UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

OFFICE OF ADMINISTRATIVE LAW JUDGES

In the matter of:	
METROLINK TRAIN NO. 111 COLLISION WITH UNION PACIFIC RAILROAD LEESDALE LOCAL, September 12, 2008, Los Angeles, California	Docket No.: DCA-08-MR-009

NTSB Board Room and Conference Center
429 L'Enfant Plaza
Washington, D.C. 20024

Wednesday,
March 4, 2009

The above-entitled matter came on for hearing, pursuant to notice at 8:30 a.m.

BEFORE: KATHRYN O'LEARY HIGGINS, Chairwoman
PAUL L. STANCIL, Hearing Officer
ROBERT J. CHIPKEVICH
VERN S. ELLINGSTAD
GARY HALBERT
JOSEPH KOLLY

APPEARANCES:

Technical Panel:

JAMES REMINES
TIMOTHY DePAEPE
WAYNE WORKMAN
RICK NARVELL
TED TURPIN
JAMES SOUTHWORTH

TERRY WILLIAMS, Public Affairs Specialist

Parties to the Hearing:

GRADY C. COTHEN, JR.,
Federal Railroad Administration
GRAY CRARY, Southern California Regional Rail Authority (Metrolink)
BOB GRIMALLA, Union Pacific Railroad
RICHARD CLARK, Director, Consumer Protection and Safety Division, California Public Utilities Commission
WILLIAM WALPERT, National Secretary-Treasurer Brotherhood of Locomotive Engineers and Trainmen
BEN BLISSETT, Brotherhood of Locomotive Engineers and Trainmen
James R. CUMBY, Transportation Safety Team Coordinator, United Transportation Union
TOMMY McDONALD, General Manager, Connex Railroad
GEORGE ELSMORE, Connex Railroad
BATTALION CHIEF JOHN QUINTANAR, Los Angeles Fire and Rescue
THOMAS ROBERTS, Mass Electric Construction Company

I N D E X

I N D E X (cont'd.)

I N D E X (cont'd.)

I N D E X (cont'd.)

I N D E X (cont'd.)

P R O C E E D I N G S

(Time Noted: 9:02 a.m.)

MR. STANCIL: Would Mr. Cumby and Mr. Walpert please approach the witness table?

Good morning. Mr. Cumby, would you raise your right hand please.

(Witness sworn.)

MR. STANCIL: Okay. Mr. Cumby, would you please state your full name.

MR. CUMBY: James Robert Cumby.

MR. STANCIL: And spell your last name please.

MR. CUMBY: C-u-m-b-y.

MR. STANCIL: Okay. And what is your current employer?

MR. CUMBY: United Transportation Union.

MR. STANCIL: And your title?

MR. CUMBY: Vice President.

MR. STANCIL: And your business address, sir?

MR. CUMBY: 14600 Detroit Avenue, Cleveland, Ohio.

MR. STANCIL: And how long have you been affiliated with the United Transportation Union?

MR. CUMBY: I've been a member for 33 years. I've been an elected officer for 25.

MR. STANCIL: Do you have any other experience in the railroad industry?

MR. CUMBY: Yes, sir, I do.

MR. STANCIL: And could you describe that please?

MR. CUMBY: I hired out in ground service as a brakeman in 1976 for the Penn Central Railroad. I've worked as a retarder operator and a yardmaster for Conrail. I've been an elected Union offer for over 25 years, holding offices of Local Chairman, Local President, Alternate Vice President, and the Vice President position that I now hold since 2003. I have been a member of the United Transportation Union, Transportation Safety Team, for over 14 years and am currently the Chairman of that group. I'm also the Vice President assigned to negotiate FRA's Close Call Project that Mr. Beardon (ph.) spoke of yesterday.

MR. STANCIL: Thank you. Mr. Walpert, would you raise your right hand please.

(Witness sworn.)

MR. STANCIL: Thank you. Would you please state your full name?

MR. WALPERT: William C. Walpert.

MR. STANCIL: And spell your last name please.

MR. WALPERT: W-a-l-p-e-r-t.

MR. STANCIL: And your current employer?

MR. WALPERT: Brotherhood of Locomotive Engineers and Trainmen.

MR. STANCIL: And your title, sir?

MR. WALPERT: National Secretary-Treasurer.

MR. STANCIL: And your business address?

MR. WALPERT: 1370 Ontario Street, Cleveland, Ohio.

MR. STANCIL: And how long have you been affiliated with the Brotherhood of Locomotive Engineers?

MR. WALPERT: Since 1974.

MR. STANCIL: And what are your duties and responsibilities?

MR. WALPERT: My duties include oversight of the financial area of the organization. I also am responsible for our Education and Training Department and I'm the Chairman of our Safety Taskforce and have been a part of our Safety Taskforce since 1992.

MR. STANCIL: Okay. Do you have any other rail experience outside of the Union?

MR. WALPERT: Yes, I do. I hired as a locomotive fireman on the old Frisco which is now part of BNSF in 1973, and I worked there until 1985.

MR. STANCIL: Thank you very much. Madam Chairman, the witnesses are qualified. I'll refer the questioning to Mr. James Remines.

TECHNICAL PANEL QUESTIONS

MR. REMINES: Good morning. I'll first direct my questions to Mr. Cumby. It goes by alphabet.

So what I'd like to ask you about first is your position on Emergency Order 26 regarding cell phones.

MR. CUMBY: UTU supports EO26, except for the joint

statement that was entered into between UTU and BLE, dated November 10, 2008, that was sent to Chief Counsel at FRA. We have no oppositions to it. There's a few questions that we did have pertaining to five different areas, and we don't object to EO26.

MR. REMINES: Has FRA responded in any way?

MR. CUMBY: Not that I know of yet.

MR. REMINES: Yesterday we talked about violations of rules related to cell phones and folks in the cab of a locomotive unauthorized. Please describe your position on both of those instances.

MR. CUMBY: UTU neither condones nor defends violation of operating rules intended to ensure the safe operation of freight, passenger and commuter trains. So if people are on the head end of the locomotive using cell phones, we don't condone that, sir.

MR. REMINES: Do you support your members in any -- I know you spoke of the Close Call Reporting Program. Is that something that might be applicable here?

MR. CUMBY: Absolutely. I think that this property would be a perfect location for a project of Close Call.

MR. REMINES: Is there any suggestions you might have on enforcement inside the cab of a locomotive of the rules? What they're speaking to is the inability to determine that they're on the cell phone or unauthorized persons are up there by management.

MR. CUMBY: A second pair of eyes in the cab would be

most desirable from the UTU's standpoint. You'd have a safety checkpoint there. If situational awareness was to be prohibited for some reason, there'd be somebody there in the cab of the locomotive that could bring it to the attention of the engineer running the train.

MR. REMINES: In this instance, the engineer didn't take action. Is that something that's promoted or is it the opposite in your Union from the standpoint of the cell phone usage by the conductor on the UP train?

MR. CUMBY: Again, we don't condone the violation of any operating or safety rules.

MR. REMINES: Okay. Video cameras, what's UTU's position on video cameras both inward and outward facing?

MR. CUMBY: Outward facing, we don't have a problem with at all. The inward facing is a little different. UTU does not object to the camera installation inside the locomotive once the property safeguards for privacy are in place.

MR. REMINES: What suggestions would you have to prevent another accident until we can get PTC in place?

MR. CUMBY: The most readily available would be the second set of eyes in the locomotive. There's been some talk about the installation of cameras. That's going to take a substantial amount of resources to install, and you're going to have to qualify people to watch the video that's in there. The fastest, most effective way in my eyes to prevent another

situation like this is to put a second qualified person in the cab of the locomotive until PTC's been put in that's been mandated by Congress.

MR. REMINES: Thank you. Mr. Walpert.

MR. WALPERT: Yes.

MR. REMINES: We'll start off with your position on EO26.

MR. WALPERT: Well, we, of course, support Emergency Order 26 and, in fact, we've taken a proactive approach publishing on our website an outline for our members of a summary of EO26 and also a flowchart of the requirements of EO26, and we've recently posted our list of frequently asked questions.

MR. REMINES: In those frequently asked questions, has the FRA responded to you in any way?

MR. WALPERT: No, at this point, they have not.

MR. REMINES: Having heard yesterday what was going on in the cab of this locomotive, are there any suggestions on improving the ability to detect and enforce operating rules in the head end of a train?

MR. WALPERT: Well, we would support the broadening of the event recorder aspects whereby more information could be obtained and downloaded by using event recorders, either on the locomotive or signal wayside event recorders.

MR. REMINES: And I'll let Mr. Cumby respond to this one. On the calling of signals, what is the position of UTU? Is

it a help or a hindrance to your safety out there?

MR. CUMBY: The calling of signals in passenger service is redundant. The only thing the conductor is doing in commuter or passenger service is repeating what has been told to him. He doesn't have any line of sight to the signal itself. Some railroads have it, some railroads don't but it is a redundant factor that he doesn't see the signal at all. All he's doing is merely repeating what's been told him.

MR. REMINES: Outside of that, in freight operations or heard outside the train, on the radio, is that a hindrance or a help?

MR. CUMBY: On, no, it's absolutely a help. Absolutely.

MR. REMINES: It is. Mr. Walpert, same question.

MR. WALPERT: Well, basically we support the same rule that's in effect on Union Pacific at this time.

MR. REMINES: I'm going to ask your position on video cameras now.

MR. WALPERT: All right. Well, of course, we certainly don't support the requirement or installation of any recording device whether it's video cameras or voice recorders in a locomotive cab. Of course, certainly we would like to see outward facing cameras on all locomotives.

MR. REMINES: Are there any suggestions, Mr. Walpert, on things that could be done until PTC is a reality?

MR. WALPERT: Well, as I indicated earlier, you know, we

would certainly support the broadening of event recorder downloading equipment.

MR. REMINES: Do either of you have any other things you'd like to bring to the record that I might not have asked you, that you as a witness might have to offer?

MR. WALPERT: I don't have anything at this time.

MR. CUMBY: No, I don't.

MR. REMINES: Thank you. No more questions.

MR. STANCIL: Mr. Wayne Workman.

MR. WORKMAN: I'd like to go into just a little bit more first with you, Mr. Cumby, when you mentioned the second set of eyes in the cab, you would support that. Although not part of this investigation, NTSB has investigated accidents where there have been two people in the cab of the locomotive and then after this accident, there was another accident in California where Metrolink did have a second person in the cab, and they still got by the red signal. So would you expound just a little more for us on, you know, since we've had accidents with second set of eyes in there, how you believe this would improve the safety since it hasn't prevented it in these instances?

MR. CUMBY: Well, there's not a 100 percent cure for this at all, but without a second person on the locomotive, the safety of the operation solely depends on the situational awareness of one person, and by putting a second person in the cab, it's going to reduce that is my goal there.

MR. WORKMAN: Okay. Mr. Walpert, from your position, from the BLET, the second set of eyes in there, how would that improve safety inasmuch as we continue to have accidents with two people in the cab of a locomotive?

MR. WALPERT: Well, you know, first of all, I would take exception to your statement that a second set of eyes wouldn't improve the conditions in a cab. I would say that it does. Of course, there are occasions where something's going to happen that's probably not preventable but a second set of eyes in our opinion would certainly go a long way towards preventing accidents.

MR. WORKMAN: Let me move toward, first with you, Mr. Cumby, the issue on video cameras and voice recorders. From your position, you know, what are the appropriate privacy protections that you're concerned about or that was mentioned?

MR. CUMBY: There needs to be something similar to what's being done currently inside the airline industry. In my 33 years in the industry and 25 years as a Union officer, at this point, I don't believe that all the rail carriers at this point are in a position to ensure the privacy piece to our membership in the cab.

MR. WORKMAN: And expounding on that just a little bit more, Mr. Walpert, what's your position here with regard to the privacy protection?

MR. WALPERT: Yeah, we believe that video cameras in the

cab, just for the sake of having them there, is overly intrusive and, in fact, illegitimate. The only potential legitimate purpose for such a requirement would be to assist the NTSB in its safety investigations when other existing types of recorders, such as signal system event recorders, or locomotive-based event recorders are incomplete or unavailable.

MR. WORKMAN: Continuing along that line, do you believe that the public would be served from a safety interest if cameras were inside the cab of a locomotive or if safeguards were put in place as Mr. Cumby mentioned, the same as the airline industry?

MR. WALPERT: As I indicated earlier, I believe the public could be served if there was a legitimate purpose for the use of such cameras, but simply for the sake of having cameras there for other purposes, to intrude on crew members, it's probably not legitimate.

MR. WORKMAN: So not wanting to put words in your mouth in this regard at all, so if cameras were in the cab of the locomotive with voice recording, and there were protections to that and they were used for the safety of the public, you could support that?

MR. WALPERT: We would have to, of course, see what those protections are. We would have to certainly be involved in the process of developing those protections and if that were the case, then there's a possibility that we could.

MR. WORKMAN: Okay. Mr. Cumby.

MR. CUMBY: I agree.

MR. WORKMAN: No further questions.

CHAIRWOMAN HIGGINS: Okay. Thank you. Let's go the parties. FRA.

PARTY QUESTIONS

MR. COTHEN: I was just going to ask if either of the gentlemen were aware that on February 17th, that FRA conducted a telephone consultation with United Transportation Union, Brotherhood of Locomotive Engineers and Trainmen and the Association of American Railroads, to discuss the filings in regard to Emergency Order 26.

MR. CUMBY: I was not aware of it.

MR. WALPERT: Yes, I was aware of that.

MR. COTHEN: Okay. Thank you.

CHAIRWOMAN HIGGINS: California PUC.

MR. CLARK: No questions from the PUC.

CHAIRWOMAN HIGGINS: Mass Electric.

MR. ROBERTS: Mass Electric has no questions.

CHAIRWOMAN HIGGINS: City of Los Angeles.

MR. QUINTANAR: No questions.

CHAIRWOMAN HIGGINS: UP.

MR. GRIMALLA: UP has no questions.

CHAIRWOMAN HIGGINS: I'll wait on you guys. Metrolink.

MR. CRARY: Good morning. Since late in 2008, SCRA has been in the middle of a procurement for both inward facing and

outward facing cameras. It's out opinion that a legitimate purpose of the cameras is to act as a deterrent and make it a safety improvement. So SCRA is moving forward with this procurement. That is the BLET's position on our installation on our equipment?

MR. WALPERT: First of all, we don't believe that such equipment would act as a deterrent. You know, we have professionally trained crew members, locomotive engineers on board in the cab and they're doing to do their job regardless if there's a camera watching them or not. Simply to have a camera there for the sake of having it there is nothing more than intruding upon their personal rights.

MR. CRARY: Yesterday we talked about the difficulty of monitoring inside the cab, particularly for the use of electronic devices. What action will the BLET take when we install these cameras?

MR. WALPERT: I'm not in a position to answer that at this point.

MR. CRARY: SCRA has also gone on record as stating that any engineer that's using electronic devices will be barred from SCRA service. What position does the BLET take on that action?

MR. WALPERT: We support Emergency Order 26 totally.

MR. CRARY: My question was our barring an employee for use of electronic devices.

MR. WALPERT: If it's in violation of Emergency Order

26, then, of course, we would support that.

MR. CRARY: A final question. What additional monitoring on the event recorder would be appropriate in your opinion that could get at these efficiency testing concerns?

MR. WALPERT: Well, there's several things that I think could be added to event recorders that are available at the present time that may not even be used that could technically help in accident investigation, and to give you specifics, I, you know, I'm not a technical expert on that but I do know that there are many more functions that are available.

MR. CRARY: And the last question. Would you agree that safety would be a legitimate purpose for installing cameras?

MR. WALPERT: I agree that safety is certainly a concern and as I indicated earlier, if it's used in accident investigation when nothing else is available, then under those conditions it may be feasible.

MR. CRARY: Thank you, Madam Higgins. We have no more questions.

CHAIRWOMAN HIGGINS: Connex.

MR. McDONALD: We have no questions.

CHAIRWOMAN HIGGINS: Okay. BLET and UTU.

MR. BLISSETT: Just a couple of questions, Madam Chairman. Mr. Cumby, do you feel there's anything that could have been done to make the conductor more aware of the signals that the train entered the station on and left on?

MR. CUMBY: It's my understanding that there could be a wayside repeater put on right as you exit the station that would repeat, the engineer would call out the signal and there would be a repeater there that could have helped call the signal coming into the station and bring the awareness of the crew up.

MR. BLISSETT: A signal that would remind the crew of the last signal they passed?

MR. CUMBY: That's correct. The way I understand it, the repeater would be the one coming into the station and if it was a green, if you had a clear indication coming out of the station, it would show a green, but if not, it would fall back to the signal that you entered the station on.

MR. BLISSETT: All right. And, Mr. Walpert, Mr. Workman made reference to a Metrolink passing a stop signal with two pair of eyes on board the locomotive. In your opinion, having the second set of eyes on board could have deterred more than one stop signal failure?

MR. WALPERT: Absolutely. I think I indicated that earlier, yes.

MR. BLISSETT: All right. That's all the questions I have.

CHAIRWOMAN HIGGINS: Okay. Thank you. Dr. Kolly.

BOARD OF INQUIRY QUESTIONS

DR. KOLLY: Mr. Cumby, since this accident, what is your organization currently doing to improve compliance to signal

calling?

MR. CUMBY: We have done the same as the BLET has done. We have link on our website that has EO26 on it, and compliance with it to make sure our members know about it. The calling the signals is a mandatory rule on all the carriers that I know of, and we, like I said earlier, we don't have any problem with the calling of signals in the cabs of the locomotives.

DR. KOLLY: Could you explain you don't have a problem? Explain what you mean by that?

MR. CUMBY: We don't oppose it. There's the better word. We have no opposition to the calling of signals in the cab. We think it's a good idea, sir.

DR. KOLLY: How about, what are you currently doing to improve the compliance with the cell phone issue?

MR. CUMBY: Again, we've got EO26 up on the website. We hold two regional meetings around the country each year, and it's my knowledge that there's going to be one of the classes where we bring in our membership and our local officers to have a class, a workshop on EO26. So we're going to be trying to update our people and give them the latest information at our upcoming meetings this summer.

DR. KOLLY: And with regard to the unauthorized persons access?

MR. CUMBY: UTU doesn't condone that at all, unauthorized people on a train in the cab, anywhere, sir.

DR. KOLLY: Have you taken any actions since the accident to try to improve that compliance as well?

MR. CUMBY: Not to my knowledge, and also to further state it, to my knowledge, no one's asked that we go and make some sort of request of our membership, but if one is desired by the Safety Board, we can surely put something up on the website.

DR. KOLLY: Aside from your suggestion of an additional person in the cab, do you believe that there is anything else that would help to improve compliance in these three areas? In particular, is there anything that your organization is trying to accomplish?

MR. CUMBY: When you say trying to accomplish, could you -- what we're wanting is a safe operation, not only for our employees but the general public. So I -- could you better define what you want?

DR. KOLLY: I'm wondering if you think that you are doing all that you can do from your position to improve this situation?

MR. CUMBY: Absolutely. I think we're doing everything that we have at our disposal. Again, on our website, we have a link to the Safety Board, whenever there's a recommendation put up by the Board, that's how we can get it out to our membership the fastest and safety is foremost in our mind, too, sir.

DR. KOLLY: Mr. Walpert, I'd like your opinion on the same questions that I just asked Mr. Cumby.

MR. WALPERT: Okay. Would you restate the questions?

DR. KOLLY: Sure. Since the accident, what has your organization done to improve compliance in signal calling, cell phone use and unauthorized persons access?

MR. WALPERT: Well, in regard to cell phone use, as I indicated earlier, you know, we have posted on our website the Emergency Order 26. We also have on our website the FRA's prepared flowchart outlining the requirements of Emergency Order 26, and we have a list of frequently asked questions up there also. In addition to that, in our monthly publication, we have run the same material, we've printed the same material. At our regional meetings which we have for a year, we talk about that, too, of membership.

DR. KOLLY: And do you believe that you're doing all that you can do from your point of view to improve the compliance?

MR. WALPERT: Yes. I think that as I said earlier, we're taking a proactive approach in this regard and compliance with these issues are paramount to us.

DR. KOLLY: No more questions.

CHAIRWOMAN HIGGINS: Mr. Chipkevich.

MR. CHIPKEVICH: Thank you. Mr. Cumby, you mentioned that UTU had five areas of concern on Emergency Order 26, generally supported it but the five areas of concern. Can you briefly describe what those concerns are?

MR. CUMBY: The first one was use of cell phones while

deadheading. The second was use of cameras. The third was use of calculators. The fourth was use of GPS global positioning technology. And I stand corrected, it's four.

MR. CHIPKEVICH: Okay. So the first was use of cell phones while deadheading. So could you explain what that means?

MR. CUMBY: Well, when a crew is deadheading, they've fulfilled their duties under the hours of service. They've got their 12 hours in, and they could be possibly in a van or deadheading on the second unit of a locomotive. The position that was taken by both Presidents of the UTU and BLE was that if someone was heading on the lead locomotive, that it would not be permissible to use a cell phone while on the head locomotive, but if they were in the second locomotive, that it wouldn't be impeding on safety at all, and they asked for a clarification on that.

MR. CHIPKEVICH: Okay. And the second item with regard to cameras, what would that be?

MR. CUMBY: Cameras again, as you know, a lot of cell phones today are equipped with cameras, some do, some don't. We had a question on whether it was going to be permissible to use the old technology of cameras and if there was an unsafe condition, would it be permissible, if the locomotive was stopped, to take a picture, to snap a picture of it, to be able to prove that there was an unsafe condition out there and be able to report it, and that was the use of the cameras.

MR. CHIPKEVICH: Okay. And what was the third item?

MR. CUMBY: Calculators. Calculating tonnage and making sure you've got enough horsepower on it, your braking ability on the train. It was the thought of the two Presidents that the use of a calculator when a train was stopped, that it would be faster to punch the numbers up in a calculator versus trying to work it out on paper.

MR. CHIPKEVICH: And the fourth item.

MR. CUMBY: The fourth item is GPS technology. A lot of times when you have slow orders, running a locomotive, it's just mainly to check the speed of the train, the accuracy of the speedometer in the head locomotive.

MR. CHIPKEVICH: And you would think a personal GPS unit or would this be one that's installed on the equipment?

MR. CUMBY: There's not a distinction in the letter that was sent to the FRA.

MR. CHIPKEVICH: All right. And what's the fifth item?

MR. CUMBY: There wasn't a fifth item. I apologize.

MR. CHIPKEVICH: Okay. With regard to calling of signals, you indicated that you didn't have a problem with calling the signals in the cab or the conductor then responding on that. But what about the conductor elsewhere in the train?

MR. CUMBY: Again, that seems redundant. He's not verifying anything. He's repeating what he's been told. He's not in a position, he's back in the back of the locomotive tending to

the passengers, and punching the tickets and making sure everyone's safe. We support the calling of signals in the locomotive but in commuter and passenger service, we find it to be just a hair redundant. I mean you're not verifying anything because he has no knowledge of it. He doesn't see it.

MR. CHIPKEVICH: Would you think that it might help the crews to stay involved, to keep the locomotive and engineer involved by knowing that he's going to call it out, a conductor is going to be listening for a signal call and therefore help both of them stay more involved with that position?

MR. CUMBY: That is a possibility, yes.

MR. CHIPKEVICH: And would a conductor know basically where the signals are and where to expect signals to be called and if a signal wasn't called, could raise a question?

MR. CUMBY: A conductor is qualified on the territory also, sir. Depending on how involved he is with his passengers, if he's having to tend to a problem in one of the cabs of the commuter cars or punching tickets, it may take him a few minutes to have his situational awareness to know where he's at. Do I think a passenger conductor knows exactly where he's at every minute of the day running between Washington, D.C. and New York City? I don't think that's, you know, not tending to the needs of the people in the car. Will it take a pair of minutes to get his awareness back and know? Yes, but to say that the conductor knows where exactly he's at every minute on a passenger train, I don't

agree with at all.

MR. CHIPKEVICH: All right. With the lack of video cameras or recorders in a cab, is there anything else that you believe that railroad carriers can do to oversee compliance with restrictions on the use of cell phones or a prohibition against having unauthorized persons in the cab or to make sure signals are being called?

MR. CUMBY: Peer training and a second set of eyes in the cab of the locomotive I think will go a long way. Both are very important and equally important, you know, when you have a second set of eyes up there, they have to be trained properly to be able to know when to call their coworker out and explain to them if there's something not being handled properly.

MR. CHIPKEVICH: Thank you. Mr. Walpert, same question for you. Given lack of video cameras or voice recorders, is there anything else that you believe that carriers can be doing to help ensure that there is compliance with the rule with restrictions on cell phones and calling signals and prohibition of somebody being in the cab?

MR. WALPERT: I think the most important thing is education of the employees, make sure that they ascertain and understand all of what's required of them to be in compliance. You know, I think a good example, is we point to Union Pacific and what has transpired in regard to drug and alcohol use, the figures that you were given, that it's now less than 1 percent

noncompliance. So with that same sort of procedure using the organizations as partners, I think it can go a long way towards compliance.

MR. CHIPKEVICH: Okay. Thank you.

CHAIRWOMAN HIGGINS: Thank you. Okay. First of all, thank you for being here and I want to, and some of you know this, but I always remind myself when I have meetings like this that my grandfather was an engineer on the Chicago Milwaukee Railroad and I have his picture in my office. So I think about him every day when I do this job.

You've talked about, you know, in this accident, there were four major rule violations, and I think I want to talk about all four of them. The issue of calling signals which was an operating rule, cell phone use and for text messaging, both on the part of the UP conductor and the Metrolink engineer, the issue of unauthorized personnel not only in the cab but operating the train, and then finally the drug violations.

And you've talked about how having a second pair of eyes in the cab would help with mitigating some of these problems and yet in the UP train, there were three crew members, two in the first locomotive, and as far as we know, there was no report of any inappropriate activity on the part of the conductor in terms of using his cell phone for texting.

So while I appreciate the fact that, you know, there is safety in numbers so to speak, I think this accident points up

that that isn't always the case. And so my question is what, and again you've already answered this, but I'm wondering about whether we shouldn't -- we've come a long way as we've heard discussed yesterday about reducing drug abuse through the random testing program. Have you thought about, would it make any sense to have some kind of random testing program on the use of cell phones or other unauthorized electronic devices?

MR. CUMBY: I take it the question's for me?

CHAIRWOMAN HIGGINS: Either one of you because it's an issue for both conductors and engineers clearly as we've seen in this accident.

MR. CUMBY: Absolutely. As I said before, there's not a 100 percent fix for this. Human beings are going to not comply with things from time to time. That's the nature of all of us. How you get it, I think Mr. Walpert had hit the nail right on the head, is that you have to have a clear and concise plan on the training part of it of what's expected for everyone. There has to be some additional training how to call out your coworker. I mean not everyone's comfortable with that, Madam Chairman. It takes a certain amount of tact to get that done especially when you're proceeding down the tracks.

As for some sort of a testing procedure, I agree with everyone that testified yesterday that I don't know what the answer is. I'm not 100 percent sure that the cameras, onboard cameras will do it, but I think it would be a quicker and a better

remedy for the second set of eyes and have the proper training on the head end.

CHAIRWOMAN HIGGINS: But would you -- I guess I'm, in addition to a second set of eyes and, you know, if you're going to spend money, where do you want to spend money frankly. Isn't that what it comes down to?

MR. CUMBY: Yes, ma'am.

CHAIRWOMAN HIGGINS: These are resource issues. You know, I know one of the arguments, and we're going to have a discussion about positive training control. If we have positive training control, then we can reduce the number of people in the cab because we don't need that second set of eyes. So that's a conversation that we'll continue to have.

I'm really more asking, we heard a lot about efficiency tests which, you know, that's the system that's in place but it clearly, at least as evidenced by this accident, I don't think it's been all that effective. I mean you've got efficiency tests but if people know they're being watched, they're going to behave differently than if they're not being watched. That leads to the question about cameras. I'm asking whether it makes any sense, I'm not sure it does, but I'm looking for other kinds of ideas that are out there, to have some kind of random testing that everybody knows that they're going to get picked out to find out whether they're using their cell phone. I mean it's just going to be part of the deal that if you, you know, if you sign up to work

for any of these railroads, and everybody has a personal cell phone now and, you know, we're going to monitor you for it, we're going to watch, we may even put cameras in, but we're also going to check your number. We're going to find some way to monitor it as we were able to do. I mean the only reason we knew that the conductor on the UP train was using his cell phone to text was because somebody anonymously reported it, not somebody part of the crew, but somebody on the outside, and we were able to obtain the records. I mean I am concerned on the one hand about the invasiveness of that in terms of personal privacy. On the other hand, if we've got a hard and fast rule that we can be pretty comfortable that people are going to try and get around, do we need to find a more failsafe, better way to counteract that. That's what I'm asking. I'm not saying this is the right idea but I think we've all got to be a little more creative here than we've been.

MR. CUMBY: Absolutely. Again, we don't, as an organization, condone anything that would hamper the safe operation of the trains. If there's some sort of technology that comes down the pike where a supervisor had a handheld, you know, that would tell them whether there's cell phones on or something like that, we're not opposed to that. I mean that's all part of being accountable and following the rules that your employer has set. We wouldn't oppose something like that.

CHAIRWOMAN HIGGINS: What about blocking the signals so

that -- because I understand there's some technology that could actually prohibit the use of, you know, prevent the use of an electronic device while you're operating the training. There's something that would interrupt the signal so you couldn't us it even if you wanted to.

MR. CUMBY: I haven't heard of that technology but I don't -- you're saying, so if someone had a cell phone on in the locomotive, it wouldn't give them a favorable indication ahead. Is that what you're saying?

CHAIRWOMAN HIGGINS: What I'm saying is that they couldn't use it in effect because they couldn't --

MR. CUMBY: Oh, it would block the --

CHAIRWOMAN HIGGINS: Right.

MR. CUMBY: -- device. I don't see a problem with that --

CHAIRWOMAN HIGGINS: Okay.

MR. CUMBY: -- from our standpoint.

CHAIRWOMAN HIGGINS: I had another question on compliance. It just escapes me. Now -- oh, I know. One of the things, and we'll have a discussion in a few minutes with the FRA about, you know, how they look at some of these issues. One of the things that I know is frustrating for us as an agency and for some of my colleagues who have been working on these issues for many more years than I have, we can only recommend. And it's ironic to me that we've made recommendations on the issues of cell

phones coming out of a rail accident I think in 2003. So almost six years ago. And it was only the accident in Chatsworth where 25 people lost their lives that led to the Executive Order, the emergency order from the FRA.

The earlier response was that, well, the railroad operating rules were sufficient. Can you tell me from your perspective, and you've sided your support for this with some exceptions, what difference does it make having a federal emergency order, in this case on cell phones, than having railroad operating rules. Arguably as I understand it, the FRA is supposed to enforce the railroad operating rules as well as now this new federal order. So what is the significance in terms of the, from your members' perspective, from your perspective, of those two things.

MR. CUMBY: Mr. Walpert's asked, he's been bumping me, he wants a chance.

CHAIRWOMAN HIGGINS: Sure. Sorry. I'm just speaking to both of you.

MR. WALPERT: Okay. Well, you know, in regard to Emergency Order 26, you know, that wasn't really the genesis as far as our organization or the UTU is concerned in addressing the cell phone use. You know, that was part of, you know, the RSAC working group as far back as February 2007, and it's been discussed. They had proposals and we're working towards that end even prior to September 12th.

CHAIRWOMAN HIGGINS: Right, but again, you know, things in Washington move like molasses literally in January. Now in March you can think of how cold it's been. So I'm just, you know, it's good that we now have this emergency order, but it's unfortunate that it took this tragedy to really essentially put it in place. You don't have, I take it, any objection to having the Federal Railroad Administration regulate in effect a nationwide ban on the use of cell phones and electronic devices.

MR. WALPERT: Well, as described in Emergency Order 26, no, we certainly don't have a problem.

CHAIRWOMAN HIGGINS: Okay.

MR. WALPERT: You know, as was brought out yesterday, on Union Pacific, for example, there are sometimes when it becomes necessary to use a cell phone.

CHAIRWOMAN HIGGINS: Okay. What I was, because you had raised the four objections that the UTU has raised, and I was just looking quickly at the rule, and as I read this, and again FRA can speak for themselves on this, but it really talks about the ban being use of a personal electronic device. Anything that's supplied by the railroad, and you were talking about issues like cameras to document safety issues or GPS systems or calculators, all of which, you know, I think those are legitimate issues, but there's a difference, it seems to me, between using a personal device which has those features. I mean my Blackberry doesn't take pictures but it can do pretty much everything else, not that

I can use it effectively but it has all those features, and that's a NTSB issued device.

I think that the issue here is a personal device used for personal, non-railroad business that really then creates the distraction. It seems to me, and I just don't know. I mean were you making a distinction in terms of your issues, with the way I read the rules to say in terms of personal electronic devices, that you think that crew members should have the ability to use a personal electronic device for calculating or GPS or photography?

MR. WALPERT: Yes, yes, we are making that distinction. They should be able to use their personal electronic device in those limited exceptions and as was pointed out yesterday, it sometimes is asked by the railroad for a crew member to use their personal device or an operational purpose.

CHAIRWOMAN HIGGINS: But don't you think that muddies the water?

MR. WALPERT: Not at all.

CHAIRWOMAN HIGGINS: Okay.

MR. WALPERT: I think there has to be an exception to it in order to perform business. If there's just a flat out ban, it could, in fact, be detrimental to safety.

CHAIRWOMAN HIGGINS: Okay. Well, we'll talk to the FRA about that. The California PUC issued a prohibition against cell phones before the Emergency Order 26 was issued. Did you support that directive?

MR. WALPERT: I'm not aware of that issue.

CHAIRWOMAN HIGGINS: Okay. It was for all the systems operating in California. Mr. Cumby, was that something that you're familiar with?

MR. CUMBY: I had heard that it come out. We had no opposition to it, ma'am.

CHAIRWOMAN HIGGINS: Okay. The issue of calling signals, that's something where again we've been on record for years asking for a uniform requirement in terms of calling signals. My understanding from our discussions yesterday and from my review of the history of this accident, is that that's a policy both that the Metrolink and Union Pacific have in place. Do you think that there should be a -- do you have any objection to a federal requirement -- federal regulation in effect, that would standardize how signals are called on the railroads?

MR. WALPERT: Our organization doesn't have an objection to standardizing or even broadening the requirements for signal aspects under certain circumstances that I delineated earlier, such as, you know, verbal communication, of course, the signals of crew members in the cab is, of course, something that we support and condone. We think that it may create, you know, unnecessary chatter for a locomotive engineer to be required to call a signal if the signal is non-restrictive.

CHAIRWOMAN HIGGINS: If it's a clear signal.

MR. WALPERT: Exactly.

CHAIRWOMAN HIGGINS: Okay.

MR. WALPERT: Yes and, in fact, it may just clutter the airwaves and, you know, there is some evidence that that may have even occurred in the Chatsworth accident.

CHAIRWOMAN HIGGINS: But right now, my understanding of the Metrolink policy is that all signals are supposed to be called and confirmed by the conductor. Would you agree -- one of the things that concerns me and we tend to talk about all these things as if all of these operations were the same, and the thing that's particularly challenged in this accident, is that you have a commuter rail system operating on the same track as freight rail, you know, in a pretty heavily congested urban area for the most part, with a lot of single track. And as a potential passenger, that concerns me because it's a more complicated system than when you are operating freight rail in the great wide open spaces where you're not likely to encounter many other trains let alone many passenger trains.

So have you all thought about making distinctions between how these things, the kind of rules that are applied in a situation like Metrolink where to me the risks and hazards are greater because of the environment that you're operating in versus a different kind of situation? You know, I think -- let me stop there.

MR. WALPERT: We actually don't believe it is necessary to have one set of rules that would apply in one location and

another set of rules that would apply in another location in regard to calling signals.

CHAIRWOMAN HIGGINS: So you think there should be one set of rules that applies uniformly everywhere?

MR. WALPERT: Yes.

CHAIRWOMAN HIGGINS: Okay. But you would not favor the system that's currently in place with Metrolink that you have to call every signal?

MR. WALPERT: No.

CHAIRWOMAN HIGGINS: Even clear signals?

MR. WALPERT: No, and the reason is that because, you know, we believe that that may even be detrimental to the safety of the crews by having to call every signal.

CHAIRWOMAN HIGGINS: Okay. But in this case, one of the issues we have to look at is whether or not calling the sign and confirming the signal was detrimental. Do you think that there's, and there was some discussion earlier of technology which I'm not familiar with, do you think the technology -- I know that some cabs have in-cab signal --

MR. WALPERT: Yes.

CHAIRWOMAN HIGGINS: -- visibility. Is that right?

MR. WALPERT: Yes.

CHAIRWOMAN HIGGINS: Okay. Is that something that you have supported or think that that's --

MR. WALPERT: Well, that would be great. Yes, we

certainly have supported that and that would be great if we did have that redundancy, and also, you know, we've always supported the policy of train control also.

CHAIRWOMAN HIGGINS: Right. Right. And we're going to have that discussion and fortunately we are moving ahead on that, it's going to take some time though before that's in place, and I think that will solve a lot of issues when, in fact, it's instituted, but in the meantime, I think we have to be clear about what the rules of the road are and whether we should be making some improvements to make sure that either the rules are more effectively enforced or that they're improved. Mr. Cumby, do you have any thoughts about that?

MR. CUMBY: A single set of operating rules would be helpful. When you get over into the Northeast, you have NORAC operating rules and then as you migrate further west, you pick up GCOR operating rules. An Amtrak engineer could feasibly be running on both sets of rules in a single run in and around the Chicago area. So to have a single set of operating rules for the railroad industry makes sense in my view. There's no doubt about it. It would bring some simplicity to it.

CHAIRWOMAN HIGGINS: Okay. Right now as I understand it, efficiency testing is the system for monitoring compliance. How effective do you think efficiency tests are?

MR. CUMBY: I'm second generation railroad. Efficiency tests have been around for as long as I'm aware of, and I think in

any industry, you have to have some sort of efficiency tests. I think they're something that's a checks and balance.

MR. WALPERT: And I would agree as long as they're not abused.

CHAIRWOMAN HIGGINS: Okay. Dr. Kolly asked a question yesterday about how much we know whether anybody's really done much validation of these tests. Are you aware of any work that your Unions have done or others have done about validating the effectiveness of efficiency tests?

MR. WALPERT: No, I'm not.

MR. CUMBY: I'm not aware of any.

CHAIRWOMAN HIGGINS: Okay. I think that's all the questions I have at the moment. Are we ready for another round, Technical Panel?

MR. CUMBY: As clarification, Madam Chairman, the BLET and UTU joint petition for review of Emergency Order 26 is Exhibit 30, and it's part of the packet.

CHAIRWOMAN HIGGINS: Okay. Thank you so much. Technical Panel, further questions.

TECHNICAL PANEL QUESTIONS

MR. REMINES: Jim Remines here. Not calling clear signals, what's the message to the conductor if the engineer misses a signal?

MR. WALPERT: Who have you pointed that one to, Mr. Remines?

MR. REMINES: Mr. Walpert seems to have an objection. I guess I'm putting it to him. It's a loaded question.

MR. WALPERT: Okay. Restate your question.

MR. REMINES: Silence from the engineer in an of itself, is that an indication to the conductor that they're running on a clear indication?

MR. WALPERT: Yes.

MR. REMINES: No further questions.

CHAIRWOMAN HIGGINS: Any other parties wish to ask further questions?

MR. WORKMAN: I have.

CHAIRWOMAN HIGGINS: Oh, I'm sorry, Wayne. Sorry.

MR. WORKMAN: This is to Mr. Walpert. You had mentioned previously you would be agreeable to adding additional recording or additional information to the event recorder.

MR. WALPERT: Uh-huh.

MR. WORKMAN: How would expanding the event recorder downloading ability help enforce a ban on cell phones?

MR. WALPERT: Well, it doesn't necessarily apply to cell phones but my point was that it would aid in the accident investigation. I think the question was framed, you know, how can we help prevent accidents and in our opinion, you know, the use of event recorders, expanded use of event recorders would help in the accident investigation and could lead to a proposed recommendation that would prevent accidents in the future.

MR. WORKMAN: Could you expand on what could be added to event recorder that's not already there that would do that?

MR. WALPERT: Well, most event recorders are, you know, there's eight features or so on event records and they're capable of having many more features and off the top of my head, I can't really tell you what those are, you know, we can get the technical explanation of that if you so desire, but all of the events of the event recorders aren't used at the present time, and they could be expanded.

DR. WORKMAN: And this is questions directed to each Union representative. Do either of you know of a labor or Union training program or any publications that advocate zero tolerance for safety violations on the part of fellow crew members?

MR. CUMBY: At our regional meetings, Mr. Workman, we've had representatives. We consistently have representatives from FRA. We've had people from NTSB attend our regional meetings each summer and we have joint panels, and we try to push it down that if there's any sort of change coming along, what that change is and what's going to be expected of you.

MR. WORKMAN: Okay. I'm going to ask this regarding some previously, you know, recommendations that the NTSB has made regarding a cognitive alerter. Do you think that the alerter on the locomotive could be expanded in a way that would improve safety?

MR. CUMBY: I don't have any knowledge of what you're

talking about, Mr. Workman.

MR. WORKMAN: Well, a cognitive alerter would be an alerter that would go beyond just ringing the bell, blowing the whistle, moving a throttle, but maybe the potential there would be to expand both for the engineer and the conductor something that would reflect what signal indications were that would be a recording the event recorder.

MR. CUMBY: It sounds like a lot of speculation to me but I don't know what you expect in the way of an answer. We'd look at it. I don't think --

MR. WORKMAN: Would you have interest in exploring how that could be? I mean Mr. Walpert brought up the subject there could be things that could be added or expanded on an event recorder.

MR. CUMBY: Yes.

MR. WORKMAN: You know, presently one of the things that are on an event recorder is -- that could be added is the alerter information.

MR. CUMBY: When it comes to safety of the public and our members, we're interested in exploring, you know, we'll take a look at anything that comes down the pike.

MR. WORKMAN: Okay. Thank you.

PARTY QUESTIONS

CHAIRWOMAN HIGGINS: Party questions. Metrolink.

MR. CRARY: Just for the record, Metrolink rule calling on signals is that the engineer calls every signal and the conductor repeats the non-restrictive signals. Mr. Walpert, this morning you suggest that Metrolink's signal calling rules could "be a detriment to safety." Have you ever notified SCRA of this concern?

MR. WALPERT: I personally have not. I don't know if any of our representatives have.

MR. CRARY: No further questions.

CHAIRWOMAN HIGGINS: Let's see. BLET.

MR. BLISSETT: Mr. Walpert, are you familiar with C.F.R. 49229.135 on event recorders?

MR. WALPERT: Yes.

MR. BLISSETT: And the engines, the locomotives that are ordered before October 1, 2006 and placed in service after October 1 of 2009, there's currently nine channels that they record. Is that correct?

MR. WALPERT: Yes, I believe that's right.

MR. BLISSETT: And locomotives ordered after this are supposed to have over 25 channels recorded?

MR. WALPERT: Yes, that's what I was indicating earlier, yes.

MR. BLISSETT: So there is much more room for other things to be recorded?

MR. WALPERT: Right.

MR. BLISSETT: And it will in the future. Do you think that this accident has brought out and amplified by Emergency Order 26? Do you think if we give more time for education and time for Emergency Order 26 to work, do you think that will be helpful to the safety of railroad operations?

MR. WALPERT: Yeah, no question about it. We just have to look at what has occurred in the past, that education and training for the railroad employees and our members goes a long way towards rule compliance.

MR. BLISSETT: And as far as GPS technology, are you aware that a number of the locomotives the foot counters don't work or are not on the locomotives?

MR. WALPERT: Yes, I am aware of that.

MR. BLISSETT: Would GPS technology on a personal GPS device or something of that nature aid an engineer when he doesn't have a foot counter letting him know where the rear of his train is?

MR. WALPERT: Yes, that's one of the many things that it could be used for.

MR. BLISSETT: I have no further questions.

CHAIRWOMAN HIGGINS: Okay. Any of the other parties?

MR. CRARY: One here.

CHAIRWOMAN HIGGINS: Metrolink.

MR. CRARY: One of the items that Metrolink is doing is

installing ATS, expanding ATS, which gets to a recent approval from the FRA. Does the BLET or the UTU have an opinion about furthering ATS installations on Metrolink territory?

MR. WALPERT: No, I'm unaware of any of the ramifications in regard to the installation of ATS.

MR. CUMBY: I concur with Mr. Walpert.

MR. CRARY: No further questions.

CHAIRWOMAN HIGGINS: Okay.

MR. McDONALD: It appears from the record so far in these proceedings that both the conductor and engineer saw the signal as green. How would calling out a signal at Chatsworth, assuming it was not called, make any difference?

MR. WALPERT: If the signal was green and was not called, the assumption is that it's green, and so it wouldn't have made any difference.

CHAIRWOMAN HIGGINS: I think that with all due respect you made a statement that so far both the engineer and the conductor saw the signal as green. We don't know that. I mean the conductor made a statement. We don't know -- we know that the signal wasn't called or confirmed by either one even though that was supposed to happen, and we know according to all the tests that were done, which may of you participated in, so I think we have to be careful about making assumptions at this point about what they saw or didn't see.

Okay. Any other party questions?

(No response.)

CHAIRWOMAN HIGGINS: Questions from my colleagues here? Mr. Chipkevich.

BOARD OF INQUIRY QUESTIONS

MR. CHIPKEVICH: Just a couple of quick follow-up questions. Mr. Walpert, do you think a personal GPS device could also be a distraction, diverting a crew member's attention away from another activity?

MR. WALPERT: Obviously there could be some cases where it could be a distraction. You know, we would support, you know, limited use of a GPS under certain circumstances.

MR. CHIPKEVICH: You had mentioned that you thought signal calling could be detrimental. Could you explain how it could be detrimental particularly with an engineer calling signals?

MR. WALPERT: Well, our only point was that for calling a clear signal, it does nothing more than clutter the airwaves, you know, with additional traffic and noise on the airwaves and could step on or walk on some important matter of information that's trying to be transmitted over the airwaves and so some restricting signal may not have been communicated because someone is calling a signal that could be considered extraneous.

MR. CHIPKEVICH: Okay. But could it not also help develop a rhythm to keep the crew members engaged in doing things very methodically by calling all the signals and help reinforce

doing things in a systematic manner?

MR. WALPERT: Well, I spent many years on a locomotive and I know that it does become a rhythm to call signals but that's why you have another crew member up there, to call the signal to and he will verify it back to you.

MR. CHIPKEVICH: Okay. Thank you very much.

CHAIRWOMAN HIGGINS: Just one more question. This whole discussion around cameras and event recorders, we now have requirements in commercial aviation and in the marine industry for event recorders that include in the cockpit both a data recorder and a voice recorder. And on passenger ships, the voyage data recorder also includes a voice recorder. We've talked a lot about cameras but I want to be clear about your position on a voice data recorder in the cab of a locomotive as opposed to a camera or other kind of visual recording information.

MR. WALPERT: Yes, as I said earlier, we are opposed to a voice recording under the same objections that we entered over cameras.

CHAIRWOMAN HIGGINS: And the opposition -- are you opposed to it for accident investigation purposes or for any purpose?

MR. WALPERT: No, not at all. We're not opposed to it if there is no other means and it's used strictly in accident investigation purposes.

CHAIRWOMAN HIGGINS: Okay. So that would -- I don't

want to put words in your mouth but what I'm trying to understand is whether given that we've had a lot of success in aviation and certainly in the marine industry with having recorders that capture both event data as well as voice communications, that have really aided and abetted our investigations, you would support a data recording system on locomotives that would include ability to capture conversations for the purposes of accident investigation?

MR. WALPERT: Only in the event that there's not a less intrusive means to do that and, you know, some of the things that have been suggested by expanding event recorders could be a better solution.

CHAIRWOMAN HIGGINS: Okay. Thank you. I'll take that as a yes.

If there are no other questions for this Panel, then we will move onto our next Panel, California Public Utilities Commission.

MR. STANCIL: Would Mr. Clark, Mr. Gallant and Mr. Logan please approach the witness table?

Mr. Clark, would you raise your right hand please?

(Witness sworn.)

MR. STANCIL: Thank you. Would you please state your full name?

MR. CLARK: Richard Wayne Clark.

MR. STANCIL: And your current employer?

MR. CLARK: California Public Utilities Commission.

MR. STANCIL: And what is your title there, sir?
MR. CLARK: I'm the Director of the Consumer Protection and Safety Division.
MR. STANCIL: And what is your business address?
MR. CLARK: 505 Van Nuys Avenue, San Francisco, California.
MR. STANCIL: How long have you held your current position?
MR. CLARK: Eight and a half years.
MR. STANCIL: And what are your duties and responsibilities?
MR. CLARK: As the Director at the PUC, I influence and implement policy of the Commission. There are five commissioners and I report to the Executive Director.
MR. STANCIL: Okay.
MR. CLARK: I oversee nine different programs. I have rail freight safety. I have rail passenger safety. I have rail transit safety. I have rail crossing safety. I have safety of the electric grid, the natural gas grid and the communications grid. I also oversee the consumer protection when it comes to utilities, and I have other transportation matters such as household goods and passenger carriers' consumer protection.
MR. STANCIL: Okay. Do you have any previous experience there at the agency?
MR. CLARK: Well, I've been there since the energy

crisis. I was hired to investigate the energy crisis in 2000.

MR. STANCIL: In 2000.

MR. CLARK: Right.

MR. STANCIL: Prior to that, do you have any experience in the railroad industry?

MR. CLARK: No, my background is white collar crime and fraud investigator.

MR. STANCIL: Okay, sir. Thank you. Mr. Gallant, would you raise your right hand please.

(Witness sworn.)

MR. STANCIL: Could you please state your full name?

MR. GALLANT: Richard Paul Gallant.

MR. STANCIL: And spell your last name please.

MR. GALLANT: G-a-l-l-a-n-t.

MR. STANCIL: And you're also employed at California Public Utilities Commission?

MR. GALLANT: Yes, sir.

MR. STANCIL: And what is your title there?

MR. GALLANT: Program Manager.

MR. STANCIL: And your business address?

MR. GALLANT: 320 West Fourth Street, Suite 500, Los Angeles, California.

MR. STANCIL: And how long have you held the position as Program Manager?

MR. GALLANT: Two months.

MR. STANCIL: Prior to that, what positions have you held at California PUC?

MR. GALLANT: Operating Practices Inspector, Senior Transportation Operations Supervisor, a Superintendent in Southern California and a Program and Private Supervisor for the past 12 years.

MR. STANCIL: And that entire 12 years at California PUC?

MR. GALLANT: Correct.

MR. STANCIL: Do you have any previous experience in the railroading industry?

MR. GALLANT: I do. I started in 1970 in the operating department working different jobs as a tower operator, train dispatcher, chief train dispatcher, assistant director of operations. In 1995, I came on board the FRA for two and a half years prior to coming to the PUC.

MR. STANCIL: Okay. And again, what are your current duties and responsibilities?

MR. GALLANT: Currently, I manage, organize and administer and direct the activities of the rail operation safety branch, both north and south in the State of California. I manage the rail operations safety program. I manage the rail special project section which is responsible for accident investigations and analysis of special projects. In working with the Director and Deputy Director we developed the program, the missions, the

goals, the objectives, work plans and training plans and at different times I'll represent the Commission at conferences, other public functions and I collaborate with representatives of the Federal Railroad Administration, state and local officials, in an effort to increase effectiveness of the railroad safety programs and services.

MR. STANCIL: Thank you. Mr. Logan, would you raise your right hand please.

(Witness sworn.)

MR. STANCIL: Okay. Could you bring your microphone a little closer.

MR. LOGAN: Okay.

MR. STANCIL: Thank you. Please state your full name.

MR. LOGAN: Thomas Gene Logan.

MR. STANCIL: And your current employer is?

MR. LOGAN: California Public Utilities Commission.

MR. STANCIL: And what is your title there, sir?

MR. LOGAN: I'm the Supervisor of Operations, Safety Section.

MR. STANCIL: And your business address?

MR. LOGAN: 320 West Fourth Street, Los Angeles, California.

MR. STANCIL: How long have you held your current position?

MR. LOGAN: One year and nine months.

MR. STANCIL: Prior to that, what did you do?

MR. LOGAN: I was the Operating Practices Inspector at the Public Utilities Commission at the Commission for about three years.

MR. STANCIL: Three years total experience there?

MR. LOGAN: Yes.

MR. STANCIL: What are you current duties and responsibilities?

MR. LOGAN: I lead and supervise 20 federally certified railroad safety inspectors in Southern California. Our inspectors represent five safety disciplines, track, motor power and equipment, hazardous material, operating practices and signal and train control. Inspectors have regulatory oversight over passenger and freight railroads in California, and we monitor for compliance of state and federal regulations and railroad operating and safety rules. We investigate railroad accidents and investigate complaints.

MR. STANCIL: And prior to your tenure at California PUC, do you have any additional railroading experience?

MR. LOGAN: Yes. I have about 13 years industry experience as a conductor for BNSF and Union Pacific Railroad and as a manager of yard operations, manager of train operations, senior manager in train operations and three years of regulatory experience.

MR. STANCIL: Thank you. Madam Chairman, the witnesses

are qualified, and I'll pass the question to Mr. James Remines.

TECHNICAL PANEL QUESTIONS

MR. REMINES: Good morning. Mr. Clark --

MR. CLARK: Yes, sir.

MR. REMINES: -- your SX88 -- cell phones, what prompted that?

MR. CLARK: We were prompted by three events that occurred in California. In June of 2008, there was a light rail transit accident where cell phone usage was implicated. Again, in July of 2008, there was another light rail accident that occurred where cell phone use was implicated. And then the tragic events of September 12th.

MR. REMINES: Do you work under the FRA regulations? Do they preempt your actions or do you have your own authority in the State of California?

MR. CLARK: It depends on the area that we're speaking of. Generally, when it comes to rail freight safety, we're preempted by the Federal Government. When it comes to rail passenger safety, I think it's a little bit less clear in terms of how much preemption. I'm talking about innercity and commuter rail. In rail transit, we're not preempted and then rail crossings, we have primary jurisdiction. We are the sole authority for rail process safety except when it comes to quiet zones.

MR. REMINES: If FRA doesn't have a regulation, is that

something you can work in as far as preemption goes. Cell phones were not a regulation by the FRA at the time.

MR. CLARK: That's true. There is such a thing. However, it is negative preemption which is when the Federal Railroad Administration has considered implementing a rule and has declined to implement that rule, then we are negatively preempted from implementing a rule.

MR. REMINES: Mr. Gallant and Mr. Logan, do they also cover transit operations?

MR. CLARK: They do not.

MR. REMINES: They do not. Do you have a separate workforce for transit or --

MR. CLARK: I do, yes.

MR. REMINES: Okay. I want to go to Mr. Logan now. Were you also an inspector or investigator -- during that tenure, were you on Metrolink?

MR. LOGAN: As an inspector?

MR. REMINES: Yes.

MR. LOGAN: Yes, sir.

MR. REMINES: Yes. And what were your observations? When was your last observation on the railroad and what was your impression of the compliance on that railroad?

MR. LOGAN: My last personal observation as an inspector I believe was probably back in 2006, and I believe it was a train ride and I took no exceptions to that particular inspection.

MR. REMINES: As an inspector on Metrolink, were you enforcing the carrier's operating rules also or did you take that up with management?

MR. LOGAN: Yes, sir. We did monitor for railroad operating rules and we did report any noncompliance to railroad management.

MR. REMINES: Was there ever an occasion that you saw unauthorized persons or cell phone usage, the lack of calling of signals?

MR. LOGAN: No, sir.

MR. REMINES: Were you familiar with the managers on Metrolink?

MR. LOGAN: Could you repeat that question?

MR. REMINES: I said were you familiar with the managers on Metrolink?

MR. LOGAN: Yes, sir.

MR. REMINES: Do you feel that they under Part 217 were performing their duties, that's railroad operating rules, observations and tests?

MR. LOGAN: Yes.

MR. REMINES: Did you participate in those tests and observations?

MR. LOGAN: Yes.

MR. REMINES: Did you do independent audits and investigations on that railroad?

MR. LOGAN: Most recently we did do a focused audit on their Part 217 program jointly with the Federal Railroad Administration.

MR. REMINES: And that was when?

MR. LOGAN: That was in January of 2009.

MR. REMINES: Okay. That was after the accident?

MR. LOGAN: Yes, sir.

MR. REMINES: Okay. Let me go back to Amtrak's operation. Were you familiar with them on Metrolink?

MR. LOGAN: No, sir.

MR. REMINES: You did not. Okay. During your focused audit in January, what was the purpose of it and what prompted it?

MR. LOGAN: I'd like to mention, it was a joint effort with the Federal Railroad Administration and what prompted it was, you know, the accident that occurred on September 12th.

MR. REMINES: Okay.

MR. LOGAN: And what was your finding? What did you find there? What did you document? Did you submit a defects violation?

MR. LOGAN: Yes. The audit consisted of 13 inspectors over the course of 4 days inspecting records and there were some exceptions noted at that inspection.

MR. REMINES: Could you describe those exceptions you found?

MR. LOGAN: Yes, sir. These again are just exceptions

that were found by the State of California inspectors.

MR. REMINES: Okay.

MR. LOGAN: Inspectors did take exception for failure to note date, time and place of inspections, where the inspection were performed, and how inspections were reported.

MR. REMINES: Okay. Was this a generality type exception? Was it widespread across all the documents that you inspected or was it just focused on certain documents that you found with shortcomings? I know these are records that you're looking at.

MR. LOGAN: Yes, it focused in on shortcomings, sir.

MR. REMINES: Okay. Did you submit any violations?

MR. LOGAN: Yes, I believe we submitted five violations.

MR. REMINES: Okay. And where would they be processed? Would they go to D.C. through FRA or would you process them at your level of PUC?

MR. LOGAN: When a state inspector is going to recommend a violation, it goes directly to the regional specialist in Sacramento and is processed from there.

MR. REMINES: And that regional specialist is?

MR. LOGAN: He's with the Federal Railroad Administration.

MR. REMINES: Does he reject them ever or does he have the power to reject them back to your level?

MR. LOGAN: Yes.

MR. REMINES: Okay. Has he at this point or have they gone on?

MR. LOGAN: Not that I'm aware of. No, not at this point.

MR. REMINES: Calling of signals. What's your impression of compliance on the Metrolink and what do you feel about that as a safety expert?

MR. LOGAN: As far as compliance, looking back at our inspection activity, we haven't documented any noncompliance of calling signals while performing our inspections and train rides, and as a safety expert, I believe calling signals is an effective tool.

MR. REMINES: If you were to observed unauthorized persons in the vicinity of a control compartment or a locomotive cab, what would be your action and have you observed such a thing?

MR. LOGAN: If an unauthorized person is in the cab of a locomotive, the action of a regulator should one -- we have no federal or state regulation regarding unauthorized persons in a locomotive cab. However, there are railroad operating rules which we also monitor. Direct action of an inspector if he does see an unauthorized person in a cab would be to, one, notify the person that they are not complying with the railroad rule and to notify railroad management and then to document it.

MR. REMINES: And that's independent of a FRA inspector, you could do that yourself?

MR. LOGAN: Yes, sir.

MR. REMINES: Okay. Mr. Gallant, you're the current inspector or were the current inspector on Metrolink for operating practices?

MR. LOGAN: I was, yes, sir.

MR. REMINES: Okay. Could you describe your experience there before the accident as far as how long you had been inspector there and what you had uncovered or developed?

MR. GALLANT: I started inspecting Metrolink back in 1995 when I was with the Federal Railroad Administration, and I was in management when Connex came on board. So most of my experience with inspections on Connex property are through Mr. Logan and through the forces that he sends out every day. My impression is that Connex does comply with all state and federal regulations the majority of the time.

MR. REMINES: Their efficiency test program, were you familiar with that?

MR. GALLANT: I was.

MR. REMINES: Okay. How did it compare to other railroads you were inspecting in the area or your experience as a federal inspector?

MR. GALLANT: My experience is that the efficiency test program that Connex had in place in July of 2008 was sufficient and a comprehensive program.

MR. REMINES: Had you submitted any defects or

violations against them for that?

MR. GALLANT: I have not.

MR. REMINES: Calling of signals, would that have been something you would have observed out there?

MR. GALLANT: Ten, twelve years ago it would have, and not recently, no.

MR. REMINES: Not recently. Did you participate in this audit that occurred in January of '09?

MR. GALLANT: Yes, sir.

MR. REMINES: And what was your findings at that point?

MR. GALLANT: Right along with Mr. Logan and with what the FRA found, that of the thousands of records that we looked at, we did take some exceptions to recordkeeping, to a few of their procedures and we've made recommendations to Connex on some of those recommendations.

MR. REMINES: What was your relationship with the employees of Connex? Could they feel that they could come to you with an unsafe condition?

MR. GALLANT: Yes. But at this point, I don't really have a day-to-day relationship with them. Management, I can talk to them anytime and they know that they can come to me and talk to me.

MR. REMINES: Okay. Maybe this is better for Mr. Logan. Are you more current then?

MR. GALLANT: Yes.

MR. REMINES: Let me ask you that same question.

MR. LOGAN: Could you repeat the question please?

MR. REMINES: Do you have a one-on-one relationship with the employees on Connex? In other words, do you go to safety meetings? Do you attend operating rules classes? Do you have a relationship to where they could come to you if they observed unsafe work practices?

MR. LOGAN: Yes, sir. I do have a working relationship with the managers of Connex and also the Union labor there as well. To answer you question about safety meetings, we do not -- I have not attended any safety meetings at least that I'm aware of and I do believe, you know, the management or any Union employees there would be able to come to us if they had any issues.

MR. REMINES: Maybe I asked this and maybe I didn't. Did you observe efficiency testing being done by Connex supervisors?

MR. LOGAN: Yes, sir.

MR. REMINES: Okay. And what was your impression?

MR. LOGAN: The tests that we observed were done correctly and in compliance with their testing program.

MR. REMINES: Okay. I'm going to stop right here. Thanks.

CHAIRWOMAN HIGGINS: Mr. Workman.

MR. WORKMAN: Wayne Workman. Mr. Gallant, could you give us an overview of the California Public Utilities Commission,

the organizational structure, including your position, the number of people that report to you and the number of inspectors that you have?

MR. GALLANT: Yes, sir. California along with a number of other states are part of the 1970 Railroad Safety Act that authorized states to work in partnerships with Federal Railroad Administration. We enforce Federal Railroad safety regulations. The Act allows the state inspectors to be certified by FRA to conduct investigative and surveillance activities. That insures that the application and the interpretation of Federal Railroad Administration safety rules, regulations, orders and standards reflect the same national uniformity.

Federal and state rail safety inspectors do not perform inspections for the railroad however. Railroads employ their own inspections, supervisors and maintenance personnel. The inspector's role is to monitor the railroad's compliance with their rail safety regulations.

We at the CPUC, we work with FRA regional managers. We work to define communication protocols pertaining to state and FRA inspection coordination, complaint and accident response and special projects. The procedures defined at the state level eliminate the potential for redundancy by providing explicit guidelines to state and FRA inspectors for efficient daily routines, prompt response to customer complaints and effective management of major accident investigations.

State rail safety program nationwide currently is active in 30 states and employs 100 safety inspectors. Safety inspectors in California has the largest state program with 38 inspectors.

As far as our program goes, there are 48 people in our program including myself. We have two superintendents, one north and one south, and we have a program and projects supervisor that oversees accident investigations, special projects. Under the Northern California superintendent, there are 16 federally certified inspectors. Tom may have mentioned, under Mr. Logan, he has 20 in Southern California and then we have a number of analysts that work on special projects.

MR. WORKMAN: Mr. Logan, with 20 inspectors, what are the requirements for participating and testing for your inspectors?

MR. LOGAN: What are requirements for operational testing for the railroads?

MR. WORKMAN: Yes.

MR. LOGAN: We have no requirement. It is a part of their regulation duties.

MR. WORKMAN: Okay. With regard to testing, how often do they participate with the railroads, in this case, particularly Metrolink and Connex? Is it a monthly, weekly --

MR. LOGAN: Are you referring to field testing?

MR. WORKMAN: Field testing, yes.

MR. LOGAN: After Chatsworth, we did commit to each

operating practice inspector which we have four, to test monthly with the Connex management. Prior to that, we had no policy and I don't have the information as far as field testing.

MR. WORKMAN: Prior to the Chatsworth accident, there was no requirement but since Chatsworth, you have a monthly requirement. Is that for all four?

MR. LOGAN: Yes, sir.

MR. WORKMAN: Okay. What have the findings been since they've been participating on a regular basis?

MR. LOGAN: Like I said, there's been no exception to how they're performing the tests at least to my knowledge. You know, they're performing the types of tests that they need to perform that focus on what type of accidents they're having and where they're having them.

MR. WORKMAN: Mr. Clark, what would be the California Public Utilities Commission's position with regard to calling signals?

MR. CLARK: We support the policy of the Federal Railroad Administration.

MR. WORKMAN: And what would be your position regarding the use with safeguards regarding onboard inward cameras?

MR. CLARK: That's a matter that will be taken up in our consideration of cell phone use policy for rail transit operations. So we will be looking at that in quite a bit of detail. I can't speculate as to what the Commission's position

would be.

MR. WORKMAN: And would that also include voice recording?

MR. CLARK: We're going to be looking at all possibilities to include any sort of technological fixes that there might be attempting to detect the use of cell phones such as detecting the frequency that's used and the spectrum of the frequency that's used on cell phones. Any sort of technological fix, we're going to be taking a look at and not just limited to technological fixes by any stretch of the imagination.

MR. WORKMAN: Mr. Gallant, Mr. Logan mentioned that the recent inspection of the Metrolink and Connex reporting found violations. What kind of violations did that reporting include?

MR. GALLANT: Some were recordkeeping. Some were duplicate tests made by railroad managers. Some were non-reporting of certain things.

MR. WORKMAN: What do you mean by duplicate tests?

MR. GALLANT: It appeared that more than one manager recorded the same test on the same crew at the same time.

MR. WORKMAN: And were there failures to report?

MR. LOGAN: Yes, some of the duplicate tests did involve failures. Is that what you were asking way?

MR. WORKMAN: Yes. So you got managers reporting failures on the same incident. So you've got multiple managers taking credit for the same failure. Do I understand that

correctly?

MR. GALLANT: Yes, that is correct.

MR. WORKMAN: Okay. What were your recommendations?

MR. GALLANT: Our recommendations were for civil penalties and those recommendations have been forwarded to the region for processing.

MR. WORKMAN: So was this widespread failure, the multiple reporting? Do you think it's an isolated incident? Earlier we -- let me explain myself. Again, I've been listening that the efficiency test is compliant, and they meet all the requirements but yet we find violations where managers are multiple reporting on the same failure which would indicate they were taking credit by multiple managers for a signal failure. So is that compliant? Is the system sound or do we need to do work over there?

MR. GALLANT: I believe that the program that they have in place, if followed to the letter of the intent of the program, is a solid program but a few instances where we found managers that were not in compliance with it, we've taken exception to that.

MR. WORKMAN: Okay. No further questions.

CHAIRWOMAN HIGGINS: Okay. Questions from the parties. FRA.

MR. COTHEN: No questions.

CHAIRWOMAN HIGGINS: Mass Electric.

MR. ROBERTS: No questions.

CHAIRWOMAN HIGGINS: City of Los Angeles.

MR. QUINTANAR: No questions.

CHAIRWOMAN HIGGINS: Union Pacific.

MR. GRIMALLA: No questions.

CHAIRWOMAN HIGGINS: UTU.

MR. CUMBY: No questions.

CHAIRWOMAN HIGGINS: BLET.

MR. WALPERT: No questions.

CHAIRWOMAN HIGGINS: Metrolink.

MR. CRARY: Thank you. We have a few questions.

PARTY QUESTIONS

MR. CRARY: Mr. Logan, the exception taken in the recent audit of Connex's reported number of managers who participated in the tests, those were exceptions to recordkeeping. Is that correct?

MR. LOGAN: More of reporting issues. As mentioned, when managers work together testing, they were each putting in a test as an individual event.

MR. CRARY: All right. SCRA has a timetable committee and normally we invite the California Public Utilities to participate in that. At this committee we usually discuss and develop rules. Do you regularly participate in that committee?

MR. LOGAN: Yes, sir, I do attend the timetable meetings.

MR. CRARY: Multiple managers taking credit for the tests was considered a recordkeeping violation, correct?

MR. LOGAN: As I mentioned, it's more of a reporting than a recordkeeping.

MR. CRARY: All right. Let me move onto my next question. Mr. Gallant, you mentioned briefly the safety bill. The safety bill that was recently enacted requires PTC by 2015. Metrolink and the freight partners have committed to trying to get PTC developed by 2012, and all of our equipment that would be running on the BNSF and the UP to be equipped by 2012.

Mr. Clark, this question is to you. Given the compressed timeframe that we have to do that, are you fully supporting of SCRA's sole effort to deliver a PTC system that is compatible with our freight partners?

MR. CLARK: Well, as you know, we have a rulemaking open at the Commission, taking a look at collision avoidance systems. The Commission's concerns are that the perfect not become the enemy of the good, that that which is installed on the innercity and commuter rails in the State of California meets minimum standards that the state feels are appropriate, and that money is well spent in that regard. Those are the issues we're looking at.

MR. CRARY: Our concern would be that it would detract from our PTC goal. Is that not a concern for you?

MR. CLARK: One of the questions that we're asking in that rulemaking is whether or not the installation of something

short of full-blown positive train control would impede progress if you will. We're very concerned that we don't slow down the progress toward positive train control or an appropriate collision avoidance system being installed on the innercity and commuter rails in the State of California. We will do nothing to stand in the way or impede that progress.

MR. CRARY: Thank you. Member Higgins, we have no more questions.

CHAIRWOMAN HIGGINS: Thank you. Connex.

MR. McDONALD: Thank you. Mr. Logan, I have a couple of questions here. During your review, can you recall how many tests you actually reviewed, your team reviewed, total number?

MR. LOGAN: That I cannot answer because there were 13 individuals there participating in this audit and each individual was looking at different tests and different things.

MR. McDONALD: Okay. One follow-up question. Were there any findings of an instance of not conducting safety tests?

MR. LOGAN: No.

MR. McDONALD: Thank you.

CHAIRWOMAN HIGGINS: Okay. Dr. Kolly.

DR. KOLLY: No.

CHAIRWOMAN HIGGINS: Mr. Chipkevich.

MR. CHIPKEVICH: Yes, thank you.

BOARD OF INQUIRY QUESTIONS

MR. CHIPKEVICH: Mr. Logan, could you provide the NTSB a

copy of the most recent Part 217 audit?

MR. LOGAN: I believe we could. Would you like just California State inspectors or federal inspectors or both?

MR. CHIPKEVICH: Both.

MR. LOGAN: We'll be delighted to. That's something we can work with the FRA on?

MR. CHIPKEVICH: Madam Chairman?

CHAIRWOMAN HIGGINS: Yes.

MR. STANCIL: Okay. We will identify that exhibit as Exhibit 3-KK. Again, the wording of the request is a copy of the most recent Part 217 audit including California PUC and FRA inspections.

MR. CHIPKEVICH: Yes. Thank you. Could you tell me when the most recent audit, Part 217 audit was prior to this most recent one?

MR. LOGAN: The last inspection that I'm aware of, prior to this one, was on March 14, 2007.

MR. CHIPKEVICH: Would it have been a similar type inspection?

MR. LOGAN: No, sir. No, sir. I believe there were two inspectors involved and it was done in one day.

MR. CHIPKEVICH: Okay. Can you explain what a Part 217 audit is generally? What is Part 217?

MR. LOGAN: Yes, sir. Part 217.9 is inspection of the railroad's operating practices, rules, testing and basically we go

in and first we take a look at the railroad's program to make sure it complies with Part 217, meets all of its requirements, and then we look at the actual performance of the railroad to evaluate the types of tests that are being done and that they meet the program's requirements.

MR. CHIPKEVICH: Okay. You currently, I think I understood it correctly, have four inspectors that specialize in operational areas. Is that correct?

MR. LOGAN: That's correct.

MR. CHIPKEVICH: For operations.

MR. LOGAN: Yes, sir.

MR. CHIPKEVICH: So some of the other inspectors would actually look at either track inspections, track program areas or some other areas?

MR. LOGAN: Yes, sir.

MR. CHIPKEVICH: Okay. Do you think four inspectors is adequate to cover the territory that you've got?

MR. LOGAN: I think the four inspectors the State has and what the FRA has, I think is adequate, yes.

MR. CHIPKEVICH: Do your operations inspectors do inspections for the FRA in the operations area?

MR. LOGAN: I don't know if for would be the correct word. We do them with the FRA.

MR. CHIPKEVICH: Okay. And so the FRA then also has operations inspectors that come to the territory you're

responsible for and then coordinate with your inspectors when they're doing inspections with regard to operations?

MR. LOGAN: That is correct.

MR. CHIPKEVICH: Okay. Other than doing a paper audit or walking up to a train to see if somebody has a cell phone or if there's not somebody else on board that's not authorized, what are the difficulties that the inspectors would have in overseeing rules compliance to make sure that cell phones aren't used when the trains are being operated? Isn't that a kind of difficult issue to address when, in fact, they're not on board a train all the time?

MR. LOGAN: That would be fair to say yes to that. I said the only real method we have to check compliance is to visually see it, and being on board the train is about the only way we can see it. We not only inspect for use of cell phone in cabs of locomotives, we also inspect it for employees working in the field.

MR. CHIPKEVICH: Okay. With regard to being on board a train, would you expect train crews to be a little bit more disciplined if an inspector was actually on board?

MR. LOGAN: Yes, sir.

MR. CHIPKEVICH: And so most of the time you don't have inspectors on board. Any ideas on how to better monitor that that you've been able to come up with?

MR. LOGAN: Yes, I have ideas.

MR. CHIPKEVICH: Could you share those with us?

MR. LOGAN: I don't know if my ideas are the same as the CPUC's ideas. So I prefer not to answer that.

MR. CHIPKEVICH: All right. Mr. Clark, with regard to your ideas on where, if you don't have inspectors that could be on every train, how can there be better oversight? Any ideas on how you can better ensure that train crews aren't using cell phones and if they are calling signals and things of this nature?

MR. CLARK: Well, as Mr. Logan said, we can't speak for the Commission. However, as one who influences policy at the Commission in these sorts of things, I do feel at liberty to say that we will be talking with the Commission in our rail transit rulemaking because we're preempted at the federal level, now that EO26 is passed, we'll also be talking with the Federal Railroad Administration I think, about technological fixes such as inward facing cameras, such as voice recordings, such as technology that detects whether or not a cell phone is turned on, whether or not the cell phone is being used and that sort of thing. There is blocking technology out there that can block the use of cell phones. However, it's unlawful to do so is my understanding under the FCC laws, the rules applicable to FCC. So we'll be looking at all those sorts of things and the Commission will be well-informed and we will make a decision.

MR. CHIPKEVICH: All right. Does your resolution, SX88 differ from Emergency Order 26? Do you feel that the California

order is stronger or how does it compare to Emergency Order 26?

MR. CLARK: I'm not an expert on Emergency Order 26, and the precise differences between the two. We did strive in SX88 to make it very clear that it applied to personal cell phone usage on a moving train by any crew member on a train, whether it's light rail transit or heavy rail train. As long as the train is moving and -- well, there were two times in which an individual could use a cell phone, if the train is stopped and they had management permission to use their personal cell phone. Otherwise, it was prohibited. So it's pretty straightforward. We thought it was a very clean approach but again, I'm not an expert on EO26.

MR. CHIPKEVICH: Okay. Does EO26 preempt California Resolution SX88?

MR. CLARK: With respect to freight rail and with respect to innercity and commuter rail, yes.

MR. CHIPKEVICH: What about on Metrolink?

MR. CLARK: Yes, we're preempted.

MR. CHIPKEVICH: Is there anything in Emergency Order 26 that you are not satisfied with?

MR. CLARK: Again, I would have to defer to someone who has more expertise than myself on EO26.

MR. CHIPKEVICH: Would either of your two staff with you have more expertise on that?

MR. CLARK: I believe they would, yes.

MR. CHIPKEVICH: Okay. I guess, Mr. Gallant, is there

anything in Emergency Order 26 that you're not comfortable with?

MR. GALLANT: There's a few issues that labor raised that I think the Federal Railroad Administration is addressing, and that's the use of cell phones while deadheading. That may be something that they want to look into. Overall, I believe it is more encompassing than our SX88 was. They've had a working group since 2007 working on it, and I think it does cover the bases, you know, and as far as Mr. Logan and I, our inspector forces, we enforce EO88 [sic] with the same vigor that, the weight it carries as if it was a regulation. So we expect compliance with it.

MR. CHIPKEVICH: Okay. Thank you very much.

CHAIRWOMAN HIGGINS: Thank you. I just want to clarify a couple of things. Help me understand what this issue of preemption and which rules you can enforce and which rules you can't? Can you enforce Metrolink's own operating rules?

MR. CLARK: Under our authority with the Federal Railroad Administration as a participating state, yes.

CHAIRWOMAN HIGGINS: Okay. So the fact that Metrolink had has a ban on cell phone use and electronic device use, is that something that you can enforce and have enforced?

MR. CLARK: I may actually be incorrect on that. I'm going to pass the mic to Mr. Gallant, so he can answer your first question.

MR. GALLANT: We're in the same position as the Federal Railroad Administration. Our inspectors are certified by FRA. We

do enforce all federal and all state regulations but generally we can only make recommendations that the railroads enforce their own operating rules.

CHAIRWOMAN HIGGINS: Okay. So essentially it's up to each local operator then. If it's a rule that isn't in conformity with either state or federal requirements, it's up to each local operator to enforce its own rules.

MR. GALLANT: That is correct, until the EO26 came out. That, of course, took cell phones out of the Metrolink authority and gave it to us to enforce.

CHAIRWOMAN HIGGINS: I'm sorry. Say that again.

MR. GALLANT: EO26, you mentioned.

CHAIRWOMAN HIGGINS: Right.

MR. GALLANT: Prior to EO26, we could not enforce or write violations if they didn't follow their own operating rules. EO26 gave that to the regulators.

CHAIRWOMAN HIGGINS: Okay. And that would also then go for calling signals?

MR. GALLANT: Correct.

MR. LOGAN: Well, calling signals, just to clarify, when it comes to railroad operating rules that aren't covered by federal or state regulations, we can't enforce them per se. We do monitor for them, and we do report them to the railroad carriers when we find noncompliance. And as far as calling signals, if the noncompliance falls under FRA ZO20, we could enforce that with a

civil penalty. If it's a rule that falls in the railroad operating rules, that's where we would just be able to note it to the carrier.

CHAIRWOMAN HIGGINS: Okay. I mean I guess I think -- that troubles me frankly because essentially, you know, we've had this tragic accident. We've got four major rule violations. And I'm saying four major rule violations as of Metrolink's rules at the time of the accident. Two of those as I understand it were federal rules. The no authorized passengers and the drug use, but the calling signals and the cell phone rules were not in effect at the time in terms of federal standards. So essentially there was no ability to enforce Metrolink's own rules even though as I understand, and I know this is a big of an arcing funding arrangement, but as I understand it, the California Public Utilities has jurisdiction because I think somebody explained to me the money flows up from the counties and back down through all of you to fund the intercounty system. Is that right?

MR. CLARK: No, ma'am. We're actually funded by a railroad user's fee when it comes to freight railroad.

CHAIRWOMAN HIGGINS: No, I'm talking about the way Metrolink is funded though. I mean it's an intercounty system, and maybe Metrolink would want to comment on this. It just strikes me as interesting that you don't have the authority in effect even though you have jurisdiction. You can advise and you can inform but you can't enforce these operating rules.

MR. CLARK: Well, I can tell you that the State of California is very unhappy with the state of the preemption, the level of preemption that exists currently in law. We have fought since 1990. We spent 10 years fighting all the way to the Supreme Court to make the preemptive standards that apply to all other industries apply in the railroad industry also. In other words, that the preemption of -- that it's not inconsistent with federal law and doesn't interfere with interstate commerce, should be the standard. It's our opinion -- that applies to the railroad industry also.

CHAIRWOMAN HIGGINS: I believe you said that the preemption is clear for freight rail, less clear for passenger rail, and that there isn't a preemption that applies for transit. Did I understand that correctly?

MR. CLARK: That's correct.

CHAIRWOMAN HIGGINS: Okay. So in this case, since this is an accident involving freight and passenger, how does the preemption or the lack of preemption affect you vis-à-vis Metrolink?

MR. CLARK: That is a central issue in our undertaking on the collision avoidance systems. It's our position that we can assert authority over intrastate rail operations, in other words, those that operate only within the State of California and that we can assert our jurisdiction over them. The railroads have taken quite an exception to that, of course, and feel that we're

preempted in the same way that we're preempted in freight railroads. So we're exploring again using lots of dollars for lots of lawyers what the preemption is.

CHAIRWOMAN HIGGINS: Okay. I, you know, we're a long way from finishing this report and coming up with our findings and recommendations, but I would be interested if you can give me some examples today, and if not today, then going forward, about how this lack of clarity, if you will, and I realize that there's -- one thing that I've learned about the rail industry is that it has centuries of tradition and practice and rulemaking or lack of rulemaking but I think that, you know, we've identified a whole lot of issues in this accident and the question really comes down to, in my mind, as one Board member, you've got rules and then you've got your ability to enforce those rules and to make those rules stick. And that's at the heart of what we're talking about here, and the question for me is, I would be interested in how this ambiguity around preemption, in terms of the role of California Public Utilities, affects your ability to enforce or not enforce or address the issues that we're dealing with today. I mean these are pretty serious violations and, you know, 25 people died as a result of it. Nobody wants to see an accident. I mean I would think that the State of California, people there expect the local authorities and the state authorities to be able to do something about it, and if there are issues that prevent you from doing that, I think I would certainly want to know that.

MR. CLARK: We would be happy to submit a white paper or whatever it is that --

CHAIRWOMAN HIGGINS: I'm sure my lawyer over to my right here is twitching but you agree. Yeah, I think again, you know, the beauty of the Safety Board is that, and it's both the beauty and the curse if you will, is that we are not a regulatory agency. We have to look down, you know, at our friends at FRA, but we do have the ability to put a spotlight on these kinds of issues and, you know, I know in California and there's going to be a lot more movement in the whole area of passenger rail. Again, as I said yesterday, a good thing, I think most people would agree. We're light years behind others in doing that. What is that going to mean though in terms of our ability to enforce these kinds of standards, and it's just something that I think needs to be thought through, and it's complicated and, you know, perhaps it can't be fully addressed in the course of this accident, but I do think it's something that we need to at least, I as one person, would like to have a better understanding of. Okay.

MR. CLARK: Yes, ma'am.

CHAIRWOMAN HIGGINS: Okay. Great. I think that's all. I think that's at the heart of all the questions. I mean we've had a lot of discussion and you've done a good job of explaining but I'm frankly surprised. We heard yesterday, one of the things that troubles me about this, is this is a system and this is just Metrolink. How many rail systems in California do you oversee,

passenger rail?

MR. CLARK: Passenger rail, we have, let's see. There are seven. We have Metrolink, Coaster, Ace, Caltrain, Surfliner, Capital Quarter and the San Joaquin.

CHAIRWOMAN HIGGINS: Okay. And do you see similar issues in all of those operations?

MR. CLARK: Similar issues in terms of preemption?

CHAIRWOMAN HIGGINS: Well, preemption but also some of the safety issues that we're addressing here.

MR. CLARK: Certainly the preemption issue is across the board. I mean it's something that every time we begin to undertake some sort of a look at an enforcement action, we have to spend countless hours trying to figure out whether we're preempted.

CHAIRWOMAN HIGGINS: Wow.

MR. CLARK: And figuring out which move we can make, like the cell phone ban. We had to spend a lot of time trying to figure out whether or not we'd be preempted if we got it out there. We got it out there in six days. So it didn't take, I mean it took quite a bit of time to sort through it. So it's there every time. In terms of the safety issues, I'd have to defer to my experts there, but I think it's important that the Board and the Parties here understand how it is that we target our inspective efforts which is that clearly we don't have enough people, or I'm not sure there are enough people to go around and

inspect everything on every railroad by any stretch of the imagination. We have 38 people. We've got seven innercity and commuter rails. We've got 2 class 1 railroads and we've got 33 short line railroads in the State of California.

So we work very closely with the Federal Railroad Administration. They have an excellent database that helps us and them target our inspective efforts. So if we see from our inspective efforts which are quality control inspective efforts, we're not an ancillary inspection force for the railroads. We do quality control over what their efforts are. If we see trends that are occurring in a particular area such as operating practices or in, you know, broken rails or derailments and those sorts of things, then we target our inspective efforts such that we go deeper into the organization, which is essentially what we did in our January audit of Metrolink. After the crash, we said we need to take a deeper look at the organization and make sure that which we're seeing in the trends in the past that have helped us scope our inspective efforts, has not been incorrect. And so that's how we marshal our forces and target our inspective efforts.

We're always looking for, however, those sorts of proactive sorts of policies that I think you in particular, Ms. Chairman, have highlighted in your questioning about how we can get ahead of the accidents, spotting them before they happen. Instead of looking for lagging indicators of safety, we want to

look for leading indicators.

CHAIRWOMAN HIGGINS: Well, it really, and as we put all the pieces of this puzzle together, what really strikes me is the limited resources that Metrolink has, that Connex has, now that I'm hearing that you have, and I know that FRA has, to really look at this, and yet a lot of people's lives are depending on all of us collectively doing this. And fortunately, we don't have many of these accidents, but again I think we have to -- I mean sometimes we talk about precursor events. This is an event, this is a tragedy that happened. There were rules in place, whether they were adequately enforced or not, is something we'll be grappling with, but it really troubles me when I hear that I think what you're saying, and I don't want to put words in your mouth, but essentially some of your own efforts are hamstrung by this preemption issue in terms of what you might be able to do otherwise. And, you know, I know there are good reasons for that but I think it's something that really deserves all of us to think carefully about because again we're going to be putting, you know, the stimulus package invests a lot more money nationwide in high speed rail and other forms of transit, a good thing I submit, but that raises all sorts of implementation and management issues, and not just about how you spend the money, but how these systems are going to operate and how we make sure that they're safe going forward.

So I think that this conversation will be valuable not

just to help educate us about what happened in this accident and what we can do to look ahead and make sure it doesn't happen again, but also to inform and educate policymakers and others around the country.

I'm advised that I need to, since I've asked you for, and you've offered a white paper, we need to assign an exhibit number to that. Mr. Stancil.

MR. STANCIL: Yes, that would be Exhibit 3-LL, and could we restate what the request would be?

CHAIRWOMAN HIGGINS: Maybe, Mr. Clark, you would characterize, since you're going to be writing it.

MR. CLARK: My understanding of what you're looking for is a paper of sorts or an explanation that contains specific examples of how the preemption affects us in innercity and commuter rail safety.

CHAIRWOMAN HIGGINS: Yes.

MR. CLARK: Does that capture it?

CHAIRWOMAN HIGGINS: Yeah, I think that's right, particularly related to the safety issues we've identified here.

Let me just ask, because one of the other questions I had, you mentioned the January '09 audit and you mentioned I think one in '07. I think it was March of '07. So that would be two years ago. Is that right?

MR. LOGAN: That's correct.

CHAIRWOMAN HIGGINS: Okay. How often are those audits

done? Is it every two years or is there a schedule or -- and you said the one in January was clearly in depth and you mentioned the one in '07 was one day. Typically tell me how you approach audits and inspections like this.

MR. LOGAN: As Mr. Clark mentioned before, we use our data really to drive our inspections and we look at safety statistics. We look at major accidents and what our inspectors are seeing in the field. That's how we focus our attention and drive our inspection activities and prior to this accident, there's no indication by looking at our safety statistics that would lead us to bring any additional attention to Metrolink than we already were.

CHAIRWOMAN HIGGINS: So it's not routine. Is that correct? That you don't schedule an audit every year or every two years just for the good of the operation?

MR. LOGAN: No, ma'am.

CHAIRWOMAN HIGGINS: Okay.

MR. LOGAN: At least not the PUC. I'm not speaking for the FRA. I'm talking about PUC inspectors.

CHAIRWOMAN HIGGINS: Okay. Is that a resource issue or is that a policy issue? I mean again I'm trying to think about how you get ahead of some of these things rather than just react to what?

MR. LOGAN: You know, like I said, we use, you know, with our resources we have, we use the data that's available to

drive our inspections to those areas where we can identify possible future problems.

CHAIRWOMAN HIGGINS: Okay. And so that's the approach you take statewide for all of the operations that --

MR. LOGAN: Yes.

CHAIRWOMAN HIGGINS: -- that you're responsible for. Okay. And you mentioned limited resources for inspectors. How often do you do inspections or ride along, efficiency tests, whatever term you use?

MR. LOGAN: Are you just looking at Metrolink or statewide?

CHAIRWOMAN HIGGINS: Well, let's talk about Metrolink and then give me statewide.

MR. LOGAN: Metrolink, prior to the Chatsworth incident, we did do regular inspections on Metrolink and, you know, there wasn't an issue with noncompliance which would require us to devote more resources to Metrolink. Prior to the Chatsworth, the 2 years prior, we did about 21 operating practices inspections on Metrolink and I think we noted 15 defects which would mean a noncompliance with the rule.

As far as statewide, all carriers for that same two year period, we did just about 1,000 inspections statewide.

CHAIRWOMAN HIGGINS: Okay. All right. That's helpful. Thank you. I don't have anymore questions. Are there any other questions for this Panel?

MR. GRIMALLA: Yes.

CHAIRWOMAN HIGGINS: Union Pacific.

MR. GRIMALLA: Madam Chairwoman, in relation to the request to the CPUC to provide a white paper, Union Pacific would like an opportunity to review that --

CHAIRWOMAN HIGGINS: I'm sure you would.

MR. GRIMALLA: -- and submit our own comments quite seriously for balance.

CHAIRWOMAN HIGGINS: Okay. That's fine. But you want to review Metrolink's paper or do you want to submit your own position on preemption?

MR. GRIMALLA: In relation to your request to the CPUC to provide a white paper on their position on preemption.

CHAIRWOMAN HIGGINS: Right.

MR. GRIMALLA: We'd like an opportunity to review that and submit our own comments.

CHAIRWOMAN HIGGINS: Let me consult with my counsel here.

(Sidebar.)

CHAIRWOMAN HIGGINS: I think that what would work best for our process is, and I extend this to you and anybody else who would like to join this conversation, we've asked California Public Utilities for their position paper. If Union Pacific wanted to submit something, please do that and then there's also a comment period on the hearing proceedings overall for 60 days

after we finish today, but I think it would be better, rather than to send the paper around for comment, essentially for you to provide us your views on the preemption issue. I know --

MR. GRIMALLA: Certainly. We understand that Mr. Stancil would give us a number.

MR. STANCIL: Yes, we will call that Exhibit 3-MM, and that will be identified as the Union Pacific submission regarding or comments on federal preemption of California PUC. How would you state it, sir?

MR. GRIMALLA: You're doing well. That's fine.

MR. STANCIL: Okay.

MR. GRIMALLA: Thank you, Madam Chairwoman.

MR. STANCIL: Okay.

MR. CUMBY: Madam Chairman --

CHAIRWOMAN HIGGINS: Can I get out of this thicket or do we have other --

MR. CUMBY: In the effort of saving a few trees, UTU and BLE are interested in a joint paper also, if you'll give us an exhibit number.

CHAIRWOMAN HIGGINS: I think this is an important issue. I don't know where it's going to go but at least it'll educate this member and some of my colleagues because I think this -- I can see this coming.

MR. CUMBY: Mr. Stancil, what exhibit number would that be for the organizations?

MR. STANCIL: Okay. 3-NN, and that will be which organization?

MR. CUMBY: United Transportation Union and Brotherhood of Locomotive Engineers and Trainmen will do a joint paper, sir.

MR. STANCIL: Okay. United Transportation Union, Brotherhood of Locomotive Engineers and Trainmen, comments concerning preemption of California PUC.

CHAIRWOMAN HIGGINS: And Metrolink as?

MR. CRARY: We, too, would like to make that submission.

CHAIRWOMAN HIGGINS: Okay. Good. We'll join the issue.

MR. STANCIL: Okay. Again, that would be Exhibit 3-OO for California Regional Rail Authority, same issue.

CHAIRWOMAN HIGGINS: Okay. We're on uncharted territory here. It would be very helpful to our process again because we want to do this in the context of trying to complete this investigation. If we could get your submissions within 30 days, and then that would allow for us to share those submissions from all of you with everybody else, for people to react to, within the next 30 days, so we can meet our 60 day comment deadline. Did I do that correctly?

Okay. And as is consistent with our Party system, please when you submit your paper, your views, your white papers to us, also share them with the other parties so that way we can make sure everybody has this information. I'm sure the FRA will be very interested in this. Okay. Thank you. Any other

questions?

Yes, Metrolink.

PARTY QUESTIONS

MR. CRARY: Just a couple of questions. Mr. Clark, we talked yesterday about Metrolink's installing or expanding the installation of ATS inductors throughout our system at select locations where speed changes occur. Does the California PUC support that effort?

MR. CLARK: We haven't yet taken a position on that. We will be looking at that in the collision avoidance rulemaking.

MR. CRARY: And, Mr. Logan, the recent 217 audit, it looked in other areas of our organization as well. For instance, you did a review of SCRA employees and SCRA dispatching practices. Were there any exceptions taken to how the dispatching practices were being used?

MR. LOGAN: Mr. Gallant actually participated in dispatcher. He might be best to comment on the dispatcher audit.

MR. CRARY: Thank you. Mr. Gallant, same question.

MR. GALLANT: What we found is that the training program was a very, very good training program, that the train dispatchers performed their duties adequately, and took no exception to any issues in the train dispatching operation.

MR. CRARY: Thank you. The records reviewed and taken exception to in your recent audit were of the Connex efficiency testing, correct?

MR. LOGAN: That is correct.

MR. CRARY: Did your audit find that all Connex train and engine employees, did they receive the proper number of efficiency tests?

MR. LOGAN: Yes, I believe so.

MR. CRARY: Thank you. No further questions.

CHAIRWOMAN HIGGINS: Okay. Any other questions for this Panel?

MR. COTHEN: Moving in the vicinity of a passenger station where a train is delayed in block is governed by FRA Emergency Order Number 20 which includes specific requirements for efficiency checks of personnel as well as briefing and training of the personnel. Do you have authority to enforce those requirements?

MR. LOGAN: Yes.

MR. COTHEN: Part 219 of our regulations, Federal Railroad Administration regulations, deal with alcohol and drug use. Do you have authority to enforce those requirements?

MR. LOGAN: Yes.

MR. COTHEN: And subsequent to the issuance of Emergency Order Number 26, dealing with personal electronic devices, do you have authority to enforce those regulations?

MR. LOGAN: Yes.

MR. COTHEN: Thanks very much.

CHAIRWOMAN HIGGINS: Okay. Last call.

(No response.)

CHAIRWOMAN HIGGINS: It's now 11:25. I think we're, unlike yesterday when we were clicking right along, we're a little slower today. I think what we'll do is break now for lunch if that's okay with everybody and come back at 12:30, and we'll start with the FRA and then we'll have a discussion about positive train control this afternoon. Okay. Thank you. See you here at 12:30.

(Whereupon, at 11:25 a.m., a luncheon recess was taken.)

A F T E R N O O N S E S S I O N

(Time Noted: 12:30 p.m.)

CHAIRWOMAN HIGGINS: Mr. Stancil, will you call the next witnesses please?

MR. STANCIL: Would Patrick Patten and Doug Taylor approach the witness table please?

Okay. Mr. Patten, would you raise your right hand please.

(Witness sworn.)

MR. STANCIL: Okay. Mr. Patten, would you please provide your full name.

MR. PATTEN: Patrick A. Patten.

MR. STANCIL: And how do you spell your last name, sir?

MR. PATTEN: The last name is spelled P-a-t-t-e-n.

MR. STANCIL: And you are currently with the Federal Railroad Administration?

MR. PATTEN: Yes, sir, I am.

MR. STANCIL: And what is your job title with the Administration?

MR. PATTEN: The job title is Deputy Regional Administrator.

MR. STANCIL: And what is the address of your office?

MR. PATTEN: The address is 801 I Street, Sacramento, California.

MR. STANCIL: How long has you served as the Deputy

Regional Administrator?

MR. PATTEN: I've been the DRA since November of '04.

MR. STANCIL: And prior to that, were you still with the Agency?

MR. PATTEN: Yes, sir, I was. Prior to that, I was the hazardous materials specialist from June of '02.

MR. STANCIL: From June of 2002?

MR. PATTEN: Correct.

MR. STANCIL: And do you have any additional experience in the railroad industry?

MR. PATTEN: I do. Before that, I was with the FRA in Region 6 as a hazmat specialist or, excuse me, hazmat inspector for about 11 years. Before that, I spent 11 years with the State of Illinois, Illinois Commerce Commission as a certified hazmat inspector at the state level. Prior to that, railroad experience would have been eight years on the Chicago Rock Island Pacific Railroad.

MR. STANCIL: Okay. Could you pull your microphone a little closer please? What are your current duties and responsibilities at FRA?

MR. PATTEN: Currently I supervise three of the five disciplines, those disciplines being motor, power and equipment, hazardous materials and operating practices. I also supervise grade crossing managers, two chief inspectors and two administrative individuals.

MR. STANCIL: Okay. And could you also identify the lady sitting at your right?

MR. PATTEN: Yes. This is Anne Landis.

MR. STANCIL: Okay.

MR. PATTEN: Her name escaped me for a moment.

MR. STANCIL: And she is --

MR. PATTEN: Trial attorney with FRA.

MR. STANCIL: Okay, sir. Thank you. Mr. Taylor, would you raise your right hand please?

(Witness sworn.)

MR. STANCIL: Okay. Please bring your microphone close. And could you give us your full name, sir?

MR. TAYLOR: Douglas H. Taylor.

MR. STANCIL: And you're with the Federal Railroad Administration?

MR. TAYLOR: Yes.

MR. STANCIL: And what is your title there, sir?

MR. TAYLOR: Operating Practices Staff Director.

MR. STANCIL: And your business address.

MR. TAYLOR: 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

MR. STANCIL: And how long have you served in your current position?

MR. TAYLOR: Since 1966 as Operating Practices Staff Director. 1996.

MR. STANCIL: '96. And prior to that, what experience do you have in the railroading industry?

MR. TAYLOR: Well, I've been with the Federal Railroad Administration actually since 1977. I've worked in various positions with the FRA as a rail accident analyst, railroad operations analyst, chief of the plans and development division. I spent eight and a half years in the field, nine and a half years in the field as an operating practices safety inspector, and then chief of the reports and analysis division before I became the Operating Practices Staff Director. Railroad experience, I started with the Missouri Pacific Railroad in 1970, worked the Missouri Pacific, the Missouri Kansas-Texas, and the Houston Belton Terminal Railroad holding positions of management trainee, assistant trainmaster, trainmaster and director of safety.

MR. STANCIL: Good. What are your duties and responsibilities as Staff Director?

MR. TAYLOR: I'm responsible for the oversight of all regulations relating to train operations, including operating rules, operating practices, alcohol and drug control, radio communications, accident and incident reporting, hours of service and locomotive engineer certification.

MR. STANCIL: Thank you. Madam Chairman, the witnesses are qualified. I will turn the questioning over to Jim Remines. Thank you.

TECHNICAL PANEL QUESTIONS

MR. REMINES: Good afternoon. I'll start with Mr. Patten. Please describe what your inspectors look for on a railroad when they investigate or look for compliance, what do you look for from an operating practices standpoint?

MR. PATTEN: Good afternoon. From an operating practices standpoint, what we're looking for is naturally compliance with 49 C.F.R., any of the rules and regulations relative to operating practices. That would be such things as railroad operating rules, control of drug and alcohol use, radio standards, qualifications of engineers' certifications. We're looking for compliance with, as I mentioned, most definitely the compliance with 49 C.F.R. It would also be with any emergency orders that FRA has issued as well as also the railroad operating rules that are to be complied with by railroads.

MR. REMINES: Do you enforce operating rules of the railroads that you inspect?

MR. PATTEN: I guess I would clarify what we do is if we find something out there that is an unsafe, non-compliant condition, and it involves the railroad operating rule, most definitely the inspector is going to note that first with the individual, if that would be the case, advise them of the fact that they are not complying with the railroad operating rule. We would then notify, once we notified the individual, we would then notify management through an inspection report. Now on that inspection report, yes, if it is a noncompliance with a railroad

operating rule, we are going to show that as, for example, an ROR. We are going to note that on the inspection report and show that as a deficiency. That report would then be given to management and we would expect them to comply with the railroad operating rules as noted on that documentation.

MR. REMINES: And your inspectors that work for the FRA, were they inspecting Metrolink before and after the accident?

MR. PATTEN: Yes, sir, they were.

MR. REMINES: Okay.

MR. PATTEN: And they continue to be.

MR. REMINES: You've heard us talk the last couple of days about the compliance with cell phone rules, calling of signals, unauthorized persons in the locomotive. What's been your experience through your inspectors of what you found on Metrolink and on other operations in California that you have oversight for?

MR. PATTEN: What I would like to do is something that I did in preparation for this, is take a look at the data that currently FRA has available based on those inspector reports. I went back to 2006 calendar year, and I compared Metrolink OP inspections with all railroads in California, OP inspections. When I identify OP inspections, I want to make sure that this is both FRA inspections being made as well as CPUC federally certified state inspectors doing that.

What I found was that, and I will focus on the number of train rides. In 2006, OP on Metrolink, we did 24 train rides. On

all other railroads again OP inspections, we did 138 train rides. So 17 percent of those train rides were on Metrolink.

I then went for the data for 2007. What I found there was 23 train rides for Metrolink, 98 train rides all other railroads OP. That would have been 23 percent of the rides were on Metrolink.

When we look at 2008, I divided that up. What I did there was I went from January through August of 2008 and found that there was 12 percent of the train rides were on Metrolink, that being 5 percent Metrolink, 41 train rides all other railroads. September of '08, after Chatsworth, through February 2009, the most current data shows 70 train rides on Metrolink, 215 train rides on all other railroads within California, for a 33 percent of those rides were on Metrolink.

I also looked at following Chatsworth and the emergency order being issued, Emergency Order 26, I looked at the number of instances to where we showed an investigation or an inspection for compliance with EO26. What I found there was Metrolink by OP inspectors, 65 units. For all railroads, it would have been 233 inspections per EO26, or a percentage of 28 percent of the EO26 inspections would have been on Metrolink.

MR. REMINES: Do you have a number of defects you would have found in the categories that I asked you about like cell phones or --

MR. PATTEN: I don't have that. What I can tell you is

they had been very low. They had been very low as far as instances of noncompliance with the railroad operating rules whether it be the cell phone use and also the calling of signals.

MR. REMINES: Has there been occasions that you would have discussed that with Metrolink or one of your inspectors, noncompliance with cell phones or --

MR. PATTEN: Most definitely because noncompliance with cell phones would be not in compliance with GCOR and also Metrolink special instructions or notices. So again we would hope that would be something an inspector would, if so observed, document on the inspector report, provide that inspector report to the appropriate carrier and discuss those instances of noncompliance.

MR. REMINES: Would that report be submitted to Metrolink, Connex also, both?

MR. PATTEN: It would depend on the inspector themselves. The guidance would be they are always to provide the inspector report to the manager that would have control over that particular operation. For example, if it's going to involve operations, operating practices, we would think we should go to someone in the operating department. If it's going to be a mechanical, someone in the mechanical department, and it follows right on through. Oftentimes because Metrolink is, in fact, the carrier, the report would go to them.

MR. REMINES: Let's say, have you been approached about

a safety problem that they need help with or anything they can enforce out there? Why I'm saying that is, can you write a violation for a violation of a GCOR rule by a Connex employee?

MR. PATTEN: To the best of my understanding, to write a violation, you would not be able to. If it is a GCOR rule, an operating rule, we would write it as a deficiency, not a violation. If it's truly noncompliance with a federal regulation, again or an emergency order, most definitely we could write a violation, and when I say a violation, then we're talking an actual penalty proceeding or recommending prosecution.

MR. REMINES: Okay. How do you do a cell phone inspection, cell phone compliance inspection?

MR. PATTEN: Never having been an OP inspector, it would come, from what I've heard, from the inspectors that do that. Something as far as cell phone, would have to actually be an observation, to where our inspectors are actually riding with the crew or perhaps observing someone on the ground using a cell phone. So it would have to be as per true observation.

MR. REMINES: Compliance with radio requirements as far as calling of signals and other requirements, you have a 220 that covers radio procedures. How would they do a radio inspection, and would they look for compliance with calling of signals in an inspection?

MR. PATTEN: Most definitely they would. They would be looking for the fact that as you made mention of a regulation,

there are also going to be GCOR requirements as far as calling of signals. There's going to be timetable instructions. So our inspectors are going to be looking for compliance in all of those different scenarios. So, yes, they would be looking for compliance for calling of signals.

MR. REMINES: The audit that was mentioned earlier today, what was your role in that audit and do you know what prompted it?

MR. PATTEN: My role in the audit was I am in authority and have supervision over the operating practices division. I was not present for the audit. The operating practices specialists that is with the FRA Region 6, 7, he was there as well as we heard testimony of a total of 13 inspectors from federal and CPUC to include our OP specialist, CPUC's program manager as well as CPUC's superintendent. I was not there the week of the audit.

MR. REMINES: Okay. You investigate accidents on Metrolink also?

MR. PATTEN: Yes, we do.

MR. REMINES: Well, what's been your -- let's say for the last couple of years, what kind of accidents have you investigated on Metrolink, and could you give us a little recap of the causes, whether they were human factor, mechanical or what?

MR. PATTEN: Yes, sir, I can. When we look at the data for Metrolink, I went to calendar year 2006. Calendar year 2006, there were zero human factor caused accidents on Metrolink. I

then went to calendar year 2007, once again, zero human factor caused accidents on Metrolink.

MR. REMINES: Have you done any full blown investigations on Metrolink for a big accident, maybe not as big as this but other accidents? I understand there was a grade crossing accident. Did that predate the period that I asked you about?

MR. PATTEN: I believe that it did but I'm not sure, but to answer your question, most definitely.

MR. REMINES: Okay.

MR. PATTEN: There have been some tragic accidents on Metrolink. The FRA has investigated each and everyone of those. We have had inspectors, both the federal and in combination with CPUC as well as NTSB if they're involved.

MR. REMINES: Okay. Mr. Taylor --

MR. TAYLOR: Yes, sir.

MR. REMINES: -- describe what the operating practices division is and does?

MR. TAYLOR: Well, basically, Mr. Remines, we have oversight of all of the regulations that pertain directly to operating practices and I went through those a little earlier. Primarily what we're talking about here today would be the operating rules and the operating practices, basically 217 and 218.

MR. REMINES: You also have engineer decertifications,

right?

MR. TAYLOR: Yes, we have 240 engineer certification, 220 radio communications, 228 hours of service, 225 accidents and incident reporting.

MR. REMINES: Were you a party to the audit that took place in January?

MR. TAYLOR: No, I wasn't.

MR. REMINES: Okay. Engineer certifications, have you heard today or in the last couple of days some events that would be decertifiable events?

MR. TAYLOR: In the case of Engineer Sanchez, if he allowed the unauthorized person to operate the train, then he certainly would have been -- could have been decertified under Part 240.

MR. REMINES: Passing of a stop signal, that's also --

MR. TAYLOR: Again, that would have also.

MR. REMINES: Okay. I want to ask you about a couple of recommendations we have, and one of them is under 3-S, and it was related to the Clarendon, Texas accident on the BNSF. It occurred May 28, 2002, and I think the Board recommended that FRA promulgate new or minute regulations that would control the use of cellular telephones and similar wireless communication devices by railroad employees while on duty so that such use does not affect operational safety.

FRA has responded more than once and has now classified

it as open, unacceptable action because FRA at some point felt that the regulation wasn't needed. What's your position today and how did your emergency order figure into it? Do you feel it complies with the recommendation today?

MR. TAYLOR: We started to consider the recommendation R03-01. It was issued on June 13, 2003, and we canvassed the railroad industry to see what rules they had on it. We met with the NTSB at a swat meeting on March 17, 2004, talked about increased monitoring of cell phones and reviewed applicable railroad rules to consider the options for possible safety advisory.

On April 27, 2004, we advised the full RSAC to be prepared to discuss cell phone use at the next meeting.

On May 26, 2004, we updated the NTSB on the status and provided the applicable railroad operating rules and all the railroads had rules that prohibited the use of cell phones under certain conditions.

On August 19 of 2004, we wanted to review these rules again to make sure that we had considered everything at least available at that time. We asked the NTSB to consider the recommendation open and acceptable.

On September 22, 2004, at the full RSAC meeting, a discussion on cell phone use, we agreed to continue to working on a best practices document.

On June 6, 2005, of course, Graniteville occurred which

sort of directed our attention to other areas.

We continued to work and decide what we were going to do about the cell phone issue. One of the main concerns we had, and when we brought this up to the RSAC operating rules working group to decide how we would best address this in a way that would be enforceable, that was one of the big issues. And I think it's been demonstrated here over the last day that enforceability is clearly an issue with respect to the use of cell phones. Once an individual is out of sight, he's pretty much free to do whatever he wants with the cell phone or any other electronic device for that matter.

So the issue was how do we enforce this if we come out with a regulation. The RSAC working group, the operating rules working group, decided that the best approach here would be a best practices document or a safety advisory type document saying these are the problems associated with cell phone use and it needs to be stopped.

We were going to advise the full RSAC of this at the next meeting. Unfortunately, the accident occurred at Chatsworth which necessitated immediate action.

MR. REMINES: Do you feel that Emergency Order 26 is the end or do we put out regulations down the road on cell phones, actual regulations? Will the EO26 stand on its own like EO20 does today?

MR. TAYLOR: Again, I think it's an issue primarily with

respect to enforcement, and we have EO26 out that basically says you're not going to use a cell phone, a personal cell phone, and we're very prescriptive in when you can use it, and we also have addressed the railroad supplied electronic devices. I think that's adequate to cover it. Now with respect to what we've discussed obviously the last the last day and a half is how do you enforce it? If somebody's going to get out there and leave a station and start text messaging away, how do you know that they're text messaging. You don't.

So the issue really is, do you want to put out a regulation or put out some order that is virtually unenforceable. It sort of in a way diminishes the effectiveness of a lot of other regulations that are out there that are enforceable, readily enforceable and in order to have something that is meaningful, and clearly it has to be enforceable, and that is the singular, biggest issue we faced in the operating rule working group when we talked about this.

MR. REMINES: Thank you. I'll talk about another regulation.

MR. TAYLOR: Sure.

MR. REMINES: R05-10, and that's Exhibit 3-X, and that came after an accident on October 12, 2003, where a Northeast Illinois Regional Railroad commuter train derailed, and in the recommendation, we asked FRA to require train crews to call out all signal indications over the radio including clearance signals

at all locations that are not equipped with automatic cab signals with enforcement for a positive control system. FRA has responded to us. That recommendation is currently open, unacceptable response. You've heard what we've talked about today, and you've heard our questions and discussions, what's been revealed. Has the FRA changed its position that this is unnecessary or unenforceable? I'm not quite clear but I'll let you verbalize what your position is today at the FRA.

MR. TAYLOR: In the Exhibit 3-Y that we were provided with, it included a letter that we sent to the Board explaining our concerns about requiring such a rule or such a regulation. And, we gave five reasons that we thought that it was not the best thing to do. A couple of them, one of them was the additional communications on the radio, a conversation on the radio. If people were calling each and every signal then, depending on where you were in the United States, that might be an absolutely unworkable practice. I mean in Chicago, in some of the major metropolitan areas, calling each and every signal would wreak havoc over the radio. Calling signals back and forth between the engineer and the conductor, in a passenger train, again there's questionable value in that. Although I can certainly appreciate the context in which the idea is advanced, the practical reality is the conductor is back in the coaches doing things that are related to the care, comfort of the passengers, collecting tickets, getting ready for station stops, assisting people and

calling signals other than, because we have EO20 that requires calling signals under certain conditions, other than that, it's difficult to see the benefit in that. And not only that, at nighttime, it's dark. The conductor couldn't see out the window or the individual couldn't see out the window. It's difficult to imagine how that could really be that effective.

Another issue, too, is because we start calling these signals over the radio for no reason, and then it just becomes routine and pretty much this just becomes white noise and nobody's paying any attention to it anyway.

But I think there's another issue here, too, with respect to that, and that's that if other crews act on the information they get over the radio, could that create a dangerous situation? And I know that we all have, you don't govern your actions based on what you overhear, human nature is what it is, and I can think of one accident, I believe it was Butler, Indiana where one train was following another and the there was another train involved, another train up ahead, with the second train thought the first train was the first train, when, in fact, the first train was the second train, and they overheard a radio communication from the second train ahead and based on that communication, they increased the speed of their train to the point where they couldn't stop before they struck the rear of what was actually the second train derailing equipment into the face of an oncoming train on the adjacent track, killing the engineer and

I believe the conductor on that train and creating a situation with respect to hazmat release. It took three or four days before they could even go in and retrieve the bodies of the employees.

So just arbitrarily calling, not arbitrarily but just calling signals over the radio, there are a lot of disadvantages in it, too, that have to be resolved in our minds anyway. That's what we think of that.

In other words, Mr. Remines, we are not convinced that it is the right thing to do at this time with respect to this overall recommendation.

MR. REMINES: Okay. Could you explain why GCOR and the other major rule groups have adopted that rule?

MR. TAYLOR: No, I can't.

MR. REMINES: Okay. Part 217, railroad operational testing and observations and practices. That's also under your jurisdiction.

MR. TAYLOR: Yes, sir.

MR. REMINES: Okay. Describe the rule that was in effect the day of this accident, and I understand you since changed it, and what changes were made, why they were made and what you think will help them be more effective under 217, you changed.

MR. TAYLOR: We changed 217. We modified 217 --

MR. REMINES: right.

MR. TAYLOR: -- with respect to operational tests but it

wasn't in connection --

MR. REMINES: With the accident, I understand that. That was already underway, but you have changed it and there was a reason why you changed the regulation. Was it related to the ineffective testing or just something that you saw wrong with the regulation as it existed?

MR. TAYLOR: Okay. Let me -- I understand the question. Back, if I can just give you a little history on this, it might clarify the whole process. After Graniteville, we took a look at the human factor caused accidents and found that 48 percent of those human factor caused accidents were the result of about 8 human factor cause codes.

One of the things that we found in the past was that when we see human factor accidents increasing, it's typically a breakdown in employee compliance with the operating rules, and I want to make one thing crystal clear here. Where we talk about employee noncompliance with operating rules, it's not just simply, boom, the employee didn't comply with the operating rules. The question is why? And there could be a number reasons why. The employee may not have been properly trained. The officer who is supervising that employee may not know the rules himself or herself and condone noncompliance either because they don't understand it's occurring or because it's operationally efficient for it to occur.

So we decided that we need to revise 217.9, the

operational test programs so that the tests were focused in the proper areas and the people conducting the tests were properly qualified. There are basically about seven or eight enhancements that we included in 217.9, and these enhancements are not just something we dreamed up for the occasion, and I think Mr. Breeden mentioned it yesterday but we had some issues with respect to human factor caused accidents on the Southern Region on the Union Pacific Railroad and based on our review of the accidents and then our review of our own inspector findings and review of the operational test data, the operational test data was completely inconsistent with our inspector findings including our findings when we went out and tested with the operating offices. So it was clear that we needed to do something there. We entered into a compliance agreement with the Union Pacific Railroad that specified certain things must occur. I'll go through them in just a minute.

Anyway, as a result of that, the UP implemented the conditions of the compliance agreement systemwide and it brought the human factor caused accidents, it swung them the other direction and started bringing them down, and I will say this, for the Union Pacific Railroad, they took that compliance agreement to levels that frankly I never would have anticipated. It is now virtually the standard of the industry in terms of how they use their program.

What did we do? We modified 217.9 to first of all

specify that the operational test and inspection program had to include a specific number of tests sufficient to ensure compliance with subpart F, 218, subpart F, which covers the eight cause codes that cover 48 percent of the human factor caused accidents.

Another thing we included in there was that railroad offices must be qualified on the operating rules, the operational testing and inspection program requirements, the procedures relevant to the tests and the inspections that they conduct, and they have to receive appropriate field training in order to achieve proficiency.

What we found when we went out and conducted operational tests in some cases was that the office conducting the test didn't have a clue as to how to set the test up properly or set it up in such a fashion that it didn't create a more dangerous situation than he or she was trying to test. So what we required here was that if you're going to go out and do an operational test, you better be qualified to do it. You better know what you're doing and the railroad has to document that you have been properly trained and qualified to conduct the test.

We also required railroads to document the qualifications of the officers authorized to conduct the tests, the types of test they're authorized to conduct and again there's a distinction between an observation type of test that probably wouldn't require a whole lot of training or the more sophisticated test where you're going out and conducting them with respect to

stop signals, interlocking signals, and things of that nature.

We also, this is the major part of this. We said that, hey, your program needs to specifically address the causes of the accidents or the testing on the rules applicable to the causes of the accidents. Okay. So if we're having accidents resulting from shoving blind equipment out the foul, crossover switches out of correspondence, sofa type of incidents, we don't want to see a lot of tests in there on personal protective equipment, slipping, tripping, stumbling hazards or headlights not properly displayed. I'm not minimizing the importance of those particular rules, but in terms of safety sensitive, in terms of noncompliance with the rules that are causing the accidents, the railroads should be focusing their effort on those rules.

We also have a requirement in there now where on a division, for example, there has to be one individual in charge to make sure that all of these requirements are properly implemented, that the offices are conducting the appropriate tests. Another major part of this is every six months, every quarter and every six months, the railroads have to conduct review of their operational test program to make sure it's being properly implemented and also to revise that program to reflect any additional tests or additional focus that they need to have to address the problems that they're finding, and those problems can occur either through accidents or reportable accidents, human factor accidents, accountable accidents, FRA inspection reports on

defects and violation of federal regulations or railroad operating rules.

And not only that, but it really doesn't have to be confined to just one particular terminal. Let's just suppose we have a terminal that's having no problems, no accidents, no injuries, everything is great. Well, what am I going to test on? You know, maybe you better take a look at what's going on next door in the next terminal or the next state and find out what other people are having problems with, and you might want to try to get ahead of the curve and address those issues before they become problems on your railroad. So the bottom line is, you need to focus your testing program in those areas that are causing the problems.

Another thing, too, that we included in this is the Associate Administrator for Safety can now disapprove an operational test program for cause so stated, so that we now have an absolute regulatory path to getting the corrections accomplished that need to be accomplished. And I want to make one point very clear here is that, and I think the UP again has carried this to heights that we didn't envision when we even thought about all of this.

The object here isn't to flip through the rulebook and come up with a test that nobody has ever heard about or no one has ever seen or the likelihood of encountering this condition is very low. The object of the operational test program is really more of

a training exercise so that people know and understand the operating rules because it is the only way that you can really validate the effectiveness of the operating rules classes that the employees go to. And if we're not getting the compliance with the operating rules, then the issue is why. And there could very well be a lot of reasons. A training issue, allowing noncompliance for operational expediency or maybe there's a legitimate concern, the employee doesn't know how to apply the rule in a particular situation.

So if it's approached as a training tool to make sure that the employee knows how to apply what he's learned in class, that's the object of this. The object isn't to go out and ding people. What does that accomplish? I got $35,000 invested in training in this guy. What am I going to do? Fire him. That's absurd.

So I think if you look at 217.9 now, the changes that we've made in it, it is far, far more effective than it was in the past, and from an enforcement standpoint, it gives us the tools we need to focus the programs in the right direction.

I don't know if I answered your question or not. I kind of took the long way around there.

MR. REMINES: Thanks. Knowing the FRA's positions on calling of signals, does that filter down to the inspectors that you don't have a belief in it so that they would not emphasize it in their inspections?

MR. TAYLOR: No, not at all. If the railroad requires the employees to call the signals, then the inspector would anticipate that that's exactly what should occur, and if he or she were doing an onboard inspection and encountered that, then we would expect that the inspector would correct that problem, record it in his inspection report, and then when the inspection report is turned over to the carrier, then the carrier has the information they need to handle it appropriately.

MR. REMINES: Do FRA inspectors -- well, maybe not that. But do railroad employees know that they can approach FRA about noncompliance issues such as not using cell phones or not obeying the operating rules? Does FRA have any kind of confidential reporting system that a railroad employee could turn to or does he have to approach the inspector on scene?

MR. TAYLOR: I think that in the case, I think Mr. Cumby mentioned it, but the UP has a program, a C3R (ph.) program in place in North Platte where there's a confidential reporting system, but with respect to our situation, we get calls from railroad employees concerning noncompliance with rules and we deal with them on a confidential basis with the employer involved. In other words, if someone says, hey, look, this engineer on job A, yard job A is on his cell phone doing this and that and everything else, we're going to follow it up and see whether or not there's any merit in those claims.

MR. REMINES: What action could FRA take against an

employee if found in violation of your regulations?

MR. TAYLOR: If they're found in violation of our regulations, there's a number of things we can do. It escalates up and also that includes violations of railroad operating rules that are in place to implement our regulations. For example, in subpart F, there are a host of requirements with respect to handling switches and derails, shoving cars, leaving equipment out to foul, and it's very, very explicit in the regulation itself that any violation of a railroad operating rule that is in place to implement that regulation is a violation of the regulation itself.

MR. REMINES: Well, is it a monetary fine or could it result in a dismissal? Would you ever recommend dismissal of an employee or --

MR. TAYLOR: One of the things we did with the new subpart F is just clearly show in there that we intend to hold the employees accountable for compliance with these rules. So to the extent that there's noncompliance with a rule, then we can do one of two things. We can hold the employee accountable. We can hold the railroad accountable or both. And with respect to the employee, typically when -- and it could go up to a fine of $25,000. The reality of the situation is that that's not the way we handle business. Typically we are more inclined, if it's a clear cut case of employee negligence, disregard for the rule, then the Region would typically write a regional warning letter.

Chief Counsel can send a warning letter and then beyond that, you get up into individual fines and beyond that, you get into disqualification from safety sensitive functions.

MR. REMINES: Are FRA inspectors required to disclose their presence or can they not disclose their presence or how would they not disclose their presence and enforce the regulations?

MR. TAYLOR: With respect to cell phones?

MR. REMINES: Cell phones, any of the regulations? Do they wear uniforms, or do they drive marked cars or anything or how do they approach the railroad without everybody knowing they're there?

MR. TAYLOR: Well, that's really -- the employees are probably going to know you're there when you get on the property. In terms of radio communications, for example, you can monitor radio communications from any location where an authorized user of the railroad is on duty and you advise, are you going to monitor the communications to see if they're in compliance with federal regulations and you go from there. So you may pick up non-compliant radio communications from crews that aren't anywhere near the location where you're doing the monitoring, would be one example. Typically, the inspector observes the noncompliance.

I might point out one thing, too, that in a case of just habitual noncompliance, it's difficult to change your patterns or styles. So that if you're doing something wrong or not in

compliance with certain rules on, you know, seven days a week, it's kind of difficult to change horses on day eight when the inspector shows up.

MR. REMINES: Okay. If you were to take action against an employee, is there a record that another employer could -- let's say he came from Amtrak over to Connex like this transition. Is there a way that an employer could find out from FRA if there's been action against them before such as a decertification or any other action such as --

MR. TAYLOR: A decert they would because that's required. I'm not sure about the other part of your question, Jim.

MR. REMINES: All right. The last question. How do you feel about video recordings on locomotives?

MR. TAYLOR: I'm not sure the agency -- how the agency feels about it. I think that's a subject of active discussion in I think the motor, power and equipment working group and they're dealing with that there and I'm not sure how they're coming out on that.

MR. REMINES: Would your office oppose it?

MR. TAYLOR: You mean the --

MR. REMINES: In your position as Director, would you oppose video recordings? You discussed about the difficulties of enforcing the cell phone regulations and what I'm trying to do is find out if you'll assist if it becomes reality?

MR. TAYLOR: It would appear to me that it's virtually impossible to force this when the individual is out of sight.

MR. REMINES: I have no further questions.

CHAIRWOMAN HIGGINS: Mr. Workman, do you have questions?

MR. WORKMAN: Yes. Mr. Taylor, could you give me an overview of the FRA's criteria for determining when and where audits are performed?

MR. TAYLOR: typically with respect to a 217 audit, Mr. Workman, or just any audit?

MR. WORKMAN: No, 217s.

MR. TAYLOR: Typically the way we get started on the 217 audit is the inspectors will typically do 217 audits as a matter of routine inspection. However, what would trigger a larger 217 audit would be a series of problems in a particular area. For example, if we see the human factor caused accidents going up, in a particular area, particular railroad, particular part of the country, then typically what we do is we would do a run to see just what types of accidents are occurring, where they're occurring, the circumstances that they're occurring under, and then we would have our inspectors go out on the property and determine what the level of compliance is with the applicable railroad operating rules, railroad safety rules.

The next thing they would do is conduct a 217 audit on the operational tests that are done, for example, on a subdivision or a division. It's typically at the division level, to see what

the officers on that division are finding with respect to the problems that are occurring, whether or not the tests are directed in the proper fashion. And, typically what we found in the past, not typically, when we do find a problem, typically what it is, is our results are 180 degrees out of sync with what the carrier officials are recording, both in terms of the numbers of defects and the safety sensitive nature of the defects. And initially while we're in there, we will go out with operating officers and conduct tests with them to see how the tests are conducted and whether or not they're recording the defects that they're finding.

And typically, not typically, but from time to time, we've actually, after we've gone back and looked at some of these 217 records, found that the only time some of these operating officers record defects is when they're with a federal inspector.

So the bottom line here is that if we see that the accidents or the TY and the injuries are increasing, then we're going to go in and we're going to go through what we call a focused inspection process and the 217 audit is part of that process.

MR. WORKMAN: Who within the FRA approves each railroad's operational test program? Does that come through your office?

MR. TAYLOR: Yes, it does.

MR. WORKMAN: Does the FRA intend any further regulatory action on cell phone use by train crews?

MR. TAYLOR: I'm unaware of any. I think we need to see how EO26 works and then make some judgments from there.

MR. WORKMAN: This may or may not come under your area but do you know if Metrolink receives any federal, state or local money?

MR. TAYLOR: I don't. I'm sorry, Mr. Workman, I don't know that.

MR. WORKMAN: Okay. No further questions.

CHAIRWOMAN HIGGINS: Okay. Questions from the Parties.

MR. NARVELL: Madam Chairman.

CHAIRWOMAN HIGGINS: Oh, I'm sorry.

MR. NARVELL: Just a real quick, if you don't mind, while I was listening to the discussion here. Just a real quick point of clarification. Mr. Taylor, I believe you were referring to the Gunter, Texas accident as opposed to the Butler, Indiana accident earlier with the three trains, both of which were investigated by the Board. Just a point of clarification.

MR. TAYLOR: The one where the radio procedures were involved --

MR. NARVELL: Three trains.

MR. TAYLOR: -- one was following another. It wasn't Gunter, Texas.

MR. NARVELL: Yes.

MR. TAYLOR: There was another one out there.

MR. NARVELL: Okay. It might have been another one.

Gunter, it sounds suspiciously like Gunter.

MR. TAYLOR: No, Gunter didn't involve -- no.

MR. NARVELL: Okay.

MR. TAYLOR: This one was a clear cut example of one train following another and there was another train out there that they were unaware of --

MR. NARVELL: Okay.

MR. TAYLOR: -- and they responded, they handled that train in according with the communications they were hearing from the first train and they ended up hitting the second train.

MR. NARVELL: Okay. Thank you. You used a term a couple of times here today, I believe we heard it earlier today, and I'm aware that FRA codes their accident as human factor cause. Can you kind of describe or provide FRA's definition of what a human factor accident is please?

MR. TAYLOR: Well, it would basically be one where human performance was the cause of the accident. For example, leaving a switch open, crossover is out of correspondence, there's any number of causes in there that are related to compliance by people with respect to applicable rules.

MR. NARVELL: Okay. Thank you very much.

CHAIRWOMAN HIGGINS: Any other questions from the Tech Panel?

(No response.)

CHAIRWOMAN HIGGINS: Okay. We'll turn to the Parties.

Mass Electric.

MR. ROBERTS: No questions at this time.

CHAIRWOMAN HIGGINS: City of Los Angeles.

MR. QUINTANAR: No questions.

CHAIRWOMAN HIGGINS: Union Pacific.

MR. GRIMALLA: No questions.

CHAIRWOMAN HIGGINS: UTU.

MR. CUMBY: No questions.

CHAIRWOMAN HIGGINS: BLET.

MR. WALPERT: Yes. Thank you.

PARTY QUESTIONS

MR. WALPERT: Mr. Taylor, you commented on the calling of signals and the fact that in some cases, especially when crew members are in the cab, it may produce maybe significant radio chatter as a result of calling of signals. Is that correct?

MR. TAYLOR: There are certain areas where there is a lot of radio communication typically occurring and to add to that, by calling a signal when there's someone in the cab with you, I'm not sure the benefit is there.

MR. WALPERT: It seems to me that maybe there is a misunderstanding in regard to calling of signals. It's not simply a matter of calling a signal over a radio, just say green signal called by the engineer and then responded green signal by the conductor. Under Part 220, are there not specific elements for identification when transmitting over the radio?

MR. TAYLOR: No, that's absolutely correct. So to call that signal, you'd have to call the individual and go through the proper identification procedures and the individual has to respond and be and over and out kind of deal and then proper termination of that. To just call a clear signal as you go along, just to announce the clear signal or approach or whatever approach, median approach diverging, it's not 100 percent in compliance with Part 220.

MR. NARVELL: So in order to be in compliance with Part 220, it requires much more conversation on the radio than simply the calling of the --

MR. TAYLOR: I think something to note here is, in the one case, in Part 220, you're calling an individual. For example, if you're calling someone in the train, someone in a passenger car, for example, then that communication has to be in compliance with Part 220. If on the other hand, I'm just simply saying clear signal to anyone who can hear it, you're not really calling anyone at that point. You're just making an announcement using the radio.

MR. NARVELL: Okay. Thank you. That's all I have.

CHAIRWOMAN HIGGINS: Okay. Thank you. Connex. Metrolink.

MR. ELSMORE: No questions.

CHAIRWOMAN HIGGINS: Metrolink.

MR. STANCIL: Madam Chairman, Connex has a substitute

party representative.

CHAIRWOMAN HIGGINS: Oh, sorry.

MR. STANCIL: Could we identify your name, sir?

MR. ELSMORE: Yes, certainly. I'm substituting representation for Tommy McDonald. My name is George Elsmore.

CHAIRWOMAN HIGGINS: Okay. Thank you. Metrolink.

MR. CRARY: The first question is for Mr. Patten. In late 2007, Metrolink received a call from your office asking for SCRA's assistance to help with Utah Transit Authority as they were setting up their operating practices for their new commuter rail services. Our assumption in sending our Director of Operations, our Assistant Director of Operations and two of our chief dispatchers for approximately two weeks, was that our operating practices were a good model for a new emerging system. Was that a correct assumption?

MR. PATTEN: Yes, we would agree with that.

MR. CRARY: Thank you. I also have a question concerning Exhibit 3-Y wherein the FRA reports on the status of PTC development. The letter's dated 2006 and it's dated progress was being made on this very difficult issue. SCRA is also of the mind that this is a very difficult and technical thing to be focused on right now. The letter also references the UP and the BNSF's efforts to develop a system. Our concern is that to meet these federal safety mandates of 2015, and our commitments to the region of 2012, that we would be solely focused on developing a

PTC system that is consistent with our freight partners. My question to Mr. Taylor is, are you supportive of this approach?

MR. TAYLOR: If you don't mind, I'll defer that PTC questions to Mr. Cothen. I think he's going to be a witness with respect to that issue.

MR. CRARY: Mr. Patten.

CHAIRWOMAN HIGGINS: Once we finish this Panel, we'll turn to the PTC.

MR. CRARY: Oh, great. Mr. Cothen. I misunderstood. Okay. I'll hold the question for Mr. Cothen.

CHAIRWOMAN HIGGINS: Okay. Thanks. Any other questions? FRA.

MR. COTHEN: Thank you. I would like to follow up real quickly.

CHAIRWOMAN HIGGINS: Sure.

MR. COTHEN: Let's go back if we can, having wandered fairly far, to control point Topanga, the distance signal for that control point station. Mr. Taylor, let's talk about applicability of FRA regulations and orders in that circumstance, and let's assume for purposes of the question that the facts adduced by the Board's expert staff over the past day and a half can be accepted as truth. And by the way, the Federal Railroad Administration would not argue to that contrary in any material respect. So the situation that we have is that the distance signal just before the passenger station is reflecting an aspect, meaning in essence

approach to the control point prepared to stop. The control point Topanga is displaying a red signal.

Under those circumstances, let's look at the responsibility of the locomotive engineer. Under Emergency Order 20, was the engineer required to call the approach?

MR. TAYLOR: Yes, he was.

MR. COTHEN: Departing the station, if the engineer could not see a clear signal, was the engineer authorized to operate in excess of 40 miles an hour?

MR. TAYLOR: No, he was not.

MR. COTHEN: Under EO20 having been delayed in block, was the engineer, unless he could see a clear signal, authorized to do anything other than prepared to stop short of the control point?

MR. TAYLOR: No, he was not.

MR. COTHEN: Under Section 240305, prohibited conduct for locomotive engineer, was that engineer permitted to pass the red signal without stopping and obtaining permission from the dispatcher?

MR. TAYLOR: No, he was not.

MR. COTHEN: So as I understand it, your testimony would be that assuming the facts to be what has been propounded here, that there were at least four clear cut, unambiguous violations of FRA regulations or orders?

MR. TAYLOR: That's correct.

MR. COTHEN: Since we're generously asking personal opinions here, and we're generously permitting the witnesses to answer, in your judgment -- how many years in the railroad industry and at FRA?

MR. TAYLOR: Thirty-two.

MR. COTHEN: Would adding another prohibition help?

MR. TAYLOR: Absolutely not.

MR. COTHEN: Thank you.

CHAIRWOMAN HIGGINS: No more questions, FRA.

MR. COTHEN: No.

CHAIRWOMAN HIGGINS: Okay. Connex.

MR. ELSMORE: Thank you, Madam Chairman. To Mr. Taylor, imagining the same scenario that Mr. Cothen just portrayed, had the engineer who was stopped at the Chatsworth station and subject to the rules of Emergency Order 20 observed a green signal at Topanga, what were his obligations under that circumstance?

MR. TAYLOR: He could have left the station at normal speed.

MR. ELSMORE: Okay. And assuming that he did that, would there have been any violation of FRA regulations?

MR. TAYLOR: Not if the signal was clear.

MR. ELSMORE: Thank you.

CHAIRWOMAN HIGGINS: Any other questions from the Parties?

(No response.)

CHAIRWOMAN HIGGINS: Okay. My colleagues, Dr. Kolly.

BOARD OF INQUIRY QUESTIONS

DR. KOLLY: Yes. This question is for either of you. Getting back to the inspections that are performed, we've been hearing about a number of groups here that are all conducting inspections on this railroad. What is the cooperation between FRA and the other groups performing inspections to share inspection information and in particular analysis, not necessarily communicating a particular violation but communicating overall trends and overall analysis?

MR. PATTEN: If I understand the question as far as sharing data, we most definitely within FRA have a secure site, and I believe, for example, our state partner, CPUC would be able to get in there and review that data. That would be data that would mostly definitely involve the inspection reports themselves, the violation reports as well as any of the accident incident data that we have.

DR. KOLLY: Do you see consistency between your findings and those of the others conducting inspections?

MR. PATTEN: When you say others, sir, would you be referring to one example being CPUC?

DR. KOLLY: Right.

MR. PATTEN: We do. As made mention by CPUC, they are federally certified state inspectors. Those inspectors are enforcing the same rules and regulations that FRA inspectors are,

and again I would say that would go beyond rules and regulations. That would include emergency orders as well as we made mention of operating rules. Again, once that state inspector, similar to a federal inspector finds a deficiency, they're going to document that on the same federal inspection report that a FRA inspector would. That inspection report, if it does, in fact, involve a violation in that they're going to recommend prosecution -- in this case, CPUC based on their findings is going to recommend prosecution, that violation report is drafted and submitted to, in this case, our OP inspector. The OP inspector looks at it with the same discretion, looking for exactly the same insurance of compliance, the same technical consistency to ensure a proper violation report. So a CPUC inspector is going to go through the same inspection process, deficiency noting process and/or violation process as a FRA inspector would.

DR. KOLLY: How about for instance with the inspections done by Connex? Do you get involved with those in reviewing those and comparing the results with them?

MR. PATTEN: Well, we would. As far as Mr. Taylor had mentioned, you know, with some of the efficiency testing, those kinds of things. So, yes, we will be out observing rules compliance with railroad employees.

MR. COTHEN: Can I have one more, Madam Chairman?

CHAIRWOMAN HIGGINS: Mr. Chipkevich.

MR. COTHEN: Can FRA have one more, Madam Chairman.

CHAIRWOMAN HIGGINS: We'll go around again.

MR. COTHEN: Okay.

CHAIRWOMAN HIGGINS: You'll get your turn.

MR. CHIPKEVICH: Thank you. Mr. Taylor, how many operations inspectors do you have in the -- what region would that be? Region number?

MR. PATTEN: This would be Region 7.

MR. CHIPKEVICH: Region 7.

MR. PATTEN: Correct.

MR. CHIPKEVICH: And how many operations inspectors do you have in Region 7?

MR. PATTEN: I can answer that. As far as within Region 7 OP, we have a total of seven operating practices inspectors.

MR. CHIPKEVICH: And has that number changed since the Chatsworth accident?

MR. PATTEN: Since Chatsworth, it has in that I believe we've got one open position now.

MR. CHIPKEVICH: Okay. So at that time you had about eight?

MR. PATTEN: No, sir. Excuse me. At that time, we would have had seven. We now have one opening.

MR. CHIPKEVICH: Okay. So you now have six with one opening?

MR. PATTEN: Correct.

MR. CHIPKEVICH: When they go out to do inspections, do

they always identify themselves? Well, this is OPS OP, so do they always identify themselves when on the property?

MR. PATTEN: Not necessarily. We're going to be conducting what we would call routine unannounced inspections. So oftentimes that it is just that, a routine inspection, we may not necessarily identify ourselves, unless it is a scenario to where we're going to jeopardize our own safety, most definitely we will let them know that we are on the property but there are types of observations that we can make without identifying ourselves to either railroad management or Union personnel.

Once we find an unsafe, non-compliant condition, most definitely then we are properly going to identify ourselves and make mention of that deficiency or unsafe condition to the appropriate party.

MR. CHIPKEVICH: Okay. Anytime you're going to board a train, you'd have to identify yourself?

MR. PATTEN: Yes, sir, we would. We've got credentials and I think the statement was made, uniforms no, credentials, yes, most definitely. If asked to provide our credentials, we would do that or in some cases as we would approach that train and prepare to board that train, we would offer our credentials so that they do, in fact, know who is being on that locomotive or train with those personnel.

MR. CHIPKEVICH: Okay. So anytime you're boarding a train to observe the crew to see how they're complying with

operating rules, you'd expect them to be on high alert and really trying to comply as well as they could, would you not?

MR. PATTEN: We would hope so. Perhaps I can expand. There may be times where if we would be, for example, inspecting compliance for a conductor within a passenger train, then perhaps we would not identify ourselves to them, but anytime we would be around the cab car, the controls of that, or the locomotive engineer, most definitely we would identify ourselves. And, yes, we would expect people to, in all cases, whether we're on the property or not, to be in compliance with all the rules and regulations.

MR. CHIPKEVICH: Okay. So in 2007, you all had 23 cases where your personnel rode trains on the Metrolink system. So if you're not there to observe that somebody's complying with the rule to not use a cell phone and the rule for calling signals, it's very difficult if you're not present. Do you have any ideas on how there could be better oversight having listened to the discussions the last few days?

MR. PATTEN: I don't know that I do. It's a combined effort of all parties involved. Naturally the scenario is when we conduct our inspections, then most definitely we're going to be looking for rules compliance. We would expect, as we've mentioned here the last couple of days, that railroad managers do the testing they need to do to ensure their employees are complying with the rules and regulations, as well as review by crew members

or any employees themselves if they find another person doing something unsafe or noncompliance.

MR. CHIPKEVICH: And what would you expect carriers to do?

MR. PATTEN: Well, we would expect the carriers to take the appropriate action based on their reprimand policies and procedures.

MR. CHIPKEVICH: With regard to the restricted use of cell phones, is there any specific guidance or anything that you all put out that you expect the carriers to do or anything consistent across the board? Mr. Taylor, maybe that would be --

MR. TAYLOR: I'm sorry. Would you repeat that for me please, Mr. Chipkevich?

MR. CHIPKEVICH: Yeah. Is there any guidance that you've put out to carriers on what you expect them to do to comply with operating rules such as restricted use of cell phone, how to monitor it?

MR. TAYLOR: EO26 requires that they incorporate operational tests for EO26 into their operational test program.

MR. CHIPKEVICH: Okay. Does EO26 identify specific types of operational tests?

MR. TAYLOR: Well, it would be a test to see whether or not employees are complying with EO26, all the aspects of it. There are several of them in there, whether it's a personal device or whether it's a railroad furnished device. So whatever element

that would apply to the employee, that's what the railroad would be checking on.

MR. CHIPKEVICH: Okay. But EO26 doesn't identify how to do the test.

MR. TAYLOR: No, it doesn't.

MR. CHIPKEVICH: It leaves it up the railroad --

MR. TAYLOR: Yes, sir.

MR. CHIPKEVICH: -- to develop what kind of test.

MR. TAYLOR: Yes, sir. That's correct.

MR. CHIPKEVICH: Okay. Does EO26 also have some requirements, I believe you mentioned to call signals?

MR. TAYLOR: No, it's EO20 that --

MR. CHIPKEVICH: EO20, sorry. Can you explain exactly what that requires, EO20 then?

MR. TAYLOR: EO20, Part 2, the crew communication rule, requires that the engineer communicate to the -- I'll just read it for you. That'll make it easier here. Okay. It's delayed in the block rule, Part 2, Item A. Crew member located in the operating cab of a controlling locomotive cab car, MU car, shall have the means to communicate orally and shall communicate the indication and location of each wayside signal affecting the movement of the train as soon as it becomes visible for all signals which require either, one, that the train be prepared to stop at the next wayside signal or, two, that the train be prepared to pass the next wayside signal at restricted speed.

MR. CHIPKEVICH: And did you first say if delayed in a block?

MR. TAYLOR: No, crew communication rule.

MR. CHIPKEVICH: Okay. How does an emergency order get implemented? I'm thinking about now Emergency Order 26. As compared to a regulation, is there something that you all can decide is just very imperative and therefore you can issue an emergency order without going through a rulemaking process.

MR. TAYLOR: That's right. Basically we've identified an emergency situation that requires immediate action, and bypass all of the standard regulatory procedures and just go right to an emergency orders. It, by the way, has to withstand a fairly significant test, and I refer that to counsel if you want to comment on it, but we just don't put them out at the blink of an eye. There has to be a legitimate, valid safety reason for doing it.

MR. CHIPKEVICH: And how long does it stay in effect?

MR. TAYLOR: Until we terminate it.

MR. CHIPKEVICH: And how is it enforced? Is it very similar to a regulation or is it enforced differently.

MR. TAYLOR: No, it's the same. It's just exactly the same as a regulation. In other words, a violation of the emergency order is just the same as the violation of the regulation.

MR. CHIPKEVICH: Okay. So there's no difference then in

enforcement capability either?

MR. TAYLOR: No, none at all.

MR. CHIPKEVICH: Okay. Great. That's all. Thank you.

CHAIRWOMAN HIGGINS: You have to tell me when you're finished. I feel like we're getting lost in the weeds here.

I want to bring back to the specifics of this accident. We have four rules as I count them, whether they were Metrolink rules or FRA rules, that were violated, and I'm trying to understand who has the ability to enforce what, because that is at the heart of this accident. You can have all the rules in the world and as Mr. Taylor said, unless you can enforce them, or unless they are being enforced, which are maybe two different things, it's not going to take very long for people to figure out they are not worth the paper they're written on.

So for the rules that I'm focused on, were the rules that, cell phone use, electronic device use, calling of signals which were both Metrolink policies, and I guess they are GCOR policies. Am I understanding that correctly?

MR. TAYLOR: Yes, that's correct.

CHAIRWOMAN HIGGINS: Okay. Then there's the rule about the unauthorized passengers in the trains and the issue of use of unauthorized and prohibited banned substances. Which of those rules does the FRA enforce?

MR. TAYLOR: We don't enforce the unauthorized person in the cab.

CHAIRWOMAN HIGGINS: You don't enforce that.

MR. TAYLOR: It's not a federal regulation, and the particular instance that we're talking about here, however, if that unauthorized person were to operate that locomotive, then clearly it would fall within our purview. In other words, the person in the control compartment of the locomotive, sitting there watching the engineer is not a violation of federal regulation.

CHAIRWOMAN HIGGINS: It's not?

MR. TAYLOR: No.

CHAIRWOMAN HIGGINS: So could have anybody -- you could have your cousin, your child, your uncle, your sister, your next door neighbor, ride in the locomotive, but as long as they weren't touching anything, even that would be okay to the FRA?

MR. TAYLOR: In terms of a federal regulation, it's not a violation of a federal regulation. However, I think that the carriers have operating rules that absolutely prohibit that from occurring, and I can say this, that in all of the onboard inspections that I've conducted as an operating practices inspector, and there are literally hundreds of them, I have never found an unauthorized individual in the control compartment of a locomotive.

CHAIRWOMAN HIGGINS: Well, there's always a first time because here we've got an accident where it is very clear that there were unauthorized people in this train, and in some cases, they were operating.

MR. TAYLOR: That's right.

CHAIRWOMAN HIGGINS: Now the cell phone use rule. We now have EO26.

MR. TAYLOR: Yes, ma'am.

CHAIRWOMAN HIGGINS: That is a post-accident executive order. Good thing that it's there -- I'm saying executive order, emergency order. But prior to the issuance of that emergency order, did the FRA have the authority to or did it in any way inspect, investigate, monitor the use of personal electronic devices?

MR. TAYLOR: That would be part of the onboard inspection or a part of any inspection in the yard or anywhere on railroad property, if an employee was using a cell phone in noncompliance with the railroad operating rule, then the inspector would show that as a defect on the inspection report. They couldn't write a violation.

CHAIRWOMAN HIGGINS: But it wasn't a violation of any federal requirements?

MR. TAYLOR: That's correct. Yes, ma'am.

CHAIRWOMAN HIGGINS: Okay.

MR. TAYLOR: Before EO26 --

CHAIRWOMAN HIGGINS: And essentially -- okay. And then we'll get to how this -- I'm trying to understand, first of all, what you had and have he authority to do and not do. Calling of signals, is that a rule that is enforceable by the Federal

Railroad Administration?

MR. TAYLOR: With respect to the signals that are required to be called, in EO26 it is, yes. So when the --

CHAIRWOMAN HIGGINS: In EO26?

MR. TAYLOR: Yes, ma'am.

CHAIRWOMAN HIGGINS: 26 or 20.

MR. TAYLOR: I'm sorry. 20. I'm sorry.

CHAIRWOMAN HIGGINS: I'm glad you're confused, because I certainly am. So I think we need to clarify for the record what signals does EO20 require be called?

MR. TAYLOR: All signals which require either one, the train stop, the train being prepared to stop at the next wayside signal, or, two, that the train be prepared to pass the next wayside signal at restricted speed.

CHAIRWOMAN HIGGINS: So in the instance of the Chatsworth accident, the approach to Chatsworth, the first signal was the flashing yellow which is the approach signal.

MR. TAYLOR: Advanced approach signal.

CHAIRWOMAN HIGGINS: Advanced approach signal. Was that required to be called under EO20?

MR. TAYLOR: No, it wasn't.

CHAIRWOMAN HIGGINS: Was not. Okay. Was the solid yellow signal required to be called under EO20?

MR. TAYLOR: Yes, it was.

CHAIRWOMAN HIGGINS: Okay. Was the signal at Topanga

required to be called before leaving the Chatsworth station?

MR. TAYLOR: No, it wasn't.

CHAIRWOMAN HIGGINS: Okay. So the only signal under EO20 that was required to be called by this crew, this is again the federal requirement, as it currently exists, was the solid yellow signal?

MR. TAYLOR: That's correct. The engineer should have called a solid yellow signal, and I might add to that, that if the conductor or the designated employee failed to acknowledge the signal the engineer called was approach, then the engineer has an absolute responsibility to ascertain at the next scheduled stop why the conductor didn't confirm the engineer's calling of the approach.

CHAIRWOMAN HIGGINS: Okay. So it's not just a question of the engineer calling the signal. The conductor also has to confirm the signal?

MR. TAYLOR: Thank you.

CHAIRWOMAN HIGGINS: Okay. So that's what exists today as it would apply to this accident?

MR. TAYLOR: Thank you.

CHAIRWOMAN HIGGINS: And then there is the issue of use of a controlled substance that was found in the case of the UP conductor. I'm pretty sure that that's something that the -- it's a federal requirement, FRA rule. Is that right?

MR. TAYLOR: Yes, ma'am.

CHAIRWOMAN HIGGINS: Okay. So we have four rules violations. Only two of them, well, maybe one and a half really, or one and a third, because we're talking about three signals here, were required under current federal requirements. Is that a fair characterization?

MR. TAYLOR: The approach signal, yes.

CHAIRWOMAN HIGGINS: One signal out of three and the violation of the use of a controlled substance. Nothing on cell phones prior to the accident.

MR. TAYLOR: Right.

CHAIRWOMAN HIGGINS: And nothing in terms of unauthorized passengers in the locomotive?

MR. TAYLOR: That's correct.

CHAIRWOMAN HIGGINS: Okay. Now so that's the federal. We're starting at the top here. That's the federal responsibility again pre-Chatsworth. Then we have the California PUC and we have Metrolink, and you indicated and I think they indicated that essentially the California PUC in terms of its authority is an extension of the FRA vis-à-vis enforcement of rules on the railroad. Is that right?

MR. TAYLOR: Yes.

CHAIRWOMAN HIGGINS: Okay. So they could really only enforce the drug rule, the rule against use of a controlled substance and the issue of failing to call one signal. Is that right?

MR. TAYLOR: Yes.

CHAIRWOMAN HIGGINS: Okay. Even though they have responsibility within the State of California, for commuter rails and other rail systems that operate in their territory, they like you, can point these problems out, but they can't take any action. Is that right?

MR. TAYLOR: Yes.

CHAIRWOMAN HIGGINS: Okay. I asked a question and you said you don't know the answer, and maybe Metrolink can provide this. I'm interested in where the funding comes from for Metrolink, federal, state, local, et cetera.

MR. CRARY: Can I just offer a recommendation for an exhibit where we reveal our full funding --

CHAIRWOMAN HIGGINS: Yes.

MR. CRARY: -- for both capital and operating.

CHAIRWOMAN HIGGINS: Yes, that would be great.

MR. CRARY: Okay. We'll --

CHAIRWOMAN HIGGINS: Because I'm a firm believer in following the money.

MR. CRARY: We'll do that.

CHAIRWOMAN HIGGINS: Okay. And that will be exhibit?

MR. STANCIL: That will be Exhibit 3-PP, and what would the exhibit be, sir?

MR. CRARY: It will be the Southern California Regional Rail Authority current fiscal year budget and it explains all the

sources of our funds.

CHAIRWOMAN HIGGINS: Okay. That would be helpful.

MR. STANCIL: Thank you, sir.

CHAIRWOMAN HIGGINS: So that leaves, we have a set of rules that are in place and that this crew was supposed to follow, having to do with cell phones and electronic devices, the calling of signals, unauthorized personnel and use of controlled substances. Do I understand correctly that the only people who really have jurisdiction to enforce those rules are Metrolink and Connex?

MR. TAYLOR: Are you talking about the federal ones?

CHAIRWOMAN HIGGINS: I'm talking about the rules that essentially these crews -- well, both crews were supposed to be operating under.

MR. TAYLOR: Well, on the rules that are covered by federal regulation and Emergency Order 20, then the California PUC and the FRA enforce those.

CHAIRWOMAN HIGGINS: Okay. But we've got four rules and I think you agreed with me that essentially that only one and a third of those rules could be enforced.

MR. TAYLOR: Well, the one that can't be enforced from our perspective is the unauthorized --

CHAIRWOMAN HIGGINS: No, you're not answering my question. You said that you don't have -- there are four rules, right, and you only have jurisdiction and therefore California PUC

only has jurisdiction over use of controlled substances --

MR. TAYLOR: Okay.

CHAIRWOMAN HIGGINS: -- and calling of a solid yellow signal.

MR. TAYLOR: That's correct.

CHAIRWOMAN HIGGINS: Okay.

MR. TAYLOR: And also going, well, in this case, going by the stop signal would be a violation of 240, occupying a block without authority, the engineer.

CHAIRWOMAN HIGGINS: Right. But if he had called the signal.

MR. TAYLOR: Well, let's assume everything went right.

CHAIRWOMAN HIGGINS: Yeah, okay. Well, it didn't obviously. Okay. Because again, you know, how do we -- we've got to get our arms around this. This is at the heart of what we're trying to do here I think. So what we're saying is that essentially Connex is a contractor to Metrolink. They have an agreement and I'm trying to understand. In fact, they are the only ones that have got these rules. We've gone through the numbers of people that they have assigned to these operations, but legally, and the way our framework currently works, they're the only ones who -- they have to essentially enforce their own rules because the feds aren't going to do it and the state's not going to do it. Is that a fair characterization?

MR. TAYLOR: They have to enforce their own rules and

some of those rules may be in place because of federal regulations.

CHAIRWOMAN HIGGINS: But their rules in terms of use of cell phones which is at the heart of this, their rules in terms of calling signals, their rules in terms of, I believe, unauthorized passengers, I'm hoping in terms of unauthorized passengers, go beyond what is currently federal regulation.

MR. TAYLOR: Prior to this accident, there were no federal regulations with respect to cell phones and there's certainly no rules now with respect to unauthorized occupancy in the cab, no federal regulations.

CHAIRWOMAN HIGGINS: Are you agreeing with me?

MR. TAYLOR: I think we understand each other.

CHAIRWOMAN HIGGINS: Okay. You know, we've got to cut through, you know, cut to the chase here. I'm just trying to get the baseline interest because we've got to come up with, you know, we've got to figure out with all of your help, you know, what we do in response to this accident. So I seem to remember a safety agreement or a contractual agreement between Metrolink and Connex that sets out the terms of what each is responsible for. Does that document have any standing in the FRA world?

MR. TAYLOR: I'm not familiar with that document, Madam Chairman.

CHAIRWOMAN HIGGINS: Okay. Are you familiar with or is there such a thing as a compliance agreement if a railroad is not

enforcing its own rules?

MR. TAYLOR: Yes.

CHAIRWOMAN HIGGINS: And what is that? How does that work? What does that involve?

MR. TAYLOR: Well, basically if we encounter a situation where the rules are just not being implemented or it could be for other reasons, let's just talk about operating practices at this point. If the accidents are, if a significant number of accidents, TY and injuries, and we determine that the cause of it, the rules not being properly implemented and properly enforced, then we can enter into a compliance agreement with the railroad to try to get the problem fixed.

CHAIRWOMAN HIGGINS: But that's after the fact.

MR. TAYLOR: Yes, it is.

CHAIRWOMAN HIGGINS: Okay.

MR. TAYLOR: Well, I will say this. It's after the fact in the sense that typically we end up looking at a series of accidents, a series of reportable events before we would do that.

CHAIRWOMAN HIGGINS: I'm familiar with, in the aviation world, for a commercial airline and the manufacturer, the rules that the manufacturer and that particular airline set, essentially become controlling. So even though they may go beyond the FAA rules, in terms of, you know, on any given issue, in fact, the FAA has the authority to enforce the rules and the manufacturer's operating standards and the airlines' particular set of rules. I

gather that doesn't exist with the FRA?

MR. TAYLOR: I'm not sure about the scope of it.

CHAIRWOMAN HIGGINS: Okay. If anybody else has a thought about that, you can please share it.

You talked about -- again, we've made recommendations on at least two of the rules that are in question here today, cell phones and calling signals. And you talked at some length about the problem with rules that -- making federal regulations for things that can't be complied with and, you know, I certainly understand that. And that in your response to us or FRA's response to us, when we've raised concern about that, the indication was that you surveyed the railroads and the rules that they had were fine and it was sufficient to allow them to essentially, I don't want to misquote you here, but essentially implement their own rules. Is that a fair characterization?

MR. TAYLOR: I think what we said with respect to that recommendation was that, and I'm quoting right from it, however, FRA strongly believes that an indiscriminate implementation of the subject recommendation to all railroad operations is not supported by the Board's analysis, the circumstances of the Metro derailment or other information available.

CHAIRWOMAN HIGGINS: Okay. I'm going to quote from something else in this letter that came back to us on May 26 of '04. So this is almost five years old. The FRA informed the NTSB that it believes that the operating and safety rules of the

railroads adequately address these situations and that responsibility for compliance rests with the company managers and supervisors. The FRA concluded that the railroad industry's enforcement of its operating rules governing cell phone use is sufficient to address the issue without the need for the intrusiveness of federal regulations at this time.

I don't know whether you remember that letter or --

MR. TAYLOR: Yes, I do.

CHAIRWOMAN HIGGINS: Okay. So essentially, I think and I realize this came out of the process with RSAC in consultation and the wonderful process we have here in Washington, which I think most of the public doesn't understand and has little patience for, but essentially we're saying it's up to the railroads. So here we have Metrolink. Here we have, working with their contractor, and we have this accident, and we've had other accidents. But yet the FRA has the ability to issue an emergency order, and in your justification for the emergency order, you cite a whole bunch of other accidents that point to the use of cell phones, and I guess we can all be satisfied or, you know, I don't know if pleased is the right word but we can be grateful that there's now an emergency order dealing with cell phones but nothing's really changed.

I mean essentially now the FRA is going to enforce it where before you said you really couldn't. I'm really intrigued by this list. It's Exhibit V, I think it's 3-V, that shows the

enforcement actions, if you will, before September 12th and after September 12th, and it seems to me that your inspectors, and maybe, Mr. Patten, they were your inspectors, maybe this is a nationwide report. I can't really quite tell, you've documented quite extensively the inappropriate use of cell phones once this rule was in place.

So I guess my question is why was it so easy to do after September 12th and so hard to do before?

MR. TAYLOR: Well, again the September 12th event certainly regrettably propelled this issue to beyond a best practices alternative that the RSAC operating rules working group planned to put before the full RSAC. So I certainly wouldn't dispute that.

CHAIRWOMAN HIGGINS: Okay. Obviously it got everybody's attention. We got a lot of, you know, a number of things have changed a result, but I just -- I mean, I think it's tragic that we have to lose 25 lives in order to essentially take action on something that we've known has been a problem for years, that we've seen as a growing problem. It's not, you know, this technology in the scheme of things is relatively new, but it's ubiquitous. It's everywhere, and there's somebody's cell phone. That's hard to believe.

And I just am trying to make the point that, you know, where there's a will, there's a way and I realize and I do not envy federal regulators. I mean we have the benefit of not having

to write the regulations. You all don't have that luxury, but I also think it is too easy many times to just say, well, it's not really enforceable. And yet you look at what your inspectors have done in a relatively short period of time, when they went out and looked and guess what? It's everywhere.

And I would be willing to submit that the same thing, we could look at the issue of calling signals. I mean you pointed out and issued an emergency order a number of years ago having to do with that issue, but in this case, it would have only applied to one of three signals. And, you know, it's fine to call signals when you've got somebody sitting right next to you, and it a form of communication making sure. The whole point of this is not for the, you know, the guy's not talking to himself. The whole point of it is to make sure that he's actually paying attention and the fact, it seems to me, why are you calling that green signal? Yes, it's green, but the point is, it's a go and somebody, you know, the dispatcher can pick it up. It is recorded. We know that and we've talked a lot about whether we should have recorders or cameras or whatever, and we're not going to deal with that now, but this isn't just frivolous it seems to me. I mean until we have a more sophisticated system of positive train control and everything else, you know, this is a system that runs on signals particularly in residential areas, particularly on railroad track where it's shared with passenger and freight, particularly when you've got single track. All of the ingredients that were placed

here.

So I, you know, we go through this process with all of the agencies we work with in terms of improving safety but I get very frustrated, in case you can't tell that, about our being a little too relaxed about this. I mean I think the public expects more from all of us frankly and, you know, I must say that I'm disappointed and hopefully we will take some actions coming out of this that will resolve some of these problems.

But, you know, we all need to, I think, think about those families who lost people in this accident, and that can't be undone. But I don't think any of us want to be back here again for another accident because we just didn't think there was a way to implement a regulation or to actually verify it. I think we're better than that. I think we're more creative. I think we can collectively, whether it's bests practices or whatever it is, but I think we've got to be tougher on some of these things, and it's not easy. I mean I'm not going to say that it is but I just also think it's not acceptable just to say, well, we really don't think it's enforceable. Therefore we don't need to do it, or we'll let the railroads enforce it or we'll let the -- but, you know, we won't let the states enforce it because they're an extension of us. I'm sorry, that just isn't acceptable.

I don't have anymore questions. Does anybody else?

MR. CHIPKEVICH: FRA does.

CHAIRWOMAN HIGGINS: FRA.

PARTY QUESTIONS

MR. COTHEN: Just a point of clarification. Mr. Patten, you had previously said that the state inspection reports go to the operating practices specialist, and then I believe you misstated and stated OP inspector, but it's the operating practices specialist. Is that correct?

MR. PATTEN: Yes, that's correct, that gives technical review. I apologize.

MR. COTHEN: The operating practices specialist would be the person assigned supervisory responsibility for FRA's operating practices inspectors and the technical specialist in the region for that discipline. Is that correct?

MR. PATTEN: Correct.

MR. COTHEN: And just one additional follow-up to the questions that were asked about coordinator with California PUC and the issue of focusing resources. Is it the case that the region and California PUC conduct quarterly management meetings in order to compare notes on those issues?

MR. PATTEN: Quarterly management meetings, you're referring to between FRA and CPUC?

MR. COTHEN: Yes.

MR. PATTEN: Yes, we do. We conduct quarterly management meetings. Also from time to time there are going to be conference calls for technical expertise in which CPUC as well as FRA inspectors would be involved, not only the OP discipline but

within all the disciplines. We also have regional conferences what have you. Anytime that FRA is going to be providing technical guidance, it would be to both federal and state inspectors.

MR. COTHEN: One final point of clarification. Is it not true that since 9/11, that it's increasingly common for any person visiting railroad property to be challenged as to their identity and purpose for being there?

MR. PATTEN: Most definitely it is. In fact, we would expect that. We would expect any railroad employee to, in your words, challenge anyone, and that's why we most definitely would have our credentials and be expected to provide them.

MR. COTHEN: So being on the property for any length of time anonymously is increasingly problematic. Is that correct?

MR. PATTEN: Pardon me, sir.

MR. COTHEN: I said being on the property for any period of time anonymously is increasingly problematic.

MR. PATTEN: It could be, yes.

MR. COTHEN: Thanks. That's all I have.

BOARD OF INQUIRY QUESTIONS

CHAIRWOMAN HIGGINS: Could I just follow up on that? First of all, I think you said you had seven people working for you. Is that right?

MR. PATTEN: That's correct.

CHAIRWOMAN HIGGINS: But that's not a lot of people in

the State of California to do all of this. How many railroads are you responsible for?

MR. PATTEN: A good many railroads. If I could expand on the seven inspectors and resource management, I made mention earlier of data and we've looked at it most definitely, this tragic accident, in reviewing the data. The Federal Railroad Administration has what is known as the national safety program plan. What that does is that allows both Headquarters and regions to come up with things that would warrant something beyond routine unannounced inspections, audits, reviews, what have you, and that's going to be based on our data.

As we look through that data, again I made mention of in 2006, 2007, no human factor caused accidents, a very low defect ratio. So there was nothing that told us that we needed to make it part of our NSPP. Part of that NSPP is also something known as the national inspection plan. What the national inspection plan does is take data and determine risk factors for each railroad and it drives it down to the state level. Metrolink, in fact, based on the national inspection plan, did have a percentage of time that FRA hazmat inspectors were to be on that property. When we looked at that, we found that we met that national inspection plan, a percentage. In fact, we were a little bit more.

So based on those kind of things, yes, seven inspectors is not that many. We're going to go where we can best go to ensure compliance.

I will say this also. Those seven inspectors work along with the CPUC inspectors. We have what's called alternate work schedules in that the inspectors are working 24/7. Now most definitely, that's not 24 hours in a row, but we try to get all to the shifts, so that we do have a presence on the railroads at all times.

The question has not been asked, but most definitely, could we use more inspectors? We could. But we try and optimize the use of the inspectors that we do have.

CHAIRWOMAN HIGGINS: Okay. I can understand why it would be difficult to have access to freight railroad yards but passenger rail, I mean I'm just wondering again, trying to think outside the box here. You know, restaurants have unidentified diners or, you know, critics who come in and just test how their services are being performed. Stores have mystery shoppers who aren't identified but they're basically there to see how they're treated. It doesn't seem to me that it would be that difficult on some passenger rails to have people who know what they're looking for to travel as a passenger and observe what's going on. I mean I don't know if that's legal or not legal. I guess I'm asking the question but I don't think you have to show a credential. No passenger shows a credential. Some people are nervous about that for security reasons but, you know, the passenger system is pretty darn open in this country, and I think we could be a little more creative about how we address some of these issues.

Okay. If there are no more questions for this Panel, we will move to the next panel. Do we need to take a break or should we keep going? Take a break? Yes, no. Ten minutes. Okay. See you at 2:30.

(Off the record.)

(On the record.)

CHAIRWOMAN HIGGINS: We've got two more Panels, and then we'll wrap it up. So if we could get everybody to take their seats and we can call the next Panel please. Three more panels.

MR. STANCIL: We actually have four more witnesses, one panel and two individually.

CHAIRWOMAN HIGGINS: Okay. Ready.

MR. STANCIL: Okay. Would Mr. Grady Cothen please approach the witness table? Now, sir, would you please raise your right hand.

(Witness sworn.)

MR. STANCIL: Thank you. Please state your full name.

MR. COTHEN: I'm Grady Colter Cothen, Jr.

MR. STANCIL: And would you spell your last name please?

MR. COTHEN: C-o-t-h-e-n.

MR. STANCIL: And you are currently employed with the Federal Railroad Administration?

MR. COTHEN: Yes, sir.

MR. STANCIL: What is your title, sir?

MR. COTHEN: My permanent title is Deputy Associate

Administrator for Safety Standards and Program Development. I'm also currently serving as Acting Associate Administrator for Railroad Safety.

MR. STANCIL: Thank you. And what is your agency address?

MR. COTHEN: 1200 New Jersey Avenue, Southeast, Washington, D.C.

MR. STANCIL: And how long have you served in your current position?

MR. COTHEN: Since 1994.

MR. STANCIL: And what are your duties and responsibilities currently?

MR. COTHEN: I'm responsible for development and review of the agency's safety regulations and for preparation of various special reports and studies and documentation accompanying regulations.

MR. STANCIL: Do you have any prior experience prior to this position in the railroad industry?

MR. COTHEN: I joined the Federal Railroad Administration in 1973 as a research assistant, now being known as a law clerk. I served in the Office of Chief Counsel as an attorney from 1973 through 1991, eventually becoming Special Assistant to the Chief Counsel and Special Counsel for various projects, safety and commercial. Also served for two years during that time as Acting Associate Administrator for Policy at FRA.

Then in 1991, I was appointed Associate Administrator for Safety, became Deputy Associate Administrator in 1994.

MR. STANCIL: Thank you. And once again, would you please identify your counsel to your right.

MR. COTHEN: Yes. Ms. Anne Landis is joining me here.

MR. STANCIL: Thank you. Madam Chairman, this witness is qualified, and I will turn the questioning over to Investigator Tim DePaepe.

TECHNICAL PANEL QUESTIONS

MR. DePAEPE: Thank you. Mr. Cothen, we're going to talk about positive train control right now, and I'd like you to give us a general description of positive train control if you could.

MR. COTHEN: Positive train control is a term that has been used to describe technology that can provide initially three core functions, preventing train-to-train collisions, preventing over speed derailments and preventing incursions into established roadway work zones. As used in the Rail Safety Improvement Act of 2008, there is also a reference to protecting against unattended train movements over a switch. That's a refinement on the core functions.

MR. DePAEPE: Thank you. Is that description in your opinion consistent within the industry?

MR. COTHEN: I think many people have many different views of what positive train control is. However, as you know,

the three core functions that we discussed initially originated in the 1994 FRA report to the Congress on railroad communications and train control. That was formalized by the Railroad Safety Advisory Committee in 1999, and their report to the FRA Administrator which was filed with the Congress in May of 2000. And so those who studied the matter a while, I think appreciate that the use of the term is intended to refer to safety functionalities of the train control system.

MR. DePAEPE: Can you explain the differences between predictive train control systems as envisioned with positive train control versus reactive train control systems such as automatic train stop or inductive train stop?

MR. COTHEN: The classic case of reactive system is one where you have either a mechanical or inductive stop which is placed in such a way that there's no enforcement until an accident is imminent. Predictive enforcement establishes a envelope out in front of the train, based upon the speed of the train and other characteristics of the operation including train tonnage, operative brakes and grade and so forth, and attempts to identify for the locomotive engineer what speed needs to be maintained and to identify for the locomotive engineer targets ahead and then if the engineer operates the train at excessive speeds, such that the warning envelope approaches the enforcement envelope, there is a warning and failing action by the engineer, the system will automatically bring the train to a safe stop short of the target.

There, of course, may be as you know a mix of reactive and predictive braking in any positive train control system. For instance, if a car should roll out within the warning envelope ahead of the train in PTC, then you would have reactive braking.

MR. DePAEPE: Thank you. I'm going to refer to Exhibit 5-A at this time and I would like to go to page 6 of that exhibit. On page 6, at the top, it says plan required under Section 20157, implementation of positive train control systems. Could you read for me that first line or the first sentence of plan required?

MR. COTHEN: Not later than 18 months after the date of enactment of the Rail Safety Improvement Act of 2008, each class 1 railroad carrier and each entity providing regularly scheduled innercity or commuter rail passenger transportation shall develop and submit to the Secretary of Transportation a plan for implementing a positive train control system by December 31, 2015.

MR. DePAEPE: That's it. That's fine. Thank you. The date of enactment of this Act was October 1, 2008.

MR. COTHEN: October 16, just to be precise.

MR. DePAEPE: Okay. Excuse me, sir. October 16th. How is that affecting the FRA as far as the railroads providing the plans within 18 months to the FRA for review?

MR. COTHEN: It's causing me considerable distress because I need to be in two places at once. FRA has been working diligently since the enactment of legislation to produce initially a draft set of regulations that would explain to folks how one

files an implementation plan. Those regulations are separately required on the following page, page 7, at the top of the page, and to do all the other things that need to be done in order to help make this happen. Would you like a little more detail there?

MR. DePAEPE: I think I'm going to give you a follow-up question that you might be able to give me more detail with then. As the safety regulator for railroads, besides the 18-month window for reviewing the plans, what is FRA doing to ensure that the railroads comply with the PTC installation deadlines December 31, 2015 and December 31, 2018, contained in the Rail Safety Act of 2008?

MR. COTHEN: The first thing we need to do is make it possible for folks to know precisely what to do. As you know, the legislation is general in nature. It calls for a less than complete PTC implementation in that class 1 railroads are going to do most of their system but not all of their system. Class 2 and 3 railroads are not immediately subject to the mandate of the law. All, however, innercity and commuter passenger railroads are going to need to implement, and many of them are facing this issue for the first time in the sense they've not been involved in previous PTC pilot projects and had no plans.

So what we're trying to do is to, first of all, make sure we have appropriate awareness. So we've been working with the northeast railroads, had a session up in New York City a few weeks back. We've worked with the American Public Transportation

Association to make sure that their people are fully represented on our positive train control working group which is now meeting very actively. We have a cadre of about 90 personnel, railroaders, labor organizations, states, FRA personnel and so forth, including a horde of consultants who are now gathering around the $4 billion that will be required to roll this out, and what we're trying to do is establish order so that folks know what they need to do and how they're going to do it and what's going to satisfy this mandate.

So we are about two-thirds of the way through our railroad safety advisory committee activity to produce regulations. We have two additional final meetings of two days each scheduled, short of the railroad safety advisory committee meeting on April 2nd.

At that point, we expect that the working group will be discharged of its responsibilities with whatever understandings, agreements, and additional information that has been produced at that point. The agency will be very quickly producing a proposed rule document for implementation as required by the statute. We'll get that cleared as soon as we can and our objective is to have final regulations in place by October of this year so that the railroads know what they need to do, what needs specifically to be in the implementation plan, what functional attributes need to be satisfied by the technology, and so that they can talk to one another because, as you know, the statute calls for attention

to interoperability in the plans that are required to be filed.

MR. DePAEPE: Thank you. Currently, however, the railroads are subject to the regulations contained under 49 C.F.R. 236, subpart H, the standards for a processor-based signal and train control systems. The purpose of the subpart is to promote the safe operation of processor-based signal and train control systems, subsystems and components, that are safety critical products and to facilitate the development of those products. What's FRA doing to ensure that the railroads comply with the provisions contained in subpart H?

MR. COTHEN: FRA is involved intensively with each of the organizations that, at this point, is involved in PTC development. The subpart H regulation to which you refer will remain active and will be the vehicle by which we begin to bring the safety case documents together, and that information will then flow into what we're calling a new subpart I set of regs which responds to different questions that were being asked with the processor-based rule and statute. There's some very clear and specific demands.

Subpart H, by contrast, was intended to incentivize the introduction of innovative technology including positive train control but it set a rather achievable bar in terms of what level of risk reduction needed to be achieved.

The process parts of existing regulations, again which were built out in view of the possibility of getting PTC deployed,

are excellent and usable and are being used to develop these systems. We will then give folks credit for what they've managed to achieve and establish under subpart H toward the more rigorous requirements of the statute.

MR. DePAEPE: One final question in that line of questioning. What's the FRA doing to ensure that the identification of verification and validation methods are sound? How is FRA going to ensure that the verification and validation processes are being completed correctly by the railroads?

MR. COTHEN: We're doing a number of things. First of all, let me say that I think we're in a good place on that point because the plans that are currently being made by the class 1 freight railroads and by commuter and innercity railroads in the northeast, uniformly utilize available signal logic where it's present. So we'll start on a foundation of well recognized failsafe technology.

Two of the four class 1 railroads also are talking about vital onboard processing, and I think that the other two over time will come around and actually I believe the onboard processing installations will probably be fully compatible in that regard in terms of adding cards and so forth.

So, you know, I think that the attempt that's going to be made which is not to develop PTC sometime downstream, but to utilize the technology that we do have available and we've been working on together for a number of years, puts us in a good place

to have confidence in the fact that the safety case targets will be made.

We also, of course, believe in trusting but verifying on all of these things, and FRA has been involved with all the railroads that have projects going on now with extensive field testing as well as laboratory acceptance testing. And we expect that that will continue. We've cautioned everybody that frankly we're all going to have to get a little better at this in terms of bringing product to the field that can be readily tested, that's not going to fail, you know, initially either in a safe state or otherwise. We're going to have to make sure that we set this up in an organized fashion so that if a railroad does a series of tests under a set of circumstances that are obtained elsewhere, that railroad number two has ability to piggyback on those tests if they're the same circumstances.

Finally, at the end of the day, of course, you have cut over testing which is going to be very much for this train control system, these train control systems, what it's always been for new signal and train control systems; that is, verification in the field of all the required functionality.

MR. DePAEPE: I'd like to talk about the issue of interoperability right now, and I'd like you to refer back to Exhibit 5-A on page 7 if you would, under I-1. If you could read the definition as it says in the Act on interoperability.

MR. COTHEN: The term interoperability means the ability

to control locomotives, the host railroad, and tenant railroad, communicate with and respond to the positive train control system including uninterrupted movements or property boundaries.

MR. DePAEPE: Knowing what that definition says in the Act, and due to the fact that railroads operate on each other's tracks, what's FRA doing or what's being done on FRA's part to address the issue of interoperability?

MR. COTHEN: Well, we've done a couple of things. One, of course, we've encouraged the freight railroads to be in conversation with one another. I'm not sure that they required our encouragement. They've been doing that because they share power and they know that they're going to have to have seamless interoperability on the general freight system, or it's going to cost a lot more money and it's going to cause a lot of disruption. So we continue to encourage them.

The encouragement along the way has included a standard human machine interface, and they've come to the point where they've all agreed among themselves that they're going to do that. That's important because obviously you can have a crew of a tenant railroad be on host railroad A, operating a locomotive of railroad C, and we don't want multiple types of training for these locomotive engineers. We want to make sure that when they get on that locomotive, what they see is what they expect to see, and that they're well qualified to interact with that system.

Another thing that we've done is to encourage

conversation in the northeast. Interoperability will not mean a single system. Different railroads have different requirements, and in the northeast, there's a requirement with respect to in particular capacity. It's traditionally been cab signal territory and as a result, Amtrak has led the way with the advanced civil speed enforcement system which is integrated into the cab signal system. And, it provides a very good platform to achieve safety objectives and also to maintain the advantages of cab signals with regard to capacity.

Other railroads in the northeast that operate in electrified territory seem to be taking that as a useful hint and probably will use that technology.

At the same time, and again without necessarily waiting for any FRA encouragement, Amtrak and Norfolk Southern, as technology leaders, are talking about ways potentially even to make the core ETMS, a Wabtec product, compatible for operation on the northeast corridor, through use of the data radio infrastructure that's present on the corridor and with some supplementation related to communications in 220 megahertz.

MR. DePAEPE: Because there's a great amount of signal systems out in the country that are different and positive train control systems have actually been implemented on some or at least tested on others, does the FRA intend to grandfather any of these systems from any of the current regulations or any parts of the Act?

MR. COTHEN: Well, there are three train control systems that are in revenue service and have extensive service history, all very positive from a safety standpoint. The first is access coupled with cab signals and speed control. The second is the incremental train control system on Amtrak's line in Michigan. And the third it ETMS, a BNSF product configuration 1, for which we've approved a product safety plan. We believe that it will be a fairly easy thing. We'll need to certify those systems under the new regulation as required by law, but we think that it will be a fairly easy thing to do that and you can refer to that as grandfathering. Customarily people have been.

There are other systems that have been under development for a considerable amount of time with which we have experience, and again we expect to be able to provide credits based upon safety case materials, previously developed testing and so forth.

MR. DePAEPE: Will that affect the interoperability with the new systems?

MR. COTHEN: There will probably not be 100 percent interoperability of systems starting up. What people will do is they have done in the train control arena for years and years, is they'll have a couple of sets of apparatus on the locomotive and, you know, they'll be in a position to move right along. That's more expensive. It's not desirable but there probably will be cases in which it goes on for a while.

So, for instance, ITCS is an example. Amtrak built that

system out on its line in Michigan. It's good right now for 95 miles an hour. When we get some remaining independent assessment of V&V, verification and validation closed up, we expect them to be operating at 110 miles an hour. There may or may not be initially a train control technology using the Wabtec core features that's good for 110 miles an hour. So Norfolk Southern locomotives, which are already equipped with ITCS, they provide freight service over that line, probably will keep the ITCS equipment on board for a while.

Over time, I think the data radio links will be used to marry up everything, but that's not going to be instantaneous.

MR. DePAEPE: Thank you. Madam Chairwoman, that's all the questions I have for Mr. Cothen at this time.

CHAIRWOMAN HIGGINS: Okay. Thank you. Any questions from the Tech Panel?

(No response.)

CHAIRWOMAN HIGGINS: Okay. FRA.

(No response.)

CHAIRWOMAN HIGGINS: PUC.

MR. CLARK: No questions.

CHAIRWOMAN HIGGINS: Mass Electric.

MR. ROBERTS: No questions.

CHAIRWOMAN HIGGINS: Los Angeles.

MR. QUINTANAR: No questions.

CHAIRWOMAN HIGGINS: UP.

MR. GRIMALLA: No questions.

CHAIRWOMAN HIGGINS: BLE and UTU.

MR. WALPERT: No questions.

CHAIRWOMAN HIGGINS: Connex.

MR. ELSMORE: No questions.

CHAIRWOMAN HIGGINS: And Metrolink.

MR. CRARY: Thank you.

PARTY QUESTIONS

MR. CRARY: I'll go back to my previous question. Mr. Cothen, you have mentioned the RSAC as well. Metrolink has, even though we don't have a long history, we have a good history I'd say with the FRA dealing with various RSAC projects, processes, including crash energy management where we're developing stronger equipment that protects the core box of the passenger in the event of a low speed accident.

We're also working closely with you on grade crossing safety enhancements and recently received some funding from the Federal Government for improved grade crossing. And we also were given significant federal dollars on CEM crash cars, a previous question that came up.

In your response to question, you stated two things that struck me. One is that PTC systems starting on the foundation of a well-recognized technology is something that we are very much an advocate of. Piggybacking you also mentioned on technology that is proven by others.

Back to my core question. SCRA is proposing to embark on a PTC system that is interoperable and consistent with the products that have been approved by the FRA and are in use or soon to be in use by both the BNSF and the UP. We're focused solely on that sort of installation to meet the aggressive FRA timeframe that was laid out for us. The question is, is FRA supportive of SCRA's effort to solely focus on this product delivery path?

MR. COTHEN: FRA, speaking myself and the FRA staff who have looked at his, we're not sure how you could do it otherwise and make your objectives. You know, there's a huge job set before commuter railroads right now, and Metrolink is a complex railroad. It's been stated here, you've got BNSF and UP on the railroad as well as Amtrak Coaster, and so Amtrak Surfliner and Coaster service.

So whatever's done is going to have to be done in partnership with your joint operations partners in the Basin, and they clearly have identified a path to take. You all have been talking with one another and with the Federal Railroad Administration right along and I don't know how you get to the end of 2012 with substantially the entire product built out in the Basin unless you focus very carefully and clearly on that effort. That's just a personal view.

MR. CRARY: Thank you. I have one more question actually related to the delivery of PTC, and this is really to Member Higgins. What we would like to do is establish an exhibit

of interim safety improvements that we have implemented since the accident, some of which will be removed once PTC is developed as that is really our long-term goal. Could I establish an exhibit number for that.

CHAIRWOMAN HIGGINS: That would be welcomed. Thank you.

MR. STANCIL: Okay. That would be Exhibit 3-QQ, and we'll identify it as interim safety improvements established by Southern California Regional Rail Authority since the accident.

MR. CRARY: Thank you. No further questions.

CHAIRWOMAN HIGGINS: Okay. Thank you. Technical Panel [sic], Dr. Kolly.

BOARD OF INQUIRY QUESTIONS

DR. KOLLY: Dr. Cothen, just a few quick questions. I believe you stated that one of your first milestones for the Rail Safety Improvement Act was the setting up of the required regulations and I think you said you were about two-thirds of the way through. Can you just elaborate a little bit on the timeframe for completing that?

MR. COTHEN: Dr. Kolly, we'll discharge the rule safety advisory committee after the last meeting of the working group on April 1st. We will come out of that meeting with a pretty refined draft, we're already I would say 75 percent there, of regulations for implementation of the statute. Another function that's been going on there within the PTC working group, of course, is sharing of information among the railroads including those railroads that

are coming late to this.

And then what we will do is we will finalize a notice of proposed rulemaking. Our objective for publication is in June which, if we accomplish it, will be unheard of. If someone wants to hear my sad tail of how long it takes to issue a regulation and why, I can do that, but you probably don't at this hour of the day.

And then our objective again is to issue a final regulation in October of this year, so that folks have about six months to work on their implementation plans, you know, doing the final cleaning up, talking to their neighbors on the interoperability issue to make sure they are where they need to be, and then they can file their plans on April 16, 2010.

DR. KOLLY: Thank you. That's all I have.

CHAIRWOMAN HIGGINS: Mr. Chipkevich?

MR. CHIPKEVICH: No questions. Thank you.

CHAIRWOMAN HIGGINS: I just have a couple of questions. I think the timeline you just outlined is helpful. Has FRA set a list of priorities in terms of where you want to implement this first and second and third?

MR. COTHEN: The statute calls on each railroad to give us a proposed approach to that within their system based on risk. So one of the things we're doing in the railroad safety advisory committee right now is we're trying to get the risk factors delineated that the railroad would need to consider. But

obviously, you know, higher density operations where you've got passenger operations mixed in with freight trains or you have significant quantities of hazardous materials, those kinds of things would certainly qualify as requiring consideration and also in our territory, where train counts are reasonably high, and where you have significant hazardous materials being transported.

So we want to see the railroads come in having done their own risk evaluation in terms of how to roll it out.

Now having said that, from a national point of view, we do believe that the LA Basin presents an excellent opportunity to get this done, do it right and provide lessons learned for the rest of the country. I pointed out earlier all of the services that are involved in the Basin that's been called out by others in this hearing. If you can make it work in the LA Basin, without delaying trains and so forth, I expect you can probably make it work almost anywhere.

And we have a willing participant in the form of Metrolink which is at the heart of that complex, and we have commitments from the two major freight railroads, to build out on their lines that Metrolink operates over. It's not all going to get done by the end of 2012. There will be some locomotives still inevitably coming into the LA Basin that are unequipped but the nice thing about it, incremental rollout of PTC is that every time you add a train that's equipped, you gain a significant increment of safety because particularly in signal territory through use of

a signal system, we know where the other trains are and we can enforce, if necessary, in a reactive way, and that will greatly mitigate any events. So that's a long answer. I apologize but the LA Basin certainly is a prime target.

CHAIRWOMAN HIGGINS: So how many different railroads are you working with?

MR. COTHEN: Well, we're working with 7 class 1 railroads and with I think it's on the order of 22 commuter authorities depending on how you count commuter authorities. Of course, you've got Amtrak providing some of the service.

CHAIRWOMAN HIGGINS: Okay. So there are those individual operators but then you also have this geographic, this regional kind of connectivity that you talked about. And so I guess we will have a better sense a year from now in terms of what the rollout might look like based on geography.

MR. COTHEN: You know, the rollout is going to look a little different depending upon where you are. If it's a very passenger intensive rollout, you know, I would hope that folks would, you know, take advantage of the opportunity to equip first some lines where we have a lot of mixed freight and passenger traffic.

CHAIRWOMAN HIGGINS: Okay.

MR. COTHEN: I think nationally the rollout is to a very large extent rolling stock application. You've got 20,000 locomotives, cab cars, whatever, that are going to take onboard

equipment and that's going to have to be done very rapidly.

CHAIRWOMAN HIGGINS: And then there's everything else that happens in the meantime. Is FRA thinking about between now and 2012, other measures that could be taken to improve safety and prevent accidents until we have a fully instituted positive train control system?

MR. COTHEN: I think we're always trying to think about that, and I wouldn't be surprised if you gave us some more ideas after this hearing. You know, I mean we normally agree with the Board of most of its recommendations. Occasionally we decide to respectfully disagree but we're always looking for good ideas to reduce risk out there on the system. And, you know, we always have something going in that regard.

You know, right now for instance, we have a medical standards RSAC proceeding. It came out of recommendations of the Board. It will deal with medications that employees are taking. They may not realize those medications can have side effects, and potentially we'll get review of that course of treatment and the underlying condition by a railroad medical department, in an occupational medicine kind of frame of reference. Our FRA medical director's been here for the last two days listening to what was transpiring. Most of the time he's in conversation with labor and railroad appointed physicians who are producing as massive set of guidelines, and I think you will see in that program much more transparency than you'll see in aviation or elsewhere in terms of

what the decisional criteria are going to be for medical fitness for duty.

So that's an example but, sure, we're looking for opportunities to.

CHAIRWOMAN HIGGINS: Okay. I have no further questions. Any other questions for this Panel? Yes.

PARTY QUESTIONS

MR. CLARK: Mr. Cothen, the Railroad Safety Improvement Act of 2008, as I understand it, directs an increase in the staffing at the FRA. Could you talk about that for a bit?

MR. COTHEN: The Act authorizes 200 additional positions in Headquarters and in the field. So, you know, that would significantly increase FRA's staffing. In past years, we've seen very small increases to build out individual programs, you know, the addition of some industrial hygienists or rail integrity specialists or bridge engineers or specialists. This would be a more ambitious staffing by the agency. We are hopeful that we will actually see the first increment of that additional staffing in the 2009 Omnibus Bill should the Congress, in fact, enact it. It would have been enacted normally on October 1, and I'm sure the Board is acutely aware, we're operating under a continuing resolution and the pennies are running out and obviously under those circumstances, you're not going to staff up. We hope to get the initial increment and, of course, the new Administration has to make a number of very difficult budget decisions, but we're

hopeful that that will include requests that would permit us to get up to the new ceiling.

MR. CLARK: And one last question. Are you aware of increases in the staffing with the California Public Utilities Commission since 2005?

MR. COTHEN: We are and we've been gratified to see the boots on the ground safety staff of the California Public Utilities Commission about double I think during that time.

MR. CLARK: Thank you.

CHAIRWOMAN HIGGINS: Just for the record, there are 12 NTSB railroad investigators. Any further questions? Yes.

MR. CUMBY: One from the UTU. Mr. Cothen, when the PTC is added to the locomotives, will it be able to be viewed from both sides of the cab or just the engineer's side?

MR. COTHEN: FRA brought into the discussion in the railroad safety advisory committee, as I think you know, a draft which would specify, as do the current rules for train control systems, that each assigned crew member should be able to view the display provided. In the organization of the locomotive cabs, that probably would mean a second display since simply putting a cab signal up on the post is not going to do the deal here.

We are adhering to that position in the current discussion. There are strenuous objections raised from the management side on that one given the fact that obviously positive train control should do a great deal to reduce risk and the cost

of the additional display is, as said, not inconsiderable. But we think that it's an important issue to raise and resolve particularly on the ground of crew resource management which is another issue that the Board has brought to us over the years. You know, folks are not just going to be working together necessarily in the cab. The conductor or brakeman is going to be getting down on the ground, and we're going to be handling some cars and we want to make sure that crew members are working together in order to accomplish the mission, and that each defined set of responsibilities is supported by a flow of information sufficient to permit that person to play their designated role.

So that's where we are in the discussion and at the end of the day, we'll see where we are.

MR. CUMBY: Thank you.

MR. COTHEN: Yes, sir.

BOARD OF INQUIRY QUESTIONS

CHAIRWOMAN HIGGINS: Can I just ask a question? I've had the chance to ride I guess it was a BNSF train and also the Amtrak train. The displays that you're talking about, would they also have the ability to see signals?

MR. COTHEN: The unified display on the access system displays the cab signal, nine aspect cab signal in the case of the Amtrak equipment, and the electronic train management type of technology displays that civil has a target on the screen.

CHAIRWOMAN HIGGINS: It is a target?

MR. COTHEN: Yes.

CHAIRWOMAN HIGGINS: So you would be able to see them?

MR. COTHEN: Yes.

CHAIRWOMAN HIGGINS: Okay. Thank you. Any other questions?

(No response.)

CHAIRWOMAN HIGGINS: Thank you, and we'll move to our next witness.

MR. STANCIL: Madam Chairman, before I call the next witness, I would like to make a correction on the last exhibit that was offered by Southern California Regional Rail Authority. One of my colleagues correctly pointed out that that Exhibit would be more appropriately placed under Group 5 for PTC. So I'd like to strike Exhibit 3-QQ and make it Exhibit 5-C, which would be interim safety improvements established by Southern California Regional Rail Authority since the accident.

CHAIRWOMAN HIGGINS: That's fine. Thank you.

MR. STANCIL: Thank you. Okay. Would Jeff Knott please approach the witness table? Good afternoon, Mr. Knott. Please raise your right hand.

(Witness sworn.)

MR. STANCIL: Thank you. Please state your full name.

MR. KNOTT: Jeffrey George Knott.

MR. STANCIL: And your current employer, sir.

MR. KNOTT: Wabtec Railway Electronics.

MR. STANCIL: And what is your title with Wabtec?

MR. KNOTT: I am the Director of Train Control Business and Development.

MR. STANCIL: And what is your company address, sir?

MR. KNOTT: 5250 North River Boulevard, in Cedar Rapids, Iowa.

MR. STANCIL: And how long have you been serving in your current position with Wabtec?

MR. KNOTT: Eight years.

MR. STANCIL: And what are your duties and responsibilities?

MR. KNOTT: My primary responsibilities are for the development and for the business aspects of Wabtec's positive train control solutions.

MR. STANCIL: Okay. What experience in railway electronics do you have other than your time at Wabtec?

MR. KNOTT: My time at Wabtec, the eight years. In total I might add that I spent a considerable amount of time in electronic products in the communication and transportation industry over the last 30 years.

MR. STANCIL: Okay. And did you have any experience outside of Wabtec in the transportation industry?

MR. KNOTT: Some in the avionics, working for a company called Rockwell Collins.

MR. STANCIL: Okay. How long was that experience?

MR. KNOTT: Twenty-two years.

MR. STANCIL: Okay. Could you identify the gentleman to your left?

MR. KNOTT: This is my, believe it or not, my product line manager, not my attorney, Jeff Kernwein.

MR. STANCIL: Thank you. And could you spell his name please?

MR. KNOTT: It is K-e-r-n-w-e-i-n.

MR. STANCIL: Thank you. Madam Chairman, the witness is qualified and I will turn the questioning over to Investigator Tim DePaepe.

MR. DePAEPE: Thank you.

TECHNICAL PARTY QUESTIONS

MR. DePAEPE: Mr. Knott, what is the current state of positive train control technology?

MR. KNOTT: Currently Wabtec's positive train control technology is currently in use in FRA approved territory. At the same time, Wabtec is currently working to enhance the system in support of customers' needs for expansion in additional territories and interoperability. Features of our system include today protection of authority limits, enforcement of signal aspects, protection of misaligned switches, protection against incursion in work zones and over speed enforcements of various types and speed restrictions. Our features are built on top of core technologies which include navigation, enforcement, braking,

communications and human machine interface, and if I may, I'd like to go into each one of those core technologies.

Navigation, we continue to utilize differential GPS, wheel tach, switch position in support of our navigational algorithms with great success. Enforcement, current enforcement logic supports all features of our system stated earlier. Enforcement is currently being enhanced to support new territory types required again by our customers. Braking algorithms, our braking algorithms have been in use for the past two and one half years and when required it assures the train is going to stop short of a target. This is accomplished by taking into account grade, speed, weight, length and a few other parameters, and we are currently enhancing the algorithm in support of commuter operations and will continue to evaluate per territory expansion. In other words, we've got some territories where the grades will be increasing to in excess of two percent.

MR. DePAEPE: I'd like to interrupt you just for a moment since you brought up braking algorithms. In various public hearings, we've had supplier testimony say that they still have an issue with braking algorithms. Where is the industry at generally? Where is Wabtec specifically at? Is it still a problem or is it continuing to improve as you've just indicated?

MR. KNOTT: It's continuing to improve and like I said, we have braking algorithms that we use today that assure that we will stop short of targets. We are also dealing with what we call

some nuisance enforcements, primarily in a very low speed situation. As a crew starts to creep up to a signal before they get into territory or have been given authorization, they creep up a little strong that we will basically give them a predictive enforcement.

We also need to be careful on stopping that train too short of the target. So what we have been working on for quite sometime is we continue to narrow that window to where we again assure we do not exceed a target, but we also are working towards how do we improve to stop closer to that target to help the railroads not affect their velocity.

MR. DePAEPE: Thank you. Were you going to continue?

MR. KNOTT: No, that was it.

MR. DePAEPE: I'm sorry. All right. Thank you. Another question I had was we've also heard about communication infrastructure and how important it is for these systems to be able to reliably communicate, be dependable. Are you still encountering communication issues, and if you are, what's being done to correct those problems?

MR. KNOTT: Today the railroads are working very hard in the whole communication area from a standpoint of really under the area of interoperability. The railroads are working toward standardization of communication technologies. We have developed the ICDs. We successfully have proven it in certain situations but we will continue to adapt depending on the requirements coming

out of the railroads once those communication technologies are well defined and implemented.

MR. DePAEPE: Can you think of any other issues that might delay the implementation of PTC as described to hit the target dates in the Rail Safety Improvement Act?

MR. KNOTT: I think we've all got a very good head start in all of this. If I were to mention a couple of things, you know, and Mr. Cothen mentioned one earlier, that is the need for the final ruling in the process, PTC type approval system certification. That is something that with our, mentioned earlier, ETMS, that we developed and BNSF received PSP approval for that product. We went through under 236 subpart H, followed all the guidelines, all the rules, you know, it was quite an extensive exercise to go through, and we just want to make sure that we understand what I conditions are going to be so they can help us with that.

And the other thing is probably the overall interoperability requirements and that is the railroads working together which they are working very closely together right now and a lot of this work is being looked at as far as to resolve those interoperability standards that are going to be required this year, what will be required next year, and kind of timeout, you know, to where we, you know, what is going to be required for total implementation by 2015.

MR. DePAEPE: As far as interoperability, is the issue

that suppliers can't agree on what platform to just use or is it the railroads that, you know, obviously is the people buying the product from the suppliers? Where's that issue really going to be resolved? Is it by the suppliers or is it by the railroads agreeing what platform to use?

MR. KNOTT: All I can comment on is Wabtec and the customers that we are currently working with on interoperability. Let me mention that Wabtec is committed to making our positive train control products operate seamlessly as a locomotive transitions from one railroad to the next, to provide continuous protection without interrupting service. Wabtec has a history of working with the various AAR and AREMA Electronic Standard Committees over the past 20 years. I might add previously as a business under Rockwell Collins, which was purchased by Wabtec, Wabtec is also today supporting several railroads in their interoperability agreements which we are not part of but I'm assuming that the railroads will speak of that later.

Current rail industry activities being supported by Wabtec include, but are not limited to, support of the AREMA Committee 39 which is a new committee working on positive train control, supporting AAR rail electronic standard committee efforts and wireless security standards, communication protocols, class C, class D, E and P protocols and standard locomotive message definitions.

MR. DePAEPE: I know you have positive train control

systems developed but do you envision any issues with producing a viable product able to comply with the requirements contained in 49 C.F.R. 236 subpart H and any additional requirements in the Rail Safety Improvement Act?

MR. KNOTT: Not at this time.

MR. DePAEPE: When or are you ready to deploy PTC systems full scale, right now?

MR. KNOTT: I'll touch a little bit on implementation which primarily implementation is the railroads implementing responsibility but let me touch on it just a little bit. Wabtec, as I mentioned earlier, our ETMS system is currently running in revenue service in FRA approved territories in Illinois and Texas and Oklahoma. The expansion efforts are underway right now for expansion into Montana, North Dakota, later this year. Wabtec is also currently working with additional class 1 railroads and one commuter railroad on various positive train control developments in Illinois, North and South Carolina, Nebraska, Iowa, Wyoming and Idaho. Current schedules call for regulatory filings towards the end of this year, and with anticipated regulatory approvals sometime in 2010.

MR. DePAEPE: I'm going to use a term that I've heard throughout my years of working in positive train control and that's plug and play. Do you envision -- is your product, you know, in dealing with interoperability, will components be interchangeable between suppliers or will your system have to be

your components only. You know, is there going to be a standard, for example, like beta and VHS? I mean are they going to pick one where you can just take any machine and play that tape in?

MR. KNOTT: In today's environment, there is not a standard. I think standards have been being worked on for quite sometime. I believe that with the importance of positive train control and what with the Rail Safety Act, and requirements that are coming down, is that we as a vendor supplier community will be working towards those standards.

MR. DePAEPE: Thank you. When people talk about positive train control, a lot of people envision the prevention of, you know, it says to prevent train-to-train collisions, but most of the time, most of the systems are geared to prevent head on train-to-train collisions. What are you as a supplier doing to prevent following move collisions where two trains in the same direction, one train strikes the other?

MR. KNOTT: Let me answer that by saying, you know, right up front, first of all, our current efforts do not pull that capability in other than in, you know, CTC territory or signal aspects protect us in dark territory or authority limits protect us in that area. As the railroads continue to move forward with enhancements and capabilities that they want to do, we've had conversations with that. Wabtec also produces an end-of-train device that includes GPS and we've had several conversations related to how to fold that capability into our train control

solution.

MR. DePAEPE: When people think about positive train control, they think about absolutes, you know, again back to train-to-train collisions, it's supposed to prevent them. What people don't realize is you have to allow two trains to couple, and if they can't touch, they can't couple. So at what speed in your system do you allow two trains to touch each other?

MR. KNOTT: If I could ask, clarify that just a little bit.

MR. DePAEPE: For example, on the CBTM, communication base-trained management that was being tested on CSX, that system allowed two trains to touch each other at seven miles an hour and less in order to allow the train to couple. If you didn't, not only could you not build the train, you couldn't have a helper engine help a train if it needed assistance. So at some point you've got to allow the trains to touch. At what speed in your system do they allow trains to touch?

MR. KNOTT: We would hold it to general operating procedures between the railroads. From a positive train control standpoint, I mean it's, you know, probably the reason I was confused is we are also looking at some alternatives to these low speed enforcements to where we always have a condition that we would call, you know, up to a hard coupling that we would like to be able to work with to allow a little bit more forgiveness in those low speed conditions of coming up to signals or coming up to

territory. So we'll follow the guidelines and rules that are out there right now.

MR. DePAEPE: And finally, with the Rail Safety Improvement Act, it appears there's going to be a lot of demand for positive train control hardware and software. Is Wabtec ready to supply 20,000 trains with all the onboard equipment they need and the 100,000 possible field locations and the maybe 10 to 20,000 radio communication towers that are going to have to be built?

MR. KNOTT: If I could remember what Mr. Cothen said about being in two places at the same time, I have a similar problem. Wabtec is prepared to move forward in this and, in fact, this effort has been coming up on our radar for quite sometime, way before September 12th of last year. Wabtec to date has shipped 430 onboard platforms to class 1 railroads and commuter railroads. Wabtec is currently producing ETMS platforms that are being deployed in locomotives transversing FRA approved territories. Our development and enhancement activities will result in additional systems, types available in 2010. Our current positive train control onboard computer has been qualified to a broad range of industrial standards and has been in production since the fall of last year.

Wabtec production capabilities are in line with our current demands and additional capacity is available when required and we are also currently working with locomotive OEMs to have new

locomotives delivered with our positive train control equipment as early as later on this year.

MR. DePAEPE: Thank you, Mr. Knott. Madam Chairman, that's all the questions I have at this time.

CHAIRWOMAN HIGGINS: Thank you. Any other questions from the Tech Panel?

MR. WORKMAN: I have a couple.

CHAIRWOMAN HIGGINS: Okay.

MR. WORKMAN: Mr. Knott, are there any particular environmental challenges to the implementation of PTC that you foresee?

MR. KNOTT: Can I ask you to just be a little clearer on environmental considerations?

MR. WORKMAN: Well, I think when we talk about the implementation of PTC and what we have to do to the track and the towers that we're going to build and the locations that we've got to have this and the overlay systems, is there going to be, from an external point of view, any environmental issues that you foresee?

MR. KNOTT: Not that I can think of at this time.

MR. WORKMAN: Are there any immature technologies out there that would prevent any kind of broad scale implementation? You may have already answered this.

MR. KNOTT: Not any additional than what I may have covered, you know. The work that we have done, that Wabtec has

done again over the past 20 years, has got us to a point where we're establishing these on pretty tried and true technologies. I don't believe that there's much out there other than some of the areas that the railroads are working on right now from a communication and bandwidth standpoint.

MR. WORKMAN: Do you see or would you see that there's a significant risk with the current state of technology that we may be going down any kind of blind alley with regard to the PTC effort that may delay implementation of any kind?

MR. KNOTT: Sir, not that I would know of right now. We live and breathe this every day of the weeks and not that I can think of.

MR. WORKMAN: And one last question. Do you believe that all the PTC packages under consideration, will they all require a reliable GPS technology?

MR. KNOTT: I can speak for the Wabtec products, and as I mentioned earlier, we depend on a reliable differential GPS solution.

MR. WORKMAN: Okay. No further questions.

CHAIRWOMAN HIGGINS: Okay. Let me turn it over to the parties. Questions, FRA.

MR. COTHEN: None, thank you.

CHAIRWOMAN HIGGINS: PUC.

MR. CLARK: Just a couple, Madam Chairman.

PARTY QUESTIONS

MR. CLARK: I understand that there are some issues regarding freeing up of the communications spectrum that require some intervention from the FCC. Could you speak about that, Mr. Knott, please?

MR. KNOTT: At this time, I cannot. That work is underway and that work has been taken on by the railroads themselves.

MR. CLARK: Okay. Thank you. My final question is does the use of cell phones interfere at all with your product and beyond that, would any technology that might be available to block or to detect the use of cell phones, would that be an issue for you?

MR. KNOTT: At this time, I do not believe that cell phones interfere at all with our equipment. I can't think of anything at this point in time. I would say that as we move forward with development of these systems under industry standards, as those things, when they do come into play, I'm assuming that they would have to be tested to make sure that they don't have interference with the locomotive standards that are there today or how they would be changing with our equipment.

MR. CLARK: Okay. Thank you.

CHAIRWOMAN HIGGINS: Okay. Mass Electric.

MR. ROBERTS: No questions.

CHAIRWOMAN HIGGINS: Los Angeles.

MR. QUINTANAR: No questions.

CHAIRWOMAN HIGGINS: Union Pacific.

MR. GRIMALLA: No questions.

CHAIRWOMAN HIGGINS: UTU.

MR. CUMBY: No questions.

CHAIRWOMAN HIGGINS: BLE.

MR. WALPERT: Yes, I have a couple of questions. Mr. Knott, what is the status of the development of rail continuity detection?

MR. KNOTT: Excuse me just a moment. For broken rail detection. I'm sorry. I apologize. We've done work in the past with our efforts in Illinois with Burlington Northern Santa Fe and proved out two separate areas with broken rail detection devices within our ETMS system and proved those out quite successfully.

MR. WALPERT: Okay. Can GPS distinguish between two trains on adjacent tracks?

MR. KNOTT: Basically with differential GPS, wheel tach and switch alignment, we generally don't depend on GPS for trains on adjacent tracks. Our navigation is based on the aforementioned inputs to navigate across track. So we do not depend on GPS to differentiate between two parallel tracks.

MR. WALPERT: So could there be a danger that one train signal could ghost another train as they pass?

MR. KNOTT: I don't believe so. We've not seen any evidence of that. Our current navigational standards and our current navigational technologies are working very successful in

our applications that we have out there today.

MR. WALPERT: Okay. One final question. Have you utilized the services of any working locomotive engineer in research and development?

MR. KNOTT: We have worked quite closely with locomotive engineers, locomotive conductors over since 2003 when we first started this effort. BNSF, back in our efforts with them, pulled in conductors, pulled in engineers. We had several reviews, meetings with them. They influenced our displays. They influenced locations of where things were going to be located on. They influenced as we were going through the testing. So they were very much a part of all of our ETMS development efforts and very appreciated.

MR. WALPERT: Okay. Good. Thank you. That's all I have.

CHAIRWOMAN HIGGINS: Thanks. Connex.

MR. ELSMORE: No questions.

CHAIRWOMAN HIGGINS: And Metrolink?

MR. CRARY: No questions.

CHAIRWOMAN HIGGINS: Okay. Board of Inquiry. Dr. Kolly.

DR. KOLLY: Yes, just a couple.

BOARD OF INQUIRY QUESTIONS

DR. KOLLY: With regard to the systems that you have in place now, can those systems be overridden by the operator or who

is on the top of the decision tree I guess is what I want to understand?

MR. KNOTT: The systems today at various parts along the route, for various reasons, the system can be cut out, if there's an issue with the system or that there's a problem with the system, that the system can be cut out by the crew. That capability is there. The guidelines and the rules on who has authority and who does what and who makes those decisions are the decisions of the railroads and the railroads are establishing those standards today.

DR. KOLLY: Okay. And with regard to the industry, how many competitors do you have in this industry?

MR. KNOTT: Off the top of my head, I can think of three competitors to what we're doing right now.

DR. KOLLY: And do you have an idea what your market share is currently?

MR. KNOTT: From an implementation, a PTC on locomotives, isn't that big right now. From a development standpoint, as I mentioned earlier, we are currently working contracts with four class 1 railroads and one commuter. I'm not sure of our competitors exactly, what agreements they have in place or what their implementations are.

DR. KOLLY: From your knowledge of the industry, do you believe that the industry is going to be able to meet the demand required by the train safety act?

MR. KNOTT: I'm confident from a Wabtec standpoint that Wabtec will be able to support our customers in meeting the Rail Safety Act deadline, the end of 2015.

DR. KOLLY: All right. Thank you. No further questions.

CHAIRWOMAN HIGGINS: Mr. Chipkevich.

MR. CHIPKEVICH: No questions.

CHAIRWOMAN HIGGINS: Okay. I just have a couple of questions. What do you see as the biggest challenge in meeting the deadlines that the legislation has set and that Mr. Cothen outlined?

MR. KNOTT: A couple of the biggest challenges we probably have right now is interoperability, but let me ask. It's a big challenge but one that I believe the railroads are all stepping up to meet that challenge right now. We can work with the railroads. We can work with the industry to determine ways of solving interoperability issues once we understand and know how the railroads will establish those operating procedures.

I think the second issue is probably the solidifying of the communication technologies to allow all of the railroads to communicate over a single source or a particular technology would be the second issue.

Those would primarily be the two probably biggest risks. Time is always a risk but I think there's a lot of people that are busily at it right now.

CHAIRWOMAN HIGGINS: Okay. Good. Thank you. And I think it would be useful for you to, I love your explanation as to how you think -- I don't know if you've been here for the last two days, but you've heard some of the discussion we've had about this accident, and I'd like to bring it back to the Chatsworth accident and how positive train control would have made a difference in this particular accident.

MR. KNOTT: Yes, I was here all day yesterday and it was very intriguing, very interesting. What I would like to say without knowing or seeing final reports or knowing exactly, you guys are still doing your job and your work, our system, Wabtec's positive train control system I will repeat basically can protect for authority limits, does enforce for each signal aspect, protects for misaligned switches and protects against incursion in the work zones, and over speed enforcements. Those are capabilities that our ETMS system which is in revenue service today have capability of doing.

CHAIRWOMAN HIGGINS: Okay. And then finally, we lose several 100 people a year in so-called grade crossing accidents, and my understanding of positive train control is that both trains have to be equipped in effect for it to work. And is there any technology that you're aware of or that's on the horizon that would signal a train if you will of another risk that an engineer's about to encounter on the track that may be a car, may be a bus, maybe an individual?

MR. KNOTT: Those are all capabilities that have been discussed. Those are capabilities that there are current technologies out there today that could be used. That is not currently in our product and again, I'll state that we very much focus in on the needs and wants of the railroads that we have agreements with. If those are chosen, to pull into those, we have some concepts, we have some designs that we could take a look at doing.

CHAIRWOMAN HIGGINS: I guess I understand that your customers is the railroads and the FRA is setting the standards for what's been defined and what is positive train control. As the Safety Board, you know, this is something that there is a whole set of safety issues that we have to look at when we look at railroad accidents, and I know FRA -- we don't even investigate most of these. FRA does. I would be interested in perhaps if there's something you could submit for the record that would indicate what technology either your company has or you're familiar with that might be applicable, again looking ahead. I'm not suggesting that we want to, what we're talking about, because this isn't an accident involving that, but I do think that, you know, the train control technology is impressive in overriding the actions of the engineer but only if the train approaching has that same technology. The question is for all the other hazards that are out there, that result in the loss of life, are there things that perhaps we ought to be looking at and be aware of to address

this?

MR. KNOTT: First, let me clarify just a little something. A lot of benefit of positive train control that we have today will benefit with one equipped train and a non-equipped or what we classify as an unequipped train. Given the other types of technologies that are out there today, generally, you know, proximity, or excuse me, with, it's been a long day for me, too, occupancy circuits today that we can warn, we can do a lot of good things without both trains being equipped. It would be best for both because we can warn the trains of each other. We can sure take a look at some of these other concepts and ideas. I'll have to get back and check and see if that's something that -- I'd like to check with my management on that if I could but I'd be more than willing to share that if possible.

CHAIRWOMAN HIGGINS: Sure. And if you do submit something, we need an exhibit number. So -- that's fine. It's being suggested that perhaps you could just send it to directly without making it part of the record for the hearing.

MR. KNOTT: I will most definitely do that.

CHAIRWOMAN HIGGINS: Okay. Thank you so much. I have no further questions for this Panel. Are there any other questions from the Tech Panel or anybody else?

MR. DePAEPE: I don't have a question, Madam Chairwoman. I just want to possibly further clarify for Mr. Knott. I think what the Chairwoman is looking for is what you've done maybe with

loop detection technology for obstructions at crossings and similar technology and that aspect. Possibly there's also been some work done with trespasser detection, you know, what I'm talking about.

MR. KNOTT: Yes.

MR. DePAEPE: Okay.

MR. KNOTT: We'll take a look at that. I have an unbelievable staff in Cedar Rapids that is a very solid group of people that take this very serious. So they've come up with some very good ideas.

CHAIRWOMAN HIGGINS: So you're based in Cedar Rapids?

MR. KNOTT: Yes.

CHAIRWOMAN HIGGINS: Thank you.

MR. KNOTT: Thank you.

CHAIRWOMAN HIGGINS: Are we ready for the next and final Panel?

MR. STANCIL: Yes. Would Mr. Jeff Young and Mr. Darrell Maxey please approach the witness table? Okay. Mr. Young, would you raise your right hand please?

(Witness sworn.)

MR. STANCIL: And could you bring your microphone closer please? Okay. Mr. Young, could you give us your full name?

MR. YOUNG: Jeffrey Darrell Young.

MR. STANCIL: And your current employer?

MR. YOUNG: Union Pacific Railroad Company.

MR. STANCIL: Please bring your microphone closer.
CHAIRWOMAN HIGGINS: Is your microphone on?
MR. YOUNG: How about this?
MR. STANCIL: That's much better.
CHAIRWOMAN HIGGINS: That's much better.
MR. STANCIL: Okay. Please restate your name, sir.
MR. YOUNG: Jeffrey Darrell Young.
MR. STANCIL: And your employer?
MR. YOUNG: Union Pacific Railroad Company.
MR. STANCIL: Okay. And what is your job title with Union Pacific?
MR. YOUNG: Assistant Vice President, Transportation Systems.
MR. STANCIL: And your business address?
MR. YOUNG: 1400 Douglas Street, Omaha, Nebraska.
MR. STANCIL: How long have you been in your current position, sir?
MR. YOUNG: Eight years.
MR. STANCIL: And what are your current duties and responsibilities?
MR. YOUNG: I have responsibility for all the systems development, to support the operating departments which consists of mechanical, engineering, and transportation. In that transportation side, -- train control, dispatch systems and the positive train control project at Union Pacific.

MR. STANCIL: Have you held any other positions at Union Pacific?

MR. YOUNG: Many.

MR. STANCIL: Okay. Could you review them quickly please?

MR. YOUNG: Yes. I have 32 years. My first 10, 11 years was pretty much supervisory and yard office management, terminal management, manager of train operations. Just after that, in 1987, became Director of the advanced train control system which was the initial, if you want to call it positive train control project, worked on that for about seven years. We started the joint UPBN positive train separation pilot up in the Pacific Northwest as a result of the Kelso, Washington wreck in 1993, worked jointly on that until 1998, became general director of transportation systems at that time, and then participated in the North American Joint Positive Train Control Project. This was Illinois high speed project through 2006, and then the last three years in my current role.

MR. STANCIL: Great. Thank you. And could you identify counsel seated with you?

MR. YOUNG: Yes, this is Mr. Adrian Randolph, counsel for UP.

MR. STANCIL: Thank you. Mr. Maxey, could you give us your full name please?

MR. MAXEY: It's Darrell J. Maxey.

MR. STANCIL: Excuse me. Would you please raise your right hand.

(Witness sworn.)

MR. STANCIL: Okay. And your full name again once more.

MR. MAXEY: It's Darrell James Maxey.

MR. STANCIL: And could you spell your last name, sir?

MR. MAXEY: M-a-x-e-y.

MR. STANCIL: Thank you. And you are currently employed with?

MR. MAXEY: Southern California Regional Rail Authority, Metrolink.

MR. STANCIL: And your job title?

MR. MAXEY: Is Director, Engineering and Construction.

MR. STANCIL: And what is your business address, sir?

MR. MAXEY: 700 South Flower Street, Los Angeles, California, 26th Floor.

MR. STANCIL: Okay. And how long have you held your current position?

MR. MAXEY: Three years, approximately three years.

MR. STANCIL: What are your duties and responsibilities at this time?

MR. MAXEY: I'm responsible for the design, construction, maintenance and rehabilitation of Metrolink's infrastructure. I lead a staff of about 45 in-house Metrolink engineers and maintenance managers, and we also oversee and manage

contractor and consultants that do the maintenance and construction and engineering on Metrolink's system. I will mention that recently, about two weeks ago, my duties were shifted. My role in the maintenance are day-to-day maintenance, rehabilitation was lessened so that I could focus and with some other key staff on the development and delivery of positive train control on Metrolink.

MR. STANCIL: Okay. Have you held any other positions with Metrolink?

MR. MAXEY: No.

MR. STANCIL: Do you have any other experience in the railroading industry?

MR. MAXEY: Yes.

MR. STANCIL: Could you describe what that is?

MR. MAXEY: I have 30 years of experience beginning with the Southern Pacific in 1979 as a project engineer working on various construction and engineering projects throughout the western United States, Southern Pacific's system, geotechnical engineer for several years, as engineer designed the construction with the Southern Pacific for several more years and program engineer with the Southern Pacific and I even spent a little bit of time with the Union Pacific after the merger. Moved over in 1997 to become the chief engineer with the Peninsula Corridor Joint Powers Board which is known as Caltrain. It's a similar commuter system in California, was chief engineer there from 1997

to 2006, and oversaw a staff in construction and engineering for a wide variety of track, signal, communication system projects.

MR. STANCIL: Thank you. And would you also please identify your counsel?

MR. MAXEY: Counsel for SCRA is Marilyn Bacon.

MR. STANCIL: Okay. Thank you very much. Madam Chairman, the witnesses are qualified and I will turn the questioning over to Tim DePaepe.

TECHNICAL PARTY QUESTIONS

MR. DePAEPE: Thank you. Mr. Young, when I contacted you to be a witness, and spoke in general terms about the issues we were going to address, you thought that it would be best if you could present an exhibit and a PowerPoint explanation of the status of PTC on Union Pacific Railroad. At this time, I would ask you to go through that exhibit for everyone in attendance here please.

MR. YOUNG: Okay. Thank you. I thought it would be good if we're talking about PTC and where we're going, it's good to understand where we are now and the concerns that we have with existing systems. So if we could --

MR. STANCIL: Excuse me. Could you identify the exhibit number please?

MR. DePAEPE: I apologize. It's Exhibit 5-B.

MR. STANCIL: Thank you.

MR. DePAEPE: Excuse me, Jeff. Sorry.

MR. YOUNG: That's all right. Next slide please. I thought what we'd talk about today are the current train control systems, the concerns that we have with these existing system and then how does PTC address those concerns. We'll talk about our pilot locations, the challenges of implementing PTC, the PTC implementation plan that was touched on briefly just a few moments ago with Mr. Cothen, and then our project timeline. Next slide please.

I'll start with the most basic control system that we use, and these are specific to UP although these are pretty standard systems and so you would find these on almost every railroad. First, dark territory. You'll notice that there's no wayside signal system here. We use what we call formed based authorities. We call track warrant. Others call it direct traffic control. In this case, you'll see it's a form that the dispatcher will communicate to the train crew, to check box, like 2, proceed from A station to another station. There's other lines on the form that would permit other instructions, for example, like hold main track at last named point.

And the train separation here is provided the train dispatcher ensuring that the instructions or the movement authorities issued to the train do not overlap and then compliance by the train crew. And if both of those individuals do their jobs correctly, then we have safe operations. Next slide please.

When you add a signal system and this is what we would

call a four aspect signal system. This is very similar to what was in place at Chatsworth. So you'll notice these signal indications of clear. The flashing yellow is advance approach. The yellow is the approach. We've gone through the rules on those. So I'm not going to reiterate those, and finally the stop signal. But that's how you can see the train control system where the signal system provides that separation, bringing the speeds of the train down to ensure a safe separation.

Now in this case, the train separation still is provided by the dispatcher issuing the authority to move, the train crew complying with those instructions but it's augmented by a signal system that's conveying information to the train crew on the presence of trains around them and they derive that based on the color light signals that they see or the aspects. Next slide please.

Another form of control is called current of traffic. This is like one way streets. If you want to liken it to that, here trains are authorized to move in one direction only on a track. The significant change here is that instead of the dispatcher issuing the authority to the train in this case, the train crew can operate or move on signal indications. So if they have a clear signal, or anything less than stop, they can proceed. Again, the train separation is provided by the train crew augmented by the signal system. Next slide.

You get into centralized traffic control. This is what

was in place at Chatsworth, the control system. On the eastern railroads, it's called TCS or traffic control system, but they function the same. You can see on the lower track, the train that's on the approach diverging, that's the double yellow, and then the red over green indicates to the train crew as they approach that, that they're going to diverge from the track they're on to the adjoining track or adjacent track and that the route through that switch is clear for them to go through. Here the efficiencies are really the power switches. So dispatchers control the switches in this territory and alleviate the trains from stopping to have to align switches. Train separation again is provided by the train crew and the signal system. Next slide.

Now once we have this type of control, you can start to add additional control or safety mechanisms on top of it. This is called automatic train stop. You'll notice the schematic looks very similar to Chatsworth. These are the indications that the train came into the Chatsworth station on or the Metrolink train. Our train was authorized to head into the siding at Chatsworth which is represented by the train on the right-hand side, but what ATS does is, you'll notice next to the signal, there's a little red light. Anytime a train passes a signal, in ATS territory, on our railroad. There's an induction loop which the locomotive reads. If the signal is not clear, then it requires the engineer to acknowledge and the engineer has six seconds to acknowledge. If the engineer fails to acknowledge, in that timeframe, within

six seconds, then a penalty break application is applied and the train is forced to come to a stop. However, if the engineer does acknowledge, then there is no further enforcement. So it's a more sophisticated form of an alerter but it does not enforce any stop. So the train separation here is provided by the train crew and signal system, and it's assisted by ATS if the signal is not a clear aspect. Let's just go to the next slide.

Another form of control, we have about 3300 miles of cab signal or what we call automatic cab signal operation on Union Pacific. This is an in-cab signal shown by what we call the Christmas tree in the locomotive. This is visible to both members of the crew, and anytime a train, the locomotive passes a more restrictive aspect than the one they're currently operating on, the crew is required to acknowledge the downgrade, what we would call the downgrade in the signal. So in this case, you can see as the train would move through the sequence of signals, an acknowledgement is required within six seconds again. If the engineer fails to do that within six seconds, then enforcement, a penalty brake application forces the train to come to a stop. However, again once the engineer acknowledges that restriction, they're free to operate at any speed much like ATS. The additional benefit here is that at anytime a train crew can look up in the cab and get the state of the block that they're operating in at this time. So train separation is provided by the train crew, the signal system and assisted by the ACS alarms.

Next slide.

This is automatic train control. We've got about 900 miles of ATC on our railroad. This is a little more sophisticated form of control. We start to get predictive in this area, and that is as the train progresses through the series of signal sequences here, acknowledgements are required as they pass the more restrictive signals and it's coupled with timeframes to get the speed down on the train to certain speeds, 40 or 20, within a certain amount of seconds, in our case 70 seconds, or the train will be forced to come to a stop. So this is referred to as speed control, and here the train separation is provided by the train crew and the signal system assisted by speed control. And this is the safest form of control that we have on our railroad, although we still have accidents, and we've had accidents in these territories as well. Once you get under 20, enforcement is disabled. Next slide.

Okay. That's a quick review of the signal systems. Most of these are reactive as opposed to predictive. The cab signal and ATS especially wait for a violation to occur and then an acknowledgement takes please. All of these systems depend on human compliance. So whether you're using a cell phone or you're disoriented, you've lost situational awareness or fatigue, asleep, whatever. And, in a review of accidents on our railroad in the last 30 years, and these are a review of accidents that have been investigated by the NTSB, there's only been one instance where the

signal system was a contributing factor. It wasn't the cause but it was a contributing factor.

These existing systems are cab signal based. That means the control is pretty much in the roadbed. They're very difficult and time consuming to design and install. Next slide.

So PTC, we've talked a little bit about PTC today. Really no positive train control system is deployable unless it's interoperable. So our interoperability objects are to meet the four criteria outlined in the RSIA. We have to meet the regulatory requirements for production deployment and that's the new subpart I that Grady had talked about just a few moments ago. We'll talk more about that.

And then we have to support the industry interoperability initiatives, and when we talk about interoperability, we're really talking about a number of things. First, the systems have to be able to communicate and locate on a standard. They need to have common system behavior and the human factors or the displays that we put on board have to be the same so that as our locomotives run through from railroad to railroad, we don't have to retrain every engineer in North America based on a UP system versus a NS or CSX, BNSF, any system. So when we talk interoperability, we're really talking about all those different features. Next slide please.

So how does the system work? This is a very high level overview but as Mr. Knott just pointed out, we use GPS augmented

by differential correction. It's important that if you're going to address human error, you've got to bring control up into the cab where the human is. So in this case the location system gets us the latitude/longitude which is then correlated to an onboard track database that gives us subdivision, milepost and track. Once the locomotive knows that information, location reports go back through a ground-based radio network, back through what we call back office server which is really a significant component of the PTC system, into the dispatch system that grants the authorities for trains to move. Once those authorities are then generated, based on the location of trains, they are sent back through the ground-based radio network to the locomotive, stored in the onboard computer and presented to the engineer on a display. The onboard computer then monitors the engineer's compliance, to make sure that the engineer is compliant with those instructions and if the engineer fails to do so, then the system will intervene and take control and bring the train to a stop. Next slide.

There are a number of things that are required. Could you hit the next slide please, one more time?

When an engineer or a train crew comes on, the engineer will log on to the system, and the following elements will be downloaded from that back office to the locomotive. The track database that has the grades, curvatures, the permanent speed restrictions, any work zones that are in effect, the temporary

speed restrictions will also be downloaded, the train consist with is loads, empties, tons and length of the train, and the initial movement authority that authorizes the train to move. Next please.

Once the train starts to move, you can see that the system starts to calculate a stopping distance. This is very dynamic. This happens about once a second. As the locomotive moves, based on those trailing tons, the velocity of the train and the gradient that the train is operating on, it's calculating the stopping distance. Now obviously if you're on an ascending grade, your stopping distance is going to be much shorter than if it's on a descending grade.

In this case, let's just assume that that switch we have down there, could you hit the next slide please?

Let's say that is CP Topanga. The train has just left the station. In this case, that signal at CP Topanga is read. The locomotive is communicating with that signal to get state information, to know the state of that signal. The signal is read. That's going to first not permit -- the train is currently operating on an approach indication. It's been delayed in the block. It's not going to allow that train to operate over 40 miles an hour. If it's passenger, it's not going to authorize it to move above 20 if it's a freight.

As the locomotive is traversing down the track, that would be -- the first safety check would be speed. It will not

let a freight train exceed 20 or a passenger to exceed 40. Once the train starts to move, if that warning curve which is moving out ahead of the train touches the end of the authority limit, an alarm goes off in the cab on the display advising the crew that enforcement is pending in "X" number of seconds if the engineer fails to bring the speed down. If the engineer continues to fail to operate effectively and the red line touches the end of the authority limit, then a penalty brake is invoked and it forces the train to come to a stop short of the violation of the movement authority limit.

So this is a high level overview that works at switches, work zones or signals, speed restrictions, anything, that that's basically how the system functions. Next slide please.

Now in our railroad, we've got three test areas. One's up in the Powder River Basin, just west of North Platte, up into Wyoming, 193 miles. We've got centralized traffic control on that territory along with cab signals. We operate about 75 trains a day. We've equipped 50 locomotives in that area.

On the Boone Sub, just east of Omaha, 123 miles of CTC with speed control. So now we've got CTC covered. We've got CTC with cab signals. Now we've got CTC with speed control.

And then lastly we have a dark territory up on the Spokane sub, and this is Idaho, Washington and Idaho, 140 miles of dark territory. That's about up to 10 trains a day now and actually we've got 15 locomotives that we've equipped and also CP.

So part of our interoperability is to work with CP on equipping locomotives that will traverse our territory. Once we complete the testing on these three territories, these will embody all the traffic control types that we have on our railroad. So if we prove it here, we should be able to roll it out anywhere, and that's our intent. Next slide please.

Okay. PTC does not come without its challenges. First spectrum. We have to ensure that there's enough throughput for safe and efficient movement of trains. We'll talk more about each of these in just a moment. The interoperability, Jeff Knott just mentioned that as well. The communications, behavior and response and the onboard display. The predictive enforcement complexity to ensure safe braking calculations, the installation of wayside interface units, locomotive equipment and telecommunications infrastructure.

Now I'll just tell you, Madam Chairman, you just asked a few moments ago what is the challenge of getting PTC and meeting the dates. This is it. Right here. Number one. We have 24,751 wayside interface units that have to be installed. That is what we have identified is required to meet the requirements of the RSIA. If we were to start today, we would have to do almost 10 per day, every single day between now and the end of 2015 to meet that date, 365 days a year. Each one of those sites requires a survey, a design, engineering, construction and installation. To get that done in that timeframe, even though it seems like six and

a half years is a long ways away, it is a daunting, daunting task. And to do it to ensure that it's installed safely, and that we're not degradating safety, because this is an overlay on the existing system, is a tremendous challenge. We'll talk a little bit more about that in a minute with one of the challenges that we have with the new subpart I.

We have 6,000 locomotive we have to equip, same thing, 2.4 per day between now and every day between the end of 2015, and this equipment is not ready yet by the way. It won't be ready probably until the beginning of early 2010. And then we have 970 base station radios. We have about 23,000 crews to train, and you can see not just the crews to train to operate, but maintenance personnel that have to maintain all of this equipment. It's a daunting task. And then we have the uncertainty with the subpart I regulations. There's discrepancies, or I shouldn't say discrepancies. There's discussions taking place about derails, about switches in signal territory. We have about 5,000 derails that we might have to add to this or 7,000 additional switches in signal territory which just increments that number, that 24,000 that much more, making it much, much more difficult to make those dates. Next slide.

Okay. Let's talk about the spectrum. The challenge of spectrum is one of capacity. It is just like a highway and channels in spectrum are like lanes in a highway. When the highway congests, every thing slows down. The same happens in a

communication network. Too much traffic on a channel will cause congestion. So what do you do? You have to add more lanes. So in this case, we would have to add more spectrum. Now the freight industry, UP and NS jointly bought some spectrum, 220 megahertz spectrum and we think that that will -- we're pretty confident that that will meet the needs of the freight railroads but when you add the commuters in on top of it, we're almost certain that it will not especially when you look at Chicago. Ground Zero for any railroad operation is Chicago because of the Metra operations, with high speed commuters and just the dense railroad operations in Chicago. That will be our challenge. And so we are doing a spectrum demand study to determine how much more spectrum we need. We think we're going to need about 250 kilohertz more spectrum which is five channel -- . Next slide.

Interoperability. Okay. These are standards that permit one railroad. You heard what was read just a few minutes ago, what we have to do. UP, NS, BNSF and CSX have all agreed on interoperable communication standards. We've all agreed to the human factors. We're all using the same supplier which is going to greatly help us achieve that interoperability in a timely manner. Once all these specifications are completed, they will be open and any supplier can develop to these specifications. Next slide.

Here's what we really have to solve. This scenario shows between Seattle and Portland how UP operates. We operate

over the BNSF on that line that's indicated in blue. UP would start, if we have a train starting in Seattle, that was going to go to Portland, we would operate from Seattle down to just north of Tacoma, a station called Black River, and then we hand off control and it goes down over to BNSF, down to Portland. So let's assume our crew comes on duty at Seattle. The crew gets on board and they're on a NS locomotive on the point. You've got a NS locomotive, a UP crew, engineer logs on the system. It sends a message, it comes back to our Omaha office and we download the appropriate track, database, speed restrictions, movement authority, work zones and everything for that 40 mile section of track.

With that message comes down a message to the locomotive that says, by the way, you need to also talk to the BNSF center in Fort Worth. So it sends a message to the BNSF center, gets authority or gets the track database, gets the same information, downloaded for authorization to move over the BNSF track. As the train starts to move, it approaches Black River. It's communicating with the UP center in Omaha, comes to the transition point at Black River, communicates with the signal. This is controlled by BNSF. It gets its clearance to move by the signal, transitions at Black River from UP to BNSF, hands off control, starts communicating with the BNSF network operations center in Fort Worth, operates down over the BNSF, down to Portland where that process is reversed, and it's handed back. That happens

hundreds of times on our railroad today all over, not just in this location but all over, North America railroads do that today. And that's what we're solving right now with this interoperability agreement. And at the onboard displays and the system behavior and function is transparent to the crew. It's transparent so that they don't have to be trained on all these different systems. Next slide. I shouldn't have moved so quick.

Madam Chairman, this is another area. When you talked earlier today, when we talked about preemption, can you imagine trying to have a California system, a Utah system, a Nevada system. There is absolutely no way that we could comply with all these state initiatives that would come out. So at least for train control and preemption, this is a major issue because if we're ever going to have an interoperable system, it's got to be one that is standardized to the freight railroads and the commuters that operate over us or we'll never get there. And the preemption, this is a real issue for the freight railroads is that we've got so much invested in this to try and accommodate all these different systems would be impossible with every state coming up with their own regulation.

Okay. The agreement quickly, just to come back to the agreement, the four class 1s are the signatories. We've talked about locomotive to wayside, locomotive back office, behavior and displays. We also have a governance board or a series of governance committees. We have working committees that are

working out all the technical side of all these standards and specifications. We've got a steering committee that is looking at unresolved issues, commercial issues, who supplies, et cetera, and then we have an executive committee, and we have an agreement to manage this 220 megahertz spectrum because we will be sharing everybody's infrastructure here. Next slide.

Lastly, the predictive enforcement complexity. You heard some talk about slow speed enforcements. There is work going on here. We have to ensure that when we are prompting this engineer on how to operate the train, that we are not sending alarms and alerts to the engineer when the engineer's handling the train properly. And it's easy with a safety system to do that, to dial in the safety so tight that every time that you're anywhere close, where the engineer's operating effectively, alarms and alerts start coming in and that kills our velocity.

So what we are developing and doing research on at the Technology Transportation Center out in Pueblo, is an adaptive algorithm, so that the braking algorithm will be able to have the capability to learn. For example, you'll see those trajectories, those predicted trajectories of stopping distances. Once the locomotive applies the brakes, we see the actual deceleration rate, compare it with the predicted deceleration rate and it compensates and it learns just like the engineer does with the seat of their pants today. But we have to do that on a reliable basis and we're working at the Technology Center on a number of

issues that will enable it. We see the braking algorithm as an interoperable component. We want to go to the FRA with our filing and jointly have all railroads using the same braking algorithm. Now the commuters obviously would not have the same as a freight railroad, but nonetheless, we see this as a significant interoperable component. Next slide.

Subpart I, you know, we've developed our system to subpart H which was basically the performance standard, was as good as or better. Obviously Chatsworth and the New Rail Safety Bill changed that. As good as, it's not good enough. So we, in our discussions with FRA and through the RSAC, we're not too concerned with the performance standard or meeting the performance standard of the new subpart I. There is a serious issue. How do we deal with class 2 and 3 railroads that are exempt from the Rail Safety Improvement Act but they operate over our lines, and some of these lines will be mandated as PTC lines.

And then lastly, one that's not on the slide, we just talked about was the additional devices that get added in could pose a real problem for us.

And then lastly is our timeline, next slide please. Whoops. Sorry. Left one out. Priority areas, much like what was discussed with Mr. Cothen. We've made a commitment to 2012 in the Basin. That's an aggressive date. We think we can make it. The commuter passenger lines will be next, Southern and Northern California, Chicago, Salt Lake City, Denver, et cetera. They'll

be followed by hazardous routes, primarily TIH, and then beyond that we'll have the risk assessment that will dictate how we roll this system out.

The commitment in 2012, I want to make sure this is very clear that the UP will be equipping the locomotives that are assigned to work in that areas. We call them tier 2 locomotives because of the emissions standards but by 2012, every UP locomotive operating in California or in the Southern California Basin will not be equipped. There's just no way we can get that done when we have 6,000 locomotives to equip.

Lastly is our timeline. You can see our pilot program. We expect to conclude this much like Mr. Knott said earlier, by the end of this year, our regulatory filing sometime early 2010, regulatory approval late 2010, LA Basin complete 2012, 2015 system deployment complete, I wouldn't say we could make that date, not at this time. There's too many unknowns. When we get our implementation plan done and we know what exactly we have to do and how we're going to structure the work, then we could possibly make some other commitments but the chart shows the end of 2015, but right now I would say that's not likely. And that concludes my presentation.

MR. DePAEPE: I want to thank you, Mr. Young, for that very comprehensive report on existing signal systems and the future of PTC on Union Pacific. You've answered most of the questions that I had prepared and that were of concern to the

Board but and I have to admit, I appreciate your candor on the difficulty of hitting the target dates because a lot of people have not realized the volume of equipment that has to be deployed, and you're just talking Union Pacific. I mean BNSF, NS, CSX, it's going to have the same amount. That's why earlier I was interested on how the suppliers were going to handle that volume, but that being said, I just want to ask a follow up on two questions that you answered but I'm not sure that I understand the answer.

The Act required that you identify priority areas for implementing positive train control and that second to last slide showed what you're thinking of doing. Is that going to be included in your plan on the exact process of implementation for those areas?

MR. YOUNG: Yes, that is required. Subpart I will define how that is to be done, but I think it's very consistent with what Mr. Cothen said earlier. We'll be focusing on passenger lines where we interoperate with freight, freight and passenger interoperate, and hazardous TIH will be right behind that.

MR. DePAEPE: Okay. And just a clarification on the Los Angeles area because we've seen press releases and things in the newspapers about the commitment to have that area up and running by 2012, but as you said, with 6,000 locomotives, you're talking more than 1 a day would have to start being equipped by now to hit that target. So is it your intent to get perhaps the wayside

interface units and all the physical material you can in place so that as you get locomotives on board, that they're equipped and they'll be able to run?

MR. YOUNG: Absolutely. In fact, we have about 60 miles, our Los Angeles sub, is what we have to equip. That's where Metrolink and UP share track. That will all be equipped, and we will have a good number, possibly all of the tier 2 locomotives installed or equipped by the end of 2012 but it's all the rest. We have about 1200 tier 2 locomotives of the 6,000. So you've got 20 percent of our locomotive fleet. That is no way going to cover all the locomotives that operate in Southern California.

MR. DePAEPE: And finally, have you been in communications with Metrolink to start equipping their trains and explaining to them the equipment and the process that they'll need to institute in order to hit that target date with their equipment?

MR. YOUNG: We've probably had a half a dozen meetings with Metrolink. Not only that, but we invited all of the commuters that operate over us to a conference in Omaha last November to walk through the bill and update them on the standards. These committees that are functioning, these interoperability committees, the working committee for example, we've got CN, CP. We've invited everybody who has interest in these standards to come to these meetings. Now they won't vote.

We're on a tight timeframe here. So we're not going to open this up to a committee or management it by committee, but we are going to take tight control, but anybody who wants to come, we invite to come so that they can understand what we're doing.

MR. DePAEPE: I'm going to follow-up to my own question. So as you said, you're going to target Chicago where Metra runs on Union Pacific trackage. Did you say you've extended an invitation to like Metra to attend so they can be prepared for what they need to do?

MR. YOUNG: Yes, we have and we went to Chicago to meet with Metra specifically to go through what we were doing.

MR. DePAEPE: Thank you, Mr. Young. Madam Chairwoman, would you prefer to question Mr. Young or should I continue with Mr. Maxey at this point, and then open for questions.

CHAIRWOMAN HIGGINS: Why don't you finish --

MR. DePAEPE: All right.

CHAIRWOMAN HIGGINS: -- with the Panel and we'll do our round.

MR. DePAEPE: Mr. Maxey, what's the status of implementing positive train control on Metrolink? Mr. Young alluded to meeting with you. I just want to confirm that he has and where you're at.

MR. MAXEY: We've begun staffing up to deliver the program. We've divided up the activities into project management, technical development, design and project controls. So we've

assembled a team of staff and consultants to develop and deliver the program. We're adding more as you can image. We developed preliminary requirements for the PTC system, a delivery schedule, an execution strategy and a preliminary cost estimate to deploy PTC on Metrolink in the Southern California Basin. We've successfully obtained funding for a portion of the PTC program. We'll speak to that some more. Our staff and consultants are actively participating in RSAC which you've heard and it's very important that we participate and provide input to that, through that process, so that we make sure that the commuter railroads are both informed and give input to the RSAC process and the FRA. We've had numerous meetings with UP and BNSF regarding PTC implementation and several meetings with Amtrak and have scheduled a meeting with the other operator on Metrolink which is North County Transit District or Coaster. We've met with all of the primary venders we believe including Wabtec, General Electric, Union Switch and Signal and others that would be interested in assisting Metrolink to deliver the program.

MR. DePAEPE: Thank you. I just want to clear this up or get clarification from you. Has Metrolink made the decision to accept the platform that Wabtec is using or what Union Pacific has decided to use through their supplier Wabtec as the platform for the equipment on the Metrolink trains in order to achieve the interoperability?

MR. MAXEY: We haven't made a final decision but we're

leaning strongly to piggybacking or pursuing the Union Pacific's VTMS system. There's a BNSF, ETMS, Union Pacific's VTMS.

MR. DePAEPE: Right.

MR. MAXEY: It's a little bit different but not that much. It may be a matter of adding modules on the onboard computers but we're leaning very strongly on that. We have to do a little bit more engineering and project development. Of course, whatever we deploy and as we make decisions, we're waiting and participating in the FRA requirements which are being developed as Mr. Cothen expressed. So we will have to stay on top of that and tailor our program to be sure that it meets all the FRA requirements.

MR. DePAEPE: I'm aware that BNSF, Amtrak, Metrolink, and Union Pacific operate on that trackage. You mentioned a fifth?

MR. MAXEY: A fifth would be we operate over Coaster's south of the Orange County line up to Oceanside. That's about 20 miles and we actually -- there's a little special circumstance. We perform the dispatching for the Coaster, the Low Sand Corridor, Los Angeles to San Diego Corridor, from the Orange County line down to San Diego. So because the dispatching is an integral part of the positive train control, we are going to have to meet with the North County Transit District and make some decisions about how and who is going to be responsible for deploying PTC on that part of the rail corridor.

MR. DePAEPE: But you've initiated discussions in order to get the ball rolling on that process though?

MR. MAXEY: Correct.

MR. DePAEPE: Okay. Thank you. Madam Chairman, that's all the questions I have for this Panel at this time.

CHAIRWOMAN HIGGINS: Any other questions from the Tech Panel?

(No response.)

CHAIRWOMAN HIGGINS: Okay. We'll go to the parties. FRA.

MR. COTHEN: Nothing.

CHAIRWOMAN HIGGINS: I'm sorry.

MR. COTHEN: Nothing.

CHAIRWOMAN HIGGINS: PUC.

MR. CLARK: No questions at this time. Thank you.

CHAIRWOMAN HIGGINS: Mass Electric.

MR. ROBERTS: No questions at this time.

CHAIRWOMAN HIGGINS: City of Los Angeles.

MR. QUINTANAR: No questions.

CHAIRWOMAN HIGGINS: Union Pacific, I guess you've -- UTU and BLE.

MR. GRIMALLA: No questions.

CHAIRWOMAN HIGGINS: Okay. Connex?

MR. ELSMORE: No questions.

CHAIRWOMAN HIGGINS: And Metrolink?

PARTY QUESTIONS

MR. CRARY: Mr. Maxey, what's your current estimate of deploying PTC in our system?

MR. MAXEY: $201 million. We have reserves and contingencies in that estimate, and I would say that at this time, our scope is -- I would characterize it as being broad and deep. We have to develop a track database but we're also going to, for instance, reassess and do a validation of our signal system to make sure that the signal locations are in their optimum location. We're going to take a look at our dispatching center which, if it needs to be upgrade, perhaps to a new building, a hardened building that meets hardened, seismic and other vulnerability standards. That's included in the program. This is not a narrowly defined project. We are broadly and deeply defining it so that we can be sure that we deploy this PTC correctly in Southern California.

MR. CRARY: And how much of that $201 million do we have right now and where did it come from?

MR. MAXEY: We have approximately $28 million in the bank with about $22 millions coming out of the economic stimulus program that was recently passed. We had about $6 million additionally that came from some local and other sources and we have a commitment from Los Angeles Metro to cash flow or fund the program up to $201 million if necessary until we can develop the funding plan for the remainder of the program or the balance of

about $175 million.

MR. CRARY: This question, we saw on Mr. Young's presentation, a depiction of the Chatsworth to CP Topanga. I'd like to clear up a question from yesterday. Is there any requirement or does our standard require a signal to be visible from a station?

MR. MAXEY: No.

MR. CRARY: What is our standard for visibility and what are you going to have to do in terms of working with our signal spacing and standards for PTC development?

MR. MAXEY: There is no federal standard for the distance of preview for a two-way signal other than it be visible. I would say a good design practice that's been incorporated in our recent standards is to have 2,000 feet of preview at 79 miles per hour. That would allow an engineer to see a signal approximately 20 to 25 seconds ahead of reaching that signal. It's often topography, tunnels, so forth, may affect that distance and as the block spacing and so forth, but that's our current design practice.

MR. CRARY: And then the second part of that question, what do you have to do in terms of understanding our signal system in terms of PTC development?

MR. MAXEY: Well, we are going to go through our signal system and revalidate, make sure that all of our circuitry is up to date, correctly designed and up to current standards, and we

are going to go through the map, the track system to make sure that we have the proper input to the computers, onboard computers that are required for the PTC system.

MR. CRARY: Thank you. No further questions.

CHAIRWOMAN HIGGINS: Okay. My colleagues. Mr. Chipkevich.

MR. CHIPKEVICH: Just a brief question.

BOARD OF INQUIRY QUESTIONS

MR. CHIPKEVICH: Mr. Maxey and Mr. Young, thank you very much for the -- presentations. Mr. Young, about how long does it take to install equipment on a locomotive?

MR. YOUNG: We're looking at, it'll probably take -- we can do it in a day. It will take two shifts, two electricians and two machinists. So about 32 man hours but we would do that in one day.

MR. CHIPKEVICH: Okay. So it's a pretty extensive job then?

MR. YOUNG: Oh, yes, it is. You're into the brake system. You're deep into the system.

MR. CHIPKEVICH: Great. Okay. Thank you very much.

CHAIRWOMAN HIGGINS: Okay. Metrolink was asking the questions that I had an interest in. Because first of all, this is very impressive, and it's also very encouraging. As you know, this is something that the Board has been advocating for a number of years, and unfortunately it took this accident to get

everybody's attention including the Congress' to get this moving. But we can be grateful that it is now moving and that it is being implemented.

I'm interested, you know, we're in a very difficult economic period, and this is obviously an expensive system to implement nationwide. I guess, you talked a little bit about the Metrolink costs. But what are the costs of implementing the positive train control for the Union Pacific nationwide?

MR. YOUNG: on our system, we are looking, and this is really dependent on what comes out of the subpart I, but we are at least a $1 billion, probably closer to $1.2 billion. If we add these 7,000 switches in signal territory, we're going to be close to $2 billion.

CHAIRWOMAN HIGGINS: And is that cost being borne solely by the Union Pacific?

MR. YOUNG: Well, I would say right now that there's been no provision, no discussion about stimulus or any other matter, and many view this as an unfunded mandate, but at the cost and really the economic conditions make this a real challenge. And so I think that there will be discussions about how do we fund this.

CHAIRWOMAN HIGGINS: It also, and again thinking about the climate in which we're having this discussion, I'm impressed with the numbers of WIUs, wayside interface units that have to be installed and how long it's going to take but also what kind of

skills are required to install those units?

MR. YOUNG: You know, that's a great question. The skill sets required, you know, signal engineering is a unique discipline. It's not like you take an electrical engineer and just make him a signal engineer. It takes time to get people trained. Anytime you have people going into signal bungalows, if you want to call them that, where the signal equipment is on the wayside, it takes a unique skill set of which is going to be stressed by this Rail Safety Act like never before. And so we've been looking at attrition plans. We've been looking at hiring plans, of bringing on as many as 200 signal engineers to be able to do this work. So that's another real challenge. I mean the time is just one challenge but getting the right skill set at the same time everybody else in the industry is trying to do the same thing, with the scarce resource, it makes it very difficult.

CHAIRWOMAN HIGGINS: And is this something as you all are working with your counterparts in the industry, I guess three of the railroads that you mentioned, all the commuter rails, is that part of the planning that FRA is expecting to be addressed?

MR. YOUNG: No, we will not lay that out. I mean what we have to lay out in our implementation plan is by subdivision how many wayside interface units do we have and when we will deploy those. We won't get into the resource constraint issues. I mean obviously --

CHAIRWOMAN HIGGINS: But clearly resources affect

delivery.

MR. YOUNG: That's correct.

CHAIRWOMAN HIGGINS: Okay. Both financial and --

MR. YOUNG: Correct.

CHAIRWOMAN HIGGINS: -- human.

MR. YOUNG: Correct.

CHAIRWOMAN HIGGINS: Okay. And this is maybe a conversation for a separate time, but I do think, I think you talked about it as a, I don't remember the word that you used, a task or something.

MR. YOUNG: Daunting task.

CHAIRWOMAN HIGGINS: Daunting task. Maybe we can also think about this as an opportunity because, you know, there are requirements, legislative requirements, there are needs that we have as a country. I know a lot of people are thinking about this. I'm not sure that this project is really very visible on anybody's radar screen, and again we have a strong interest, for safety, for all the accidents we've seen. I know you do, too, in trying to get this done, but I think we also have to be honest about what's involved in terms of things we just talked about. How are we going to meet these deadlines? And, you know, I don't know if FRA wants to comment, but I personally would be happy to talk to you about how we might be able to knit some of this together because I think there are ways to think about it a little bit differently perhaps. So that we're not, you know, it

shouldn't be a competitive issue where you're having to steal from each other to get your piece of it done, not to mention the commuter rails that are going to have more difficulties given the issues that they face. So I think it's something worth thinking about. Maybe you all are already thinking about it. Would you like to comment on that or --

MR. YOUNG: Well, we would be all ears, I would tell you that.

CHAIRWOMAN HIGGINS: Okay.

MR. COTHEN: This would be the first time they would want us in their business I think but --

MR. YOUNG: I didn't say that, Grady.

MR. COTHEN: I think FRA is conscious of these issues. I'm not sure what we can do in terms of the skill sets that will be required. You know, that's a huge issue, and ironically a weak economy might be a good thing for getting this project done as long as the cash flow's there to get it done.

The issue of funding, you know, I think is something that the Federal Railroad Administration can be, and the U.S. Department of Transportation can be more helpful about the capital required. Generally on the freight side it's going to have to be generated on the freight side but there's ways still in which we can be helpful. FRA has the RIF program which is the real infrastructure program which is potentially a $35 billion loan guarantee program that's available to both passenger and freight

railroads and indeed both have already in small ways, not around PTC, but other projects, have taken advantage of that financing authority. And clearly as has already been mentioned, there are already small pots of money showing up, in Amtrak appropriations and the stimulus legislation and so forth, and the FRA's Office of Railroad Development is a point of contact and is extremely conscious about this issue being on the screen. Secretary LaHood is conscious and aware of the fact that this is a major area of need but once the funding is there, the logistical and skill set issues still remain.

CHAIRWOMAN HIGGINS: Right. Why don't we -- well, let me just offer my help because I actually -- I've had many previous lives but one or more of them dealt with some of these kinds of things. So I just think there's a way to, you know, again I can see this becoming the stumbling block to meeting the deadline. You're already saying it's going to be hard to meet 2015 for some of the reasons I think we just talked about. You're one railroad. We've got how many that have to implement this, Grady?

MR. COTHEN: Over 20 passenger railroads and 7 class 1 railroads in North America.

CHAIRWOMAN HIGGINS: Okay. Let me just leave it at that because it really goes beyond the scope of what we're doing here, but I do think again from the Safety Board's perspective, this is, as you know, has been on our most wanted list. We took it off this year frankly over my objection because, you know, we knew

that the law had been passed but the law's only as good and as viable as it's being implemented. And, you know, if you already know that you're going to miss this deadline, I think the question that I would ask as a Board member and one of the things that we're going to have to consider, looking at FRA and the industry and labor movement, is what is it going to take to meet this statutory deadline, and not just in terms of the plan. I think what I heard you saying is the plan to essentially map out where you're going to start and when you're going to start but going beyond that, to say what's it really going to take to realistically meet this deadline. We all want to get this done but I think we all have to be honest about what's involved.

Okay. I don't think I have any other questions. Are there further questions for this Panel from the Technical Panel?

MR. DePAEPE: No.

CHAIRWOMAN HIGGINS: Okay. From the Parties?

(No response.)

CHAIRWOMAN HIGGINS: I think everybody's worn down. And we're actually eight minutes ahead of schedule. Thank you.

I have a brief closing statement. Is there anybody else that wants to make a comment before I wrap this up? This is your last chance.

(No response.)

CHAIRWOMAN HIGGINS: Okay. Since there are no other witnesses to be called to testify, this portion of the Safety

Board's investigation is concluded.

But I want to emphasize that in accordance with our procedures, this investigation will remain open to receive at anytime new and pertinent information regarding this accident. The Safety Board may, at its discretion, reopen the inquiry in order that such information is made part of that public record.

I want to thank all of you for joining us. Those of you who watched over the webcast, those of you in the audience, our witnesses, and our parties. You've been with us over the last two days. We've learned a great deal that will help inform our investigation and help make sure that this tragic accident doesn't occur again.

There's nothing any of us can do to change what happened last September 12th but we can and will learn all the factors that led to this accident and will work together to ensure that it will never happen again.

And then I want to thank all those who have worked so hard to put this two-day hearing together. Wayne Workman and his team of investigators, Wayne's been our Investigator-in-Charge, and he's got a great team working with him. Paul Stancil, our Hearing Officer, Bob Chipkevich, Gary Halbert and Joe Kolly, my colleagues on the Board of Inquiry, and I also want to recognize the people who you haven't seen or heard from who work behind the scenes. The administrative assistance has been provided by Denise Whitfield and Nancy Mason, Public Affairs, Terry Williams has been

fending press calls and handling scheduling press interviews. This room, the Board room, we've had the help of Rochelle Hall and Fernando Castillo, all of the technical, sound effects, special effects have been provided by Antoine Downs who's sitting up there I think in the booth. You can wave at him if you can see him. We've had the webcast I mentioned. Bill Price is the person who has been responsible for that, and all of the computer and IT technology, Greg Perrera (ph.), Pumy Bawa (ph.), and our security by Officer Austin and Officer Stewart.

So thanks to all of you and this has been a great and challenging effort over the last two days and we look forward to continuing to work together and I know that we're going to get this report done in a year,

Mr. Chipkevich. I think that's a yes.

Thank you all.

(Whereupon, at 4:55 p.m., the hearing in the above-entitled matter was adjourned.)

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF:	METROLINK TRAIN NO. 111 COLLISION WITH UNION PACIFIC RAILROAD LEESDALE LOCAL, September 12, 2008, Los Angeles, California
DOCKET NUMBER:	DCA-08-MR-009
PLACE:	Washington, D.C.
DATE:	March 4, 2009

was held according to the record, and that this is the original, complete, true and accurate transcript which has been compared to the recording accomplished at the hearing.

_____

Timothy J. Atkinson, Jr.
Official Reporter