's correct.

JIM SOUTHWORTH: Without TO there's no form and there's no radio announcement or anything like that, that I need to do about verifying what track I'm on?

AARON RATLEDGE: That's correct.

JIM SOUTHWORTH: As compared announcing the signal?

AARON RATLEDGE: That's correct.

JIM SOUTHWORTH: Particularly anything less than a clear?

AARON RATLEDGE: That's correct.

JIM SOUTHWORTH: And so this is like an

added task?

AARON RATLEDGE: That's correct.

JIM SOUTHWORTH: Okay. If I choose, if I'm not mentored and I'm not trained to run Trip Optimizer and I initialize, have I violated a rule?

AARON RATLEDGE: No.

JIM SOUTHWORTH: Okay. If I have a conductor that's riding with me and I'm an engineer and he's qualified in the territory and has been through a mentor's program and he wants me to put it in place, can I do that as an engineer even though I'm not trained?

AARON RATLEDGE: You cannot run the system in auto if you have not had the proper training.

JIM SOUTHWORTH: Okay. But if I do, what happens to me?

AARON RATLEDGE: Then if it's discovered, then we have a discussion with that employee and find out why he elected, he or she elected to run it in auto when not trained.

JIM SOUTHWORTH: All right. Do we have a specific rule other than it says if you're not trained, don't do it?

AARON RATLEDGE: We have a rule in our air brake and train handling -- I'm not going to quote it,

Jim, but I need to go back and refresh it, I don't know if it says verbatim, "Do not use if you have not been trained." I know we've had multiple Form C's out there and we have general notices out there that do state that. And I would have to resurrect that just to be absolutely sure that we say it black and white.

JIM SOUTHWORTH: And when the mentor is in the (inaudible) 45:50, the mentor actually rides the train with that engineer?

AARON RATLEDGE: Yes, or oversees the NETSIM or the network simulator with that engineer.

JIM SOUTHWORTH: In a training environment possibly in Kansas, or Overland Park, or --

AARON RATLEDGE: Yes.

JIM SOUTHWORTH: Okay. And is it pretty well standard for all new engineers that they go through this training in Overland Park?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: So, they wouldn't need a mentor when they get out of line on the road?

AARON RATLEDGE: That's the idea.

JIM SOUTHWORTH: Okay. The other question I have is on the other side of the dime. If I've been mentored or I've come through the training program and I've been exposed to and it's equipped on my train and

I'm supposed to initialize its origin and I choose not to do so, is that considered a breaking of a rule?

AARON RATLEDGE: Yes. Well, okay, so there's a lot of pieces that goes into this before -- can we just talk about this, we call it "energy management accountability." So, for years, while TO was being matured, we did not absolutely just slap our hand down on the table and say, "Thou shalt use it or you're going to be disciplined." We understood that there was a development curve in process. Whenever we felt, my department felt it was up to the standards of what a locomotive engineer was expected to run his or her own train, then at that point in time we felt the system was robust enough to begin starting the mandatory use of it when possible, when only operating on clear signals, not through Form B's, et cetera, et cetera, et cetera.

Now, if we do find an employee that -- let me just take you through the process. If we find an employee that historically has a record of not utilizing the system to its fullest potential, and we have to see several occurrences before we even send a warning letter to him or her. If we had identified an employee that consistently does not use it, then we find that through event recorder analysis and

investigation where the individual had multiple TO units on the point of their train and failed to initialize it, or if they initialize it, and they don't use it in auto and we know that there was clear signals between Point A and Point B and they weren't utilizing it, we have to see a pattern, a repetitious pattern before we even execute a letter to go out to this employee to say, "Hey, we're noticing this. We really need you to start using the system." And at that point in time we say, "This is a warning." We don't even enter it into the Operations Testing database.

It is a warning that we track. I mean, we're going to track to see if this employee shows up again for non-use of the system. Then it could result in an investigation. So, just because we identify them on the forefront, we don't even execute an investigation at that point. We give them the opportunity, to the employee to actually start utilizing the system.

JIM SOUTHWORTH: It's not like a Level 3 safety violation?

AARON RATLEDGE: No, sir.

JIM SOUTHWORTH: It's more of an aid to performance.

AARON RATLEDGE: It's a coaching and

counseling event.

JIM SOUTHWORTH: Okay. Now, Mr. Owens, had he been mentored or did he come through a training program where he was exposed to Trip Optimizer?

AARON RATLEDGE: I need to research that. I don't have that.

JIM SOUTHWORTH: Okay. And I'm assuming that most of the time when there's a detection of non-use or misuse or not efficient use or not enough use that comes from that program data, then that's used in the basis for all those types of things?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: All right, good to understand. I'm assuming, I picked up on one thing when I was out there, and that's the one I just mentioned, but I haven't entered into the system will track you on. It doesn't automatically do that, so you need to do that at every control point, just put a few out there along the road. You have to be attentive to that as well.

AARON RATLEDGE: That's correct.

JIM SOUTHWORTH: If there's any other items like that, are they included in the documentation that you give them in order to know about TO?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: Okay. Are you or would you say you are, or do you feel that you are the point person for BNSF on Trip Optimizer?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: Okay. And at a fairly high level? I mean, is there anybody above you that has more responsibility for knowing and understanding, monitoring, overseeing, if you will, the programs so that it rolls out properly, that no employees are destructive, probably that kind of thing?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: And looking to the efficiency, that's pretty much under your realm?

AARON RATLEDGE: That is my responsibility.

JIM SOUTHWORTH: That's why I have the right guy in the chair.

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: Okay. All right, that's all I have for right now. The only other question that I might have is that can you tell me what data from Trip Optimizer, if any, is captured on an on-board event record?

AARON RATLEDGE: We capture -- it will be an exhaustive list.

JIM SOUTHWORTH: So, exhaustive list in with

the literature?

AARON RATLEDGE: Yes. Well, the literature will not have the event recorder elements, but we -- I can't remember if we supply that to Mr. Torres or not. But if not, we can get that information.

JIM SOUTHWORTH: Okay.

AARON RATLEDGE: We made sure whenever we were designing Trip Optimizer with GE, we wanted the necessary elements inside the event recorder that would show the state of Trip Optimizer, whether it's in auto, whether it's in manual, whatever state it was in. We also wanted to know the position of the master control, the throttle notch, the physical state of it. So, when in auto, the physical state of the master control or the throttle is in Notch 8. So, whenever the event recorder also shows what Trip Optimizer is commanding -- (inaudible) 51:33 and if distributed power equipped, it'll show what it's commanding the rear consists what throttle it has to be in. It could be throttle or it could be (inaudible) 51:42, but we have an exhaustive list of event recorder channels that we added to ensure we understood what the system was and what it wasn't doing.

JIM SOUTHWORTH: Good. Is there any direct tie-in -- I know there is to the event recorders -- any

direct tie-in and/or effect of Trip Optimizer on the use on alert?

AARON RATLEDGE: No, not at all.

JIM SOUTHWORTH: Okay.

AARON RATLEDGE: So, let me clarify that. So, the alerter on today's locomotive, the microprocessor-based locomotive, only is reset on a human touch. So, a human or an engineer has to change the throttle, has to push a soft button on a computer screen, blow the whistle manually, blow the bell, push the bell, any kind of a brake handle operation, any movement or any kind of response seen by the system, by a human, that will trigger the reset of an alert. Trip Optimizer, any throttle manipulations that the system is commanding has no effect on the alert. The only thing that can reset the alerter is the engineer pressing something in that cab.

JIM SOUTHWORTH: All right, so if I'm on Trip Optimizer and I'm on a totally clear block, the paperwork I have before I got my train and took into play, pretty much leaves out for me several clear blocks. I initialize it, it's running. And I'm an astute engineer and I think I see something ahead of me, could be another train, could be something in the crossing, could be what he thought may be a kinked

rail, something like that, things that are visual for locomotive engineers to see. And I decide to make a brake application while I'm looking, and I take a full 20 pounds, or maybe I take 8 to 10 or something like that. I'm not going to emergency, but I really want to get control of the train and start retarding forces, because if it is something, I don't want to hit it. Does that disable Trip Optimizer at that point?

AARON RATLEDGE: Yes.

JIM SOUTHWORTH: So, once I verify then that it's not an obstruction or the truck got out of the way of the crossing, and I go back to Notch 8 and I start to accelerate, how long do I wait or should I immediately put it into Trip Optimizer?

AARON RATLEDGE: No.

JIM SOUTHWORTH: Do I need to go back up to 8? Do I need to be back into acceleration mode or I need to be stabilized or something like that, or can I go right to Trip Optimizer once I made a determination I still have a clear block?

AARON RATLEDGE: So, if the engineer is committed and has set 20 pounds of a train, the engineer will be forced to a manual state. The engineer will then get his train under control, cannot re-engage Trip Optimizer until the brakes are released

and until an engineer verifies you're back on the clear, you are on a clear signal. But an engineer will wait until the brake pipe has normalized, is going to wait until he has actually a clean release before they re-engage Trip Optimizer. So, there can be several minutes that lapse between the time that he or she set 20 pounds and by the time they actually get it back into an auto control state.

JIM SOUTHWORTH: And if I was an engineer, I'd still have control?

AARON RATLEDGE: Absolutely. You can set air anytime you want.

JIM SOUTHWORTH: Can I do the same with dynamic?

AARON RATLEDGE: You have to take it out of manual and go right into dynamics, yes.

JIM SOUTHWORTH: And, again, once I get control of my train, come out of dynamics, start to accelerate and that sort of thing -- I understand that we have to brake back to 9 and just kind of applies to the future, so and so forth.

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: Okay. All right. I'm particularly interested in just gathering more data if it's available on any additional tasks. You talked a

lot about some tasks that seem to be taken away, because I'm not manipulating the throttle, the system actually takes over and does that for me based on some studies and algorithms or whatever and the system more efficiently run this route with this train that would use certain things at certain times. I get it, but I'd like to know if there's more that's required of an engineer --

AARON RATLEDGE: You bet.

JIM SOUTHWORTH: -- because of the installation of TO? And if it's in the literature, we'll look for it. If not, you can expect more questions, but keep that in mind if you wake up in the middle of the night and think of something, we'd like to know.

AARON RATLEDGE: Absolutely. And I will just also make one other further add-on or clarification. We've heard more from engineers that the system when using in auto actually allows them to look out the window more, so they can actually not miss a whistle post or a signal indication by not having to constantly look back into throttles or look down at the screen several times. They're able to focus more on the outside. And also, able to have conversations more in the cab with their conductor. I mean, that's just

what I've observed and witnessed on the hundreds of train rides that I've been on out there.

JIM SOUTHWORTH: All right. I'll go back to Tomas Torres for a follow-up.

Are you doing okay, do you need a break or anything?

AARON RATLEDGE: I'm good.

JIM SOUTHWORTH: Okay, so we're going to --

AARON RATLEDGE: Everybody else.

TOMAS TORRES: Tomas for the NTSB. And going back to the discipline and alternative policies, so it could be that the BNSF complied with all the guidelines and policies, would BNSF be reactive versus being proactive for this particular engineer?

AARON RATLEDGE: Again, Tomas, I'd have to get into each disciplined event and look and see what the discipline was assessed, because I have not -- in all fairness I have not done a deep dive analysis on Mr. Owens and his past record and history. I'm sure others have at BNSF, I just cannot comment on him at this point in time.

JIM SOUTHWORTH: This is Jim Southworth. Let me just interject that the witnesses we have later, would they have more input on that?

AARON RATLEDGE: I believe so.

JIM SOUTHWORTH: Specifically to what's required, what's part of the policy, what's part of the agreement, what they can't bypass, what they can --

AARON RATLEDGE: I believe that's fair.

JIM SOUTHWORTH: And explain a little bit more then what that will do is explain just a little bit more about how they use what's in place to make a determination as to whether to go that route, the alternate or not?

AARON RATLEDGE: Yes.

JIM SOUTHWORTH: Okay. And there are some violations that it's just not eligible? We'll get more detail from them?

AARON RATLEDGE: I think so, yes.

JIM SOUTHWORTH: Okay. All right, Tomas?

TOMAS TORRES: Okay. It's Tomas again with the NTSB. With your knowledge, with your understanding of the alternative handling, was that designed for the occasional violation or is it just kind of you dequalify regardless of what you've done the last four years, you're still going to fall into, be able to use that? Does it need to be revised, to be looked at again?

AARON RATLEDGE: I'm not the person qualified to say it needs to be revised or anything,

but what I can say is that when that document, when that agreement was made several years ago, it does not cover -- as you get the Safety Summit Agreement, as you read through it, you'll see that there's certain violations that are not covered under the Alternative Handling Agreement. Serious violations are not covered, and it gives examples of what those serious violations are. But I'm going to say 95%, 90% of violations were covered under that. Now, don't hold me to that percentage, but I'm going to say there is more alternative handling granted than what was denied. I'll just say that.

And, again, that's going back to my experience as a superintendent six years ago.

TOMAS TORRES: The reason I'm asking is because there's tendencies, right, even though they don't meet that serious violation stuff, but there's tendencies on his record that he was kind of gradually moving up to a more serious violation, and usually there's a progression of behavior that leads up.

AARON RATLEDGE: Right.

TOMAS TORRES: And that's what I'm getting at.

AARON RATLEDGE: Yes. And so, and as you read the Safety Summit, you'll see that there's a

progressionary stipulations in there and that if the same offense is committed within a, I think it's 24-month period, then they don't qualify for it. They got to be outside of that two-year long period to where they would become eligible. So, I think that gets to the root of your question to address that type of behavior. If it's the same rules violation, this employee continues to have the same issue, the same area, we're not going to grant alt handling every single time that employee has the issue. We would further into the PEPA Policy with an investigation.

TOMAS TORRES: That's all I have.

STEVE FACKLAN: Steve Facklan, BLET Safety Task Force. We'll continue on with the PEPA and the Safety Summit Agreement. Kansas division, what operating groups are covered by the Safety Summit Agreement in the Kansas division?

AARON RATLEDGE: (Inaudible) 1:00:34

STEVE FACKLAN: Would it be safe to say that it's just the BLET because the UTU has pulled out?

AARON RATLEDGE: I don't know. I can't comment on that.

STEVE FACKLAN: Okay. Alternative handling, you mentioned I think earlier different classes of alternative handling, Class 1, Class 2, Class 3. Can

you give us an example of each Class 1, Class 2, 3?

AARON RATLEDGE: Okay. Just for the record, this is six years ago I'm resurrecting these memories from. So, a Class 3 alternative handling event at that time would be like an attendance guidelines violation or a miscall, exception where an employee is not available for call. Class 2 violation would be an operations test exception. A Class 1 violation would be a violation of such that would result in a decertification, a decertifiable event.

STEVE FACKLAN: And I know with the alternative handling you develop an action plan with the employee to go over. The action plan can last, I think we covered from a few days to longer, whatever that action plan's developed, but the overall alternative handling is there a probationary period after, even after the approaching and counseling or the action plan's done?

AARON RATLEDGE: Within the Summit guidelines it clearly spells out what the thresholds are based upon each class. So, Class 3 has a certain amount of time you can't violate the same rule in. It's progression, it works up to where you're not eligible. But a Class 2 has stronger thresholds and the Class 1 obviously has even tighter thresholds,

because those violations are of a serious nature, and if those continue to repeat themselves, then we certainly don't want to continue the alt handling path.

STEVE FACKLAN: Okay. I got up on my computer the Safety Summit Agreement and Class 1 covered offenses subject to alternative handling, under Item 6 Section A for the different classes, Class 1 offense would be rules violations that's subject to company or individual TFR fines, results in an accident or injury or a result of a decertification, violations of all rules designed to protect people and equipment other than PTE.

And then I was reading down here on employee eligibility for alternative handling. For Class 1 offenses, an employee is ineligible for alternative handling if he or she has more than one prior alternative handling offense for Class 1 violations; 2, three violations of any kind in the previous 12 months; or 3, a Class 1 violation in the previous 12 months; or Class 4, a violation of the same Class 1 offense in the previous 24 months. Going back to Mr Owen, he was decertified from an incident I believe that happened September 21, it was a decertified event that Mr. Roberson had talked to us earlier, that they caught on the tapes, and he was decertified and then went back to

work and had breaken his status, I believe they said until March 16th, okay? And then after March 16th he was recertified, had his license reinstated and be able to work as an engineer.

Following that, June 1st, Mr. Roberson stated he had ops test failure, he self-reported going by too fast an approach signal and alternative handling was offered, and he was in the process of working out that plan when this Panhandle accident occurred. I guess my question would be he was decertified previously, which would be a Class 1 offense, how is he offered alternative handling, because it's within that 12 months, because according to the Safety Summit Agreement he should have been ineligible to be offered alternative handling because he had a Class 1 offense within a 12-month period before?

AARON RATLEDGE: Yes. I don't know. Was it a Class 2 -- I'd have to find out how the division classed it up.

STEVE FACKLAN: Okay.

AARON RATLEDGE: Did they offer a Class 2 or Class 3?

STEVE FACKLAN: No, it was a decertified event, which according to the --

AARON RATLEDGE: Well, back in September,

right?

STEVE FACKLAN: Yes.

AARON RATLEDGE: Okay, but what about the event on June 1st, that was not a decertified one, correct?

STEVE FACKLAN: There was not a decertified event --

AARON RATLEDGE: So, what class --

STEVE FACKLAN: But according to the Safety Summit Agreement he would have been ineligible to be even offered alternative handling because he had, it states Class 1 offenses an employee is ineligible for alternative handling if he or she has, one, more than three prior alternative handling events for Class 1 violations, which he hadn't had according to any of the information we have; 2, three violations of any kind in the previous 12 months, which I can't tell you if he got; but number 3, a Class 1 violation in the previous 12 months. And up above that, it's a Class 1 offense would be including a rule violation that had resulted in a decertification.

AARON RATLEDGE: Yes. So, without looking at the plan or the agreement, all the specifics of Mr. Owens violations, I can't answer it at this point as to why he was or was not eligible for the alternative

handling event.

STEVE FACKLAN: Maybe next interview is they probably have more detail on that?

AARON RATLEDGE: I don't know. I'm assuming, I can't say for sure, Steve.

STEVE FACKLAN: Okay.

AARON RATLEDGE: I'd have to do some research to be able to give you an accurate answer.

STEVE FACKLAN: All right, let's see. Let's go back to Trip Optimizer and the training. Beyond, when an engineer is going through training class, when a student engineer is going through his training class at Overland Park, would you say that they, part of that is Trip Optimizer training in the simulators that they have there?

AARON RATLEDGE: I need to verify that. I mean, I think what I said was that their LETP program, when they're in the field running locomotives actually in the field, part of that is Trip Optimizer. The first half of it is learning how to run a train first. I need to verify what elements are part of that first three weeks and what elements are not.

STEVE FACKLAN: And if you can, can you get us follow-up on that, any kind of retraining that the college may do when they're recertifying on the

NETSIM's or they're going for the Year A on the NETSIM's, if they do any kind of follow-up retraining, anything beyond on the job?

AARON RATLEDGE: Yes, I would associate it to something similar to distributed power. So, we look at what retraining is needed for distributed power and we kind of base it off the same methodologies. I can find that out.

STEVE FACKLAN: All right. I just wanted to have you clear this up earlier, you talked about the Trip Optimizer and it could eliminate speed violations, and to clear up, if you have a verbal Form A crossing notification that your Optimizer couldn't prevent?

AARON RATLEDGE: Not yet, but it's coming.

STEVE FACKLAN: Okay.

AARON RATLEDGE: Once we integrate with PTC, it'll all gel together to where crossing warning notifications, verbal Form A's, Form B's when they expire will automatically jive with PTC. Come in, come out, it'll be dynamic.

STEVE FACKLAN: Okay. So, right now they would still if they get a verbal Form A, they would still have to put it in manual crossing warning notification?

AARON RATLEDGE: Yes, sir.

STEVE FACKLAN: Okay, I just wanted to clear that up. And I think you had touched on this, but if an employee did not initiate the training that was equipped with the Trip Optimizer -- I'm not talking about discipline or anything here, but does BNSF consider that a violation of an air brake train handling rule at this time?

AARON RATLEDGE: Here's my answer to that, is we want to see a pattern of an employee. So, if an employee has nine trains out of ten and that employee initiates Trip Optimizer on nine of the ten and for one trip he or she didn't, we're not going to waste our time with that. We want to see a pattern of non-usage, someone who's going to continuously bow on the top to have no usage whatsoever. Those are the individuals we'd like to understand what's preventing them from using the system.

STEVE FACKLAN: I understand that. What's getting communicated to the crews, are they told that it is a violation of air brake and train handling on the rules?

AARON RATLEDGE: If it's not used to the fullest extent, yes.

STEVE FACKLAN: Okay.

AARON RATLEDGE: Under 106.9, that outlines

pretty clearly in black and white what the expectations are, just like any other rule in the rule book, right?

STEVE FACKLAN: That's all I have for now, thanks.

RYAN RINGELMAN: Ryan Ringelman. So, you went through your history, your career. Where were you at in 2001, 2002? What job were you at? Do you recall?

AARON RATLEDGE: I was an Assistant Trainmaster in Clovis and transitioning over to Trainmaster in Saint Louis, Missouri.

RYAN RINGELMAN: So, were you involved in the negotiation of the Alternative Handling Agreement in 2001, 2002?

AARON RATLEDGE: No, I was not.

RYAN RINGELMAN: In your current role are you involved in alternative handling decision-making or considerations?

AARON RATLEDGE: No, I'm not.

RYAN RINGELMAN: Thank you.

CHRIS MARTINEZ: Chris Martinez, FRA. Just one question on the TO. If you're coming down on a green and you hit a yellow light, can you walk us through what happens, what you got to do?

AARON RATLEDGE: Absolutely. So, the

question was if the train is in auto control and the engineer is running on clear signals, what happens whenever he or she comes to an off-colored signal, is that correct?

CHRIS MARTINEZ: That's correct.

AARON RATLEDGE: So, the instructions are today pre PTC integration, an engineer is only allowed to run in auto control when operating on clear signals. When an engineer sees a flashing yellow, he or she is to be out of auto control by the time they reach that flashing yellow. So, simply put, you cannot run auto control on anything less than a clear. Now, if you have a diverging route, red over green or an advanced approach that allows you to go through a crossover at 50 mile an hour, just to the point that Mr. Southworth was making earlier, the system will ask you what track you're going to be taken beyond each control point. And that's 1,000 feet before each approach to each control point where the system is prompting you for that answer.

And if you say that you're going to take the crossover, the system replans in about six seconds. Once it replans, it automatically starts taking the train into a state to where it's going to comply with the crossover speed. If it sees that it can't and it's

going to need additional air braking and the engineer's going to need to intervene, that's when the system says in transitioning back to manual, I can't get you down here with just dynamic brake, so the engineer takes over at that point.

CHRIS MARTINEZ: So, then can you go through a yellow, like a little hot thing at all?

AARON RATLEDGE: No.

CHRIS MARTINEZ: It'll stop it?

AARON RATLEDGE: Well, I mean, Trip Optimizer today does not see signal indications.

CHRIS MARTINEZ: Right.

AARON RATLEDGE: So, if the train goes through a yellow block hot, it's because the engineer did not take control of the train.

JIM SOUTHWORTH: Or abide by signals?

AARON RATLEDGE: Correct.

JIM SOUTHWORTH: That was Jim Southworth to interject and clarify.

CHRIS MARTINEZ: That's all I have.

KAMRON SAUNDERS: Kamron Saunders, SMART TD. You mentioned scorecards and I think that comes with a numeric number.

AARON RATLEDGE: Yes, sir.

KAMRON SAUNDERS: So, you start out at 100

and as you -- if you have things take away from that number and then I'm sure add back, do you know what -- you may or may not -- do you know an average number for engineers? Or is there a threshold that they get below to where that becomes an issue or that engineer becomes an issue?

AARON RATLEDGE: So, we have different tiers, if you will, for lack of a better term, to where a certain amount of points do become deducted. They get into a state of where the SOP's in the field, the Superintendent of Operating Practices, actually -- again, I'm not going to quote the goals and the guidelines that they have for (inaudible) 1:14:50, but they have a mechanism in place to where they do take a closer look and be able -- I mean, essentially alert them to say, "Hey, this guy is getting pretty low on the score. You need to get the employee to find out what additional help we may be able to provide him or her."

KAMRON SAUNDERS: Do you know what that number is?

AARON RATLEDGE: I don't, not off the top of my head. I can't remember.

KAMRON SAUNDERS: Do we have information on what the engineer on the Eastbound train score was?

AARON RATLEDGE: I'm sure we do. I just, I don't know if we provided that here or not. We can get it, we can certainly get it.

KAMRON SAUNDERS: Okay, thank you.

All right, going to Trip Optimizer, so if I'm running along and it tells me I need to set air, or there's just a spot, not because there's something bad fixing to happen, but will Trip Optimizer say okay, because you're going down a hill, set minimum reduction? Does that take you out of automatic? So you set that air, then it tells you to kick it off?

AARON RATLEDGE: So, if you -- again, this is the very latest version or enhancement of Trip Optimizer -- if it calls for a minimum set, an engineer sets a min set, it will stay in auto and it will advise when to kick the air off. But you can stay in auto up to 10 pounds when the air is set, anything above 10 pounds the system will take you back to a manual state.

KAMRON SAUNDERS: Okay. If I don't respond to setting air or kicking it off, will that put you in penalty?

AARON RATLEDGE: No, not a penalty. It will take you back to a graceful disengagement. If you're in dynamic brakes, it will maintain the dynamic brake state, it will not come out of dynamic brakes. The

idea is to keep the engineer at a brake state, to maintain that brake, but if you're in a throttle state and the engineer's not complying with the prompts or the indications, it will take you all the way down to idle. And again, then we rely on the alerter system, if the engineer's incapacitated, then the alerter system will set up a penalty to bring the train to a stop.

KAMRON SAUNDERS: Okay. And you also talked about running on multiple main track. You said it'll prompt you 1,000 feet prior to that control point?

AARON RATLEDGE: A 1,000 feet prior to the approach signal to that control point, so you can be two, three miles.

KAMRON SAUNDERS: Okay, good. That's good. What happens if you don't acknowledge that or you don't answer it?

AARON RATLEDGE: It will push you back to a manual state.

KAMRON SAUNDERS: Okay. Is there anything in a tie-up screen when they go off duty where you report whether or not you were in Trip Optimizer and any issues with it?

AARON RATLEDGE: Any issues we have with Trip Optimizer or the crew feels for maybe future

enhancements, we have a form essentially that gets filled out and sent to our manager of operating practices to be able to add future enhancements to the program. But we do not require that they say, "I used it X amount of miles." We can look and see where all that stuff is in the back office, we don't have to have it told. It's just we don't want to put the burden on the engineers to add that extra step on tying up.

KAMRON SAUNDERS: Sure. Okay, that's all I have.

RICK NARVELL: This is Rick Narvell with the NTSB. I just have a couple, again, follow-ups and a clarification on TO, and I think I'll be done.

Aaron, I did look up in the book you provided and you did reference ABTH 106.9, which says that if it's equipped, employees shall engage. But what you were indicating earlier is you're looking for patterns of non-use here. You're not going to hold that so stringent there, is that accurate?

AARON RATLEDGE: Yes. I mean, this is -- like I said, we're taking a very, very proactive approach to the non-usage of it.

RICK NARVELL: Gotcha.

AARON RATLEDGE: We are not going to sit there and go after somebody for not initializing or not

taking a trip whenever their history has been impeccable. We have to have a clear pattern of non-usage before we reach out to the employee to understand what would be preventing them from using the program?

RICK NARVELL: Okay, thank you. Because when I read that I heard this -- like I said, there's not a waiver per se, but it's more of an eyeball on that particular engineer if he or she rises to the level of non-use.

AARON RATLEDGE: We want our employees to use the technology.

RICK NARVELL: Right.

AARON RATLEDGE: Like I said, we've ran over 50 million miles in auto and we have not had one decertification as a result of that when the employees were not, when using the system properly. I mean, it's just huge. Probably the most disheartening piece out of all of this is whenever they initialize the system and they're running it in manual, and they go through a slow order hot and have to be decertified. If they would have been in auto, they would have automatically complied with the speed restriction. They would not have gotten into that decertifications they're in. Those are the hardest ones to take.

RICK NARVELL: Yes. Just, again, for my

edification here, and what I'm looking for is can you kind of walk us through or speak to what an event recorder would capture from a TO that's engaged, and then what from that is looked at by a trainmaster or a supervision?

AARON RATLEDGE: So, the event recorder captures, it's got a channel in there that tells whether the system is in auto or in manual, and it also has a planned speed line as to what the system thought the train should have been achieving, and that's all determined upon how many engines are online, how many dynamic brakes are cut in or cut out, and it builds that plan. It's pretty close. So, it tracks the actual speed of the train and the plan that was actually running. We have automated scans in the background that actually shows high utilization or high non-utilization, and that allows us to be able to see who the non-users are at a pretty quick pace.

RICK NARVELL: How often, or is there a schedule to that being looked at? And if so, what is that schedule?

AARON RATLEDGE: I can't say that there's a specific schedule, each one of the managers of the operating practices have responsibilities and goals to obviously increase the utilization of Trip Optimizer

across the territories. So, that feature is used to look at regularly and find out who needs a little more help and who doesn't.

RICK NARVELL: But there's no set specific once a quarter, once a month or whatever?

AARON RATLEDGE: I'm going to say that it's -- I mean, it's annual goals that they have to ensure the utilization of Trip Optimizer is being effective across their territories.

RICK NARVELL: Okay. Last area here, and again, I don't know how much you know this. I know virtually none, but I want to go specific to the circumstances surrounding why we're here today. Was the Eastbound train in operational or active TO when they departed on their trip?

AARON RATLEDGE: We know that the crew initialized at Amarillo after going on duty.

RICK NARVELL: Okay. That is a fact, correct?

AARON RATLEDGE: That is a fact. We have that, and Mr. Torres has that information from General Electric.

RICK NARVELL: Okay.

AARON RATLEDGE: We secured that from them. What we do not know, because the lead engine's event

recorder was destroyed, and that is the only place, that and a communications management unit on the locomotive would have the information inherent to it to be able to say for sure 100% without a doubt whether Mr. Owens was or was not in auto at the time the incident occurred.

RICK NARVELL: So, we just simply don't know and likely we'll never know?

AARON RATLEDGE: That's correct.

RICK NARVELL: Okay. All right. Do you know -- well, that's okay, fine. I think that's all I have for now, thank you.

JIM SOUTHWORTH: And you all are okay?

AARON RATLEDGE: Yes, sir.

JIM SOUTHWORTH: You need a break or anything?

AARON RATLEDGE: I'm good. If everybody else is?

JIM SOUTHWORTH: Anything, Tomas?

TOMAS TORRES: I'm good.

JIM SOUTHWORTH: Tell me a little bit about the role with conductor with TO? Is there any role to play?

AARON RATLEDGE: We have --

JIM SOUTHWORTH: This is Jim Southworth, by

the way. I keep forgetting. Go ahead, I'm sorry.

AARON RATLEDGE: So, the role of the conductor with the Trip Optimizer, obviously we still want communication to go on in the locomotive between the engineer and the conductor. Just like yesterday, I mean, you heard us all talking in the cab yesterday about Form A's coming up, about Form B's, the expiration times, signal indications, and the whole time I was in auto. We still want those communications to take place. We do not want Trip Optimizer to take the place of those valuable cab conversations that need to take place for train operations.

The conductor needs to be made aware of when the train is or it's not in auto, we encourage those communications to happen when an engineer is actually in an auto state, whenever he's not. But essentially the conductor's role is do not change when the Trip Optimizer is on a locomotive.

JIM SOUTHWORTH: Does he have direct responsibility to request to the engineer that Trip Optimizer be put into play? I understand the conductor's responsible for the safety between and a lot of times they work out there on the development or building in the train, (inaudible) 1:25:13, service to customers en route, but on a long-haul, line-haul train

or unit train type operation where he picks this train up from another crew or he picks it up in origin, and then steps out, and if he's lucky enough to get greens the whole way, clear blocks. But does he have a requirement under his position of responsibility for the safe operation of the train? Does he have a requirement to request to the engineer whether it's been set into Trip Optimizer or not?

AARON RATLEDGE: Not at this time.

JIM SOUTHWORTH: Okay.

AARON RATLEDGE: I can tell you from my experience, a lot of engineers want engineers in auto. They want them in auto.

JIM SOUTHWORTH: Well, that was my next question. I didn't know how to ask it without being analytical, so thank you for that comment.

PARTICIPANT: Excuse me, just to be clear, you say that engineers want engineers --

AARON RATLEDGE: I'm sorry, no conductors prefer their engineers to have the system in auto.

PARTICIPANT: That's what I thought you were going with.

AARON RATLEDGE: Yes, I made a mistake and I apologize.

PARTICIPANT: That's okay, I just want to

clarify.

AARON RATLEDGE: Conductors, more times than not, have indicated to me that they want their engineers in auto.

JIM SOUTHWORTH: Okay, I have no further questions. Pretty much everything else I have is related to alternative handling, I think we'll be able to cover later in the other interviews with the operating management people.

Since you've self-identified while we're here as being the expert on TO and you've identified yourself as the best person to comment or ask questions to, can you guarantee us some follow-up information once we get into reviewing the documentation that you've given us?

AARON RATLEDGE: Absolutely.

JIM SOUTHWORTH: The ride was very informative and I can see where we might do something like that again, maybe not in your territory BNSF, but I think actually seeing it and then a chance to review it, your answers to the questions here gives us a little bit better of an understanding of the cab environment with Trip Optimizer and that was what our goal was here today.

Any other follow-up questions from anybody?

Okay. Do you have anything additional that you would like to know or add? Is there something we did not ask you that you'd like to comment on? The other thing is you will see this transcript, you will have an opportunity to correct any errors, not necessarily the testimony or the questions, but specific details that might not come through either in the transcription or the clarity. And we'll also at some time be put in the docket.

AARON RATLEDGE: Okay.

JIM SOUTHWORTH: (Inaudible) 1:27:56. But do you have anything additional that you'd like to present to us?

AARON RATLEDGE: No, sir.

JIM SOUTHWORTH: Nothing new?

AARON RATLEDGE: Nothing else, sir.

JIM SOUTHWORTH: Okay.

PARTICIPANT: Not at this time.

JIM SOUTHWORTH: Thank you very much for your participation. At this time I'll say we go off record.

(Whereupon, the above entitled-matter went off the record at 1:28 p.m.)

C E R T I F I C A T E

MATTER: Head On Collision, Panhandle, TX
BNSF Railway, June 28, 2016
Accident No. DCA16FR008
Interview of Aaron Ratledge

DATE: 08-31-16

I hereby certify that the attached transcription of page 1 to 74 inclusive are to the best of my professional ability a true, accurate, and complete record of the above referenced proceedings as contained on the provided audio recording; further that I am neither counsel for, nor related to, nor employed by any of the parties to this action in which this proceeding has taken place; and further that I am not financially nor otherwise interested in the outcome of the action.