ROLE OF HUMAN FACTORS IN RAIL ACCIDENTS

(110–18)

FIELD HEARING

BEFORE THE

SUBCOMMITTEE ON

RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS

OF THE

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

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Washington, DC 20515

March 13, 2007

John L. Mica
Ranking Republican Member

James W. Coon II, Republican Chief of Staff

SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Railroads, Pipelines, and Hazardous Materials

FROM: Subcommittee on Railroads, Pipelines, and Hazardous Materials Staff

RE: Hearing on the Role of Human Factors in Rail Accidents

PURPOSE OF THE HEARING

The Subcommittee on Railroads, Pipelines, and Hazardous Materials will meet Friday, March 16, 2007, at 10:00 a.m. in San Antonio, Texas to receive testimony on the role of human factors in rail accidents.

BACKGROUND

According to the Federal Railroad Administration (FRA), there were 2,835 train accidents in 2006 (excluding grade crossing collisions), which resulted in six fatalities and 172 injuries. Twelve percent of these train accidents, or 342 of the 2,835 train accidents, occurred in Texas – the highest number of train accidents among all of the states.

The FRA organizes the causes of train accidents into five categories: human factors; track and structures; equipment; signal and train control; and miscellaneous. Human factors and track defects consistently rank as the top two causes of all train accidents. According to the FRA, almost 40 percent of all train accidents are the result of human factors. Since 1994, when Congress last reauthorized the FRA, the number of train accidents caused by human factors has increased from 911 in 1994 to 1,000 in 2006. In 2006, 129 of the 342 train accidents that occurred in Texas were the result of human factors; 132 train accidents were caused by track defects.

The top five most common human factors causes for accidents are improperly lined switches; absence of an employee on, at, or ahead of a shoving movement; failure to control a shoving movement; switch previously run through; failure to secure a hand brake; and cars left afoul.

All of these accident causes were contributing factors in a series of accidents that occurred in Texas and across the U.S. over the last decade.

THE TEXAS ACCIDENTS

On February 21, 1997, at 2:08 a.m., a Union Pacific Railroad (UP) northbound freight train collided with the rear car of another UP northbound freight train near Odem, Texas. The National Transportation Safety Board (NTSB) determined that the probable cause of this accident was that the crew of second train were inattentive to their duties and failed to ascertain that the rear of their train was not clear of the yard limits in Odem, Texas. Contributing to the accident was incorrect consist information supplied by the clerk.

On June 22, 1997, at 10:52 p.m., two UP freight trains collided head-on in Devine, Texas. The trains were operating on a single main track with passing sidings in dark (non-signalized) territory in which train movement was governed by conditional track warrant control authority through a dispatcher. The conductor from one train, the engineer from the other train, and two individuals who may have been riding on the first train were killed in the derailment and subsequent fire. The engineer from the first train received minor injuries, and the conductor from the second train was seriously burned. Estimated damages exceeded $6 million. The NTSB determined that the probable cause of the accident was the failure of the third-shift dispatcher to communicate the correct track warrant information to the traincrew and to verify the accuracy of the read-back information because the UP management had not established and implemented workload policies and operational procedures to ensure a safe dispatching system and the FRA had failed to provide standards and oversight in all aspects of train dispatching operations. Contributing to the accident was the lack of an installed positive train separation control system that would have prevented the trains from colliding by automatically intervening in their operation because of inappropriate actions being taken.

On May 28, 2002, at 8:57 a.m., an eastbound Burlington Northern Santa Fe (BNSF) coal train collided head on with a westbound BNSF intermodal train near Clarendon, Texas. Both trains had a crew of two, and all crewmembers jumped from their trains before the impact. The conductor and engineer of the coal train were critically injured. The conductor of the intermodal train received minor injuries; the engineer of the intermodal train was fatally injured. The collision resulted in a subsequent fire that damaged or destroyed several of the locomotives and other railroad equipment. Damages exceeded $8 million. The NTSB determined that the probable cause of the collision was (1) the coal train engineer's use of a cell phone during the time he should have been attending to the requirements of the track warrant his train was operating under and (2) the unexplained failure of the conductor to ensure that the engineer complied with the track warrant restrictions. Contributing to the accident was the absence of a positive train control system that would have automatically stopped the coal train before it exceeded its authorized limits.

On December 7, 2003, at 12:12 a.m., a UP switching foreman was struck and killed by two locomotives at the UP's East Yard in San Antonio, Texas. The two locomotives were operated as a single unit under the foreman's control. He was operating the locomotives from the ground using a remote control transmitter. The foreman usually had a helper. However, on the night the accident occurred, the helper position was not filled because of a crew dispatch program, so the foreman worked alone. The foreman's assignment was to switch 44 railroad cars using the locomotives.

When the accident occurred, the locomotives were traveling at about 11 mph and were moving back over the track they had just traversed rather than over the tracks leading to the destination. The NTSB determined that the probable cause of the accident was the foreman's inattentiveness to the location of the locomotives and the switch position and the lack of adequate oversight by the UP of power-assisted switch installation, maintenance, and operations at its East Yard.

On May 19, 2004, at 5:46 p.m., two BNSF freight trains collided head on near Gunter, Texas. The southbound train was traveling about 37 mph, and the northbound train was traveling about 40 mph when the collision occurred. The trains were being operated under track warrant control rules on non-signaled single track. The collision resulted in the derailment of five locomotives and 28 cars. About 3,000 gallons of diesel fuel were released from the locomotives and resulted in a fire. The southbound train engineer was killed, and the southbound train conductor was airlifted to a hospital in Dallas with serious burns. The crewmembers on the northbound train were transported to a local hospital, where they
were admitted. Estimated property damages exceeded $2 million. The NTSB determined that the probable cause of the collision was the southbound train crew's failure to adhere to an after-arrival track warrant requiring them to stay at Dorchester until the northbound train arrived. Contributing to the accident was the BNSF's use of after-arrival track warrant authority in non-signaled territory, and the FRA's failure to prohibit the use of such authority.

On May 23, 2004, a UP westbound freight train collided into the rear of a UP eastbound freight train, as it was crossing from one main line track to another main line track in San Antonio, Texas. Two locomotives and eight cars of the westbound train derailed, a portion of which ended up in the San Antonio River. The rear car of the eastbound train derailed, but immediately re-railed. There were no serious injuries. The FRA found that the probable cause of the accident was the failure of the crew of the westbound train to stop at a signal before passing.

On June 28, 2004, at 5:03 a.m., a westbound UP freight train traveling on the same main line track as an eastbound BNSF freight train struck the midpoint of the 123-car BNSF train as the eastbound train was leaving the main line to enter a parallel siding. The accident occurred at the west end of the rail siding at Macdona, Texas, on the UP's San Antonio Service Unit. The collision derailed the 4 locomotive units and the first 19 cars of the UP train as well as 17 cars of the BNSF train. As a result of the derailment and pileup of railcars, the 16th car of the UP train, a pressure tank car loaded with liquefied chlorine, was punctured. Chlorine escaping from the punctured car immediately vaporized into a cloud of chlorine gas that engulfed the accident area to a radius of at least 700 feet before drifting away from the site. Three persons, including the conductor of the UP train and two local residents, died as a result of chlorine gas inhalation. The UP train engineer, 23 civilians, and 6 emergency responders were treated for respiratory distress or other injuries related to the collision and derailment. Damages to rolling stock, track, and signal equipment were estimated at $5.7 million, with environmental cleanup costs estimated at $150,000.

The National Transportation Safety Board determined that the probable cause of the Macdona collision was UP train crew fatigue that resulted in the failure of the engineer and conductor to appropriately respond to wayside signals governing the movement of their train. Contributing to the crewmembers' fatigue was their failure to obtain sufficient restorative rest prior to reporting for duty because of their ineffective use of off-duty time and UP train crew scheduling

practices, which inverted the crewmembers' work/rest periods. Contributing to the accident was the lack of a positive train control system in the accident location.

On November 10, 2004, at 9:10 a.m., a UP freight train collided with a track car mover and four refrigerated boxcars that were parked at Crystal Cold Storage track in San Antonio, Texas. The engineer lost radio communication with the conductor, who was controlling the train movement, and failed to stop the train in time to avoid the collision. An employee of a rental car company was killed as one of the parked cars was shoved over a pair of wheel stops and into the Crystal Cold Storage maintenance building. A Crystal Cold Storage employee was injured while he was unloading frozen food from one of the parked boxcars. Damages totaled $308,637. The NTSB determined that the probable cause of the accident was the failure of the engineer to stop the train as required by UP radio communication operating rules.

On September 15, 2005, at 12:07 a.m., a UP freight train traveling southbound at a speed of 36 mph entered a siding and collided head-on with a standing UP freight train near Shepherd, Texas. The collision derailed two locomotives and 13 cars (11 of which were carrying hazardous materials) of the southbound train and two locomotives and four cars of the standing train. The engineer of the standing train was killed and four other crewmembers were injured. The NTSB determined that the probable cause of the Shepherd collision was the failure of the previous crew for the standing train to return a main track switch to the normal position after they had secured the train on the siding and departed the area.

On October 17, 2006, a UP freight train derailed 17 cars near downtown San Antonio, Texas. The unoccupied houses were destroyed as a result of the derailment. The FRA found that the probable cause of the accident was the use of excessive dynamic brake forces. A contributing factor was the failure of the previous UP traincrew to provide written notification regarding the status of the dynamic brakes to the relieving engineer.

THE FRA'S RESPONSE

Following each of these accidents, the NTSB issued a number of recommendations to the FRA, the railroads, and others to improve safety. Few of those recommendations have been implemented.

For example, following the accident in Shepherd, Texas, and similar accidents in Graniteville, South Carolina, Heber, California, and Nickerson, Kansas – all of which involved improperly lined switches – the FRA issued Emergency Order No. 24, which required the railroads to modify their operating rules and take certain other actions necessary to ensure that railroad employees who dispatch trains in non-signaled territory or who operate hand-operated main track switches (switches) in non-signaled territory restore the switches to their proper (normal) position after use.

The Emergency Order was in follow-up to a Safety Advisory that the FRA had issued after the Graniteville accident, entitled "Position of Switches in Non-Signaled Territory," which "advised" all railroads to ensure that train crews who operate manual main track switches in non-signaled territory restore the switches to their normal position after use. The Emergency Order was

intended to accomplish what the Safety Advisory could not: implement safety practices that will abate the emergency until the FRA could complete a rulemaking.

On October 12, 2006, the FRA issued a Notice of Proposed Rulemaking (NPRM), which was intended to prevent accidents caused by human factors. The rulemaking has not yet been finalized, but the NPRM failed to address the safety recommendations that the NTSB issued to the FRA following all of these accidents. For example, the NPRM does not, as the NTSB has recommended:

- Require that, along main lines in non-signaled territory, railroads install an automatically activated device, independent of the switch banner, that will, visually or electronically, compellingly capture the attention of employees involved with switch operations and clearly convey the status of the switch both in daylight and in darkness.

- Require railroads, in non-signaled territory and in the absence of switch position indicator lights or other automated systems that provide train crews with advance notice of switch positions, to operate those trains at speeds that will allow them to be safely stopped in advance of misaligned switches.

- Require railroads to implement operating measures, such as positioning tank cars toward the rear of trains (when appropriate) and reducing speeds through populated areas, to minimize impact forces from accidents and reduce the vulnerability of tank cars transporting chlorine, anhydrous ammonia, and other liquefied gases designated as poisonous by inhalation.

- Determine the most effective methods of providing emergency escape breathing apparatus for all crewmembers on freight trains carrying hazardous materials that would pose an inhalation hazard in the event of unintentional release, and then require railroads to provide these breathing apparatus to their crewmembers along with appropriate training.

- Implement positive train control systems to prevent train collisions and overspeed accidents. The NTSB has repeatedly concluded that positive train control systems would greatly reduce the number of serious train accidents by providing safety redundant systems to protect against human performance failures. Consequently, positive train control has been on the NTSB's list of Most Wanted Safety Improvements for the last 17 years.

With respect to the FRA's actions relative to Union Pacific, following the June 28, 2004, accident in Macdona, Texas, the FRA initiated a series of on-site inspections at UP to determine the level of employee compliance with UP operating rules and FRA regulations in Houston and San Antonio, Texas. As part of those inspections, the FRA reviewed UP's compliance with the railroad's program of operational tests and inspections. The FRA concluded that although UP's written program was comprehensive and well structured, notable deficiencies with how the program was administered existed. The FRA also concluded that UP crew compliance with railroad operating rules was not satisfactory and that a sustained effort was necessary to ensure that UP's safety program was functioning as intended and that employees were responding appropriately.

Following the November 10, 2004, accident at the Crystal Cold Storage facility, in San Antonio, Texas, UP and the FRA entered into two Safety Compliance Agreements (SCA) containing

terms and conditions to improve UP's compliance with FRA safety regulations. One of the SCA's encompassed UP's San Antonio Service Unit, and the second SCA included both the Houston and Livonia Service Units.

Under the terms of the SCA, the FRA directed UP to re-instruct its testing managers on the entire contents and requirements of their safety programs. Additionally, the Service Units agreed to conduct a monthly analysis of its respective accident/incident data. During the term of the SCAs, the FRA conducted several team audits on all three Service Units. The San Antonio and Livonia Service Units were found to be in compliance with the terms of their respective SCAs. Accordingly, both the San Antonio and Livonia Service Units were released from the terms of their SCA.

However, the terms of the SCA for the Houston Service Unit was extended by 180 days due, in part, to the Shepherd, Texas collision, and the negative findings associated with the audits on the Houston Service Unit. On July 19, 2006, the Houston Service Unit SCA officially expired. Following an extensive audit in August 2006, UP agreed to conduct scheduled UP-FRA joint operational testing team audits at all major facilities in its Southern Region through 2007.

UNION PACIFIC AND SAN ANTONIO

According to UP, as a result of the SCA, several new initiatives are now in place, including increased employee training and testing, ride evaluations and event recorder (black box) download reviews. In addition, UP now employs a state-of-the-art train simulator for engineers and conductors to take advantage of advances in computer-based training and evaluation. Key learning from UP's intense reviews in San Antonio have led to several system-wide operating rules changes, including changes in in-cab communication rules to avoid distractions at critical times called the "cab red zone," or CRZ, a process similar to that used by airline pilots during take off and landing.

The San Antonio Service Unit also implemented a safety center to facilitate daily start of shift communications to all employees. In addition, labor and management, working with the FRA and Behavioral Sciences Technology, have implemented the employee-led, peer-to-peer, CAB (Changing At Risk Behavior) process to reduce and eliminate human factor incidents in train operations. UP has also increased the frequency of visual track inspections and the use of the geometry car on their mainline tracks in San Antonio.

UP claims that it has invested heavily in San Antonio's infrastructure to help provide a safe operating environment. In 2005, UP invested $54 million in track and infrastructure and another $8 million in 2006. UP states that it will invest an additional $17 million in 2007. Union Pacific has also supported job growth in area with a $26 million investment to serve a new Toyota facility as well as the construction of a new $100 million intermodal facility.

Expected Witnesses

Mr. Grady C. Cothen, Jr.
Deputy Associate Administrator for Safety, Standards, and Program Development
Federal Railroad Administration

Mr. Bob Chipkevich
Director of the Office of Railroad, Pipelines, and Hazardous Materials Investigations
National Transportation Safety Board

Mr. Lance Fritz
Vice President – Southern Region
Union Pacific Railroad

Mr. Phil Hardberger
Mayor of the City of San Antonio, Texas

Mr. Nelson Wolff
Bexar County Judge

Ms. Maria Berriozabal
Former San Antonio City Council Member

State Representative Mike Villarreal

District Chief Nim Kidd
Emergency Management
City of San Antonio Fire Department

Mr. Ralph Velasquez
Community Advocate Injured at the Macdona Accident

THE ROLE OF HUMAN FACTORS IN RAIL ACCIDENTS

Friday, March 16, 2007

HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS
San Antonio, TX.

The subcommittee met, pursuant to call, at 10:00 a.m., in City of San Antonio City Council Chamber, Municipal Plaza Building, 103 South Main Avenue, San Antonio, Texas, Corrine Brown, [chairwoman of the subcommittee] presiding.

Ms. BROWN. Will the subcommittee please come to order. Good morning. I'm Congresswoman Corrine Brown, and will the Subcommittee on Railroads, Pipelines, and Hazardous Materials Field Hearing on the Role of Human Factors in Rail Accidents, March 16, 2007, officially come to order.

I want to say good morning, and I want to welcome our distinguished panelists and guests in today's hearing on the Role of Human Factors in Rail Accidents. I want to thank Congressman Gonzalez for inviting us, and for hosting us in this great city. Thank you.

Congressman Gonzalez testified at one of a series of safety hearings that the subcommittee held this Congress. He made it clear that the people in San Antonio was extremely concerned about the large number of train accidents that have occurred in their community, and want to work with the Federal Railroad Administration and the National Transportation Board, and the railroads to provide solutions to the problems.

Our subcommittee has held several hearings on safety and fatigue in the rail industry, and is in the process of developing legislation that will address training, fatigue, and other human factors, which constantly rank as one of the top two causes of all rail accidents each year, and accounts for approximately 40 percent of all rail accidents annually.

Congress last passed legislation to re-authorize the FRA in 1994. That authorization expired in 1998. Since that time, the railroad industry have changed, economic growth, and an increase in international trade have led to record traffic levels. Unfortunately, that has put a lot of pressure on our rail system, and had a significant impact on work and public safety.

According to the FRA, there were 2,835 train accidents in 2006, which resulted in six fatalities, and 172 injuries. Twelve percent of those accidents, or 342 train accidents, occurred in Texas, the high-

est number of train accidents among all of the states. But I believe that working together with all the stakeholders, the federal government, the state, the railroad, the workers, and the local communities, we can improve safety and security in the rail industry.

Again, I want to thank the Congressman from this area, and the City of San Antonio for hosting this important hearing on rail safety. I'm looking forward to everyone's testimony today.

Before I yield to Mr. Gonazalez for an opening statement, I ask unanimous consent for Mr. Gonzalez, and any other Member of the House, who wish to participate in today's hearing to sit and ask questions of the witness. Without objection. So ordered. Mr. Gonzalez.

Mr. GONZALEZ. Thank you very much, Madam Chairwoman, and it's an honor to welcome you here to San Antonio. I know that I speak for all the elected officials and the citizens in San Antonio, that you found that this was something that was meritorious, that brings the subcommittee that you chair to our wonderful city, to address a problem that obviously has come to the very forefront in the past few years.

I would like to request permission at this time to submit my full written statement into the record.

Ms. BROWN. Without objection.

Mr. GONZALEZ. Thank you very much, and I really would like just to move on with some of the testimony. I know that our colleague and dear friend, Congressman Ciro Rodriguez, who also represents part of San Antonio, and shares to the same degree that I do, the concern regarding rail safety, not just in San Antonio, but throughout the United States, so I welcome you, and I join you in this endeavor in seeking answers and remedies to those problems that we have, that have resulted in these accidents, not, again, just in San Antonio, but with some frequency in San Antonio, but the rest of the nation. And I yield back.

Ms. BROWN. Thank you, and Congressman Rodriguez.

Mr. RODRIGUEZ. Chairwoman Brown, let me, first of all, thank you for coming to San Antonio, and I hope you have an opportunity to stay here a few days. I want to also thank you for, not only your leadership as Chairman of this committee, but I also want to thank you for your leadership, because I know that you are also on the Veterans Committee, and you played a very significant role there in terms of the struggles that we've had in terms of funding the VA. So I want to personally thank you, and the relationship that I had with you when we both sat together in that committee.

I, also, just want to indicate to you that I sit on the Appropriations Committee and the Subcommittee on Transportation. And we've had, also, some hearings on rail, and there's no doubt that there's a need for us to re-examine, and see how we can participate, and how we can help in the process of preventing the multitude of accidents. And I think you've outlined a good 2,600 throughout the country, and the fact that there's a disproportional number here in this state. So, once again, I do want to thank you.

And I, also, just want to indicate to you that my District runs for 700 miles through the border to El Paso. I have a meeting in approximately an hour and a half in Uvalde, so I'm going to be

leaving, but I do want you to spend your money here. Okay? Thank you.

[Laughter.]

Mr. RODRIGUEZ. Thank you very much.

Ms. BROWN. Thank you. Now, before we begin, several of the people in the audience have asked that they have an opportunity after the hearing to make testimonies or comments. And I am amenable after the witnesses that we have invited, if the staff would have them to sign-up, but we're going to keep with the rules of the House, and those rules are one minute. So you will get one minute, an opportunity to make your presentation, if you have some presentations or comments, and then you can follow-up with written comments.

Okay. Without objections.

Who is the staff person who's going to get those names? Okay. Thank you.

We are pleased to have a distinguished panel of witnesses this morning. Before I introduce them, I ask unanimous consent to allow 14 days for all members to revise and extend their remarks, and to permit the Subcommittee for additional statements and materials by members and witnesses.

Without objection. So ordered.

I want to welcome Mr. Cothen, who is the Deputy Associate Administrator for Safety, Standards, and Program Development for the Federal Railroad Administration. He has brought with him some experts from the FRA to help answer questions. Welcome.

Next, we have Mr. Chipkevich, who is the Director of Office of Railroads, Pipelines, and Hazardous Materials Investigations at the National Transportation Safety Board.

Let me remind the witnesses, they are under committee rules. They must limit their oral statements to five minutes, but the entire statement will appear in the record. I recognize Mr. Cothen.

TESTIMONY OF GRADY C. COTHEN, JR., DEPUTY ASSOCIATE ADMINISTRATOR FOR SAFETY, STANDARDS, AND PROGRAM DEVELOPMENT, FEDERAL RAIL ADMINISTRATION; AND BOB CHIPKEVICH, DIRECTOR OF THE OFFICE OF RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS INVESTIGATIONS, NATIONAL TRANSPORTATION SAFETY BOARD

Mr. COTHEN. Thank you, Madam Chairwoman, and Congressman Gonzales, also Congressman Rodriguez.

On behalf of Secretary Peters and Administrator Boardman, let me express the appreciation of the Department of Transportation for your invitation to participate in this Rail Subcommittee Field Hearing.

Our thanks, as well, for your role in the introduction by request to the Department's Rail Safety Re-authorization Bill, H.R. 1516.

With me today are Bonnie Murphy, our Regional Administrator for Region 5, headquartered in Fort Worth, and Robert Castiglione, our Deputy Regional Administrator, and, by the way, proud son of San Antonio. They can help me answer any questions that you may have this morning.

At the outset, let me note that despite the difficult experience that San Antonio, Bexar County, and nearby communities have had over the past several years, there is positive news that should bode well for the future, wherever we live. Specifically, based on preliminary numbers for 2006, last year's train accident rate for the nation was at an all-time low. The total of train accidents was also down from 2005, nationally, and as you have noted, for the State of Texas, but we can do better.

The theme of this hearing is Human Factors. As the Secretary's National Rail Safety Action Plan emphasizes, over the past few years, human factors have been responsible for more train accidents than any other major category. And human factors also play a predominant role in employee casualties, and on-the-job incidents. So what are we doing?

Very quickly, to summarize just the items that I can fit in. First, to ensure that rules are clear, and that everyone is accountable for compliance. FRA issued last fall a notice of proposed rule making on Railroad Operating Rules. This proposal would address three major areas of Operating Rules compliance, which are responsible together for one-half of all human factor train accidents, including handling of switches. It will also ensure that managers and supervisors are actively conducting, and that they're learning from their Programs of Operational Testing, that evaluate rules compliance on the ground, and in the cabs, where the work is done.

We're currently seeking resolution of comments to the Railroad Safety Advisory Committee, will issue a final rule later this year.

Second, we're maintaining a clear focus on training. This has always been an FRA emphasis, but just last week, we concluded a series of meetings with Labor and Management regarding the Railroad's training programs for remote control operators. The agreements we reached last week will result in a thorough review of the Railroad's programs, to ensure that standards for practice and proficiency are sufficient, and that they're applied in the field.

Third, we're working to build a positive safety culture in the railroad industry. Together with Labor and major railroads, FRA has launched the confidential Close Call Reporting Program, with an initial pilot in North Platt, Nebraska. And we're working with three additional railroads to get pilots in place.

DOT's Rail Safety Re-authorization Bill proposes to build on this concept with a broader risk reduction program that would seek to identify areas of hazards before accidents occur, and encourage railroads to address them rapidly.

Fourth, FRA's moving beyond its pioneering efforts in control of alcohol and drugs of abuse to a broader concern for overall fitness to perform the duties of safety critical jobs. The Railroad Safety Advisory Committee has established a Working Group on Medical Standards for Safety Critical Railroad Employees, and that group is off to a strong start. But to be rested, we must have the opportunity to rest. Our Rail Safety Re-authorization Bill asks for regulatory authority over hours of service. After 100 years of checking some of the worst abuses, the Hours of Service Act needs to give way to science-based fatigue management.

We have the tools we need to implement that authority, Madam Chairwoman, including a fatigue model newly validated with the

help of Railroads and Labor, but we need to ensure that knowledge is applied. This is not an issue exclusively for collective bargaining, because communities are threatened by the accidents that can occur.

Finally, we're promoting the use of technology to re-engineer job requirements, and provide a safety net when humans err. Positive Train Control is a reality on high-speed passenger lines in the United States, but the road to affordable PTC from general freight system has been a very long one.

In December of 2006, FRA approved the Product Safety Plan for the first freight railroad PTC system under a performance-regulation that we issued in March of 2005. The BNSF Electronic Train Management System is now approved for revenue service in its initial configuration, and the three other major freight railroads are working on their own versions.

Working with FRA, BNSF has also taken a leadership role developing the Switch Position Monitoring System for non-signal territory. Just this week, FRA placed into clearance a proposed rule to facilitate introduction of electronically controlled pneumatic brakes. ECP brakes will make the locomotive engineer's job much more reasonable by eliminating the risk of inadvertently depleting the train air line, which is used to command brake applications, and by giving the engineer a better tool for train handling. The nation will benefit by reducing fossil fuel use, and diesel emissions.

Let me close with a local focus, because in the end, Madam Chairwoman, that's where we all live, including FRA and participating state safety personnel, who endeavor to address these issues every working day.

Beginning with the fatality in Remote Control Service in late 2003, San Antonio, Bexar County, and surrounding communities experienced an usual number of severe events that brought us to this place and time. If there's any organizing principle that might be assigned to these events, particularly in 2004, it was that supervisors and workers were stressed by heavy workloads, and long hours. And the railroad could not adjust fast enough to change circumstances.

As Acting Associate Administrator for Safety, I personally responded to the Crystal Cold Storage Facility in November of 2004, where a fatality to a contractor in that private business had just occurred.

Bonnie Murphy and I then conducted a very short, intensive negotiation with the Union Pacific with an agreement to address oversight of Operating Rules Compliance on the San Antonio service unit. We used similar agreements to handle similar issues on two other services units in the region.

The lessons we learned in that process have flowed into the proposed rule that I've already described, so that we reduce the possibility of ever going down that road again.

A great deal more has happened in San Antonio over the past several years. UP added staff and facilities, a local fatigue study funded by FRA heightened awareness among people here in San Antonio. Presently, UP and its employees in the San Antonio service unit are engaged in an innovative peer-to-peer observation pro-

gram funded by FRA, and UP has already decided to extend it two other terminals. But we know more work needs to be done.

The most recent accident of concern in this area occurred in October of 2006, and resulted in damage to two local residences. Our investigation showed that it was caused by excessive dynamic braking, that resulted from the failure to set up the locomotives properly, in accordance with UP's special instructions, and failure to provide locomotive crews with information concerning the number of axles a dynamic breaking in effect, something we require by regulation.

We're processing enforcement actions, and the railroad has taken a number of steps to prevent a reoccurrence. In November, FRA inspectors and UP managers conducted the first of a series of joint operating testing audits in UP's southern region, and they started right here in San Antonio. That effort is going to continue at least through September.

Sometimes lost in the story is the number of times that railroads and their employees get it right. And the broad range of initiatives that we're undertaking together to drive down risk associated with rail transportation, we do believe that with continued effort, we'll see additional reduction in accidents, injuries, and we're confident that progress will be evident here and across the nation.

Thank you, Madam Chairwoman.

Mr. CHIPKEVICH. Good morning, Chairwoman Brown, and Members of Congress. Thank you for the opportunity to testify today on Human Factors in Rail Accidents.

Since 2001, the Safety Board has investigated 29 railroad accidents involving train collisions, and over-speed derailments. Most occurred after train crews failed to comply with train control signals, failed to follow Operating Rules in non-signaled or dark territories, or failed to comply with other specific Operating Rules, such as returning track switches to normal positions after completing their work.

Our accident investigations have identified human performance failures related to fatigue, medical conditions, such as sleep apnea, and the use of cell phones. We've repeatedly concluded that technological solutions, such as Positive Train Control systems, have great potential to reduce the number of serious train accidents by providing safety redundant systems to protect against human performance failures. The objective of Positive Train Control is to prevent trail collisions and over-speed accidents by requiring automatic control systems to override mistakes by human operators.

We are pleased that today several railroads are moving to develop Positive Train Control systems, and although we are encouraged with progress underway by some railroads, we note that Positive Train Control systems are needed across the entire country.

FRA certification requirements for locomotive engineers focus on specific vision and hearing acuity standards, but do not provide guidance regarding medical conditions that should be considered in the course of an examination. We've recommended that the FRA develop a standard medical examination form that includes questions regarding sleep problems, and require that the form be used to determine the medical fitness of locomotive engineers, and other employees in safety-sensitive positions.

In 2002, two trains collided head-on near Clarendon, Texas. The engineer of one train had used his cell phone for two personal calls the morning of the accident, one for 23 minutes, and the second call for 10 minutes. He was on the second call as he passed the location at which he should have stopped and waited for the arrival of another train. The Safety Board does not share the FRA's confidence that the railroad industry has taken sufficient steps to prevent the use of cell phones for personal matters, when crew members should be attending to the operation of the train, and has recommended that the FRA promulgate appropriate regulations.

Dark territory presents a unique problem for rail safety. In dark territory, there are no signals to warn trains as they approach each other, and the avoidance of collisions relies solely on dispatchers and train crews adhering to Operating Procedures.

The Board has recommended that the FRA prohibit the use of after-arrival track warrants for train movements in dark territory not equipped with Positive Train Control System.

In early 2005, a train encountered an improperly positioned switch in Graniteville, South Carolina. It went from the main line onto an industry track, where it struck a parked train head-on. The track was in dark territory, and nine people died from chlorine gas inhalation.

Later that year, a train entered a siding in Shepherd, Texas, and struck a parked train head-on, killing a crew member. Again, the track was in dark territory. And, again, the previous crew failed to return the main track switch to the normal position after they had secured their train on the siding.

Measures beyond additional Operating Rules, forms, or penalties are needed. The Safety Board has recommended that railroads install an automatically activated device that would compelling capture the attention of employees involved in switch operations, and clearly convey the status of the switch. In dark territory, and in the absence of switch position indicator lights or other automated systems, trains should be operated at speeds that will allow them to be safely stopped in advance of misaligned switches.

Finally, because of the time that it will take to design and construct improved tank cars, the Safety Board believes that the most expedient and effective means to reduce public risk from highly poisonous gases in train accidents is for railroads to implement operational measures that will minimize the vulnerability of tank cars transporting these products.

Madam Chairman, this completes my statement. I'll be happy to answer any questions.

Ms. BROWN. Thank you. I guess I want to go right to one of the questions pertaining to the cell phones. Why hasn't the FRA adopted federal regulations that prohibit a locomotive engineer from using a cell phone while at the control of a moving train?

Mr. COTHEN. Madam Chairwoman, we have discussed this issue in some depth at the Railroad Safety Advisory Committee, at the Full Committee, and with the Board. This is one of those things that I think we can all agree on, in principle. If we could get some of our friends out on the streets in Washington, D.C., and in San Antonio not to use their cell phones while they're driving, we'd all be a lot safer. And the same things goes for a locomotive cab.

One of the issues we have from a FRA standpoint is how do you enforce? And, as a practical matter, because train and engine crews are self-supervising, it's very difficult to enforce that kind of requirement from a federal standpoint, except after-the-fact. And by then, needless to say, it's too late.

However, we're not through in terms of working this issue with the Board. Our Railroad Safety Advisory Committee, Railroad Operating Rules Working Group, when it gets through with the rule that I talked to you about, is going on to Board recommendations on after-arrival orders, and cell phones. We're going to talk about some other issues that we've got live with that group, as well. And we commit to the committee that we're going to look at it thoroughly, and do what's required.

Ms. BROWN.Would you like to respond to that?

Mr. CHIPKEVICH. Thank you. Nothing specific, other than we do believe that there are means that can be found to enforce that requirement. And, certainly, as we've seen in that particular accident, it is a distraction to crews. It may inhibit one crew member from talking to another crew member, and not wanting to bring something up because they're on the phone, and interrupting, and we think it's an important issue.

Ms. BROWN. My understanding is that mic in the center is also working at this time, so you can use the mic at the podium, or the hand mic. Okay.

The FRA has told the NTSB that developing guidelines for local skill development, and that contribute to good situation awareness, is worthy of consideration. But says that it did not currently have funds available, and it will try to identify resources to undertake this work. Have you done that, and why don't you ask for the funding in your re-authorization proposal?

Mr. COTHEN. Madam Chairwoman, that comes out of Research and Development budget. My understanding, that the funds are currently obligated. We do believe it's an important task. FRA has a simulator in Cambridge at the Volpe National Transportation System Center, provides a platform for doing this kind of program development, and we're going forward.

Ms. BROWN. Would you stay there. Just, in reviewing the 2006 safety figures, it seemed that the accidents caused by track defect supplants accidents caused by human factors. Why did this occur, and what is the FRA doing to prevent accidents caused by track defects?

Mr. COTHEN. It's absolutely correct. In 2006, we actually saw a reversal, as a result of the numbers going down in the Human Factors category, and the track category is the predominant category, again.

The Federal Railroad Administration has ordered a second, and a third track geometry vehicle. We've got delivery of that second vehicle, and the third is on its way, so that we can do track geometry evaluation across the core of the National Rail System on a more current basis. And, thereby, quality control the efforts of the railroads, themselves. We're also, as always, working energetically on enforcement of the Track Safety Standards.

This year, the Congress gave us, and we thank you, nine new positions for Rail Integrity Specialists under the President's budget

request, and we're working now to fill those positions. And what we'll do there is to build a more effective program to deal with broken rail derailments. That's the category of main line track-caused accidents that's going to be our biggest issue in the coming years. So we know we've got to get more traction there, and thank you for giving us the resources to do it.

Ms. BROWN. Okay. Mr. Gonzalez.

Mr. GONZALEZ. Thank you very much, Madam Chair. My first question would be to, is it Cothen? How do you pronounce the last name?

Mr. COTHEN. It's Cothen, just a short O.

Mr. GONZALEZ. Cothen. Mr. Cothen, of course, I was introduced to the whole regulatory scheme on railroads as a result of the accidents that have transpired in the past few years.

One thing that I want to point out, is we do have a relatively new administrator. The individual we worked with in the past, when we had the more serious accidents, as opposed to the administrator we have today, and that is Mr. Boardman. Is that correct?

Mr. COTHEN. Yes, sir.

Mr. GONZALEZ. And how long has Mr. Boardman been the administrator of the Federal Railroad Administration?

Mr. COTHEN. He joined us in the summer of 2005.

Mr. GONZALEZ. And I do want to say, and acknowledge from the outset, that he has been much more responsive, timely, and substantively, also, to some of our inquiries and requests.

I've reviewed some materials that have been provided by the committee for background in my previous testimony in Washington, and it's something that I always sensed was occurring when it came to the FRA in my previous experiences. And I'm not indicating that Mr. Boardman shares some of that particular history, but what I believe has been, basically, a culture within the FRA and the relationship with the railroads that I think did impact its ability to regulate in a manner that promoted safety. And this is what I'm going to allude to at this time. And I'm going to read from the information that was provided me some time ago.

"Central to the success of the Federal Rail Safety Program is the ability to understand the nature of rail-related accidents, and to analyze trends in railroad safety. To do this, the FRA relies heavily on information that is reported by the railroads following accidents and incidents."

I always felt that there was an over-dependency as far as the fact-finding duties performed by FRA, based on information provided by the railroads. That's been a concern, and I will ask you a question on that in a minute.

Further, railroad accident reports, "The FRA does not routinely review locomotive event recorder data, police reports, and other sources of information to determine the causes of the collisions, or the need for further investigation."

So my question goes to, do we still have that reliance base when you investigate, or decide to investigate accidents, based almost totally on information that is provided you by the railroads?

Mr. COTHEN. I don't think so, Congressman. We get a lot of help from our friends. Mr. Chipkevich and his colleagues at the National

Transportation Safety Board provide an objective perspective on major accidents, as they occur.

People on our staff, like the colleagues that I've introduced to you today, bring to us a railroad background. Try to sell them a line of goods, and you're going to find yourself coming up short real quick, because they know how things operate out on the railroad.

FRA does its own accident investigations. We do over 100 assigned investigations a year for major events, and the regions, themselves, elect to do additional investigations, at greater or lesser depth, as required by the circumstances.

And, finally, we've got rail labor representatives in the hall today, and they're not at all reluctant to pick up the phone and call us. They have my cell phone number, Joe Strang, who is our Associate Administrator, cell phone number. And if something is transpiring out on the property that's seriously amiss, we find out about it pretty quick.

Now, having said that, we're about 500 people in the field, about 400 inspectors with territories, and this is a national rail system that employs 235,000 people, operates over about 150,000 route miles. And we've got over 200,000 grade crossings, and it generates an awful lot of work. So we try to stay on top of it, and I think we do.

You asked the question about grade crossing collisions, and there's been a lot of public interest in that. And we work carefully with our office of Inspector General. They have actually been doing audits of our grade crossing program now continuously, in terms of having an open audit, I think it's correct to say for over four years. The reports that they produce are worth reading. They're now finalizing a report, again, on accident reporting in this area. And what we've been able, I think, to demonstrate to them as a result of audits we have done of the railroad's own accident reporting systems; we go on the property, and we check the police records, and we check the Op Center records, and we compare that with what we got in, and so forth, is that, substantially, we're getting the reports.

Now having said that, having said that, it is always the case that any database is going to have imperfections in it. And when we sit down with the Railroad Safety Advisory Committee, for instance, with a batch of train accidents, go over them and say what does this mean in terms of what we should do for rule making, you're going to have somebody from the same railroad that did the report saying that's not right. There's a detail wrong here, and we need to fix that, because it's a massive effort, gathering up that kind of data. So I don't want to mislead you on either side. I don't want to tell you we know everything that's happening everywhere, all the time, because that's physically impossible. But I think we have, overall, a good handle on what's transpiring in the railroad industry.

Mr. GONZALEZ. And there's going to be another Inspector General report coming out regarding investigative practices by the FRA.

Mr. COTHEN. Yes, there is. We've been talking to them about recommendations, and the last we saw of their draft recommendations, they look pretty good.

Mr. GONZALEZ. And the reason, again - and this information, again, is based on previous reports by the IG. "The Inspector General also found that the FRA investigated few accidents. It investigates two-tenths of 1 percent of all accidents and incidents involving railroads, and recommended few findings of violations for critical safety defects identified through those inspections." So I'm going—the jury is out on this new report, and I'll wait to read that, with the assistance of the Chairwoman here.

One last thing is just an observation. If you've identified cell phone use as the culprit in some of these accidents, and you're saying enforcement would be difficult, have you already—it wasn't clear to me, have you already established a rule, recommended a rule, promulgated a rule that simply says no cell phone use, period? I mean, we have laws in different states and cities that prohibit the use of cell phones while you're driving. I mean, it's an absolute prohibition. How it's enforced is one thing, but I assure you that it definitely has some affect on the use of cell phones by drivers of automobiles.

Mr. COTHEN. And I understand what you're saying. What we've done is we've ascertained that the railroads, themselves, have established appropriate limitations on use of cell phones. And, you know, railroad employees are very often issued company cell phones, because railroad radio channels are so congested. You need to have multiple means of communication, in order to talk to the dispatcher, the trouble desk, whatever the issue may be. So the cell phones are going to be in the cab, and nobody is going to be inspecting people's grip to see if the personal cell phone is in there. But I understand exactly what you're saying about the notion of the moral as suasion attached to an official prohibition. And that's precisely what we've got to look at, and make a decision on.

Mr. GONZALEZ. You know, my suggestion is you simply get tied up, and there's no tolerance, and no understanding or accommodation. I think it just has to be an absolute. I think you're going to see some results. And, again, I just want the FRA to be more aggressive in its recommendations and rule making. But I do thank you for your participation here, and I look forward to working with you in the future. And I really appreciate your indulgence. Obviously, we've had these questions going for some time here in this area, and I would direct the questions to the second witness, and that is, is it Chipkevich?

Mr. CHIPKEVICH. Yes, sir.

Mr. GONZALEZ. Pretty close. Right?

Mr. CHIPKEVICH. Yes, sir. Thank you.

Mr. GONZALEZ. For the benefit of the audience, your relationship to the FRA, National Transportation Safety Board. We read about you all the time when there are accidents regarding airliners, and such, but what is your relationship? What service do you provide in a couple of sentences, so everybody understands.

Mr. CHIPKEVICH. NTSB is an independent agency, not associated with the FRA or the Department of Transportation, at all. And we report directly to the U.S. Congress, and do independent accident investigations. We don't regulate the industry, so we look at what are factors that caused an accident, and what are factors that need to—or solutions that need to be made to prevent future accidents.

Mr. GONZALEZ. Regarding recommendations, and I've always been very impressed by your staff, by the way, when we've had our inquiries and our discussions. There are many people in San Antonio, to be frank with you, were pretty disappointed with the findings regarding the Macdona accident, in which we had some residents die as a result of the chlorine spill and cloud, as well as the conductor on that train, because you found that it was human error, and such. And many others really thought it was something to do with infrastructure, signals, and so on. Nevertheless, we live with that, and that's what this hearing about. Obviously, we've traced many of the causes of the accidents to fatigue and human factors.

You have pointed out Positive Train Control. That's something that you all have been advocating for some time. In your opinion, based on what you know, and the recommendations that you had made in the past to the Federal Railroad Administration, have your recommendations been adopted?

Mr. CHIPKEVICH. With regard to Positive Train Control, that's been on the NTSB's Most Wanted list of safety improvements for 17 years, and so it has been many years before there was any significant progress in this area. We're finally seeing progress in this area, but not by all the railroads.

Second, with regard to the acceptance of safety recommendations; overall, the acceptance rate across the nation, across all modes, is about 82 percent for the modal administrations. The FRA, overall, has been about 76 percent in the past, but in the recent last 10 years, is also at about 82 percent acceptance rate, so it is comparable in the last 10-year period to the other modal administrations.

Mr. GONZALEZ. We're talking about technology that will assist us addressing the problems with human error. It will override human error. And a lot of the technology that is utilized today in the cars that we all drive home today, is something that is not in the railroad industry.

Mr. CHIPKEVICH. Correct. We believe—we've got many accidents, as I noted today, 29 accidents that we looked at just since 2001, where we investigated collisions and over-speed accidents, where we believe that Positive Train Control would have done just what you said. It would have been a safety redundant system to stop the train prior to the accident.

Mr. GONZALEZ. I think both of the witnesses—one point of clarification, because my staff wanted to make sure. And I fully understand the cell phone use is essential for communication relating to work conditions, and instructions, and such. We're talking about cell phone use that's entirely different, that you alluded to by an engineer or conductor. That was personal use, and it's obvious, again, how that plays into the accidents.

But with that, Madam Chair, thank you very much. I yield back.

Ms. BROWN. Thank you. Would you explain for all of us what do you mean by "Positive Train Control?" Because I have this car, and we jokingly say that I got my driver's license from Sears a long time ago. But if I back up into a wall, or into another car, it starts making a noise, and so that's, I guess, Positive Control. Is this—

can you kind of explain to us, as far as the industry, what does that mean?

Mr. CHIPKEVICH. Yes, ma'am.

Ms. BROWN. Because you mentioned that this has been on your top list for the past 17 years.

Mr. CHIPKEVICH. That's correct. Positive Train Control System is a system that, basically, a computer-integrated system with the train. As the train is proceeding down the track, there are signals which the engineer needs to comply with. And there'll be an advance signal, or a stop signal, which will tell him how to operate the train. If the engineer fails to comply with the signal, for example, to slow a train from 50 miles an hour, to 30 miles an hour, be prepared to stop.

The computer system will identify the failure to act and slow the train to the appropriate speed; and, therefore, automatically apply the brakes. And it will also sense ahead for a red or a stop signal, how far the distance is, compute the stopping distance, and then actually apply the brakes, if the crew has not slowed the train to a specific speed.

Additionally, just for operating, if a crew member is operating above a specific speed, and exceeds a certain threshold, then the train will apply the brakes, and bring that train back down to the appropriate speed.

Finally, I've been on a train being tested with a switch being left in the open position in dark territory, where that's incorporated into the system. And if a train approaches that, the brakes will automatically apply again and stop the train.

Ms. BROWN. I guess my question, or follow-up to that is that you indicated that some trains was adhering to this, and some was not. Can we get a list of the trains that are using this technology, and those that need to be dragged into the 21st century? Yes, sir? We can get that. Yes.

Mr. Cothen, why hasn't the FRA adopted federal regulations that prohibit a local engineer—well, we just talked about the cell phones. Okay. I think we've answered that one. What was his other question?

You mentioned drugs and alcohol regulations. Are all railroad workers subject to drug and alcohol regulations? If not, why, and why are they not covered?

Mr. COTHEN. Madam Chairwoman, we focused our attention on safety critical employees, pretty much as defined by statute under the Hours of Service Act, so these are folks who are operating trains, issuing authorities from a dispatching center, working on signal systems. And we found, over time, that that seems to be a good area of emphasis. However, we have also collected specimens from deceased employees who were involved in other events, and we have seen prevalence of drug use and other crafts.

Ms. BROWN. Did you want to answer that question I asked about the tracks in more extensive, the Positive Train? You said you're going to get us a list.

Mr. COTHEN. Madam Chairwoman, we can certainly do that. And I think Mr. Chipkevich did a very good job of explaining. The railroads generally describe it as being an electronic system that consists of a locomotive segment, a wayside segment, and an office seg-

ment. And they're all linked together, and when it works right, and it takes a good deal of effort to make it work right, the trains run on time, and they run safely. And a mistake that the engineer makes, or that the conductor makes, does not result in an unfortunate mishap. So it's a very powerful technology. It can protect roadway workers within their authorities. It can keep trains from going over speed, and the Burlington Northern Santa Fe has got a production version of it for their Configuration One territories, which are territories that are dark single track, or dark traffic control. And I just got another email this week on Configuration Two, so I think we're seeing very substantial movement.

Ms. BROWN. In reviewing the material for this hearing, I guess I was a little distressed about the number of accidents that was caused by defective tracks. What are we doing as an industry to correct that, because many of the accidents, many of the loss of life, seem like could have been prevented if we had put in the technology that we're talking about, or if the tracks was inspected, or just minor things that could be very disruptive to a community, or to the safety of the engineers, or the people that's working for us.

Mr. COTHEN. Madam Chairwoman, a great deal is being done. Frequent inspections are required, visual inspections, by the Federal Railroad Administration twice a week on most tonnage territories. We also require use of internal rail flaw detection technology, and railroads actually exceed our requirements on a regular basis in terms of checking the inside of the rail, using inductive or ultrasonic techniques. This is not destructive testing. And their car or rolling equipment mounted devices that check as they go along the track.

We come back around with our automated track inspection vehicles, and we check for property track geometry. Our inspectors go out on the ground with railroad personnel, and we check. And I would say that, in general, we've got a big challenge here.

The challenge is very heavy tonnage. And once you get something right, here comes another train, and it's pounding, and there are issues. And the next thing you know, you've got a problem, so it's a constant challenge. The railroads are trying to manage it, and we're trying to watch them as closely as we can.

One thing I think you know we need to get to an extent that we haven't over the past few years, again, is rail integrity, and that's our next area of focus at FRA.

Ms. BROWN. Cars lining up, there is some discussion about hazardous material. Do you want to respond to that?

Mr. COTHEN. The status of hazardous materials tank car work, Madam Chairwoman?

Ms. BROWN. Yes.

Mr. COTHEN. We have a very active team at the Volpe National Transportation System Center that is evaluating derailment forces, under what conditions will a car breach? They're developing a model for a new approach to tank car safety. We have a cooperative relationship with Union Tank Car Dow Chemical, and Union Pacific Railroad to put together a package of proposals, engineering work and proposals, and our objective is to get that out this year.

Technically speaking, and I've worked on tank car issues now since the 1970s, it is a very challenging area, because the potential

forces in these accidents are very high, but we're aggressively looking at it. We have also put out for comment a suggestion which plays off of some of the suggestions that the National Transportation Safety Board has made in its recommendations out of Graniteville, that maybe for a while for these most hazardous chemicals, and that would be chlorine and hydrous ammonia, and other toxic inhalation hazard materials, in dark territory maybe we need to train staff. And we have that proposal out in December for comment in the informal public comment process that we're doing. Our third meeting will be coming up here in the next couple of weeks.

Ms. BROWN. Okay. Mr. Chipkevich, would you answer those same questions, please? Particularly, about the defection, as far as the tracks is concerned.

Mr. CHIPKEVICH. We found in accidents that it's important for the FRA inspectors to, when they're doing track inspections, to really compare the deficiencies that are found to the railroad's own track maintenance program. Under continuous loaded rail, they have a means of both installing the track, and how they're supposed to maintain it.

We made recommendations in the past, and FRA has been responsive on requirements that they are going to have on their track inspectors to have copies of the programs with them while they're doing the inspections. And then we found that a Mississippi accident where there was a major Amtrak derailment, to make sure that there's follow-up after the inspections to make sure that the repairs are made to tracks.

We've also seen the need for improved ultrasound inspection of rail, looking at the interior of the rail following an accident. At Nodaway, Iowa, where there was an Amtrak train that had derailed, we found that the railroad had done ultrasound inspections, found a defect in the rail, cut out that piece of rail, put in a replaced piece of rail, and that replaced piece of rail had a defect in it, and failed under the load of the train. And so we've made recommendations that the replacement rail be ultrasound inspected before installed into the track, so there is some area that needs to be improved.

Ms. BROWN. Mr. Gonzalez.

Mr. GONZALEZ. Thank you very much, Madam Chair. Just real quick question, because I know you've been up here a long time.

In reviewing your summary of your accident report and investigation of the June 28th, 2004 Macdona accident, in which we had fatalities. We had at least 50 people hospitalized, some very seriously. Conclusion 13 reads: "The Macdona, Texas accident is another in a long series of railroad accidents that could have been prevented had there been a Positive Train Control System in place at the accident location." And you've touched on that. As a matter of fact, you described how it would have slowed the train down, and so on, and then maybe it wouldn't have clipped that other train that led to that horrible accident.

You may these findings and conclusions, but you also make recommendations, do you not?

Mr. CHIPKEVICH. Yes, sir.

Mr. GONZALEZ. And you make recommendations to all parties. That's going to be FRA, the Railroad Administration, as well as to the railroads, and so on. You made recommendations in this particular accident, did you not?

Mr. CHIPKEVICH. Yes, sir.

Mr. GONZALEZ. And of those, have they been complied or adopted? Is there anything you can—whether they're adopted or not—first of all, have they been adopted, and if not, to what extent can you do anything about that?

Mr. CHIPKEVICH. Yes, sir. The NTSB cannot require that its recommendations be adopted. And when they are not, and there's not appropriate action, our means is to be able to report to the Congress on the progress of those recommendations, in particular, when they're made to modal administrations.

With regard to the Macdona accident, that is correct. When the engineer missed the signal and did not slow the train, a Positive Train Control would have slowed the train, and would have stopped the train before it reached its stop signal.

Mr. GONZALEZ. Have your recommendations been adopted?

Mr. CHIPKEVICH. Those have not been adopted, as of yet.

Mr. GONZALEZ. Thank you very much. I yield back, Madam Chair.

Ms. BROWN. Yes. I have a question. How many recommendations did you come up with?

Mr. CHIPKEVICH. We can provide you a list, for the record, of all the rail recommendations that have been made. There are currently about 45 recommendations open to the Federal Railroad Administration.

Ms. BROWN. And as of the time of this hearing, none has been adopted?

Mr. CHIPKEVICH. No, ma'am. Over a period of time, many have been adopted. And the acceptance rate, over the last 10 years where they have been completed and adopted, has been about 82 percent.

Ms. BROWN. Okay. Well, thank you very much for your testimony, both of you. And we will get you the additional questions in writing.

Mr. CHIPKEVICH. Thank you.

Ms. BROWN. We're going to break up the panel into Panel Two and Panel Three. And Judge Wolf and Mayor Hardberger will be on the second panel.

Mr. Mayor, I want to tell you, I like your digs here. So you could come up. I know this is an unusual position for you to—

Mr. HARDBERGER. Well, I'm very happy to have you in that spot, and we're very glad to have you here.

Ms. BROWN. Thank you.

Mr. HARDBERGER. Would you like me to go ahead and give a few remarks here?

Ms. BROWN. Yes, sir. I'm looking for the Judge.

Mr. HARDBERGER. The Judge is right here, Judge Nelson Wolff.

Ms. BROWN. Yes, Judge. Would you mind coming up?

TESTIMONY OF PHIL HARDBERGER, MAYOR OF THE CITY OF SAN ANTONIO, TEXAS; NELSON WOLFF, BEXAR COUNTY JUDGE

Mr. HARDBERGER. I'll take the lead, but I will tell you that Judge Wolff and myself have been working on this together. We've authored several letters, and made some recommendations together, so in many ways on this issue, we speak with one voice.

First, let me thank you, though, for being here. And, Congressman Gonzalez, thank you so much. It's an appropriate place for you to have these hearings, because we've had some bad experiences, and we could have had a lot worse experiences. And it doesn't take a whole of imagination to get from what might have happened, to many hundreds of deaths. So it's a very timely subject.

San Antonio's history is actually linked with our railroads. They helped make San Antonio what it was, and the reason that we grew as a city in the 17th, 18th century, early 19th century. Railroads were rivers of commerce that allowed San Antonio to flourish.

Our city grew along these tracks, naturally attracted the house and the industry along the tracks. The irony, though, is today, those houses and those businesses are very much threatened and present a problem for our society, as well as the railroads.

I would say that railroads today represent our greatest threat in terms of a catastrophic event. We have an emergency responder team, and, of course, we are ready and trained for things like hurricanes, or a terrorist attack. We plan for those, but the more likely thing that will happen is a major derailment of a train going through the middle of our city carrying hazardous material. In my own opinion, that is several times more likely to happen than a terrorist attack in San Antonio.

Depending on what the train that's derailed is carrying, chlorine, natural gas, or other chemicals, you really would not have—it's not an exaggeration to say hundreds of people might die, and thousands might be injured. You actually have a person here in the audience, Ralph Velasquez, whose health is permanently injured because of the lasting damage done to his lungs, which has just about stopped his quality of life, and certainly will shorten his life. So these are very real things.

October of last year, I got a call around 11 a.m. in a very populated part of our area, it's called Five Points, houses all up and down those tracks. And just a few feet away, not much further than I am from you, Madam Chairwoman, 17 cars had derailed. Some of them had gone right straight through the houses. I'd never seen a derailment up close. It's rather horrific. I mean, the utility poles are snapped off like matches. The pavement itself nearby is ripped up like you'd had a bulldozer got all of these twisted tracks, and the tie sticking straight up in the air, instead of being horizontal. I mean, you really can see the power that is there. The house is no protection whatsoever for a box car. I mean, it'll go right straight through it, and never even slow down.

Actually, nobody got hurt. They weren't carrying any hazardous materials. It was actual paper products, and just so happened, the

people weren't in the houses at 11 a.m. They were out and about. But boy, that is a close one, really close, especially when you put that with our past experience with Macdona, where four people died, and many others were injured. That's the one Mr. Velasquez was involved in. And then, of course, we've had another one where it went through a warehouse and killed somebody else. These are all fairly recent happenings. We're not having to reach real far back in our memory for this.

Judge Wolff and I went immediately to the scene of the one that happened in October. In fact, I think we were there within about 30 minutes. It was still truly dust, and smoke, and everything else was still in the air.

The cause of the derailment, Union Pacific later told us, was excessive braking force. And I guess in common language, they put the brakes on too hard. It ma have been the trains weren't strung together as they should have. Certainly, though, it was human error, and that's why you're here. But I will tell you, what if they had been carrying bad chemicals, and somebody had hit the brakes too hard?

I don't think it's enough that we can hope our luck holds out. The odds would be against it, for one thing. And the safety of our city and the seriousness of this issue require a lot of attention from our national leaders, Union Pacific, itself, National Transportation Safety Board, and certainly, the local leaders here.

The truth is, most accidents, whether you're talking about airplanes, cars, or trains, are probably, strictly speaking, a proximate cause, if not the proximate cause, is to do with human factors. It's a condition of life, and we have to keep working on those. But the truth is, you will continue to have accidents caused by humans, for one reason or another. You just try to, as you were talking about, keep them off the phone and other things, go slow, keep the tracks in good condition.

A derailment itself may be, of course, caused by the condition of the roadbed, and that, too, is a human factor, too. Deals with something hard, but somebody made a decision not to fix the roadbed. Trains traveling too fast, same thing, are human factors. And, actually, even allowing trains to carry highly hazardous material through crowded areas, I submit, is a human error. That's an error in judgment.

We, of course, as official policymakers and officials, we can, ourselves, be guilty of a human factor and human error, if we don't regulate the trains and the cargo properly. And we don't take heed of the now, at least three strong warnings we've had in a fairly short period of time. So I'm really glad you're here, because it gives us a chance to be able to talk to somebody that's important.

And I will say, when we call Union Pacific, they have been absolutely courteous. They're very quick to get back to you. They apologize sincerely, but that's really not enough. That won't quite get it, although, I appreciate the courtesy and the quick phone calls.

I have a few recommendations, for what they are worth. We set some of these out, Judge Wolff and myself, in a joint letter that we sent the National Transportation Safety Board. We are seeking support from our current Texas legislature at this time, and at least one of our representatives, Mike Villarreal, is in the audience,

to relocate the rail traffic out of highly populated areas. We're asking the State of Texas to help us on that.

We would also ask some federal help on that, as well. It's expensive. It's going to cost about $2 billion, and it will probably take about 10 years. Those are obstacles, big obstacles, but the quicker we work on the big obstacles, the more they become medium-size obstacles, and then small obstacles. And the size of this problem must not deter us from taking the necessary action. And it is necessary. This is not you could do it, it's we must do it.

We would also like the City of San Antonio to ask this committee to consider granting the local government authorities, the city and the county, a multi-jurisdictional rail district that would allow us to know and share manifests, to identify hazardous cargo, and do what we can to seek alternative routes from hazardous cargo going through heavily populated area until we get the tracks moved.

Of course, that is the long-term goal, but the short-term goal is we'd like to know what's coming through here, and when it's coming through. And we don't know that. I couldn't tell you whether hazardous material came through here last night, or this is just about the time that the last accident happened three months ago. For all I know, there's more coming through right now as we're talking. And we would like to know about that.

So we ask for your support in these requests, Chairwoman and Congressman Gonzalez, to do so and help us with this. I'm afraid it always does get down somewhat to money, as well as rule making. You will make our city a safer place, and I know that we all want to do that. I know that's why Congressman Gonazalez was especially anxious to bring it here, which I appreciate.

I know that you all are committed to this task, and I appreciate your commitment, and I ask you to do your best to translate some of that commitment in money. Thank you.

Ms. BROWN. Thank you. Are you going to be with us for a minute?

Mr. HARDBERGER. Yes, I will. And we'll hear what County Judge Wolff has to say.

Mr. WOLFF. Well, thank you, Chairwoman Brown, for coming here to San Antonio today, and the great support that Congressman Gonzalez has given to this tremendous effort.

On that June 28th, 2004 accident that happened in Macdona where people were killed, and some 50 people were injured from 60 tons of chlorine gas that escaped, I went to that accident site. And I don't think you could see a more horrifying element, when you see the fumes still coming out. The bulldozer people had to stop operations because it was such a dangerous situation. But they did react, and they did clean up.

Very shortly after that, on November the 10th, 2004, the Crystal Cold Storage was crushed. An employee of a rental company was inside doing business and was killed. I went to that site, also.

The National Transportation Board did investigate these and found human failures with that. During that period of time, I learned that freight trains were being parked in sidings with locomotives left running and unsecured, leaving them ready to accessibility, anybody who wanted to board and set the train in motion. I heard from employees who were left waiting hours for transpor-

tation back to their terminals following expiration of available hours of service. And employees also reported they were being called back to work on such a frequent basis, they could not get the proper rest.

We went to Washington. We met with the Federal Rail Administration, we met with the National Transportation Board, we met with Congressmen, and we talked about exactly what they're talking about with you today, some three years later.

We talked about the need, and has been recommended for some 17 years, of Positive Train Control. Nothing has been done in the last three years. We talked about hours of service, where an employee can work up to 432 hours a month, four times more than an airline pilot, twice as much as a person working in the shipping industry, and twice as much as a truck driver. Again, nothing has been done.

We felt, after that trip, there was too cozy a relationship between the Federal Rail Administration and the railroad companies. I must say, since then I think that they have improved greatly on both sides.

After the accidents, Union Pacific changed their local management people here. They hired more employees. They beefed up their training and safety operations, and the Federal Rail Administration assisted by sending more teams of inspectors to San Antonio. But on two of the biggest issues, they continue to talk, and they continue to do nothing, and we hope that this hearing will give the emphasis for them to move forward on the Positive Control, and limit the number of hours that a person can work. And, also, handle this limbo time when crews are waiting for transportation to their final release point, with neither time, nor duty for time off during that period of time.

As Mayor Hardberger stated, a real major issue facing the state, the federal government, and local entities is to get the freight out of the major urban areas of San Antonio. Seventy percent of the freight that comes in San Antonio is pass-through freight, not destination. Freight is expected to double in the next 20 years, with twice as many trains on the existing tracks that we have today. It doesn't take much to imagine the much greater hazard that we're going to face in the future, so we hope you will be a partner, along with the state. They have a fund that they're beginning to put in place, and hopefully will pass this session, some $200 million to begin a fund to relocate rail, but we will need federal funds in that, also.

Locally, we're getting close to finishing a rerouting program that would pull some of the traffic around the southeastern part of San Antonio, rather than going through. Union Pacific has done another good. They have created a multi-modal yard with a building outside of the urban area, which will reduce the number of trucks and trains coming into the inner city on the west side, so we have made headway. We think there's a heck of a lot more to do, and we ask your assistance in helping us make that come about.

Ms. BROWN. Thank you so much, both of you. Your testimony is very targeted, and just very crucial. And I want to thank you.

First of all, let me just ask for copies of the letters that you sent to Washington, and to NTSB, so we can make it an official part of

the record. And second, the subcommittee have had several hearings on fatigue. And as we look toward re-authorization of the Federal Rail Safety Program, Judge, what do you think we should do to prevent fatigue, and what specifically should we be doing to address limbo time?

Mr. WOLFF. Well, first of all, on the fatigue issue, I think a rule very much at least in line with the number of hours per month that someone can work. Perhaps the number dealing with shipboard personnel, and truck drivers, might be the proper way to look at it. That would be half of what they're allowed to work today.

And I know, I just heard the steps taken forward on Positive Train Control. I think the faster that you can implement that, and move that forward, would be a tremendous help. After all, it's only been recommended for 17 years. Hopefully, this Congress with the change that's come about, which I might add I'm delighted about that change, and I hope that he will be aggressive in pushing forward on this issue.

With respect to the limbo time, while they're waiting for transportation from their release points, somehow there has to be a better method, some planning of where they're released from, to begin with. And if they're going to have to be released in the middle of the countryside somewhere, then they ought, at least, be able to get credit for time still on duty. They ought not to be released there, to begin with. There needs to be some flexibility to get them in closer to the metropolitan area, and closer to where they're going to be. But I don't know that a rule can be promulgated in that limbo time, other than compensation. Ithink that the railroads have to work a little better in terms of planning of where this crew will be released.

Ms. BROWN. I have a real follow-up question for you. The railroad, including Union Pacific, have proposed limiting their liability in train accidents involving hazardous material. They have proposed a cap in damages at $200 million. What do you think of this proposal?

Mr. WOLFF. I hadn't heard of that one. Doesn't sound good. If it's their fault, they ought to pay for it.

Ms. BROWN. All right. All right.

Mr. HARDBERGER. You know, you pay for the damage that you do. Maybe $200 million is enough, maybe it isn't. Depends on how many people are injured and killed, and how much property is destroyed. I don't think there should be any caps. The caps are what the damage is, and needs to be—you need to cut the cloth to fit the damages, not some arbitrary figure.

Ms. BROWN. In the areas that occur in this area, do you know whether or not the people that was involved, have they been compensated for what happened to them, or is it still in litigation?

Mr. HARDBERGER. I know that at least some of them have been compensated and the suits have been settled. I don't know if it's 100 percent, but I believe most of them have, and that the litigation is at an end.

Ms. BROWN. Let me just say one other thing, before I turn it over to my colleague for his questions or comments. In TEALU, we appropriated, authorized $350 million for just what you requested,

partnership, relocation of tracks, and the President zeroed that out, or put no funding, or no recommendations in the budget for that kind of partnership. You may have a little bit more influence with him, since he's from this area, and he's going to be coming back here soon.

Mr. WOLFF. Well, we will encourage him. Quite frankly, I don't think that's enough money, because we're looking to the state for 150-200 million dollar fund.

The State of Texas, by the way, passed that. Again, another positive sign that Union Pacific is doing the right things, is that they have stepped up and said that they have signed an agreement with the governor to do a joint proposal to move these lines out of part of San Antonio, out of the Austin-San Antonio corridor.

Ms. BROWN. How much is that going to cost, total?

Mr. WOLFF. That's probably going to be a billion dollars or more, just for this. But the $200 million, maybe closer to two billion, the $200 million leverages up to two billion in the ability to provide for relocated lines, so I would think that the—this is going to be a huge problem for you.

I've got to know Matt Rhodes well, who is the Chairman and CEO of Burlington Northern, and I've got to know Jim Young very well. And I must say, Jim Young, President of Union Pacific, was right here on the ground, went to visit the people that were injured, and really stepped up and did the right thing.

But bottom line is, this country is facing, somewhat, what President Eisenhower faced with respect to highways in the 1950s. Rail is growing at about 5 percent a year. As I say, it will double, and the rail infrastructure is not there to handle it. The rail infrastructure is in the wrong place. And if Congress would take a look at this, as they did at highways some 50, 60 years ago, I guess, now, I think it's a major issue facing all of us. And as Mayor Hardberger said, if you are worried about a terrorist attack or something going wrong, a train moving through the heart of a city is the most dangerous threat that we could face, as Mayor Hardberger said, so we need to get them out of the urban areas. And we will significantly need your help to address this for every train that we can reroute out, and not have them on the highways, dangers on the highways. I think one train, 200 trucks or something like that, so it makes sense. It's a good investment for safety, both on the highways and on the railways.

Ms. BROWN. I agree with you 100 percent. I'm excited about the challenges that the railroad face, but before the 1950s, we were number one in the world, and now everybody is ahead of us, if you look at China, or you look at all these other countries. And, basically, the communities or the country that the infrastructure is not in place, then we're going to be left behind, because we want to be able to move these goods and services throughout our country. And even though $1 billion sounds like a lot of money, we're spending, I want to say, $15 billion every, what, five weeks in Iraq?

Mr. WOLFF. Yes.

Ms. BROWN. Yes, so the taxpayers—

Mr. WOLFF. I hope that you all will move aggressively on this. For transportation, also economic development, as the Chairwoman pointed out, it's economic development, as well as safety. And it

just has to be done, I think, and this Congress hopefully will be the one to step up and allocate the resources where they belong, and away from where they don't belong.

Ms. BROWN. Thank you so much. Mr. Gonzalez.

Mr. GONZALEZ. Thank you very much. Now you know why I enjoy serving with Chairwoman Brown. We're getting a little taste of her personality, and very strong-held convictions, which are quite admirable.

I guess a couple of observations. You know, we have worked really close, and I've known the Mayor and the Judge for so many years. And it's been frustrating on the federal level not being able to really provide you adequate answers or the funding.

A couple of things that could easily be addressed, though, and I still don't understand why they're not. And, Mayor, you had indicated, you would really like to know what hazardous materials are coming through the city, and when. That information is not available, and I'm thinking of first responders. And I know that Nim Kidd is not going to be here today, and he probably could have shed some light on this. But even outside would be the normal course of business for the city, in the first responder mode, and, of course, with the threat of terrorism and such, they could take advantage of hazardous materials coming through a highly populated area; do you have any authority, or manner, or means to obtain that information, so that it can be coordinated? Or you can, actually, maybe try to reach agreements to have the materials transported during those periods of time when there's less traffic, less population out there, and so on.

Mr. HARDBERGER. We do not have the authority to make that happen. I think we would need some enabling legislation from the federal government that that material would be shared. Otherwise, we are merely asking the railroads to do that for us, and they have indicated that they want to do that. So I think we'll probably need some help from you to be able to get that done.

Mr. GONZALEZ. The issue of authority, of course, is a big one, and I guess I'll kind of play the devil's advocate on this thing. Not that we would—at the federal level, why not share some of the responsibility with the state and local authorities? I don't know if that's really going to happen.And let me just toss this out for consideration.

Anticipating where I think the railroads would come on that, is that they really do like a federal scheme so that they wouldn't have, let's say, 50 different sets of regulations in 50 different states that they would be operating out of. On top of that, given local authorities some jurisdiction over some of these matters, could also complicate things, because you always hear that, that the regulatory scheme out there, especially when it's distributed at the federal, and state, and local levels, really makes the cost of business - it drives it up, it makes it difficult and so on.

How would you address that particular argument that might be advanced by the railroad industry? And that's a question for both of you.

Mr. WOLFF. Well, I think you guys are the guys that need to do this. The problem is they haven't really stepped up and did it. And it needs to be uniform throughout the country. But I think what

Mayor Hardberger was referring to was just information, so that if we knew something was coming through, when it was coming through, that we could respond, and be ready to respond to that.

And as you so aptly stated, there may be a way to have that kind of freight coming through when there's less congestion on the highways that may cause an accident. I know what you're going to run into, I've already heard it. You're going to run into National Security, about if they knew a train was coming, and they got that information, maybe they would do something to it, so I know you're going to bump up against that, because that was one of the issues we raised, and that was one of the push-backs on it, regarding National Security. I don't know, still might be.

Ms. BROWN. Let me just say that this committee is working with Homeland Security in coming up with a safety bill that would include how we could work together to—because the first responders have a need to know, and so we're working through these issues. And you can rest assured that we're talking, and we're going to come up with some recommendations, and some bill. Keeping in mind, we've only been in charge since January. And we've had 91 Oversight Hearings since that time, so we're going to do our part to not just talk about security, but walk that walk.

And I want to thank both of you for your leadership, and for you comments. And we are looking forward to your statements and letters that you sent to the committee for the record. And we may have additional questions that we will forward to you.

Any closing remarks, Mr. Mayor?

Mr. HARDBERGER. No, but I want you to know that I do have the letters right now. And I also have my remarks, that I gave this morning reduced to writing.

Ms. BROWN. Thank you. And thank you, Judge.

Mr. WOLFF. Thank you very much.

Ms. BROWN. I'm going to let Mr. Gonzalez introduce the next panel.

Mr. GONZALEZ. I appreciate it, Madam Chair. It is a privilege to.

Ms. BROWN. I think you have it.

Mr. GONZALEZ. Oh, absolutely. And I'm going to start off—and he is on this particular panel. Is that correct? Okay.

She may not be here as a witness, presently, and I think I may have seen another council member, but we have Sheila McNeil, who's here, someone that we're all very proud of in the capacity as City Council Member. I know Councilman Roland Gutierrez was here earlier, and I don't know if he's still here. And we have any other member of the City Council or Commissioner's court that I—oh, Councilwoman Herrera, good to see you. So we have two members that are here.

Testifying today in the next panel, a good friend and one of the most—what I always consider one of the more imaginative, creative state legislators, and hardworking state legislators, State Representative Michael Villarreal. Mike, if you'll come up and be positioned wherever staff finds you a place.

Another good friend, community leader, former council member is Maria Berriozabal. And, Maria, if you would please come up. An acquaintance of many years, very prominent family who, unfortunately, had a very terrible experience, because he was one of the

individuals out at Macdona who resided near the accident site, Mr. Ralph Velasquez.

We also have, of course, representing the southern region for Union Pacific Railroad, Mr. Larry Fritz. And we appreciate Mr. Fritz being here today.

Thank you, one and all. And I yield back to the Chairwoman.

Ms. BROWN. We're going to be opening with the State Representative, with his remarks. Yes, sir.

TESTIMONY OF MICHAEL VILLARREAL, STATE REPRESENTATIVE; MARIA BERRIOZABAL, FORMER SAN ANTONIO CITY COUNCIL MEMBER; RALPH VELASQUEZ, COMMUNITY ADVOCATE INJURED AT THE MACDONA ACCIDENT; LANCE FRITZ, VICE PRESIDENT-SOUTHERN REGION, UNION PACIFIC RAILROAD

Mr. VILLARREAL. Madam Chair Brown, thank you for giving me this opportunity. Congressman Gonzalez, thank you for bringing the subcommittee to our community.

Though we've heard earlier that the number of accidents and incidents in the nation in regards to rail accidents have declined, that has not been our experience. That's not what we are feeling here in the San Antonio community.

I believe government's first priority is to protect us. I fight to make sure, on the state level, I can do everything I can to make that happen. My constituents have asked that I take action. In doing so, I have discovered that I have very limited number of options.

This problem, the nature of the problem, is a federal nature. However, I filed House Bill 1345.

Which would require that the 87 schools in Bexar County that are located within 1,000 yards of a railroad track develop emergency response plans. This is not only for the 60,000 students that occupy these school buildings along the railroad tracks, and I brought a diagram to just show you. I'm happy to give you a smaller copy of this map.

The red lines represent the railroad lines. The orange figures represent the number of school houses along railroad lines within 1,000 yards. There are 87, totally 60,000 students. That's larger than the San Antonio Independent School District. They're counting on us to protect them.House Bill 1345 will require their schools to develop emergency response plans in case of train derailments.

I've also authored House Current Resolution 91.

Respectfully requesting that the federal government take appropriate steps to address our concerns with rail safety.

The Mayor and the County Judge have done a good job in describing our recent history, accidents in '04 and '05, and most recently, in '06 with the 17-car derailment. I won't cover that. I want to jump straight to my recommendations.

Number one, steps must be taken to improve the predictability and regularity of engineers and conductor's work schedules. Union Pacific, and most other railroads, use a work system in which an engineer or conductor have a set time for rest, but may be called

in at any time during that period of rest. According to Union Pacific's Director of Fatigue Management, this is their own person, such a work schedule results in "erratic, unpredictable shifts ".

I've spoken to engineers and conductors, and what they tell me is even though they are required to have an eight-hour rest period, they can receive a phone call in the middle of that eight-hour period calling them back to work. That's unacceptable. That's not rest.

Recommendation Two, data. The fox is guarding the henhouse. Today, railroad companies control the fact-finding, Congressman Gonzalez, that you referred to earlier. They control the data collection process. They also control the ability to classify, to interpret the data before reporting it to the federal government. That's unacceptable. We need to change that. What-if data collection and classification was conducted by the government, not Union Pacific, or other rail carriers.

There should be full disclosure of data collected by defect detectors. Also, the reporting of excess hours of service, of rule violations, and of all incidents, not just reportable incidents. This would empower not just the federal government, but it would empower us, at the state level, to act appropriately when we observe trends that are climbing toward, building toward a potential accident.

The FRA and the NTSB should improve information sharing. You heard that earlier from the Mayor and the County Judge. If the federal government were to take control of the fact-finding, data collection process, I would ask that you empower us, at the state level, by sharing that information.

Recommendation Three, the FRA must enforce current regulations more aggressively. You heard others talk about the Macdona incident in 2004 that claimed three lives, and injured up to 50 people. The National Transportation Safety Board report notes, and I'll quote: "The Safety Board examined FRA inspection data for calendar years '03 and '04. No FRA violation reports were submitted during that period for non-compliance."

What that tells me is there was an accident, people died; yet, there is no official blame placed on the engineer, the railroad company. We need to do better about aggressively enforcing our current rules.

Finally, I want to offer just a suggestion; and that is, the policy focus should be less on finger-pointing that often occurs after an accident, putting it on the shoulders of a sleepy engineer, or human error of a conductor. That seems to always follow an accident. I think what we should do, as policy makers, is to step back and identify what the root causes of these accidents are.

My own mind gravitates towards how hard the conductors are being worked, and how little rest time they're being given. That results, that systemic problem expresses itself in human error, and train derailment tragedies, as we have seen here in San Antonio.

In conclusion, I thank you for refocusing attention on safety. I thank you for coming to our community, who have seen a rash of accidents. You have given the citizens of this town a feeling that our voice is being heard. I thank you for that.

Mr. GONZALEZ. The Chairwoman has given me the additional privilege of introducing my local witnesses here. I would call at this time as the next witness, Maria Berriozabal.

Ms. BERRIOZABAL. Good morning, Chairwoman Brown. We're so glad that you came to our city today, and responded to the invitation of our Congressman Gonzalez. We're very happy that you came, and thank you very much for inviting me to provide some comments.

I am Maria Antonietta Berriozabal, and I come here as a resident of this city, trying to voice concerns of so many people who are very concerned about this issue in San Antonio.

My particular neighborhood is sandwiched between two railroad lines. One of them is three blocks from my house, the other one is two blocks from my house. This neighborhood is about two miles and a half from City Hall, where we are here today.

On the morning of October 17th, 2006, I got a call from my sister asking if I was being evacuated since there had been a train derailment near our house. I did not wait for much more information, and I ran out to see if I could see the wreckage from my porch. I could see nothing, but immediately thought of a friend who is 30 yards from the railroad tracks, Mrs. Torralva. So I started to go out and see how I could help her, and others. But then it struck me that I had my own human error, my human factor. What if there was toxic chemical in the train? So I went back into the house, turned the TV on, and learned that there were no hazardous materials; however, two houses had been struck by a train. Later, I learned that the house of the Alvarez family. Mr. Martin Alvarez, his wife, and his daughter, were left homeless.

In this story, there are several obvious points that I have pondered, even more closely every time I hear the whistle of the train at night, or during the day. The Union Pacific Railroad Lines, as they cross our city, are lined with hundreds of homes, businesses, many belonging to working-class people and poor people. Within a block of the derailment were located two publicly subsidized apartment complexes for the elderly, and handicapped individuals. One of these is a high-rise apartment where mostly elderly people live. Within half a mile are three schools, one junior college, our San Antonio Community College.

A major threat for all of us, whether we live yards from the railroad tracks, or miles away, is the danger of the derailment of a train carrying hazardous cargo. Whether we are rich or poor, we are seconds away from a major disaster during the day or at night, and we are not ready for such an accident. Our city and county are very limited in the kind of investment that needs to be made to prepare a city this large for this disaster.

As a community, we grieve the loss of Gene Hale, Lois Koerber, Heath Pape, Rob Whitworth of Macdona, Texas. For them, all these discussions were too late to save their lives. What happened to the Ralph Velasquez family of Macdona, can happen to any of us. And we resonate with the pain of the Alvarez, who lost their home, a home their father had built with his own hands.

One major concern we have is for chemicals that are being transported in these trains. It was chlorine that killed the four people in Macdona, and did irreparable damage to the health of the

Velasquez. A huge problem is that we do not even know which chemicals are being carried, and when they are crossing our neighborhoods. Are they during the day when people are home? Are they at night?

Both the train collision that injured the Velasquez, and the derailment that uprooted the Alvarez, were caused by human error. We know that both of these accidents were caused or aggravated by train crew fatigue. It is simply irresponsible for railroad companies to schedule train crews in the erratic and unpredictable shifts they now use.

The railroad companies knowingly put their crew members into a state of perpetual exhaustion, and then allow them to drive dangerous trains through highly populated areas. My neighbors and I worry about the callous disregard for human life that is reflected in these practices. And we worry about the indifference of government agencies who are supposed to be protecting us.

We need the help of the federal government in several areas. Some of them are, in cases like the Alvarez and others like them, they should be compensated for all their losses, including the serious emotional disruption, and multiple economic consequences of the tragedy. Cities and counties should be reimbursed for costs incurred for emergency response in cases of train derailments, which would include community education on how to respond to train derailments, especially when toxic chemicals are involved. People should not be put in the situation that I was put in, to run and help my neighbors, when I could have been hurt, also.

Union Pacific must address the condition of all its rails, bridges, rail crossings, and their infrastructure, in general. We who live right close to the railroad tracks know that there has been much deterioration in recent years. These are old tracks. Trains carrying hazardous materials must be rerouted away from our highly dense populations. And finally, and most important, all of our rail lines must be relocated from the midst of our cities.

Our local and state officials are doing the best they can with very limited resources. We are grateful to them. But we trust that under the new leadership of this committee, Chairman Oberstar, Chairwoman Brown, Congressman Gonzalez, yourself, and the other committee members, that our pleas of so many years are going to be heard. And we are trusting in you that you are going to take care of the lives of our people, particularly those who live very close to the railroad tracks. And when they lose a house, they lose everything.

Thank you very much for having me here today.

Mr. GONZALEZ. Thank you very much for your testimony. And at this time we would call—the next witness would be Mr. Ralph Velasquez.

Mr. VELASQUEZ. This is—I prepared a statement, because I was asked to. And there's a lot that I said in here, and you all can read it. This is difficult.

First, before we get into this, I want to thank you for coming to our city, and experiencing the caldo we call San Antonio. It's a diversity of culture, and great visionaries. And you've experienced how we love this city, because we love our representatives. Our representatives, thank you, Charlie, thank you, Mike, are vision-

aries, and they care. They were elected to represent, and they have excelled at every level. And you've experienced them, you've listened to them. They are passionate, but they are the best. And I think that from San Antonio, you will see solutions come out, because San Antonio has a brain-trust second to none in the city, and in the nation. We have experienced things that no other city should experience. We have got the best representatives, and for that I want to thank you.

Charlie, I want to thank you for spearheading this investigation. You initiated the investigations at the highest levels. You brought this thing home, and for that, I thank you.

For State Representative Mike Villarreal, I want to thank him very much from the bottom of my heart, for initiating the evacuation plans for schools. It was very visionary, very great, and very heart-felt. Thank you.

Judge Nelson Wolff and the Mayor, I want to thank them for bringing all affiliated parties together, and finding the causes of this tragedy.

City Councilwoman Delicia Herrera, she was there from the very beginning, and I want to thank her for having the vision to create a bridge between the railroads and the city to create the first regional training facility outside of Pueblo, Colorado, here in San Antonio. That way, the first responders and their families will have someone coming home after an accident. And for that, I want to thank you. We have great people here.

But also, I'd like to thank many of the citizens of San Antonio, and those first responders. No one has thanked them today. These are young kids, a lot of them are young kids, and they were scared to death. I spoke to several of them, and thanked them personally. They had to be rescued from my front door. It was bad, and it was horrible. They're still having nightmares, so imagine the nightmares that my children still have.

But the primary reason for my testimony is to present an opinion on rail safety, and to offer suggestions that might provide venues to increasing public safety. But to begin with, I think that you need to hear from a survivor. And this is very difficult for me to talk about, so please bear with me. I wrote these things from the heart, and sometimes the heart can't speak very well, so I might have to ad lib a little bit. Okay?

Since there's nothing that can be done to undo the incredible pain and continued suffering of those who have had -I thought I was kind of tough, you know.

It was 4:48 in the morning, and I've skipped a lot. You all can read what I was going to say. It is 4:48 in the morning when my son, Ralph, woke me up and said, "Dad, there's a strange noise outside." And I got up and went out, and when you live out in the country, you live with your windows wide open, your doors open, and your ceiling fans on, and you've got a bunch of dogs. We're no different. It's a very safe place. It was my Xanadu. It was a place where my kids would go fishing along the river right next to us, and they built tree-houses, and they were just a bunch of Tom Sawyers and Huck Finns. They were great kids. But when somebody wakes you up and says there's a strange noise, it's best to investigate it, so I went outside, and I didn't see nothing. I just heard

the trains. And I came back inside, and my ex-wife, who came by to stay with my kids on the weekend, she came in a few minutes later, and she was making these gestures, going like this. And I asked her what's wrong, and she didn't say anything. And so I got up, and went to the kitchen, and I asked her if she had spilled some chlorine. And she said—I mean, she didn't say anything. She was just going no, like that. And then I thought somebody was up to something, you know.

You got out there, that's not normal stuff, you know. So I went outside and the smell of chlorine was getting stronger, and stronger. It was dark outside, you know. And I went around the house, looked all around, didn't see anything. And then I went up to my front gate, and I looked towards the railroad tracks. And I thought I saw like a bunch of ghosts or something. And then all of a sudden my tree line kind of disappeared, and this huge cloud, about 60, 70 feet high, and like a donut, was real long, as far as I could see, came rolling pretty hard through the forest. And that's when I started—I ran back to my house, and I yelled to my kids to cover up and get out. And we were going to go into my car that was parked right next door.

By the time I hit the house, got into my house, the cloud was already hitting—just a few seconds later hit the house pretty hard. It was like a thud. And right after, that you couldn't see a thing. The lights were on, and they became like a little red glow. You couldn't see anything. And we got out, and we found our car, bumped into the car. And my kids got into the car, and everybody was scared.

And I went to get my dogs, because it was the dogs that saved us. My dogs were yelping, and making all kinds of noises. And we couldn't find them, because at that time, then it got pretty near zero where you couldn't see anything. And the pain wasn't immediate, it grew on you.

After we started the car, I turned the lights on, you couldn't see anything, so I put it on parking lights and drove through the back gate by my barn. And, unfortunately, someone—my neighbor had borrowed my barn, and he put bailing wire on the gate, and I couldn't get out. And we cut our hands and everything just trying to open it, and we couldn't do it. And at that time, it was already zero. We couldn't see anything, so I backed the car up and rammed right through the gate, busted our windshield and everything. And we went out. We were going to go to the back end to break through onto Lackland. I was going to break through their gate. That would have alarmed people, brought somebody to our neighborhood.

We didn't make it that far. There was a divine intervention or something, something told me to stop, and I did. And I went outside, and ran in front of the car, and ended up in a sea of mud. If we had kept on going, we would have died right there. So I came back, and my kids helped guide me back, and we went across the cornfields and the sunflower fields, and everything. It was like seven foot tall. And that's what kept us from sinking into the mud.

We eventually got out of there. My daughter, when I got out the first time, my daughter, Nicky, said, "Daddy, don't leave us. Don't leave us." It was at that time they were already starting to bleed, and I came back in with all mud and stuff, and came back in, and

we went across country, and they were bleeding pretty much, coughing up a lot of blood, and that's when Nicky said, "Daddy, are we going to die?" And like I've told folks, that's one of the hardest things any father can hear from their children. And I vowed that that wouldn't happen. And we made it, through the grace of God, and the Virgin Mary, we made it through.

I'm not a very good Christian, but I'm a damned good Catholic, so we really got to get into—and I really believe in the Virgin Mary, because that was a woman's voice I heard. It was a woman's voice that told me to slow down, stop. It was woman's voice that told me go this way. And that's when I saw that, busted out, and we got out there.

And when we crossed the last gully, the car was falling apart. It had gone through hell. And I saw this 18-wheeler coming up, and I knew where we were at, but we knew we had to go get our neighbors, so we went and got our neighbors, and got them out. But the things that we went through, it's just very hard.

People say, "Well, what did it feel like?" Well, you can only imagine a man on death row getting that cyanide cloud coming up, and knowing that if he's going to breathe it, he's going to die. Well, that's the same thing we felt. Those chemicals burned us pretty much. It scarred us not only physically, but mentally, emotionally. It took its toll. It took it's toll. My kids don't sleep anymore, I don't sleep anymore, or sleep not very much. And these are things that we're going to have to live with the rest of our lives. And one of the reasons I'm here is how do we fix this? How do we just say no. I mean, we don't want this to happen again.

Well, when I got out of the hospital, I found out that my neighbors died, the ones you had mentioned, wonderful ladies. We had been helping them. My daughter had bought a bonnet for Ms. Hale, and was going to give it to her that Monday because we were helping them in their garden. And she had just finished her garden, finished her fence and things. But what was very, very difficult was to know that a young man died in my driveway, young Mr. Pape, a very courageous conductor. A very young man, 23-years old.

And it's taken me a long time as a father to accept that. As a father, all of us here who are fathers, would move any mountain to go save a child. And there's a young boy, he died on my driveway. That's been very, very difficult, and I could never forget that, because if had I known he was there, I would have moved everything in my power to get him, but I didn't.

So what do we do to avoid such tragedies in the future? I'm an ex-union organizer, so I don't particularly like to blame Labor. I think it's a dual thing, maybe bad planning and stuff. People don't go on drugs just to go on drugs when they've got hard responsibilities. But they sometimes use those things just to keep their jobs; in other words, keep working.

Maybe we should figure out ways of how to create a good, strong relationship between corporate and labor, because there's enough blame to go around. But blaming doesn't accomplish anything, it only alienates and stifles meaningful cooperation, and potential partnerships.

There are some things that were said today that I disagree with, and I disagree with them very strongly, and said by my friends, who I respect and admire greatly, that we have that friendship because we can disagree. I disagree with the relocation of the tracks. I don't feel that we need to pit the culturally affluent southside against the economically affluent northside.

We tend to see rail lines predominantly in people of color neighborhoods. We predominantly see that. We cannot continue that. If we move them out, then they're going to be moved out into rural, and you're going to have people who have less voice being affected by this. You're going to have people who rely on these spurs for the merchandise that are presently now small businesses. They're going to have to shut down, because they won't have to relocate. This relocation, in my opinion, only benefits speculators and developers, because that's prime property downtown. And if we're going to do that, if we're going to go that way, then make sure the developers and speculators have zero access to that prime property, and make it into linear parks, so that the entire community can enjoy it, not just the affluent.

But I just think that we're brighter than that to move things. I think we can find solutions. One of them, I would think is, let's theoretically deconstruct the rail system. Let's partner with them. Let's bring them into the fold, because, after all, they are part of our community, as well.

Now people say, Ralph, you should be angrier than heck with them. I am. You know, I'm very angry. I'm very angry for the damage that was done to my family, that was done to my community, and to the friendships I lost, and to that young man who lost his life. I'm very angry, and I will be angry for the rest of my life about that, but that accomplishes nothing. That anger would be misplaced if we don't look at it to find solutions.

And so with that, I'm trying to bring some kind of suggestions that might be solutions. For example, concrete rail ties. I'm an ex-railroader. Okay? Concrete rail ties would go a long ways, because the nature of wood is that it expands and contracts with the weather. And when you put something metal into it, it doesn't naturally hold it. It'll expand because of the traffic of the thing. The weight of the thing. If you use concrete ties, one, you're going to benefit the environment because we stop cutting down trees. And two, we don't have to use cancer-causing carcinogens preservatives, that eventually leach into our water table.

Let's think broader. Let's think, if you use the concrete like they do in Europe and other places, they don't have the derailments. They just have — okay. If we can avoid derailments because of materials, well, then let's do that. If we're going to do that in the high traffic areas, let's put concrete ties in every metropolitan area. That way the chances of derailment are minimized. Plus, you're going to create a new industry. You will create a new industry with the partnerships of the affiliated parties. You'll create new economic development opportunities.

Containers. Containers made before 1987, and that's you guys numbers, suffer from extreme metal fatigue. Just like airplanes after 9/11, they all got x-rayed, they all got—well, a lot of the rail cars did, too. And they had stress, metal stress, metal fatigue, sim-

ply because of all the different kind of chemicals being carried in these things. They said well, you know, if it's made before 1987, it should be taken out of service.

Well, the one that derailed on our property was, I think, 1973 or 1976, something like that. It's not saying that the new containers are going to withstand puncturing. That's not saying that, but it's the alternative that we'd have to look at.

Ms. BROWN. How much longer?

Mr. VELASQUEZ. One more minute, or two. One more minute.

Let's go to the 911 upgrade. You heard the tapes. There was mask confusion. If we go with the 911 upgrade to include a border trace, a rail trace, that way the 911 operators will know exactly what is on that manifest, and they'll know exactly what evacuation routes to use. That's where we just wanted to—I made sure you put that in.

Manufacturers of hazardous materials should be required to transport their products only on approved containers that meet or exceed all federal guidelines.

And in closing, I want to thank my Congressman and our great elected body here, and to all those brave first responders. You are, indeed, a credit to our community. But please remember that the other side of tranquility is hell. Thank you.

Ms. BROWN. Thank you very much for your testimony, all of you. I guess, I'm thinking that maybe, if it's possible, maybe we could take about a five minute water break, and then we'll come back to Mr. Fritz. You've got a lot to answer, and I want to give you a moment. Maybe we can get you some water.

[Recess.]

Ms. BROWN. Let's get started because we have several people that need to testify and have to leave. Will you please take your seats. Once again, while they're taking their seats, you all need to know that you all have a wonderful representative in Mr. Gonzalez, who was very emphatic about us holding this hearing here. And we had planned on doing a hearing here, and then going on to California. And when California dropped out, there was no dropping out of coming to San Antonio. I can tell you that.

All right. Mr. Fritz, we're going to let you give your opening remarks, and then we have questions. I understand that some of the panelists have to leave, but I have a couple of questions that we want to ask you before you leave. And any additional ones, we'll just give it to you in writing, and you can respond. Mr. Fritz.

Mr. FRITZ. Thank you, Madam Chairwoman and Congressman Gonzalez. Good morning. My name is Lance Fritz, and I am the Vice President of Union Pacific Railroad Southern Region, which includes our facilities and operations here in Texas. I'm pleased to be here today, and I thank you for the opportunity to testify.

We recognize why this hearing is being held in San Antonio. All of us at Union Pacific regret the accidents that have occurred in San Antonio, and in Bexar County. We work very hard to prevent accidents of any kind on our railroad, and we have implemented numerous measures to help ensure a safe operating environment for our employees, and through the communities through which we operate.

Having said that, I've been advised by our counsel not to discuss any specific incidents, as they may be subject to litigation. I'm here to tell you of the many positive things our employees are involved in, both here in San Antonio, and across our rail system.

Our objective with these programs is to provide safe reliable rail service that supports this region's growing transportation needs. Over the past several years, we have increased employee training and testing. Our managers provide more ride evaluations, and they review more black box downloads to ensure compliance with our Operating Rules. In addition, in San Antonio we employ a state-of-the-art train simulator, so our crews can take advantage of advances in computer-based training and evaluation.

What we have learned from our intense reviews has led to several systemwide operating rules changes, including changes in locomotive cab communication rules to avoid distractions at critical times. I would add at this point, including the use of cell phones.

Working with our union leaders in the San Antonio Service Unit, we've implemented a safety center to facilitate daily start of shift communications for all our employees. In addition, working with Labor and the FRA, we have implemented an employee-led peer-to-peer process to reduce and eliminate human factor accidents in train operations. You've heard a little bit about that this morning from previous witnesses.

We have invested heavily in San Antonio's rail infrastructure to help provide a safe operating environment. In the last two years, we've invested $62 million in track and infrastructure in this area. This year we're going to invest an additional $17 million.

We've also supported job growth in the local area. We invested $26 million to support the new Toyota manufacturing facility. And you heard this morning, we've announced a new $100 million facility that's an inter-modal facility.

Increased emphasis on fatigue management, rules compliance, improved infrastructure, and operating process improvements have made our operations in San Antonio more predictable. This has led to fewer overtime hours, and fewer hours of service tie-ups. We've also added a substantial number of employees, with the addition of 13 managers, and 166 agreement employees.

As we've minimized variability in the operation, it has allowed our employees a more predictable, and a higher quality of work life. The activities are showing positive results. Since 2004, we've reduced the employee safety incident rate by over 25 percent, and reduced rail equipment incidents by over 23 percent. Here on the San Antonio Service Unit, the employee safety incident rate has been reduced by over 24 percent, and rail equipment incidents by over 36 percent. We are proud of these gains, but clearly, more can be done, and will be done. Our goal is zero incidents.

Madam Chairwoman, Congressman Gonzalez, let me conclude by saying that Union Pacific is committed to providing safe, reliable rail transportation, not only in San Antonio, but across our system, and we will continue to work towards that goal. Thank you.

Ms. BROWN. Thank you, Mr. Fritz. The Mayor and the Judge mentioned the needs to ensure that the local communities and emergency responders receive timely information on the hazardous

material going through the communities. What is Union Pacific doing to make sure that this happens?

Mr. FRITZ. Union Pacific currently provides immediate response to the emergency responders when they request for the consist of a train that's been involved in an incident, so we do provide that information currently, immediately upon request.

Ms. BROWN. After an accident.

Mr. FRITZ. At the request of an emergency responder. And I would presume that's as a result of an incident.

Ms. BROWN. Okay. So they don't get that information prior to.

Mr. FRITZ. They get information from us that includes the types of hazardous materials that are being transported through the community. And they also receive from us special training in how to handle those hazardous materials.

Ms. BROWN. You mentioned that Union Pacific has employed a train simulator for San Antonio engineers and conductors. Do you provide the same training for all engineers and conductors in other states?

Mr. FRITZ. Yes, we do. We have these simulators across our system.

Ms. BROWN. And you mentioned that you're spending $62 million, and an additional 17 in '07. But given the fact that 30 percent of the accidents in Texas is caused by defective tracks, what do we need to do?

Mr. FRITZ. Yes, I'm glad you asked that question. We have numerous programs targeting track infrastructure, and the safe operating of track infrastructure. We use detector cars, as was mentioned earlier, in terms of trying to find rail defect. We use geometry cars. They try to find defects in the configuration of the track, the interaction between the rail and the ties. We use track inspectors, who are assigned particular main line territories, and they have defined responsibilities for inspecting those main line territories.

We also design our maintenance of way, our programs for investing in track infrastructure and refurbishing it. We design those around the wear and tear that a particular main line is receiving from the type of traffic that is on it. All of those are targeting rail infrastructure to operate safely at the speed it is designed to operate.

Ms. BROWN. Union Pacific is one of the trains or rail industry that have indicated that you want to put a cap on—I want to say $200 million on damages. Can you respond to that? One of the things that our Chairman, Chairman Oberstar likes to do with the committee is remind us how we got to this point with freight, and how you receive the public tracks, and how we actually gave it to the industry and why. And so, there is some responsibility as far as the community is concerned. I mean, that's why you have to carry the hazardous material; but, in addition, you can talk about the new cars, the new generation of cars that will—I know the community—we think about the hazardous material, but we need the chlorine for the water in the community, or else we won't have the clean water, so it's kind of a catch-catch. But can you deal with that, please?

Mr. FRITZ. Yes, Madam Chairwoman. I am not intimately familiar with what we are attempting to move through Congress, if you will, as an industry. What I can speak to is the fact that we haul hazardous materials because we have to. We are under a common carrier obligation to haul those commodities. We'd prefer not to.

Having said that, given that we do haul them, we design our routes around the safest available route. They represent a very small fraction, particularly TIH, or Toxic Inhalants, represent a very small fraction of the commodities that we haul.

When it comes to San Antonio, some of those do move through the community, and some relatively fair share of that is consumed locally, as you point out, for things like water purification.

When it comes to the cars that are hauling hazardous materials, we are working, as you heard this morning, with Dow Chemical and Union Tank Car to design what we would consider the tank car of the future. And it is specifically being designed to handle some of the significant stresses that are found in a train incident, or derailment.

Ms. BROWN. Okay. I'm going to turn it over to Mr. Gonzalez, and then we will ask questions to everybody else.

Mr. GONZALEZ. Madam Chair, I know that Representative Villarreal - do you need to be leaving in a minute, Michael? And Mr. Fritz, can you stay a little longer? Are you okay?

Mr. FRITZ. Yes, I can.

Mr. GONZALEZ. Do you mind if we take State Representative Villarreal out of order right now?

Ms. BROWN. Yes.

Mr. GONZALEZ. And finish with Mike, and then let him get to where he needs, because I know it's family-related.

Ms. BROWN. And she, also. Yes, she has family related. Okay. Would you just take your seat for a minute.

Let me ask you, Mr. State Representative, one question. You mentioned the importance of clearing vegetation, like trees, bushes, and other along railways. Some states have laws on the books to do this. There is no minimum standards in clearing vegetation. Do you think that it should be particularly in a state that do not have laws in place? And maybe this is something that you can, as a State Representative, address.

Mr. VILLARREAL. That was actually part of my comments, but thank you for bringing it to my attention. And the suggestion is that other states have laws that govern the clearing of trees and bushes near easements that support rail lines.

Ms. BROWN. That's correct. Also, can you get us information on, we were talking about a partnership between the state, local, and federal as far as the track relocation. I can see it's going to be a source of discussion and hearing, but I'm just interested in knowing what is it that the state will be willing to—because as we move forward, we want to be able to have a package. And even though we authorized 350 and the President didn't offer anything up, 350 million is nothing in comparison to the needs of even this community, much less the entire country. And I wanted to—I was trying to find out from my staff how much have we provided for the Iraqis for transportation and safety, and just in this area. And I understand it's over $1 billion so, I mean, you know, the people that ac-

tually pay the bill, seem to me they should be able to sit at the table also.

Mr. VILLARREAL. I agree wholeheartedly with you. And what we are looking at is a cost of $2 billion in debt acquisition to solve the rail relocation. And I believe it's from Austin, around San Antonio. That's just our segment. There are proposals to extend that bypass all the way further north around Dallas. But for our region of the state, the capital improvement cost is about $2 billion. And to issue that debt, we're looking at, I believe, a figure of $200 million to capitalize that.

And the last session, we meet once every two years, the last time we met we created a fund in order to issue debt and carry out these kind of projects. This year, our challenge is to put money into that fund. Any help that can come from the federal government would be greatly appreciated. If it's a matching program, where you tell us, State of Texas, for every dollar you put up, we'll match you a dollar, or even 50 cents, we would jump on that. And so I would encourage Congressman Gonzalez, and you, Madam Chair, to put forth those kind of ideas. I think they would be well received by our state government, because today, we don't have that kind of partnership with federal government. We're looking at it solely as a state and local investment that's going to be carried just by the state and local taxpayers. We'd love to partner with the federal government.

We believe that to really solve this problem, it's going to require partnerships. The railroad carriers are not going away. We depend on each other.

Ms. BROWN. And I think they should be at the table, also. I think it should be—all of us should be—the stakeholders would benefit from it, the citizens, so I think everybody should be at the table.

Mr. VILLARREAL. I agree. In fact, I filed legislation applying a sales tax on railroad cargo. I've discovered that I can't only apply a tax just on the rail lines, without including truckers. I think that can be fixed. I think it's going to be a challenge to pass that, but I believe that that kind of solution makes sense, because as you heard earlier from Mr. Fritz, Texas is generating a lot of economic activity, not just for itself, but also for the railroad companies. And that's why they're making these investments. To tax them, and to dedicate that new money to infrastructure improvement seems, to me, to be a win-win on both sides. It brings forth better infrastructure that they can rely on, and also more public safety for our citizens.

Ms. BROWN. All right. Mr. Gonzalez.

Mr. GONZALEZ. Thank you, Madam Chair. Mike, you pointed out that, I think, when the session started this year in Austin, you were pretty ambitious about your plan, which I really do commend you. And I think, basically, you had to scale back, but I still say what you're doing here is so important, and it's contingency planning. And I know you're thinking in terms of being proactive, and ahead of it, and preventive in nature. But I wanted to read to you the problem that you faced just a couple of months ago, and this is from the materials that are prepared by our staff on the committee.

"A state may adopt or continue to enforce an additional or more stringent law, regulation, or order only in instances where the law, regulation, or order is necessary to eliminate or reduce an essentially local safety or security hazard." But then this is the kicker. "Is not incompatible with a law, regulation, or order of the United States Government, and does not unreasonably burden interstate commerce."

The pre-emption standard has been a concern among some states and localities that have tried to adopt regulations requiring trains to operate at lower speeds and railroads to re-route hazardous materials around heavily populated areas. And I think you pointed out, this is a federal issue. It is a federal problem. Like so many things, we fail to act, communities then attempt to move forward, and what happens, basically, you don't have jurisdiction and such. And the immigration issue is a great one. Congress is frozen, it's grid locked, you have communities moving, and I believe in the wrong direction; nevertheless, they're moving. So we have something like that here, and I'd like to tell you that Maria's observation that this is a new Congress, this is a new Chairwoman of this subcommittee. There's a new Chairman of the big committee, and we're going to be as aggressive as we can.

There are limitations, no doubt, as to what we can pass. And I don't want to get people's hopes up on something on the scale of relocating rails, when it would be $2 billion or above, because every community is similarly situated. If we start multiplying that by the billions, it's an incredible—but there are so many things in your suggestions that I think we can do to achieve tremendous safety, never to the degree that if we relocated something.

Ralph points out, though, well, wait a minute. Where are you relocating it? Why are those people any less important than other people, and so on. It's usually density in the number of people, I understand that.

As far as monies, I'm not sure, and I think the Chairwoman is in a better position down the line to identify what would be a realistic federal contribution, Mike. And I don't know, just because I know that every community in the United States is going to want some assistance with relocating. And I think some things can be relocated without great disruption, or tremendous cost. But I wanted to thank you for your suggestions today, which from the state level, making these recommendations to the federal level. And I will definitely—I know that the Chairwoman will make these known. They're part of the record, and Chairman Oberstar has been a real champion on rail safety since he got there. And he's been there quite a while, but if there's anything else that you need from us, please always feel free.

I know that you have some obligations with the family, and unless the Chairwoman has anything else, I just want to say thank you for all your work.

Ms. BROWN. I want to thank you also, and we will follow-up with any additional questions and getting you some additional information on what other states are doing.

Mr. VILLARREAL. Madam Chair, thank you for bringing our federal government to our community.

Ms. BROWN. It's your federal government.

Maria, I had a couple of questions for you, because I understand that you have some family obligations, also.

You mentioned that Alvarez, his family and young daughters, have been homeless since the October 17th, 2006 train accident. What have Union Pacific done to compensate the Alvarez family for their damage?

Ms. BERRIOZABAL. My understanding, Madam Chairwoman, is, they do have an attorney, and they have been working on the issue. Their house was demolished by the city, and they're in, I don't want to say litigation, but they are working with their lawyers.

My understanding is that right now Union Pacific will provide them the market value of their home, and to us in the community, their neighbors, we think that's not enough. There's been pain, there's been suffering. They lost a home. There was a long history. It was very painful for me to see some events where the whole family gathered to say goodbye to their family home. There's costs, intangible costs involved in these situations. But that is my understanding, that the Union Pacific will give them the market value of the house.

Well, that's good, but we feel that more needs to be done, not just for them, but other families. It's not just a house that they lost. They lost lives, a lifetime of history, of memories.

Ms. BROWN. I guess my question is, are these people still homeless?

Ms. BERRIOZABAL. No. No, no.

Ms. BROWN. Oh.

Ms. BERRIOZABAL. I used that word, they lost their home.

Ms. BROWN. Okay.

Ms. BERRIOZABAL. But they have a place to stay right now. It's temporary, but they have a place to stay.

Ms. BROWN. What are some of the recommendations, that if you could get your top one, two, or three recommendations, what would they be?

Ms. BERRIOZABAL. One thing that I would like to reinforce is what the Congressman was asking other people from Union Pacific. There's got to be a way that we, as citizens, know what's crossing our communities. I understand the whole Homeland Security situation, but it's very scary. And I've been talking to people. What I did, I sent out a notice when the Congressman's office advised me that I would, perhaps, be invited to be a witness. And I'm very conscious that I did it as a member of a community. It's not just me coming, it's my community, so I sent out a notice through my email asking people, tell me what I should say, so my little statement is a compilation of what people wrote, and said, "This is what we're worried about." And one of them is, we don't know what's going through our railroad tracks. We're scared. And ever since the issue of Macdona, another one is the care of the railroad property. The city can't go in there and clean it up. It's not their's. And the debris, sometimes the danger in flooding because of inappropriate care of the railroad.

I was on the City Council for 10 years representing this area, and one of my biggest problems was trying to figure out how do you get a hold of this Union Pacific company that seems so far away

from our daily life. I mean, who do you call? There's an 800 number in the little boxes, but they're not going to come and clean the debris.

Checking the railroad ties regularly, seeing that they're in proper shape, the lights. You know, you trust that when you're coming to a railroad crossing and there's a train coming, you trust that the light is going to work, and that the little arm is going to come down. Those things for us who are right here are inconvenienced every day because of it, we just want to make sure that they're taking care of their property.

Ms. BROWN. I agree with you. And, in fact, I went to one of the training simulators, and clearly, a lot of our citizens may feel that they can go around those railroad crossings. And let me tell you, when the engineers see it, if you're on the tracks, it's too late. They can't stop, and so it's very important that we educate the community, that you can't, if the train is coming. I mean, just that little will prevent some accidents.

Mr. Gonzalez.

Mr. GONZALEZ. Thank you very much, Madam Chair.

Maria, I know that—I think Mike Villarreal had a Town Hall in the area regarding the accident and such. I know you've been very active, and that's why you were immediately identified. And I appreciate that you were willing to testify, but also, to canvass the neighborhoods and find out what's on their minds.

When it comes to dealing with Union Pacific, I will tell you, we've had our differences of opinion and such. And maybe, because I'm a member of Congress, we get treated differently or something. They respond timely, I will tell you that. They may not go through all the recommendations and suggestions, and I think the Mayor and Nelson Wolff said that that has not been a problem. The communication is good. And I think there's follow-through to the extent that there's an agreement.

What has been your experience, because I think they're much more sensitive than ever before because of the accidents, and what's transpired, and lessons learned. But have you, yourself, experienced some difficulty communicating with a representative, or maybe trying to assist the individuals whose home was—it was so damaged, it had to be demolished.

Ms. BERRIOZABAL. We agree. We agree.

Mr. GONZALEZ. Yes. Have you—what has been your experience when you attempt to assist people in their dealings with Union Pacific?

Ms. BERRIOZABAL. Well, that's why I mentioned when I was on City Council. I have to say that like right now, until this issue came up, it's something that you really don't think about. Like I said, the first time we started thinking about it again is when this happened to the Ralph Velasquez family, because these are very close friends of our's, of a lifetime. But I was referring to the time that I was on City Council, and we would have that problem. But, I guess, Congressman, the issue is that sometimes we don't even—it doesn't even enter our mind that we can pick up a phone and call somebody about it. And, actually, entities like Union Pacific, with the tremendous power they have, should really have community relationships, community relations people that we—I work

with my neighborhood association. In fact, I brought our neighborhood association president to be with me today. But just to have somebody that we can call, and can come to neighborhood meetings, that can do Town Hall meetings, instead of us calling them, for them to say here we are. Let us tell you how we work. Let us tell you about the cargo. Let us tell you why we have to cross your city with this cargo. Just some communication.

Companies have community relations departments. Do they? I don't know. So when you ask me that, like it doesn't even enter my mind that I can pick up a phone and call them. That's how far they seem from me. And I'm a person that pretty much can find answers when I need them, because people call me. To this day, I get a lot of calls from people just on all kinds of things. But I was very surprised when I sent out my little note on, does anybody have any suggestions for my little statement that I'm going to give. All these people writing and saying the hazardous cargo, the condition of the railroad by their neighborhood, and then the concern that some of the most vulnerable populations are the ones that live close to the railroad. A couple of them were from people from Park—you've very familiar with Park Apartments by San Pedro Park. It's a high-rise. People are on their little walkers. They were saying well, if there had been a toxic chemical there on Hickman, what would we have done? Well, I can't tell them. They're in walkers. Do we have a plan for that? And it's not just the federal government. We, as the city, need to do that.

And, Madam Chairwoman, I'll be very honest to say that we really hold our local officials accountable, too. I mean, we're not just demanding, or speaking out to our federal government because you're here. We work with our local officials, and we're very proud of what they have done. But we also need to do a better job locally of responding ourselves. What do we do? Do you run to help your friends, or do you run away? And how do you know what to do?

Ms. BROWN. Thank you for your participation today.

Ms. BERRIOZABAL. Well, thank you, because your coming here has done a lot.

Ms. BROWN. I know Mr. Fritz heard what you said about the big company having community relations, and having someone that is working with the community and interfacing. I'm sure he has this team available, but we don't know the number, and we don't know who the person is, and so they probably don't need a bonus, because the community needs to know who to contact.

Ms. BERRIOZABAL. Thank you very, very much.

Ms. BROWN. And I know you heard that.

Ms. BERRIOZABAL. Yes.

Ms. BROWN. Thank you.

Ms. BERRIOZABAL. You give us hope. We know you can't do everything, but to be able to talk to somebody is very important. And I will give my report to my community on what happened today.

Ms. BROWN. But one of the things I do think is important, that government should be personal and up close, and that's why we're here.

Ms. BERRIOZABAL. And you're here. And we thank you, and we recognize that. Thank you very much.

Ms. BROWN. Okay.

Mr. GONZALEZ. Thank you.

Ms. BROWN. Ralph, I have a couple of more questions for you, and then we'll go back to Mr. Fritz, before we open it up to the public. And my question to you is just very general.

You are a former rail employee, and have knowledge of the industry, and one of the major causes of accident have been human factors. And I understand one of the crews had worked 22 hours without breaks, so can you give us some recommendations in that area? And any other closing comments that you would like to make.

Mr. VELASQUEZ. Yes, ma'am. I think the regulations are already in place. We've got the Hogg Act, make them adhere to it. It's just enforcement. I mean, the rules are already in place, just have them enforce it. There are many things that we can work together, if we just communicate. And if we agree to communicate, and we agree to do something, then if we don't do it, then we need to be punished, or held accountable. But yes, you've got all kinds of already rules. And I understand business, and a lot of times the bottom line runs a lot of things, but corporate responsibility should never be negated at the expense of public safety.

With that said, I think the corporate relations between them and the Labor unions could improve. Sometimes, Labor unions are pretty terco, terco meaning stubborn, but it works. You know, I mean, as long as they can communicate and work together, that's important.

Ms. BROWN. What we're discussing, as we speak, as we move forward with the safety bill, and the question is whether or not Congress need to weigh-in, because Labor and Management don't seem to be able to resolve this issue of limbo time and fatigue. Do you want to weigh-in on this?

Mr. VELASQUEZ. I understand that. And in my opinion, it's just simply bad planning. You know, you've got a critical path that you've got to follow, well, follow it. If you know you're going to have a train crew waiting out in Uvalde somewhere, and they're gong to stop right there, well, then you should already have the limo waiting for them, instead of having them just sit there for hours and hours. And then, you know, a lot of times they run back-to-back.

Just follow the rules. You know, the rule says hey, you've got to have X amount—see, because one of the little things that they like to do is, if you—I think it's 12 hours. I'm not exactly sure. I think it's 12 hours, and so they clock off at 11:59, or 11:58, 11:57. Well, that's kind of cheating a little bit, you know. Let's just do it right.

We were talking about the emergency 911 things. And you were talking about the manifest, and things like that. Well, we had—the Councilwoman Herrera had been talking about, was the fact that if we had a 911 upgrade to work with the railroads and the 911 system to create—and it's easy, with the technology we have today, if there is a derailment, just like there was at Hickman, I happened to go, and they never broke the lines. You're supposed to break the line so the emergency systems can go through. The lines were still stuck for hours, and so somebody has to go way around to get, in case there was an emergency. But there were rules already in place, you have to break them. They didn't do that.

But on a 911 upgrade, to include a border or a rail trace, that would identify it to the dispatcher, and the dispatcher would automatically know what is on the manifest, and he or she could relay that to the first responders. And the first responders, with the proper training from the railroads and the chemical companies, know how to respond. That's why they created, or they're in the process of negotiating creating the first regional training facility outside of Pueblo, Colorado, here in San Antonio. And that's going to go to benefit not only the firefighters and the first responders in San Antonio, but that's also going to benefit all the volunteer fire departments. These mom and pop communities, who don't have the money to send them to Colorado, and they could train them here. And that's what I mean by partnerships. You've got corporate and community partnerships to create a better safety system.

Ms. BROWN. All right. Mr. Gonzalez.

Mr. GONZALEZ. Thank you, Madam Chairwoman. And, Ralph, thank you for sharing what I know is a really emotional experience, that will continue to be an emotional one for you and your family. So special thanks to you.

And I don't want to violate any agreements or anything that you may have, because I don't know of them, but I do know some general, like the general nature of some negotiations that you had with Union Pacific as a result of your claim on your behalf and your family. And, of course, there's the monetary part, which we discussed about caps, and all that. I'm going to leave that alone.

But my understanding is that there are aspects of your negotiations with Union Pacific that were not monetary in nature, but rather maybe corrective action, or policies, or procedures on the part of the railroad regarding safety practices, and such. Is that correct?

Mr. VELASQUEZ. Yes, sir.

Mr. GONZALEZ. And I guess what I'm trying to get at is, I just think that somewhere there's room for the communication. There's room to reach some sort of agreement, and then legislation takes over. You know what I'm saying?

Mr. VELASQUEZ. Yes.

Mr. GONZALEZ. And I think you've been alluding to that. We've got rules, we can just go ahead and enforce them. But, also, there's things they can do, outside the rule making process and so on; like Maria was saying, it's about community relations and things like that.

In your opinion, and the extensive negotiations I would imagine during the course of your litigation with Union Pacific, how would you characterize their cooperation, and how receptive they have been to your recommendations made by you and your attorneys?

Mr. VELASQUEZ. I would like to commend them. They said that this was the first time in their history that anyone has ever negotiated for a community benefits package, and that's what we did. We didn't go for ourselves. You know, there was something there, but the primary thing was the community benefits package, because we didn't want to see this happen again. We didn't want to see it happen to our neighbors or community, or anyone else. And that was very, very strong. And I commend the railroad for being very receptive. I know it caught them off-guard, because no one has

ever asked them for something like that. And it was very unusual, to say the least, but then we're an unusual family.

Mr. GONZALEZ. Second that. Second that. All right. Thank you very much, Ralph.

Mr. VELASQUEZ. Thank you.

Ms. BROWN. Thank you.

Mr. VELASQUEZ. Thank you, ma'am.

Ms. BROWN. Thank you very much for your testimony.

Mr. Fritz, I want to go back before—and I just want you to reiterate for me what sort of technology would help prevent train accidents. Can you just go over that once more?

Mr. FRITZ. What types of technology help prevent train accidents?

Ms. BROWN. Yes.

Mr. FRITZ. Well, they're numerous.

Ms. BROWN. For example, would you suggest railroads to implement some form of Positive Train Control? We've talked about that. We talked about the human factor, we talked about fatigue.

Mr. FRITZ. Yes, ma'am.

Ms. BROWN. I just want you to just go over it, since you are representing the industry here today.

Mr. FRITZ. Yes, ma'am. I will start with Positive Train Control. Union Pacific is on record that we are aggressively pursuing Positive Train Control. We are in the process of developing the technology for two tests on our system. We anticipate running those tests in the near to medium term future.

I would tell you that from what I heard in the testimony today, it sounded like that technology is already readily available, and can be pulled off the shelf. I assure that is not the case, otherwise, we'd have it implemented. It is more complex than that. Complexity is around how to control a train of different weight cars, different lengths, over different types of terrain in a manner that doesn't shut the railroad down, from the standpoint of being able to stay fluid. So that is a very complex issue to be addressed.

The BNSF has proven a prototype system. I know that they will continue to develop that system, and we are also developing a system along the lines.

To address your question from the standpoint of all the things that railroads do to prevent train accidents, let me break that up into track-related, or infrastructure-related activities, employee-related activities, and then let's say just systems and processes.

From the standpoint of track, it has been mentioned today already that we employ technology in the form of ultrasonic testing and detector cars; also, technology in the form of geometry cars. We also use algorithmic technology to determine where we should be investing our dollars.

I'd like to mention, we spend about 20 percent of our revenue every year on investing in the railroad. The vast majority of that goes towards maintaining the infrastructure that we've got right now. That's a phenomenal number. Last year it was $2.8 billion. We target that investment so that it's spent at the right spot, so that it does prevent rail accidents.

Concrete ties were mentioned today. We are implementing concrete ties on our highest density, heavy haul portions of our rail-

road. We're implementing those in a prudent but rapid fashion. We also happen to use composite ties in areas where wood ties tend to degrade relatively quickly. I use those, to the extent they're available, I use them extensively in the south. So, on the track side, we design our systems, we employ technology, all with a design of running at design track speed, and doing so safely.

As regards our employees and human factor derailments, it was mentioned today that Labor and Management need to work better together. I fully agree. We're driving those conversations and that cooperation. Here on San Antonio, on the San Antonio Service Unit, there's a program that we call the Cab Red Zone Program, CAB, an it is targeting safe operating behavior in a peer-to-peer observation in the cab of a locomotive. It's unique in the rail industry. We are getting, what we would consider, positive results from it. It is showing up in statistics on the service unit from the standpoint of reduction in human factor derailments, and human factor incidents. And that was created jointly between Labor, Management, and the FRA. The FRA is maintaining a position in that program.

We also use technology as regards making sure that our train crews are trained to operate safely and effectively. We use, as you heard, train simulators, so that conductors and engineers know the territory they're running on, know how to run on it safely. We go through extensive rules classes before any new hire has the ability to actually operate a piece of rail equipment. If they were to actually get into the seat of the locomotive, as the engineer of the locomotive, we take them through another series of extensive months of training prior to being able to operate the locomotive as an engineer.

And then as regards our systems, we implement rail signaling, signalization on our main lines, where we can, as is prudent in terms of investment. We're doing that so that at some point in the future, and I'd prefer in the near future, our main lines are signalized. That takes away the dark territory discussion, and it's also in our railroad's best interest. That gives us derailment detection or broken rail detection, which—I meant broken rail detection, which is very important to us. Because at the end of the day, Madam Chairwoman, my employees here in San Antonio, are citizens. They're interested community members. We do not want to have incidents in this community. We do everything in our power to improve our safety record, and our safety policies and procedures, so we avoid them. I mentioned, our ultimate goal is zero incidents.

Ms. BROWN. Thank you. I guess I do have a couple of other follow-up questions. The incident that we've been talking about with the 22 hours, and the fact is that you said you're going to have zero tolerance. I guess I'm interested in what provisions are you putting in place so that that limbo time is correct? I mean, I've heard a lot of discussion from the industry about it. We've had a hearing in Washington on it. I don't think you were there, but the question is, that takes planning and coordination. I understand that there are going to be some emergency times, some train is going to break down, and you need the authority to be able to deal with emergencies, but it should not be day-to-day operations. I mean, it's just

not for the safety of the industry to have your people out somewhere in the middle of nowhere for five hours.

Mr. FRITZ. Madam Chairwoman, I would agree with you. We are aggressively reducing limbo time, at least the portion that is within our control. You did mention that limbo time will happen, periodically. A great example is when we suffer a snow storm or an ice storm, which we have at the beginning of this winter, earlier in the year. And when that happens, the safest path is to keep the crew on the train until we can figure out a way to safely get them tied up at their destination.

But having said that, regarding the limbo time that is a failure, if you will, a cost of quality, we are working with our van companies; that is, the companies that provide transportation. We are working on our own systems so that, to Mr. Velasquez' point, we plan better, further in the future for where a train is going to tie up, and being able to get that crew off that train, and get them to their official tie-up destination as expeditiously as possible. Because, again, it's in our best interest to have rested crews, and crews with positive work attitudes.

Ms. BROWN. One other thing. We, in the last couple of Congress', you all were getting, I think it was 4-1/2 cent deficit spending, and you've given it back to the industry. And we're looking at additional ways that we can support industry, but can you tell us how much, maybe you can't, but maybe you can put it in writing, how much have you received, and how has that investment gone into the infrastructure of your railroad?

Mr. FRITZ. Madam Chairwoman, if I understand what you're asking, you're asking how much money have we received?

Ms. BROWN. Of the gasoline tax. We were taxing you 4-1/2 cents.

Mr. FRITZ. Right.

Ms. BROWN. Yes, 4.3 cents, and we've done away with that.

Mr. FRITZ. Yes.

Ms. BROWN. And with the understanding that the industry was putting it back into the infrastructure of the railroads. And, I guess, my question is, how much have you received, and how much has gone into—reinvested into your railroad?

Mr. FRITZ. I'll have to get back with you on that. My understanding of the 4-1/2 cent tax that we were paying was a deficit reduction tax.

Ms. BROWN. That's correct.

Mr. FRITZ. And my understanding is that we received virtually none, if any. But I will have to verify that, and get back to you in writing.

Ms. BROWN. No, I know that you've received, because we're no longer doing it, so you have received. But why don't you just check with your staff.

Mr. FRITZ. I will.

Ms. BROWN. Okay.

Mr. FRITZ. We are no longer being taxed that tax.

Ms. BROWN. That's correct.

Mr. FRITZ. That is correct.

Ms. BROWN. So the question is, how much money have you received from that tax, that we no longer doing it?

Mr. FRITZ. Oh, I'm sorry. I apologize. So you're asking the question, with the tax relief.

Ms. BROWN. Yes.

Mr. FRITZ. That has provided cash flow.

Ms. BROWN. Yes.

Mr. FRITZ. How much was that? I can't give you an exact figure.

Ms. BROWN. And how are you investing it?

Mr. FRITZ. I will tell you that all of our cash flow is being either invested in the railroad and infrastructure. And I mentioned we invest at about a 20 percent of revenue level. Last year was a $2.8 billion spend, this year's game plan is a $3.2 billion spend. It either goes into the infrastructure investment. It pays employees, or it goes to a return for our shareholders. But I will get you an exact figure of what that dollar figure is in terms of relief of that tax.

Ms. BROWN. Mr. Gonzalez.

Mr. GONZALEZ. Thank you very much, Madam Chairwoman. Mr. Fritz, a couple of things. The first observation, and as full disclosure, I am not a formal member of the Committee on Transportation, so, obviously, I not a formal member of the subcommittee. It's just my privilege to participate, so I don't speak for any of the members.

My own impression of it, though, as a member of Congress, we appreciate the necessity many times for uniformity when you're dealing in interstate commerce. And if you're in transportation, if you're in the rail, we understand that, and so we recognize that states and localities would like to do many things on their own, but that could very well complicate matters. And as you noticed, I was very frank with my state legislator, and my Mayor, and my County Judge, that that may complicate things. We may never be able to have that kind of authority vested, other than the federal government. But the federal government has to do right by the localities and the states, so that's first understanding. And I want you to know that.

The other is, railroads are indispensable. We really need you. This economy needs you. We turn the lights on here today because we have, in all respects, a coal-fired plant over here, and that—if Wyoming coal wasn't being delivered as it is by rail, we'd have a lot of problems on our hands.

I think someone alluded to Toyota, a brand new plant out there. Well, how do you think the finished product gets distributed, so we understand the need. And I think we have to have this partnership. And there is no reason why there shouldn't be some sort of meeting of the minds.

The thing that has troubled me for some time has been this fatigue factor. And I think we had Mr. Cothen here, and I may be wrong, Madam Chair, as to where we are in this whole debate. And my materials are a couple of months old, but they were prepared by staff, and they're excellent, by the way, whoever put all this together. See if I can try to get a handle on this fatigue so that when I report to my local officials and such, I say we're doing something on not just identifying the main cause of the accidents, especially in San Antonio, which resulted in fatalities.

"The Department of Transportation, on numerous occasions, has formally submitted legislation to reform the Hours of Service law,

supplemented with fatigue management requirements, or authorize the FRA to prescribe regulations on fatigue in light of current scientific knowledge. Currently, the statute contains no substantive rule making authority over duty hours. The FRA's lack of regulatory authority over duty hours, unique to FRA, among all the safety regulatory agencies in the department, precludes FRA from making use of almost a century of scientific learning on the issue of sleep/wake cycles, and fatigue induced performance failures."

Do you think we need to be making changes? I know that Mr. Cothen had alluded to, we're making some progress. And I don't know if that's a matter of just suggestions, recommendations, a meeting of the minds, and such, but do we finally have to do something legislatively? Like I said, I'm not speaking for the committee. They may be way ahead on this thing, and they could probably inform me now or later on it, but what is the position of Union Pacific as far as rule making authority vested in the FRA, to come in and simply tell you, as the employer, and then, of course, the employee that may be represented by the unions. Do you all have a position on that?

Mr. FRITZ. Yes, sir. We would prefer to be able to work this out with our unions. Clearly, as stated already, that would be the best overall outcome, and we're working very hard to do that.

Absent the ability to create a more conducive work/rest cycle that would satisfy all parties, both Labor and Management and the railroad industry, we believe that the responsibility should reside with Congress and the Rail Safety Act for Hours of Service legislation.

Mr. GONZALEZ. But to specifically address it, as I just read this portion from the report that was provided me, does it appear that we need to do more to vest some sort of additional authority, to get into the specifics. If the parties can't work it out, and to be honest with you, I think, Madam Chairwoman, they probably have the best of all worlds, because if you have the employer, let's just say that's corporate America or whatever, and you have those members of Congress that obviously would be on your side. And then you have the unions on the other, and you have other members of Congress, and both of you all are saying the same thing, it's let us work it out, let us work it out. But the truth may be that it hasn't been worked out. And I guess I'm just trying to figure out—I know that your position is, we're going to continue working on it. There'll be recommendations. But somewhere along the way, if it's not worked out, do we simply say we're going to vest that authority in the FRA, like we do other regulatory agencies, and they go forward.

My last observation is, I know that you say the technology may not be there, or whatever. I just find it almost impossible to believe that Positive Train Control technology hasn't reached a state where some of it would have been adopted, maybe in its very primitive, and its expensive form. And it's not as simple as the Volvo commercial, where they're driving and it tells the driver that there's a motorcyclist to the right in that blind spot, or the driver who's fumbling with something and comes to another stationary object, and it warns him. But surely, there's something out there for railroads, and there has to be some aggressive adoption.

Again, I've been informed today that it appears that we have some technology that's reached that point, but I think you all definitely have to be much more aggressive.

My last observation is going to be on the public relations. You heard Maria Berriozabal, that the neighbors worry and such, and it is about public relations. And I know that you all have endeavored to do more here in San Antonio, for all the obvious reasons. But truly, take it from members of Congress, politicians, elected officials, people just want to know they're being heard, and the questions have to be answered. And sometimes it's simply saying, you know what, we messed up. Our employee was at fault, applied too much pressure, or whatever it is, on the brake and created the accident.

You want to know what hazardous materials are coming through here. Well, we can't give you specifics for some reasons, but we'll tell you, it's minimal, or it doesn't even come through this area, to be honest with you. But these are small things, but you hear the citizens asking for that, that would go a long way.

Those are just my own suggestions and recommendations. I will definitely follow this issue closely, just because of the accident history in this city, but I surely will defer to the expertise that will be demonstrated by Chairman Oberstar and Chairwoman Brown. And I yield back. Thank you so much.

Ms. BROWN. I personally want to thank you for coming. I know you've heard the comments of the committee, and comments from the citizens. And I know that you will govern yourself accordingly.

The current law—and thank you very much.

Mr. FRITZ. Thank you.

Ms. BROWN. Thank you, again. I want to thank you for being here today, and for your testimony. And you need to know that as Chair, the railroads—I just didn't happen to get this committee. I've been involved in transportation for over 25 years, and been on this committee for 15 years. And when I was born, I used to tell people the Silver Meteor ran through my house, and my brother has worked with the industry for over 30 years. And I think the industry is very important to the community. And for years, it's been operating in the red, and now it's in the black. And I tell people all the time, we're not competing with Georgia and Alabama, we're competing with the Chinese and other countries, and so we need to stay on top of it, and we need to work together. And the key, in my position, is that I want to always be fair, but I think there are some things that the industry can work out without Congress telling them to work out.

If we look at the Fatigue law, it's over 100 years old, and so, I mean, modern technology and people's goodwill, you all can solve this, and we don't have to. But it's in your hands, and we're looking forward to leadership from people like you, Mr. Fritz.

I want to thank the witnesses for their valuable testimony, and members for their questions. Again, the members of the subcommittee have additional questions for the witness, and we'll ask you to respond in writing.

The hearing record will be held over for 14 days. And with that, we have 14 people from the community that would like to make testimony, or comments. And I'm going to turn it over to Mr. Gon-

zalez to take their testimony. I'm going to be right here. And I know this doesn't sound like very much, but in Congress, every morning we have one minute that we can come and make our comments, our remarks, and then you can extend and give additional comments in writing. So now this is your chance. We have several people, and I'm going to turn it over to Mr. Gonzalez to chair this portion of the hearing. Have them come up.

Mr. GONZALEZ. If you will come up and take the podium there, and use that microphone. And the Chairwoman has indicated it is one minute; but, of course, we'll entertain something beyond that at a later date. I'm going to go by the order that I have here, so if it's, I didn't take this down. Glenn Sellars. Glenn.

Mr. SELLARS. Thank you for this meeting, Congressman. I've been working with Stephanie, and a lot of the things I'm going to say, you have already in your possession. I never did get a definitive answer on the cell phone, but I do have it for you now.

On the Union Pacific policy, cell phones are to be used for company use only, but a dispatcher will call a dispatcher on a train and say, "Do you have a cell phone? Please call me." And the dispatcher will relay sensitive safety matters by cell phone to the conductor. That's number one.

Fatigue. Fatigue, well, first let me tell you about myself. I've been with the railroad since 1966. I got 1.7 million miles as an engineer. I never had a derailment. I never had a personal injury with my crew members. I know railroad back and forth, and the Union Pacific, I wish you would ask the Vice President here; the employees must stay marked up or available 91 percent of the time. That's nine out of ten days they have to be available, but why is there 100 people laid off, furloughed here in San Antonio right now?

Mr. GONZALEZ. Glenn, I'm going to have to hold you to that one minute. Actually, I've gone to a minute and a half.

Mr. SELLARS. Sir?

Mr. GONZALEZ. I have to hold you to that one minute, because that is the Chairwoman's order.

Mr. SELLARS. Is my minute already up?

Mr. GONZALEZ. Oh, believe me, one minute—members of Congress, if we can do one minutes in the morning in Congress, we figure just anybody can do one minutes. But we'll follow-up. And you know Stephanie will take your name right now, and we do want the benefit of what you're telling us today based on your experience, so if you'll just—and, of course, you know Stephanie. But if I don't cut this—because the Chairwoman, we're going to have to have another meeting, and then we're due over at the Editorial Board, so I apologize.

Mr. SELLARS. I appreciate the Congressman holding this meeting, but, Congressman, please let me say one final thing.

Mr. GONZALEZ. Yes, sir.

Mr. SELLARS. Make it a federal law, make it a federal law, remote controls cannot be used while using hazardous material. Please make that a federal law.

Mr. GONZALEZ. Definitely we take that under advisement. And I think there's some action on that. It's Laura or Lara Cushing.

Ms. CUSHING. Good afternoon. My name is Lara Cushing I'm with the Southwest Worker's Union. We're a grassroots community-based organization representing 2,500 families in San Antonio that are concerned about economic and environmental justice.

San Antonio is crisscrossed by train traffic, and 70 percent of that is merely passing through the city on its way to somewhere else. The low-income communities of color that we organize on San Antonio's southside are boxed in by tracks, and could be trapped without an escape route were an accident to occur. There are over 140 train crossings without over or under passes, and 162 hospitals or schools within a mile of tracks.

In seven short months in 2004, 21 derailments occurred in Bexar County, five lives were lost, and dozens were injured. However, in the two and a half years since then, we still don't have even a basic emergency notification system, or evacuation plan for the city. Instead, we've seen more accidents, including the one last fall that Ms. Berriozabal spoke about.

Southwest Worker's Union feels that no amount of measures to reduce human factors in accidents will be adequate to protect our health and safety. As long as hazardous material is carted through our communities, there are going to be accidents, and there will be deaths.

Union Pacific's profits rose by over 50 percent last year. Now is the time for Union Pacific and federal regulators to invest in a just relocation of train traffic away from where people live, work, and play, and a conversion of the current tracks to a commuter light rail system. Until then, we need an emergency notification system, and an immediate moratorium on transport of hazardous waste through San Antonio. Thank you.

Mr. GONZALEZ. Thank you very much, Ms. Cushing. Next we have Igenio Rodriguez. Mr. Rodriguez. Thank you for your patience. And, again, I remind you that you have about one minute.

Mr. RODRIGUEZ. Madam Chair and Committee Members, my name is Igenio Rodriguez. I'm a retired firefighter of the City of San Antonio, and also have a compilation title, Fire and Hazardous Materials containment over the Edwards Aquifer Recharge Zone.

Because of property rights, this issue requires multi-agency cooperation. I respectfully request that prior to implementing any recommendation, that it be reviewed by local, state, and federal emergency personnel, and others. Please consider studying, or suggesting the possibility of a prudent standard related to buffer zones, occupancy types, density, land use, sensitive environmental protections, serious consideration for response time, natural or manmade terrain or hazards involved that can affect communication, safety, evacuation, and containment. A benefit analysis should be done regarding trucks versus trains, consumer cost, and warehousing.

I commend you for having come to us, and for having the courage and diligence to bring this forth to us, and for being proactive, versus reactive. Thank you very much.

Mr. GONZALEZ. Thank you very much, Mr. Rodriguez.

Ms. BROWN. I want to thank you for making sure that we open it up to the public.

Mr. GONZALEZ. Harry Sandgill.

Mr. SANDGILL. I'll try to use one minute for Rail Labor. I'm a law professor, and 30 years of pro bono experience in rail safety matters. I have a creative solution. I take up the UP on their offer. Let's do something about not carrying hazmat through cities. Let's do something that hasn't been done for years. Let's go back to the STB, the successor to the ICC, go for a red flag or an embargo on ultra-hazardous materials, go together with rail labor, corporations, cities, local governments, and say the FRA is not doing it safely. We can't guarantee safety, and until we get it right, let's not carry this stuff. Let's just do this, and we'll do this for an interim period until we've gotten better safety protection across the board.

This isn't hard. We should just go do it. I know that's not the human factors issue. This is possible. We ought to go down that path before.

AAR members tried this in the Rail Classification cases, and the only reason they lost was despite the fact that they had the only testimony from Dr. Cards and Dr. Gregory, there was no opposition by the shippers at all. The ICC, the forerunner of STB, said look, the FRA says it's safe. We have no choice but to say you're still going to carry it. But if we all agreed it's not safe, and got the FRA to help us build the statistical case for why it's not safe yet, we can protect San Antonio, we can protect Minott, which has been blown up already, Scotts Bluff, which has been blown up twice, and protect against something else that no one has talked about, which is this.

Three different federal circuits have held that railroads when they're negligent are not responsible in money damages for the damages they created to cities. That happened in Scotts Bluff, and in Minott, and the Baltimore Fire Tunnel. I think this committee knows about this, so this is a good creative step, we ought to take this path. Thanks very much.

Mr. GONZALEZ. Thank you very much.

Mr. SANDGILL. I'm going to be in Washington working with staff next week.

Mr. GONZALEZ. Appreciate it. Mary Ozuna.

Ms. OZUNA. Hi, Mary Ozuna. I'm a member of South Central Community Planning Team in the city. I'm also the county precinct chair for 10-03, which is the area between the two railroad trails on South Alamo, and South Florez. I would like to look at this as a proactive. This has happened for many years. My cousin was in an accident 30 years ago, same area by Brackenridge High School, and survived. The person in front of her did not. But I'm also on the zoning—I get all the zoning notices from the city because I'm on the Community Plan.

I offer—I thought the gentleman was over here, to someone from the railroad to be in our committee. The South Central Planning Committee is from South Alamo Street, which is a new city building, and it goes all the way to Toyota, right before it, on Military Drive. We get all zoning issues. I continuously ask if the Union Pacific has been invited, and I'm told generally no.

I also would like to—I'd love to have somebody on the team. I also would like to suggest that zoning, city, state, whatever, needs to be looked at. There are individuals when I go to meetings who

are just starting off with condos. That was mentioned earlier, and they're right by the tracks. That is ridiculous.

I'm a product of a person that was in the railroad, came in 1800s here, so I'm not against them, but I think we need to work together. And I think that some other issues can be done. I agree with Mr. Velasquez, who actually is a friend of mine, didn't realize he was going to say he's against moving the tracks. I don't think that's the answer.

Taxpayers also do not want to pay more money for those ideas. I think in the modern-day time, we have a lot of opportunities that are available, and we just need to use our individual minds and work on it. Thank you very much for coming.

Mr. GONZALEZ. Thank you.

Ms. OZUNA. Thanks, Charlie.

Mr. GONZALEZ. Betty Edward. Betty.

Ms. EDWARD. Well, I'm going to talk about something entirely different. I am a Senior Advocate for seniors in San Antonio. I run a senior center, and the trains go right by our senior center. And I know that we're not ready when we have the next train wreck, and incident, and event in San Antonio. I know seniors are not ready, but my recommendation is a little bit different.

The train and the railroads are the history of our country. They were here before we were here, and we built next to them. I would like to see something, and I don't know who can do it, whether it starts with Charlie, or whether it starts with Mike Villarreal, or where it starts, state, local, city, that we not build anything else next to the railroad tracks in our city, county, or state until all of these things that we talked about today, these safety issues, are put into place, or at least part of them, in order to prevent what will happen.

On the day of October 17th, I was en route to a zoning meeting here in San Antonio to change the zoning on a piece of property right next to the railroad track in the neighborhood that I represent. The zoning was changed. We talked to the developer. We tried to get him to give the property back and not build there. We haven't made any headway with him, at all. He's going to build. They are going to bring families in. The families will bring children. The children love the trains. We know what's going to happen.

At Dora Street, San Pedro and Dora, we've had—I've witnessed, personally, one death, two others have occurred there, because one person took their life on the railroad track, believe it or not, 46 years old, a homeless lady. One child wandered to the railroad track, two years old, was killed. And one young lady going to college was killed because she had her radio on, air condition on, she couldn't hear the train.

Now we do have the railroad guards there now because of Mike Villarreal, and the railroad, of course, put them in, and we appreciate that. But I think that we need better guards at our tracks. We needs guards that will close completely so people will not attempt to go around them. They can't hear the train. And I'll tell you, if I hear the train, I know I better not cross that track.

Mr. GONZALEZ. Betty, the time is up.

Ms. EDWARD. I know my time is, too. Okay. Thank you very much. Thank you for coming. Thank you, Chairperson Brown. We appreciate it. We hope something results from this meeting. Thank you.

Mr. GONZALEZ. Brad Smith.

Mr. SMITH. Congressman Gonzalez, thank you very much. And thank you for insisting that your committee be here. And I did speak with Chairwoman Brown earlier. I think she and I see eye-to-eye regarding this. I am here today. I'm a political candidate more than once, but today my opponent spoke earlier, Mr. Hardberger. And so thank all of you that tried to get more attention to this.

Obviously, not enough has been done, in my opinion. I honestly thought that Big Brother was already watching the transport of hazardous materials here. In other words, that one hand knew what the other hand was doing. I can promise you that this will be an issue.

In my campaign, I'm calling for however many billions of dollars, 90 or 100 billion, since we've heard that that much is going to the Iraq war on a short-term basis, why can't we invest here the same amount of money. Our government can certainly borrow eight trillion dollars, so I don't think $100 billion is too much to ask to come and take care of many, many safety factors, starting here with the railroad and transportation. And thank you for your time.

Mr. GONZALEZ. Sam Parks.

Mr. PARKS. My name is Sam Parks. I'm a commercial airline pilot, about to be forced into mandatory retirement in another year and a half. If you all want to do something about that, but that's another story.

Ms. BROWN. I signed onto that bill to extend it.

Mr. PARKS. I beg your pardon?

Ms. BROWN. I signed onto the bill to extend it from what, 62 to 65 years.

Mr. PARKS. Bless your heart. I'll give you a hug later.

Ms. BROWN. All right.

Mr. PARKS. I took an active interest in the railroads after 18 years of driving around a block crossing out in southwest Bexar County. On a website called "My Rulebook.com," I downloaded their GCOR, General Code of Operating Rules. I also found out what state laws were applicable to blocked crossings, and after some $2,000 in fines, we finally got their attention.

I also got tired of calling an 800 number, where I was talking to Kansas or Omaha, or someplace, and not a specific individual. In the last six months, I ran across an individual that's present here today named Travis Behnke, and that gentleman can make things happen, and I appreciate that.

There's a lack of professionalism in the part of the operating crews. The conductor is in charge of the train, but the engineer is operating. The conductor is the youngest member of the crew, and there's an intimidation factor there. When the conductor says we shouldn't be doing this, and he says oh, no, we're going to do that anyway. And it's like a captain and a first officer relationship, where the first officer is in charge of the train, but the captain is operating it.

I also have a problem with this dark territory. It's inexcusable to me that on the shift technology today with GPS tracking, that trains cannot be tracked exactly like all airborne aircraft over the air space today. Eighteen wheelers, companies track eighteen wheelers to the very mile as to what their location is.

Laptop computers on each train with broad band or wireless access, the engineers could have a screen to give them situational awareness in their cab, much like we have on an airliner, which call it Terminal Collision Avoidance System, where we see every other airplane that's around us. We have a Situational Awareness. These engineers and operators of these trains have no idea where they are unless they knock down a switch.

I mean, it's like the railroad is being dragged kicking and screaming into the 21st century. It's like they're still operating with two dixie cups and a string for a telephone.

Mr. GONZALEZ. Sam, I've got to go ahead and call you on the time.

Mr. PARKS. All right.

Mr. GONZALEZ. Thank you very much. I think you've brought out some very interesting facts. Charlotte Cable.

Ms. CABLE. Thank you so much for having us today. And you have come to the home state of Jessie Jones, whose visionary rail policies helped bring the U.S. out of the Great Depression. So our rail system is still the backbone of U.S. transport, and growing commuter systems.

We do not want to regulate the rails out of business. There is a limit, however, which taxpayers will begin questioning, and then resisting federal funding for rail projects. After the films of the January 7th Louisville disaster, those tolerance limits have been raised.

We do not envy your challenge to properly regulate the self-sustaining, safe U.S. rail system, but we must ask you to please do so to protect your constituents living in cities, counties, and states without the local authority to regulate that system that is both a great benefit, and great hazard to our welfare.

So thank you for bringing this to San Antonio to hear our thoughts, and welcome to San Antonio.

Mr. GONZALEZ. Thank you very much, Ms. Cable. Nettie Hinton.

Ms. HINTON. I'm Nettie Hinton, and I live at 509 Burlison Street, and that's the east downtown neighborhood, which is a historic district in San Antonio, Dignowity Hills. We are home to what had been the historic roundhouse, the first train station. We have now the intermodal yard, the east yards where a UP employee has died in the yards because of a safety mishap. We also are the home of the engineer repair facility for Union Pacific.

We were there before the railroads came, because they came in 1877, and we were founded long before that as a community. We have lived since that time with health and safety issues from the railroad, including the rail cars blocking three major arterials in our community, Pine Street, Hackberry Street, and LeMar Street, as they're waiting to get into the yards.

We understood that that meant that police, fire, and EMS would not be able to have access to our community, nor to the Bowden Elementary School, and the Ella Austin Community Center, be-

cause of the location of the railroad. But we are now living with an additional fear factor, and it comes because we know that the benzene, and the chlorine, and the acids are passing through our community. And we know of the deaths that have resulted because of the derailments. And we are asking that you do something about those toxic materials running through that main line. They have to be relocated.

We are going to host, hopefully, Texas A&M playing Ohio State on March 24th at the regionals at the Alamo Dome. I would hate for a tragedy to occur during March Madness, or, for that matter, during the month of April when our families are on Broadway watching the Battle of Flowers and Fiesta Flambeau, but that's exactly what can happen in my community in San Antonio because of the main line. Thank you.

Mr. GONZALEZ. Thank you very much, Ms. Hinton. I yield back to the Chairwoman.

Ms. BROWN. I want to thank you. I want to thank all of the witnesses for your testimony, and we will take it back, and take it under advisement. Thank you, Congressman, for inviting us to come here, and unless there's further business, this subcommittee will stand adjourned. Thank you very much.

[Whereupon, at 1:40 p.m., the Subcommittee was adjourned.]

Statement of
The Honorable Corrine Brown
Chairwoman
Subcommittee on Railroads, Pipelines, and Hazardous Materials
Field hearing on the Role of Human Factors in Rail Accidents
March 16, 2007

I want to welcome our distinguished panelists and guests to today's hearing on The Role of Human Factors in Rail Accidents. I want to thank Congressman Gonzalez for inviting us and for hosting us in this great city.

Congressman Gonzalez testified at one of a series of safety hearings that the Subcommittee held this Congress. He made it clear that the people of San Antonio were extremely concerned about the large number of train accidents that have occurred in their community and wanted to work with the Federal Railroad Administration (FRA), the National

Transportation Safety Board (NTSB), and the railroads to provide solutions to the problem.

Our subcommittee has held several hearings on safety and fatigue in the rail industry and is in the process of developing legislation that will address training, fatigue, and other human factor issues, which consistently rank as one of the top two causes of all rail accidents each year, and account for approximately 40 percent of all rail accidents annually.

Congress last passed legislation to reauthorize the FRA in 1994. That authorization expired in 1998. Since that time, the railroad industry has changed dramatically. Economic growth and an increase in international trade have led to record traffic levels.

Unfortunately, that has put a lot of pressure on our rail system and has had a significant impact on worker and public safety.

According to the FRA, there were 2,835 train accidents in 2006, which resulted in six fatalities and 172 injuries. Twelve percent of those accidents, or 342 train accidents, occurred in Texas – the highest number of train accidents among all of the states.

But I believe that working together with all the stakeholders – the Federal Government, the states, the railroads, the workers, and the local communities – we can improve safety and security in the rail industry.

Again, I want to thank Congressman Gonzales and the City of San Antonio for hosting this important hearing on rail safety. I look forward to hearing from everyone today on ways we can improve rail safety in San Antonio and throughout the nation.

Before I yield to Mr. Gonzalez for an opening statement, I ask unanimous consent for Mr. Gonzalez and any other Member of the House who wishes to participate in today's hearing to sit and ask questions of the witnesses.

Without objection, so ordered.

Mr. Gonzalez.

Testimony of Congressman Charles A. Gonzalez (TX-20)
Before the Subcommittee on Railroads Pipelines
and Hazardous Materials
House Committee on Transportation and Infrastructure
Hearing on Reauthorization of the Federal Rail Safety Program
Friday, March 16, 2007, San Antonio, TX

Chairwoman Brown, Ranking Member Shuster, and Members of the Subcommittee, I thank you for the opportunity to testify for a second time as you consider the reauthorization of the Federal Rail Safety Program. Thank you also for scheduling this field hearing in San Antonio. A spate of recent train accidents in this area makes rail safety a high priority for the residents of Congressional District 20, and I am pleased to appear today on their behalf. My comments will focus on the matter of railroad safety in general.

Let me begin my remarks by stating that, while some progress has been made in recent years toward improving the level of safety with which our nation's rail system operates, much remains to be done in order to ensure that railroad accidents and incidents are minimized both in number and in the extent of damage they cause. My testimony today draws upon several examples from the San Antonio area that highlight the continuing need to improve the safety performance of our nation's railroads.

The Federal Railroad Administration (FRA) reports that in 2006, for the second year in a row, the number of train accidents declined nation wide. I have

seen the figures, and this is indeed good news. The FRA and our country's rail companies should be congratulated on their progress toward a better record of safety.

Despite this positive sign, however, a number of disturbing statistics in the same report reveal that we have a long way to go in preventing death and injury on the rails. While accidents, as the FRA defines them, have declined for two years in a row, they are the cause of only a tiny fraction of total train-related fatalities. Last year a total of 12,833 train-related accidents or incidents are reported to have occurred in the United States.[1] 2,834 of these were actual train accidents, primarily involving train collisions or train derailments. This is the category of train wrecks traditionally used by the FRA in press releases claiming progress on rail safety. The number in 2005 was 3,225, demonstrating a decline of 391 "accidents" from 2005 to 2006.

Another 2,897 wrecks involved highway-rail collisions. Highway-rail accidents are considered separately from train accidents and are statistically far more deadly. While 6 people were killed in train accidents in 2006, 362 people were killed in highway-rail accidents. As the FRA admits, fatalities in the highway-rail accident category actually increased 1.4% from 2005 to 2006.

[1] These statistics are drawn from the Federal Railroad Administration website and were accessed March 13, 2007. http://safetydata.fra.dot.gov/officeofsafety/Default.asp

Finally, an additional 7,102 "other incidents" occurred in 2006. The vast majority of fatalities in 2006 resulted from highway-rail collisions, or from other incidents—often involving trespassers on the rails. To reiterate, the number of fatalities due to train accidents, that is, involving individuals riding trains and killed as a result of impact in a crash, was just 6 last year, down from 33 the previous year. Sadly, the combined number of fatal train accidents, highway-rail accidents, and other train-related incidents increased from 808 in 2005 to 850 in 2006, resulting in a total of 915 deaths, up from 888 in 2005.

During the same period, 1,172 train-related accidents or incidents occurred in Texas. Of these, 58 occurred in Bexar County alone. The FRA reports that Texas led the country in reduction of number of train accidents, an encouraging statistic. Still, train accidents accounted for 342 of the state total for train-related accidents or incidents, and resulted in 3 of the 93 total train-related fatalities that occurred in Texas in 2006.

Although rail transportation will always involve a level of risk to operators and to persons in close proximity to the tracks, the number and severity of rail accidents that occur on our nation's rail system must be reduced. Efforts must be made to reduce not just train accidents and resulting fatalities, but also highway rail, and other train related incidents, as these categories also cause the largest number of fatalities. The number of serious train accidents and incidents in or near

my San Antonio area congressional district over the past few years clearly demonstrates the need for improved rail safety.

The most serious accident to occur in the past three years was one that occurred on June 28, 2004 in Macdona, TX, southwest of San Antonio. In this accident, a collision occurred between trains owned by Union Pacific Railroad (UP) and Burlington Northern & Santa Fe Railroad (BNSF). Forty cars derailed in the accident. Tragically, one of the cars carrying toxic chlorine gas ruptured. Exposure to the gas caused the death of the conductor on the train and of two residents living nearby the crash site. Fifty other people had to be hospitalized due to chlorine exposure. Many of these victims are still suffering from their injuries today.

A month prior to the deadly June 2004 derailment, a wreck near Brackenridge High School injured three and spilled 5,600 gallons of diesel fuel along the San Antonio River. It was sheer luck that four tank cars carrying highly explosive propane did not derail. Just three months later, in September 2004, another accident occurred at the same location, this time without hazardous spills or injury. While I am thankful that these accidents were not worse, we must not resign ourselves to the powerless position of reliance upon chance in potentially deadly situations. The children at that San Antonio area school may not be spared injury in a future accident, so we must do everything in our power to prevent it.

In November 2004, a mere five months after the fatal June 2004 accident, Bexar County was once again the site of a fatal train accident. This time, a Union Pacific train car collided with the Crystal Storage Company building on the east side of San Antonio. Significant damage was done to the building, but even more important, tragically, a man sitting at his desk inside the building was crushed between the train and the walls of the building and was killed.

All told, at least six major train-related accidents or incidents occurred in Bexar County in 2004. Four people died as a result of these incidents; many who were injured continue to suffer from their injuries today.

Moreover, on February 11, 2005, just 50 miles north of the City of San Antonio, the City of San Marcos was the victim of a seven car Union Pacific train derailment. A number of the cars were carrying hazardous materials, prompting the evacuation of 200 residents. Chance was again on our side as none of the cars ruptured, and no one was injured.

Last year, another major train derailment occurred near downtown San Antonio. On October 18, 2006, seventeen Union Pacific cars jumped the tracks. Miraculously, even though the accident occurred in a highly populated area of the city, no serious injuries occurred. However, two homes were struck by derailed cars and were severely damaged.

Some of the outstanding safety issues, which, in my opinion, have not been adequately addressed over the years include, but are not limited to, the following:

- Employee fatigue
- The use of positive train controls
- Improved safety and security of remote control train operations
- Safety inspections of locomotives and the maintenance of tracks

It is well known that limits on an employee's hours of service have not been enough to prevent employee fatigue, a concern that by the Federal Railroad Administration's own admission is a significant cause of train accidents. I am pleased that the bill to reauthorize the federal rail safety program introduced last month includes a proposal to replace outdated railroad hours of service laws with scientifically based regulations similar to hours of service standards governing truck drivers. This development begins to address concerns about fatigue as a cause of train wrecks.

With respect to positive train controls, the National Transportation Safety Board (NTSB) has been calling for the use of positive train controls since 1990, when it was listed on the NTSB's Most Wanted List of Transportation Safety Improvements. Positive train controls are used in an effort to mitigate the severity of accidents caused by human factors. I understand that the FRA has recently announced that it has approved the first positive train control technology that

automatically controls speed and movements and is designed to avoid certain accidents. I applaud the FRA on their efforts and encourage them to continue to study the use of this technology and implement it where appropriate.

Another concern is the increased use of remote controlled locomotives. The use of remote controlled locomotives has been such a concern to 43 cities and 20 counties throughout the United States that they have passed resolutions regarding the use and safety of remote controlled locomotives in their localities. In fact, because of a fatal train accident involving the use of remote controls in Syracuse, New York in December 2006, the FRA has issued a series of recommendations to the railroad industry governing the use of remote control trains. However, history shows us that recommendations to the industry may not go far enough; actual regulations governing the use of remote control locomotives should be implemented and enforced.

Finally, the FRA must continue to ensure that the railroads are conducting the proper safety inspections, not only of the locomotives themselves, but also of the rail tracks, bridges and rail crossings. I was very concerned when Union Pacific railroad recently applied to the FRA for a waiver of certain safety inspections for trains coming from Mexico into the United States. I made my opposition to this request quite clear in a January 10, 2007 letter to the FRA Administrator, Mr. Joseph Boardman. This request was also made in 2004, but the

FRA denied it. I was pleased to hear in late January that Union Pacific Railroad pulled its latest request for this waiver.

With regard to inspection of equipment and tracks, I was also pleased to read in a recent letter from Administrator Boardman that the FRA has acquired additional automated track inspection vehicles that will significantly increase the miles of track inspected. The adoption of a new "Close Call" program is also a positive safety development. This system, which allows employees to anonymously report "close call" incidents that could have resulted in an accident but did not will provide additional opportunities to analyze and correct problems with rail safety.

I think we can all agree that now is not the time to relax railroad safety standards and inspections. Rather, it is time to re-examine old ones, consider new safety regulations, and ensure that those in place are properly enforced.

Members of the Committee, my constituents here in Bexar County and taxpayers across this nation deserve a safer rail system. The picture of rail safety presented to you here is one of tragedy, and one of narrow escapes. None of us can afford to sit idly by, hoping that a major train accident will not cause fatalities or injuries in our neighborhoods, especially when we know that there are outstanding safety precautions that have yet to be implemented. That is why I am pleased to appear before you today to share my experiences and concerns regarding rail

safety. As you consider the reauthorization of the Federal Rail Safety Program, I urge you to focus not merely on the security aspects of the nation's rail system, the protection of these assets against attack, but also on the safety of the system that our constituents rely upon.

I sincerely appreciate the Members' interest in this subject and thank the Subcommittee for holding this extremely important field hearing.

United States House of Representatives
Committee on Transportation and Infrastructure
Subcommittee on Railroads, Pipelines and Hazardous Materials
Role of Human Factors in Rail Accidents
Testimony of Maria Antonietta Berriozabal
Former City Council member
San Antonio, Texas
March 16, 2007

Good morning Chairwoman Brown, Ranking Member Shuster and Members of the Subcommittee. Thank you for accepting the invitation of our Congressman Charlie Gonzalez to hold this hearing in San Antonio. Madame Chairwoman, thank you for inviting me to come before you today.

I am here as a resident of one of the oldest neighborhoods in San Antonio, the Beacon Hill neighborhood. I come as an resident of this city who like many others has a deep concern about rail safety. The Union Pacific rail line is two blocks from my home.

On the morning of October 17, 2006, I was working at home when my sister who lives several miles away from me called to ask me if I was being evacuated. I was startled by her question. She informed me that she had just seen a television report that people in my area of town were being evacuated because there had been a trail derailment. Without even waiting for more details I ran out to see if I could see anything from my front yard. I could see nothing from my vantage point, however, I thought of my very elderly friend from church Mrs.Torralva who lives on my street. Her house is about 30 yards from the railroad tracks. I quickly got into my car and started to drive to her house and all of a sudden something struck me: "What if the train was carrying toxic chemicals and that is why my sister said they were evacuating people?" I went back into my house and learned from the special television coverage that there were no dangerous chemicals on the train that had derailed. By the time I got to Hickman Street that is six blocks from my house the streets were already closed. I could only see several railcars off the tracks. I had learned in the news that the train had actually hit a house by the tracks. Since that time I have learned that the house was owned by the Alvarez family, and that the train derailment has left Martin Alvarez, his wife and young daughter homeless, with their lives torn apart.

This story points to several issues

- The Union Pacific railroad lines as they cross our city are lined with hundreds of homes and businesses. There are large numbers of small houses belonging mostly to working class and poor families whose home is the major investment of their lives. In my own neighborhood there are many elderly who have lived in these homes for many years.
- A few houses from Mrs. Torralva lives Mr. Ray Liberto another friend from my church. Mr. Liberto gets around in a wheelchair.

- Within a block of the derailment are located two publicly subsidized apartment complexes for elderly and handicapped individuals. One of these is a high-rise apartment where mostly elderly persons live.
- According to an extensive story done by the Express News entitled "A City at risk – Miles of potential danger" there are approximately 73 public schools within one half mile of a rail line.
- Our Beacon Hill neighborhood is sandwiched between two rail lines located east and west of us. If we want to go downtown, we have to cross the rail track again.
- And there is that major threat for us all. Whether we live yards from the railroad tracks or miles away like my sister we are all in danger of a derailment of a train carrying hazardous materials, particularly toxic chemicals. Whether we are rich or poor we are all seconds from a major disaster.
- We are not ready for such an accident. Our city and county are very limited in the kind of investment that needs to be made to prepare a city this large for a major chemical spill.
- Even the mere loss of property can be profoundly destructive in the lives of poor and working class people whose lives are held in a delicate balance of hard work, thrift, and ingenuity.

What these facts shape is a worry for all of us. We worry about our families and the families of our neighbors. People like the Torralvas, the Libertos, the Velasquez and the Alvarez. And as a community we grieve the loss of Gene Hale, Lois Koerber, Heath Pape and Rob Whitworth in Macdona for whom all these discussions were too late to save their lives.

We know that what happened to the Ralph Velasquez family of Macdona, Texas can happen to any of us. We worry about chemicals like sodium hydroxide which can cause burning or liquefied petroleum gases which are flammable and highly explosive. Other toxic chemicals are sulfuric acid, paraformalydehyde and toluene disocyanate which can also be very harmful. And it was chlorine that killed the four people in Macdona and did irreparable damage to the health of the Velasquez family.

Trains carrying these chemicals go by our neighborhoods day and night and the big problem is that we don't even know which trains are carrying these chemicals or when they are moving as close as 30 yards to a person's home such as Mrs. Torralva. We know that some of what these trains are carrying is not even intended for San Antonio. They use our railroad tracks to get materials to other places and it is our lives that are put in danger.

But hazardous materials are not the only problems that my neighbors and I see.

Both the train collision that injured the Velasquez family and the derailment that uprooted the Alvarez family were caused by human error, and we know that both of these accidents were caused or aggravated by train crew fatigue. It is simply irresponsible for Railroad companies to schedule train crews in the erratic and unpredictable shifts that they now use. The railroad companies knowingly put their crew members into a state of

perpetual exhaustion and then allow them to drive dangerous trains through highly populated areas. My neighbors and I worry about the callous disregard for human life that is reflected in these practices and we worry about the indifference of government agencies who are supposed to be protecting us.

What we ask of this committee is that in cases like the Alvarez Family who lost not only a structure that was their home but they lost the history of a family that they be compensated for all their loses, including for the serious emotional disruption and multiple economic consequences of this tragedy. This was a trauma for Martin, Belinda, and Amanda Alvarez and for all of the Alvarez family. Their lives will never be the same again.

Our local government is working hard to beef up our emergency response teams particularly in cases of train derailments of which we have had more than our share but they need help from the federal government in terms of reimbursements for these costs.

We need our federal government's help to our city and county in resources to properly train citizens like me on how to respond to a train derailment. Had there been hazardous materials in the train that derailed five blocks from my house many of my neighbors would have done what I did. Run to the derailment instead of away from it. What is a citizen to do in these cases?

The years that I served as City Council representative my constituents and I had a great challenge with the simple issue of getting the Union Pacific to maintain its right of way in proper order. Even finding the right person to address on these small issues was a problem. Today the challenge continues to keep the UP right of ways free of weeds and debris. A bigger problem is the condition of the rail tracks and other railroad infrastructure. Union Pacific must do a much better job of inspecting its rail tracks. Over the years there has been serious deterioration. Bridges and rail crossings must also be inspected regularly. We trust that those lights and rail tracks are in good shape. Is our trust well founded?

A great need that exists is policies that would remove any trains carrying hazardous materials from going through our city. Ultimately, what is needed is the relocation of rail lines from the midst of our city.

We hold our officials at the local, county and state level accountable for keeping us safe. They are doing their job, but they cannot do it alone. We need our federal government to help us. Madame Chairwoman Brown, we trust that under the leadership of Chairman Oberstar and yours, and working with Congressman Gonzalez, that our pleas of so many years will finally be heard. We are putting our trust in you.

National Transportation Safety Board

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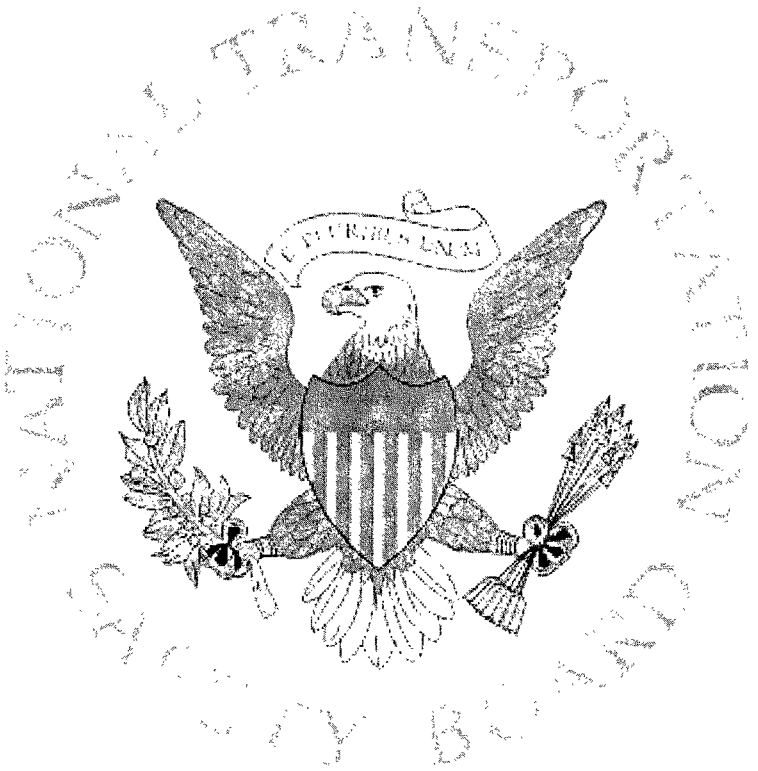

Bob Chipkevich
Director
Railroad, Pipeline, and Hazardous Materials Investigations

Testimony of Bob Chipkevich
National Transportation Safety Board
Before the
U.S. House of Representatives
Committee on Transportation and Infrastructure
Subcommittee on Railroads, Pipelines and Hazardous Materials
Human Factors in Rail Accidents
March 16, 2007

Good afternoon Chairwoman Brown, Ranking Member Shuster, Members of the Subcommittee and Members of Congress. My name is Bob Chipkevich, I am the Director of the Office of Railroad, Pipeline and Hazardous Materials Investigations at the National Transportation Safety Board. Mark Rosenker, Chairman, has asked me to represent the Safety Board today. Madame Chairwoman, I would like to take this opportunity to thank you, for inviting the Safety Board to testify today on the topic of Human Factors in Rail Accidents and for your continued interest in furthering the safety of our Nation's railways.

Since 2001, the National Transportation Safety Board has investigated 29 railroad accidents involving train collisions and over-speed derailments. Most of these accidents occurred after train crews failed to comply with train control signals, failed to follow operating procedures in non-signaled (dark) territories, or failed to comply with other specific operating rules such as returning track switches to normal positions after completing their work at track sidings. Our accident investigations have identified human performance failures related to fatigue, medical conditions such as sleep apnea, the use of cell phones, the use of after-arrival track warrants in dark territory, loss of situational awareness, and improperly positioned switches. Human fatigue has been identified as a safety issue in many railroad accidents over the years, including the June 28, 2004, accident in Macdona, Texas, that resulted in the deaths of three people from chlorine gas inhalation. Because we provided detailed testimony on fatigue at a railroad safety hearing earlier this year before this Subcommittee, I will focus my testimony today on other human factor issues related to railroad accidents and actions that are needed to prevent additional accidents.

Positive Train Control

The Safety Board has made numerous safety recommendations to address specific human factor issues, and I will discuss these issues later in my testimony. However, we have repeatedly concluded that technological solutions, such as positive train control systems, have great potential to reduce the number of serious train accidents by providing safety redundant systems to protect against human performance failures. As a consequence, positive train control has been on the Safety Board's list of Most Wanted transportation safety improvements for 17 years.

The objective of positive train control is to prevent train collisions and over-speed accidents by requiring automatic control systems to override mistakes by human operators. This issue was highlighted in 2002 when a freight train and a commuter train collided head-

on in Placentia, California, a high-speed corridor where commuter and intercity passenger trains operate. The Safety Board reiterated Safety Recommendation R-01-6 to the FRA to facilitate actions necessary for development and implementation of positive train control systems that include collision avoidance, and require implementation of positive train control systems on main line tracks, establishing priority requirements for high-risk corridors such as those where commuter and intercity passenger railroads operate. More recently, the Board found that the lack of a positive train control system contributed to a commuter train derailment in Chicago, Illinois, in 2005, that killed two passengers.

The FRA's Railroad Safety Advisory Committee (RSAC) established a working group to address positive train control. The group was tasked to address the Federal regulations and their applicability to new train control systems under development, and to draft new regulations as necessary. The FRA published a final rule in the Federal Register titled "Standards for Development and Use of Processor-Based Signal and Train Control Systems," which became effective on June 6, 2005. As a result of FRA's responsiveness, Safety Recommendation R-01-6 is classified "Open—Acceptable response."

We are pleased to note that today, several railroads are moving to develop positive train control systems. For example, in January of this year, the FRA approved a BNSF Railway project for its Electronic Train Management System (ETMS), an overlay technology that augments an existing train control method. The ETMS system includes an in-cab electronic display screen that will first warn of a problem and then automatically engage the train's braking system if the locomotive engineer fails to act appropriately. The FRA action allows BNSF to implement ETMS on 35 specific freight lines in 17 states.

The Union Pacific Railroad (UP) is working on a communication-based train control system pilot project that will enforce stop signals, dark territory authority limits, and speed restrictions. Field tests are scheduled to be conducted on two test beds and will cover about 333 miles of track. They began installing test equipment on locomotives in September 2006.

Although we are encouraged with progress underway by some railroads, we note that positive train control systems are needed on railroad systems across the entire United States. Next Tuesday, March 20th, the Board will deliberate on the probable cause of yet another collision between two freight trains, this time in Anding, Mississippi, on July 10, 2005. Two CN freight trains collided head-on about 4:15 a.m., killing all four crewmembers. Damages and clean-up costs alone exceeded $10 million dollars. The lack of a positive train control system will be a safety issue, yet again, addressed by the Board.

Medical Conditions

Safety Board accident investigations have also addressed specific human factor safety issues. The Board identified inadequate requirements for identifying and addressing potentially incapacitating medical conditions of railroad employees who carry out safety sensitive duties. The Board found that the probable cause of a collision between two CN freight trains near Clarkston, Michigan, on November 15, 2001, was train crewmembers'

fatigue (for the train that did not stop for a stop signal), which was primarily due to the engineer's untreated and the conductor's insufficiently treated obstructive sleep apnea.

Both crewmembers of the train that passed the stop signal had been told by their private physicians that they had (or likely had) obstructive sleep apnea, but neither employee informed the CN of his potentially incapacitating condition. Company physical exams did not include questions about sleeping disorders or other chronic problems that might cause performance-impairing fatigue. FRA certification requirements for locomotive engineers focus on specific vision and hearing acuity standards but do not provide guidance regarding medical conditions that should be considered in the course of an examination. The Board also found that no standard medical examination form exists in the railroad industry.

On November 27, 2002, the Safety Board recommended that the FRA develop a standard medical examination form that includes questions regarding sleep problems and require that the form be used to determine the medical fitness of locomotive engineers, and that the form also be available for use to determine the medical fitness of other employees in safety-sensitive positions (R-02-24). The Board also recommended that the FRA require that any medical condition that could incapacitate, or seriously impair the performance of, an employee in a safety-sensitive position be reported to the railroad in a timely manner (R-02-25). Further, the Board recommended that the FRA require that, when a railroad becomes aware that an employee in a safety-sensitive position has a potentially incapacitating or performance-impairing medical condition, the railroad prohibit that employee from performing any safety-sensitive duties until the railroad's designated physician determines that the employee can continue to work safely in a safety-sensitive position (R-02-26).

In response to these safety recommendations, in 2004,the FRA issued a safety advisory to highlight the relationships between medical conditions (particularly sleep problems) and impaired performance. Further, a study completed by a contractor for the FRA on the need and options for implementing medical standards was completed in January 2005, nd presented to the RSAC. The report concludes that there is a need for a consistent industry-wide medical standard program for railroad workers and recommends that the FRA expedite the development of a medical standard program for the industry. This issue is now in review at the RSAC. All 3 safety recommendations are classified "Open—Acceptable Response."

Use of Cell Phones

On May 28, 2002, two BNSF Railway freight trains collided head-on near Clarendon, Texas. The Safety Board determined that the probable cause of the accident was the coal train engineer's use of a cell phone during the time he should have been attending to the requirements of the track warrant his train was operating under, and the unexplained failure of the conductor to ensure that the engineer complied with the track warrant restrictions. Contributing to the accident was the absence of a positive train control system that would have automatically stopped the coal train before it exceeded its authorized limits.

Locomotive engineers commonly use the locomotive radio to communicate with the dispatcher or other railroad employees. At the same time, cell phones are becoming more prevalent, and all four crewmembers involved in this accident had personal cell phones with them. The engineer of the coal train had used his cell phone for two personal calls the morning of the accident, one call for 23 minutes and then a second call for 10 minutes shortly before the accident. The engineer was on the second call as he passed the location at which he should have stopped and waited for the arrival of another train. The Safety Board concluded that the engineer's cell phone use likely distracted him to the extent that he did not take proper note of the after-arrival stipulation imposed by a track warrant and thus was unaware of the need to prepare to bring his train to a stop.

As a result of an unrelated collision on a different BNSF subdivision, the railroad issued instructions to operating employees on June 18, 2002, that prohibit locomotive engineers from using cell phones and laptop computers while operating the controls of a locomotive.

Cell phone use interferes with the perception process during the performance of operational tasks. A crewmember who is on a cell phone may miss information broadcast on the locomotive radio from a dispatcher, from wayside defect detectors, or from train crews from a passing train. When used by either the engineer or conductor, a cell phone may distract the other crewmember or terminate the normal interaction between the two. Further, one employee may wish to ask a question or offer a reminder but may choose to not disturb the employee who is using the phone. Additionally, an incoming call may be a significant distraction to a person who is engaged in a particular task at a critical time.

Federal regulations do not prohibit a locomotive engineer from using a cell phone while at the controls of a moving train. On June 13, 2003, the Safety Board recommended that the FRA promulgate new or amended regulations that will control the use of cellular telephones and similar wireless communication devices by railroad operating employees while on duty so that such use does not affect operational safety (R-03-1).

The FRA responded that by and large, railroads across the country have promulgated, or are promulgating, operating rules that prohibit or severely restrict cell phone use by employees moving equipment and in other situations, such as switching activities or when inspecting passing trains. FRA noted that the railroad industry's enforcement of its operating rules governing cell phone use is sufficient to address the issue without the need for Federal regulations. However, the Safety Board does not share the FRA's confidence that the railroad industry has taken sufficient steps to prevent the use of cell phones for personal matters when crewmembers should be attending to the operation of the train. The Board is concerned that the risks of complacency and attention deficiencies associated with cell phone use are not sufficiently understood or recognized. Unlike some other distractions to operating crewmembers, cell phone use has the potential to distract crewmembers for a considerable length of time, and is avoidable. The FRA acknowledged its concern and issued instructions to its staff to watch for use of cell phones, and has asked railroad members of the Railroad Safety Advisory Committee to provide information about their instructions for use

of cellular phones before determining what actions, if any, the FRA should take. The safety recommendation is currently classified "Open—Acceptable Response."

After-Arrival Track Warrants in Non-Signaled (Dark) Territory

Non-signaled (dark) territory presents a unique problem for rail safety. In dark territory there are no signals to warn trains as they approach each other, and the avoidance of collisions relies solely on dispatchers and train crews adhering to operating procedures. Issuing after-arrival track warrants under these conditions exacerbates an already potentially tenuous and contingent work situation. (An after-arrival track warrant is a conditional authority given to a train crew by a dispatcher. It authorizes the train crew to proceed ahead only after another specifically identified train that is en route to their location has arrived.) While the railroad industry contends that after-arrival track warrants facilitate the expedient and efficient movement of trains, and the FRA has seen merit in the industry's logic, ultimately, the role of human error and the cost of human casualties also must be considered in this equation.

The Safety Board has investigated a number of accidents involving after-arrival track warrants in non-signaled territory. In 1996, in Smithfield, West Virginia, the Board investigated a head-on collision between two CSX Transportation freight trains operating under after-arrival operating procedures. CSX Transportation subsequently discontinued the use of after-arrival authorities in non-signaled territory. In 1997, the Board investigated a collision between two Union Pacific Railroad freight trains in Devine, Texas. As a result of the Devine investigation, the Board recommended that the FRA permanently discontinue the use of after-arrival orders in non-signaled territory (R-98-27). The safety recommendation was classified "Closed—Unacceptable Action" on June 29, 1999.

After investigating the 2002 head-on collision between two BNSF trains in Clarendon, Texas, the Safety Board recommended that the FRA limit the use of after-arrival orders in non-signaled territory to trains that have stopped at the location at which they will meet the opposing train (R-03-2). The safety recommendation was classified "Closed—Unacceptable Action" on August 6, 2004.

On May 19, 2004, the Safety Board investigated yet another head-on collision between two BNSF freight trains near Gunter, Texas. Again, the trains were being operated under track warrant rules on non-signaled territory. The Safety Board has concluded that informal communications between the dispatcher and train crews regarding authority limits, train names, and meeting or stopping points may lead to misunderstandings and errors. In the opinion of the Board, the use of after-arrival track warrants for train movements in dark (non-signaled) territory creates an unacceptable risk of collision. The Board also concluded that had the FRA required railroads to permanently discontinue the use of after-arrival orders in dark territory as advised in Safety Recommendation R-98-27, this accident would *not* have happened. Further, the Board concluded that had a positive train control system with collision avoidance capabilities been in place and operational on the subdivision at the time of the accident, the collision would *not* have occurred. On June 29, 2006, the Board again recommended that the FRA prohibit the use of after-arrival track warrants for train

movements in dark (non-signaled) territory not equipped with a positive train control system (R-06-10). The FRA responded on October 23, 2006, that this issue merits further study and that it will refer it to an RSAC working group for consideration.

Loss of Situational Awareness

The Safety Board has investigated accidents in which the loss of situational awareness was a factor. In its investigation of the collision of an Amtrak train with a Maryland Rail Corporation (MARC) train in Baltimore, Maryland in 2002, the Safety Board concluded that a factor in the accident was the engineer's unfamiliarity with equipment. Specifically, the Amtrak engineer, with about 6 months of operating experience over the territory, had a train that was pulled by two locomotives of a type she had never operated. In addition, she had had limited experience operating locomotives as multiple units. As the engineer was approaching Baltimore Station, she became overly concerned with and focused on maintaining her speed; as a result, she did not see either the cab or wayside signals indicating that she should stop. She continued past the signals and collided with a MARC train near the station.

On October 12, 2003, a Northeast Illinois Regional Commuter Railroad (Metra) train derailed in Chicago, Illinois, at a speed of about 68 miles per hour as it traversed a crossover from track 1 to track 2. The maximum authorized speed through the crossover was 10 mph. There were 375 passengers and a crew of 3 onboard; 47 passengers were transported to hospitals.

During interviews with Safety Board investigators, the engineer discussed some operational concerns he had had soon after he began the trip. None of the fundamental tasks (train handling, signal recognition, and operating rules) faced by the engineer on the day of the accident was beyond his capabilities. However, when his belief that he was operating on clear signals was coupled with his unresolved concerns about the location of a work crew, when he would be crossed over, and other tasks, his ability to operate the train safely was affected.

The engineer was confronted with a number of tasks that he should have handled more effectively. Training programs should help prepare students for "real-world" situations and teach them how to effectively prioritize conflicting tasks. The Safety Board concluded that the cumulative operating concerns of the engineer likely diverted his attention from the safety-critical task of observing and complying with signal indications. The Board also concluded that the Metra accident is another in a series of accidents that could have been prevented had there been a positive train control system at the accident location. On November 23, 2005, the Safety Board recommended that the FRA develop guidelines for locomotive engineer simulator training programs that go beyond developing basic skills and teach strategies for effectively managing multiple concurrent tasks and atypical situations (R-05-9).

On May 26, 2006, the FRA responded that it agreed that developing guidelines for locomotive skill development that contribute to good situational awareness is worthy of

consideration, both as a further contribution to the quality of existing training programs and as a means of benchmarking the various programs. The FRA noted that while it did not currently have funding available to initiate this action, it would try to identify resources to undertake the work. The Safety Board staff is currently studying the FRA's activities related to this issue, and Safety Recommendation R-05-9 is classified "Open—Response Received."

Improperly Positioned Switches

One of the most serious hazardous materials train accidents in recent years occurred in Graniteville, South Carolina on January 6, 2005, after a Norfolk Southern Railway Company freight train, while traveling 47 mph, encountered an improperly positioned switch that diverted the train from the main line onto an industry track, where it struck an unoccupied, parked train. The track through Graniteville was non-signaled (dark) territory. Nine people died as a result of chlorine gas inhalation after a tank car was punctured during the accident.

The investigation determined that the improperly lined switch had most recently been used by the crew of a local train about 8 hours before the accident. The crew had lined the switch for an industry track in order to place two cars at a local plant and then park their train. No crewmember remembered relining the switch for the main line before they boarded a taxi and returned to the terminal. The Safety Board concluded that the local train crew failed to reline the main line switch for one or more of the following reasons: (1) the task of relining the switch was functionally isolated from other tasks the crew was performing, (2) the crewmembers were rushing to complete their work and secure their train before reaching their hours-of-service limits, (3) the crew had achieved their main objective of switching cars and were focused on the next task of securing their equipment and going off duty, and (4) the switch was not visible to the crew as they worked, leaving them without a visual reminder to reline the switch.

On September 15, 2005, a Union Pacific Railroad train entered a siding in Shepherd, Texas, at approximately 37 mph and struck a parked train, killing one crewmember. There were no wayside signals to govern the train movements or protect the train from an interruption in the continuity of the track, such as an open switch. Consequently, strict compliance with the operating rules was necessary to protect one train from another. The probable cause of this accident was the failure of a previous crew to return a main track switch to the normal position after they had secured the train on the siding and departed the area.

The Safety Board was concerned as early as 1974 about the issue of train speeds in areas not under a form of centralized traffic control. As a result of its investigation of an accident in Cotulla, Texas, involving a misaligned switch in non-signaled territory, the Board recommended that the FRA determine and assess the current risks of train accidents involving misaligned switches, collisions, broken rail, and other route obstructions on main track where automatic block signal systems do not exist, and to promulgate regulations that detail the major risks and controls assumed, set guidelines for safe operations below the maximum operating speed, and assign responsibility to the carrier for safe operations.

Because the FRA's actions did not satisfy the Safety Board's intent that new regulations specify circumstances that required when trains be operated below the allowable maximum speed, Safety Recommendation R-74-26 was classified "Closed—Unacceptable Action."

Measures beyond additional operating rules, forms, or penalties, are needed to ensure that accidents such as the one in Graniteville, South Carolina, do not recur. On December 12, 2005, the Safety Board issued Safety Recommendation R-05-14 to the FRA to require that, along main lines in non-signaled territory, railroads install an automatically activated device, independent of the switch banner, that will, visually or electronically, compellingly capture the attention of employees involved with switch operations and clearly convey the status of the switch both in day and in darkness. In a letter dated June 30, 2006, the FRA acknowledged that additional actions are needed to protect the safety of trains in dark territory and that over time, positive train control will serve this function. However, it noted concern that any system that requires power at the switch location will involve significant costs, simply because of the number of switches involved. The letter advises that the FRA has initiated a project to evaluate a system that it believes will be able to detect and report switch point gapping for switches on main line tracks located within dark territories as an alternate action. Safety Recommendation R-05-14 is classified "Open—Response Received."

The Safety Board also recommended that the FRA require railroads, in non-signaled territory and in the absence of switch position indicator lights or other automated systems that provide train crews with advance notice of switch positions, to operate those trains at speeds that will allow them to be safely stopped in advance of misaligned switches (R-05-15). In its June 30, 2006, letter the FRA states that it does not believe the recommendation is feasible for operational and economic reasons and may also increase the risk of derailments. The FRA hastened to add that there are undoubtedly certain situations where requiring trains to approach switches prepared to stop would be practical and an appropriate safety response, and that railroads should consider this option as they conduct risk assessments of their hazardous materials routes. However, the FRA states that it is not aware of any means to describe how this strategy could be applied in a safe and cost-effective manner. The FRA requested that the Safety Board classify the safety recommendation as "Closed—Reconsidered." The safety recommendation is currently classified as "Open—Response Received" and the Board is evaluating the information provided by FRA.

Finally, the Safety Board believes that modeling accident forces and applying fracture toughness standards, as recommended in the Minot, North Dakota accident report, will improve the crashworthiness of tank cars transporting hazardous materials. However, because of the time that it will take to design and construct improved tank cars, the Board believes that the most expedient and effective means to reduce the public risk from the release of highly poisonous gases in train accidents is for railroads to implement operational measures that will minimize the vulnerability of tank cars transporting these products. For example, in Graniteville, the chlorine tank car that was punctured was in the ninth position of 42 freight cars in the train; the front 16 freight cars derailed. In Macdona, the punctured chlorine tank car was in the 16th position of 74 freight cars in the train; the front 19 cars in this train derailed. Following the Graniteville accident, the Board recommended that the

FRA require railroads to implement operating measures, such as positioning tank cars toward the rear of trains and reducing speeds through populated areas, to minimize impact forces from accidents and reduce the vulnerability of tank cars transporting chlorine, anhydrous ammonia, and other liquefied gases designated as poisonous by inhalation (R-05-16). In its response of October 24, 2006, the FRA stated that it believes that placing toxic inhalation hazard cars at the rear of a train would do little to protect them from damage and that slowing trains could have a negative impact on operations, however it would continue to examine the issue. This safety recommendation is currently classified as "Open—Response Received."

Madame Chairwoman, this completes my statement, and I will be happy to respond to any questions you may have.

Written Statement of
Grady C. Cothen, Jr.,
Deputy Associate Administrator
for Safety Standards and Program Development,
Federal Railroad Administration,
U.S. Department of Transportation
before
the Subcommittee on Railroads, Pipelines, and Hazardous Materials,
Committee on Transportation and Infrastructure,
U.S. House of Representatives

March 16, 2007

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Subcommittee Chairwoman Brown, Ranking Committee Member Shuster, Representative Gonzales, and other Members of the Committee, I am very pleased to be here in San Antonio today, on behalf of the Secretary of Transportation and the Administrator of the Federal Railroad Administration (FRA), to discuss the specific topic of this hearing, the "Role of Human Factors in Rail Accidents," as well as other issues that relate to some recent, fatal rail accidents in the San Antonio region and to highway-rail grade crossing accidents in the State. To start, I will briefly describe FRA's railroad safety program in general. Then, I will revisit subjects that FRA's Administrator Joe Boardman addressed, at least in part, in his testimony earlier this year before this Subcommittee: first, the status of implementation of the aspects of FRA's National Rail Safety Action Plan that relate to human factors and certain accidents in the State; and, second, the need for enactment of provisions in FRA's new rail safety bill that address the same issues. Finally, I will close with a focus on what is being done to remedy human-factor problems particularly in the San Antonio region.

I. FRA's Railroad Safety Program

FRA is the agency of the U.S. Department of Transportation (DOT) charged with carrying out the Federal railroad safety laws. These laws provide FRA, as the Secretary's delegate, with very broad authority over every area of railroad safety. In exercising that authority, the agency has issued and enforces a wide range of safety regulations covering a railroad network that employs more than 232,000 workers, moves more than 42 percent of all intercity freight, and provides passenger rail service to more than 500 million persons each year.

FRA's regulations address such topics as track, passenger equipment, locomotives, freight cars, power brakes, locomotive event recorders, signal and train control systems, maintenance of active warning devices at highway-rail grade crossings, accident reporting, alcohol and drug testing, protection of roadway workers, operating

rules and practices, locomotive engineer certification, positive train control, and use of train horns at grade crossings. FRA currently has active rulemaking projects on a number of important safety topics, many of which will be described later in this testimony. FRA also enforces the Hazardous Materials Regulations, promulgated by DOT's Pipeline and Hazardous Materials Safety Administration (PHMSA), as they pertain to rail transportation.

FRA has an authorized inspection staff of about 400 persons nationwide, distributed across its eight regions. In addition, about 160 inspectors employed by the approximately 30 States that participate in FRA's State participation program also perform inspections for compliance with the Federal rail safety laws. Each inspector is an expert in one of five safety disciplines: Track; Signal and Train Control; Motive Power and Equipment; Operating Practices; or Hazardous Materials. FRA also has 18 full-time highway-rail grade crossing safety positions in the field. Every year FRA's inspectors conduct thousands of inspections, investigate more than 100 railroad accidents, investigate hundreds of complaints of specific alleged violations, develop recommendations for thousands of enforcement actions, and engage in a range of educational outreach activities on railroad safety issues, including educating the public about highway-rail grade crossing safety and the dangers of trespassing on railroad property.

FRA closely monitors the railroad industry's safety performance, and the agency uses the extensive data gathered to guide its accident prevention efforts. FRA strives to continually make better use of the wealth of available data to achieve the agency's strategic goals. FRA also sponsors collaborative research with the railroad industry to introduce innovative technologies to improve railroad safety. Finally, under the leadership of the U.S. Department of Homeland Security (DHS), FRA actively plays a supportive role in Federal efforts to secure the Nation's railroad transportation system.

II. The National Rail Safety Action Plan (Action Plan)

A. Genesis and Overview of the Action Plan

As detailed in the appendix to my testimony, the railroad industry's overall safety record has improved during recent decades, and most safety trends are moving in the right direction. However, significant train accidents continue to occur, and the train accident rate has not shown substantive improvement in recent years. Moreover, several major freight and passenger train accidents in 2004 and 2005 (such as those at Macdona, Texas;[1] Graniteville, South Carolina; and Glendale, California) raised specific concerns about railroad safety issues deserving government and industry attention.

[1] The National Transportation Safety Board determined that the probable cause of the Macdona collision was--

In May 2005, DOT and FRA announced the National Rail Safety Action Plan, a blueprint to comprehensively address critical safety issues facing the railroad industry with the following strategy:

- Target the most frequent, highest-risk causes of train accidents;
- Focus FRA's oversight and inspection resources on areas of greatest concern; and
- Accelerate research efforts that have the potential to mitigate the largest risks.

The causes of train accidents are generally grouped into five categories: human factors; track and structures; equipment; signal and train control; and miscellaneous. In the five years from 2001 through 2005, the great majority of train accidents resulted from human factor causes or track causes. Accordingly, human factors and track are the major target areas for improving the train accident rate. The Action Plan includes initiatives intended to--

- Reduce train accidents caused by human factors;
- Address fatigue;
- Improve track safety;
- Enhance hazardous materials safety and emergency preparedness;
- Strengthen FRA's safety compliance program; and
- Improve highway-rail grade crossing safety.

Today, given the purpose of the hearing, I will focus on only four of the Action Plan initiatives: reducing human factor accidents; addressing fatigue (which is, of course, a human factor); enhancing hazardous materials safety and emergency preparedness; and improving highway-rail grade crossing safety.

B. Implementation of Action Plan Initiatives to Reduce Human Factor Accidents, Address Fatigue, Enhance Hazardous Materials Safety and Emergency Preparedness, and Improve Highway-Rail Grade Crossing Safety

1. Reducing Train Accidents Caused by Human Factors

Union Pacific Railroad train crew fatigue that resulted in the failure of the engineer and conductor to appropriately respond to wayside signals governing the movement of their train. Contributing to the crewmembers' fatigue was their failure to obtain sufficient restorative rest prior to reporting for duty because of their ineffective use of off-duty time and Union Pacific Railroad train crew scheduling practices, which inverted the crewmembers' work/rest periods. Contributing to the accident was the lack of a positive train control system in the accident location. Contributing to the severity of the accident was the puncture of a tank car and the subsequent release of poisonous liquefied chlorine gas.

NTSB No. RAR-06/03; NTIS No. PB2006-916303, Executive Summary.

Accidents caused by human factors constitute the largest category of train accidents, accounting for 37 percent of all train accidents in the five years from 2001 through 2005. As you will remember, FRA last testified on the full range of human factors before this Subcommittee in July 2006 and provided an update in January on the human factor initiatives pursuant to the Action Plan. Today, I will provide a further update on the Action Plan human factor initiatives.

a. Development of Rulemaking to Address Leading Causes of Human Factor Accidents

Some human factors are addressed squarely by FRA regulations. For example, FRA's regulations on alcohol and drug use by operating employees were the first such standards in American industry to incorporate chemical testing, and they have been very successful in reducing accidents resulting from the use of illicit substances. FRA also has regulations on locomotive engineer certification, and enforces the Federal hours of service restrictions, which are wholly governed by statute. However, FRA has been concerned that several of the leading causes of human factor accidents are not presently covered by any specific Federal rule, and these causes can have serious consequences.

In May 2005, FRA asked its Railroad Safety Advisory Committee (RSAC) to develop recommendations for a new human factors rule to address the leading causes of human factor accidents. This effort helped lead to FRA's issuance of a notice of proposed rulemaking (NPRM) in October 2006, to Federalize core railroad operating rules governing the handling of track switches, leaving cars in the clear, and shoving rail cars. *See* 71 FR 60371. Overall, the rule proposes to establish greater accountability on the part of railroad management for the administration of railroad programs of operational tests and inspections, and greater accountability on the part of railroad supervisors and employees for compliance with those operating rules that are responsible for approximately half of the train accidents related to human factors. FRA believes this will contribute positively to railroad safety, by emphasizing the importance of compliance with fundamental operating rules and providing FRA a more direct means of promoting compliance. The final rule is expected to be issued later this year.

The final rule is intended to supersede Emergency Order No. 24, which FRA issued in October 2005, in response to an increasing number of train accidents caused by hand-operated, main track switches in non-signaled territory being left in the wrong position and the potential for catastrophic accidents, such as the one in Graniteville, South Carolina, in January 2005, which resulted in nine deaths. The emergency order requires special handling of hand-operated main track switches in non-signaled territory, as well as instruction and testing of employees in railroad operating rules pertaining to such track switches, and is expected to remain in place until the final rule addressing the major causes of human factor accidents is promulgated and becomes effective.

b. *Launch of "Close Call" Pilot Research Project*

"Close calls" are unsafe events that do not result in a reportable accident but could have done so. FRA is working to better understand these phenomena. In March 2005, FRA completed an overarching Memorandum of Understanding (MOU) with railroad labor organizations and management to develop pilot programs to document the occurrence of close calls. In other industries, such as aviation, adoption of close-call reporting systems that shield the reporting employee from discipline (and the employer from punitive regulatory sanctions) has contributed to major reductions in accidents. In August 2005, FRA and DOT's Bureau of Transportation Statistics (BTS) entered into an MOU stipulating that BTS will act as a neutral party to receive the close-call reports and maintain the confidentiality of the person making the report. Four railroads have expressed interest in taking part in this project, and participating railroads will be expected to develop corrective actions to address the problems that may be revealed. Union Pacific Railroad Company (UP) has signed an Implementing MOU for its North Platte Service Unit to be the first site for this project. Data collection at UP began on February 1, 2007, and more than 40 reports have been received as of last week. Discussions are also underway with BNSF Railway Company (BNSF) and Canadian Pacific Railway for second and third sites for this project.

c. Development and Implementation of Promising Technologies to Improve Safety through Redundant Safety Systems

Technology can be a tremendous aid to safety, providing a safety net when human beings make a mistake or become incapacitated.

o Positive Train Control (PTC) Systems. PTC systems are capable of automatically preventing train collisions (with positive stop protection), preventing overspeed derailments, and protecting roadway workers within their authorities. Recognizing the safety benefits of PTC systems, as well as their potential to improve rail efficiency by safely increasing the capacity of high-density rail lines, FRA issued a final rule in 2005 entitled, "Performance Standards for Processor-Based Signal and Train Control Systems." *See* 49 CFR part 236. Earlier, FRA worked with Amtrak and other stakeholders to assist in the development of PTC systems in support of high-speed passenger rail. The results included the Advanced Civil Speed Enforcement System, which, combined with cab signals and automatic train control, safeguard operations up to 150 mph on the Northeast Corridor. In addition, the Incremental Train Control System was deployed on Amtrak's Michigan line and currently supports operations up to 95 mph (planned for 110 mph when validation and verification work is complete on the final system).

  * In January 2007, FRA approved operational use of the first PTC system intended for general use, BNSF's Electronic Train Management System.

The rail industry is actively advancing the implementation of PTC technology as other railroads—among them, UP, Norfolk Southern Railway Company, CSX Transportation, Inc. (CSX), and the Alaska Railroad—are all making significant strides to develop PTC systems. The Association of American Railroads (AAR) will play a critical role in finalizing interoperability requirements for these technologies.

- Switch Point Monitoring System and Other Systems. There are steps that can be taken short of PTC to reduce risk in non-signalized territory while PTC systems are deployed. In November 2005, FRA partnered with BNSF through a $1 million Switch Point Monitoring System pilot project. The main objective of the project is to develop a low-cost system that electronically monitors for, and reports, a misaligned switch on main line track located in dark (non-signaled) territory. The project involves the installation of wireless communication devices at 49 switches along a 174-mile section of non-signaled BNSF track between Tulsa and Avard, Oklahoma. Train dispatchers at an operations center in Fort Worth, Texas, are monitoring the devices to detect when the hand-operated switches are set in the wrong position. If a switch is misaligned, the dispatcher directs a train to slow down or stop until railroad crews in the field confirm it is safe to proceed. Along with the human factors rulemaking, this new switch monitoring system may prevent future train accidents such as the one at Graniteville, which resulted from an improperly lined main track switch in non-signaled territory.

  - BNSF is also demonstrating rail integrity circuits, which can detect broken rails and alert the dispatcher much in the same way as the switch point monitoring technology. Both of these technologies are "forward-compatible" with PTC, meaning that they can be integrated into PTC as it is deployed on the subject territories.

- Electronically Controlled Pneumatic (ECP) Brakes. In 2005, 14 percent of human-factor accidents on main track involved improper train handling or misuse of the automatic braking system. A significant number of these events might have been avoided if locomotive engineers were given a more suitable air brake system to use as a tool. During the 1990s, the AAR led an industry effort to develop ECP brakes, which use an electronic train line to command brake applications and releases. ECP brakes apply uniformly and virtually instantaneously throughout the train, provide health-status information on the condition of brakes on each car, respond to commands for graduated releases, and entirely avoid runaway accidents caused by depletion of train-line air pressure. ECP brakes shorten stopping distances on the order of 40 to 60 percent, depending on train length and route conditions. In turn, shortened stopping distances mean that some accidents that occur today might be avoided entirely and that the severity of those that do occur in the future might be reduced. (I would hasten to add that our ongoing

safety analysis confirms that most grade crossing accidents, in particular, could not be prevented by ECP brakes, because motorist actions become manifest only seconds before the collision.)

* FRA commissioned a study released last year that identified and quantified significant business benefits that could be realized with this technology through greater operational efficiencies and suggested a migration plan that would start with unit train operations, logically focused initially on the Powder River Basin coal service. Since then, FRA has been working with the AAR, railroads, vendors, and the coal sector to generate momentum toward implementation of this cost-saving and, potentially, life-saving technology. In this regard, ECP brakes are one of the key features of FRA's Advanced Concept Train, a research-and-development prototype train specially designed and equipped with other improvements that is helping to demonstrate the potential of these new technologies across the Nation. FRA is also planning to develop a revised set of requirements for train air brakes that are more suitable for this new technology, by issuing a notice of proposed rulemaking sometime in the near future. Until a final rule is issued amending the train air brake requirements, we remain ready to review and respond to requests for relief from railroads interested in proceeding with ECP technology, and are currently reviewing such a request.

d. Safety-Related Training for Employees

Obviously, training is another important component of any human-factors effort. Just last week, FRA convened the final meeting of a joint labor-management-FRA group that has reviewed standards for training operators of remote control locomotives and has identified the need for more precise qualification standards, conditions for learning, and documentation of proficiency.

2. Addressing Fatigue

Fatigue has long been a fact of life for many railroad operating employees, given their long and often unpredictable work hours and fluctuating schedules. Train crews may legally work an enormous number of hours in a week, month, or year. While commuter train crews often have some predictability in their work schedules, crews of freight trains rarely do. The long hours, irregular work/rest cycles, and lack of regular days off, combined, have a very deleterious effect on employee alertness. Railroads are necessarily 24-hour businesses, and the effects of "circadian rhythms" challenge the alertness of even well-rested employees, particularly in the early morning hours. The hours of service law, originally enacted in 1907 and last substantially amended in 1969, sets certain maximum on-duty periods (generally 12 hours for operating employees) and minimum off-duty periods (generally 8 hours, or if the employee has worked 12

consecutive hours, a 10-hour off-duty period is required). However, the limitations in that law, although ordinarily observed, do not seem adequate to effectively control fatigue.

FRA's Administrator testified in some detail about fatigue at the Subcommittee's hearing on this subject last month. As a result, I will not take up the Subcommittee's time on this issue at today's hearing, except for covering FRA's hours of service reform legislation, later in my testimony, and mentioning sleep disorders now. The National Transportation Board has emphasized the role of sleep disorders in transportation accidents, and FRA recognizes that providing fatigue management information alone may not be sufficient. In October 2004, FRA published a safety advisory in the Federal Register, urging railroads to address sleep disorders through progressive company policies. This past September, FRA's Railroad Safety Advisory Committee adopted a task to develop recommendations on medical standards for safety-critical railroad employees. Management of sleep disorders is among the important elements of that effort, which is now well underway.

3. Improving Hazardous Materials Safety and Emergency Response Capability

The railroad industry's record on transporting hazardous material (hazmat) is very good. The industry transports nearly two million shipments of hazmat annually, ordinarily without incident. However, the Macdona accident in 2004 and the Graniteville accident in 2005, which together involved 12 deaths as the result of chlorine releases, demonstrate the potential for catastrophic consequences from train accidents. The agency is actively engaged in a variety of activities intended to reduce the likelihood that a tank car may be breached if an accident does occur, complementing our effort to reduce the likelihood of train accidents. Realizing that we cannot prevent all accidents, FRA has developed initiatives to ensure that emergency responders will be fully prepared to minimize the loss of life and damage when an accident or release does occur.

It is important to emphasize that these safety initiatives are in addition to, and complement efforts by, FRA, DHS and its Transportation Security Administration (TSA), and PHMSA to provide for the security of hazmat transported by rail. A major component of this effort has been PHMSA's March 2003 regulation requiring each shipper and carrier of significant quantities (placardable amounts) of hazmat to adopt and comply with a security plan. *See* 49 CFR § 172.800 *et seq*. Last December, in consultation with FRA and TSA, PHMSA published an NPRM to revise current requirements for the security of hazmat transported by rail, with particular focus on toxic inhalation hazard materials, such as chlorine and anhydrous ammonia. *See* 71 FR 76833. This proposal would require consideration of both safety and security in evaluating routing of hazardous materials and the mitigation of hazards on the routes selected. PHMSA and FRA held two public meetings, one on February 1, in Washington, D.C., and the second on February 9, in Dallas, Texas, to obtain oral comments on the proposed requirements, with a view to issuing a final rule. The comment period closed on

February 20, and PHMSA and FRA are in the process of reviewing all of the comments received and anticipate issuing a final rule by the end of the calendar year.

The safety and security of hazmat transported by rail are often intertwined, and I would be glad to provide the Subcommittee with additional information concerning the many security initiatives in this area.

a. Enhancements to Emergency Response Readiness

Emergency responders presently have access to a wide variety of information regarding hazmat transported by rail. Railroads and hazmat shippers are currently subject to the hazard-communication requirements of the Hazardous Materials Regulations. In addition, these industries work through the American Chemistry Council's Transcaer® (Transportation Community Awareness and Emergency Response) program to familiarize local emergency responders with railroad equipment and product characteristics. PHMSA publishes the Emergency Response Guidebook, with the intention that it may be found in virtually every fire and police vehicle in the United States.

In March 2005, with FRA encouragement, the AAR amended its Recommended Operating Practices for Transportation of Hazardous Materials (now Circular No. OT-55-I) to expressly state that local emergency responders, upon written request, will be provided with a list ranking the top 25 hazardous materials transported by rail through their communities. This is an important step to allow emergency responders to plan for, and better focus their training on, the type of rail-related hazmat incident that they could potentially encounter.

In July 2005, again with FRA encouragement, CSX and CHEMTREC (the chemical industry's 24-hour resource center for emergency responders) entered into an agreement to conduct a pilot project to see if key information about hazmat transported by rail could be more quickly and accurately provided to first responders in the crucial first minutes of an accident or incident. The project is designed so that if an actual hazmat rail accident or incident occurs, CHEMTREC watchstanders, who interact with emergency response personnel, will have immediate access to CSX computer files regarding the specific train, including the type of hazmat being carried and its exact position in the train consist. CSX has advised that there has been sufficient use of the current system to begin evaluating the project, and that is scheduled to being early this year. FRA is also working through the AAR to encourage the other major railroads to participate in a similar project.

Finally, another pilot project is underway to evaluate the use of Railinc Corporation's Freightscope, a program that provides equipment search capabilities for hazmat shipments. The system was installed at CHEMTREC in December 2006, and it has the potential to more rapidly provide information about hazmat shipments on

shortline and regional railroads to CHEMTREC watchstanders to improve information availability and reduce delays in emergency response. The pilot project is scheduled to last a year, and includes various tests to determine the system's effectiveness. Two tests have already been conducted with good results.

b. Improvements in Tank Car Integrity through Research and Development

Before the August 2005 enactment of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, FRA had initiated tank car structural integrity research stemming from the circumstances of the 2002 derailment in Minot, North Dakota, which involved the release of anhydrous ammonia from tank cars punctured during the derailment. Current research being conducted for FRA at Southwest Research Institute in San Antonio involves a three-step process to assess the effects of various types of train accidents (e.g., a derailment or collision) on a tank car. The first phase is the development of a physics-based model to analyze the kinematics of rail cars in a derailment. The second phase is the development of a valid dynamic structural analysis model; and the third phase is an assessment of the damage created by a puncture and entails the application of fracture mechanics testing and analysis methods. DOT's Volpe National Transportation Systems Center (Volpe Center), part of the Research and Innovative Technology Administration (RITA), is doing the modeling work now, and FRA will dovetail this ongoing research with the requirements of the statute. FRA, in conjunction with PHMSA, hopes to develop new hazardous material tank car safety standards in 2008.

In addition to focusing on strengthening the structural integrity of the tank car to reduce the probability that a collision will result in release of a hazardous commodity, the project is also evaluating technology such as pushback couplers, energy absorbers, and anti-climbing devices designed to prevent a train derailment in the first place. We are currently consulting with railroads, shippers, and car manufacturers and have solicited public comments in this initiative.

To further these efforts, FRA just signed a Memorandum of Cooperation with Dow Chemical Company, UP, and the Union Tank Car Company to participate in their Next Generation Rail Tank Car Project. The agreement provides for extensive information-sharing and cooperation between ongoing FRA and industry research programs to improve the safety of rail shipments of hazardous commodities, such as toxic inhalation hazards and high-risk gases and liquids.

Finally, in September 2006, FRA awarded $200,000 to test sample tank car panels with various coatings to determine their ability to prevent penetration from small arms fire, as well as their ability to self-seal and, thereby, mitigate the severity of any incident. FRA developed the project in coordination with the AAR and DHS, which came up with the idea of applying to tank cars a protective coating like that used to enhance the armor protection of military vehicles in Iraq.

4. Fostering Further Improvements in Highway-Rail Grade Crossing Safety

Deaths in highway-rail grade crossing accidents are the second-leading category of fatalities associated with railroading. (Trespasser fatalities are the leading category.) The number of grade crossing deaths has declined substantially and steadily in recent years. However, the growth in rail and motor vehicle traffic continues to present challenges.

a. Issuance of Safety Advisory 2005-03

In May 2005, FRA issued this safety advisory, which describes the respective roles of the Federal and State governments and of the railroads in grade crossing safety. It also specifically reminds railroads of their responsibilities to report properly to FRA any accident involving a grade crossing signal failure; to maintain records relating to credible reports of grade crossing warning system malfunctions; to preserve the data from all locomotive-mounted recording devices following grade crossing accidents; and to cooperate fully with local law enforcement authorities during their investigations of such accidents. FRA is also committed to providing technical assistance to local authorities in the investigation of crossing accidents where information or expertise within FRA control is required to complete the investigation. FRA has extensively distributed this advisory through national law enforcement organizations and through contacts with local agencies.

b. Development of State-Specific Grade Crossing Safety Action Plans

In June 2004, DOT and FRA issued an "Action Plan for Highway-Rail Crossing Safety and Trespass Prevention" that sets forth a series of initiatives in the areas of engineering, education, and enforcement to reduce and prevent highway-rail grade crossing accidents. As one of these initiatives, FRA began working with the State of Louisiana in March 2005 to develop its own action plan for grade crossing safety, to address high numbers of grade crossing accidents and deaths at the State level. The action plan focuses on reducing collisions between trains and motor vehicles at grade crossings where multiple collisions have occurred. After a cooperative effort between the Louisiana Department of Transportation and Development, Federal Highway Administration, FRA, and other stakeholders, the State approved the action plan in April 2006. FRA is encouraging other States with high numbers of grade crossing accidents and deaths to do the same, and we are in preliminary discussions with the Texas Department of Transportation regarding preparation of a State action plan.

c. Focus on Pedestrian Safety

In addition, FRA will work with the grade crossing safety community to determine appropriate responses to pedestrian fatalities at grade crossings. Early in 2006, the Transportation Research Board devoted an entire session of its annual meeting to

pedestrian grade crossing safety issues in order to capture information on how to improve safety in this area. By this spring, FRA will publish a compilation of information on existing pedestrian safety devices currently being used in the Nation so that those making decisions on methods to improve pedestrian safety may have resource material available.

d. Inquiry on Safety of Private Grade Crossings

In June 2006, FRA initiated an inquiry into the safety of private grade crossings. Approximately 10 percent of grade crossing collisions occur at privately-owned crossings. However, there is little governmental safety oversight of these crossings, at either the State or Federal level. As a result, in cooperation with appropriate State agencies, FRA has been soliciting oral statements at a series of public meetings throughout the Nation on issues related to the safety of private grade crossings, including current practices concerning responsibilities for safety at these crossings, the adequacy of warning devices at the crossings, and the relative merits of a more uniform approach to improving safety at private crossings. The next and final meeting will be held in Syracuse, New York, on April 26. FRA has also opened a public docket on these issues, so that interested parties may submit written comments for public review and consideration. The statements made and comments received will help inform decisions on what action needs to be taken to address the safety of private grade crossings.

II. FRA'S NEW RAIL SAFETY BILL AND ITS MAJOR PROVISIONS THAT DIRECTLY ADDRESS THE ISSUES OF THIS HEARING

The Bush Administration's rail safety reauthorization bill, the Federal Railroad Safety Accountability and Improvement Act, which was transmitted to Congress last month, would reauthorize appropriations for FRA to carry out its rail safety mission for four years and proposes a number of other measures that would significantly advance rail safety. I will describe some major provisions of that legislation that bear on fatigue and human factors generally, on grade crossing safety, and on hazardous materials safety.

In order to enhance the accountability of railroads for their own safety, the bill would authorize appropriations for the addition of a safety risk reduction program to FRA's current safety activities. Since rail-related accidents, injuries, and deaths are already at low levels, FRA needs to supplement its traditional behavior-based and design-specification-based regulations with a robust safety risk reduction program to drive down those key measures of risk at a reasonable cost. In the safety context, a risk reduction program is intended to make sure that the systems by which railroads operate and maintain their properties are adequate to meet safety objectives. This approach focuses on both entire systems and management-level decisions, and it improves these systems by eliminating or minimizing processes that cause, or tend to allow, employees to make mistakes that lead to accidents, injuries, or deaths.

To implement this new program, FRA will need to acquire new skills and adapt to

new ways of thinking. FRA will also put greater emphasis on developing models of how railroads can systematically evaluate safety risks, in order to hold railroads more accountable for improving the safety of their own operations, including implementing plans to eliminate or reduce the chance for workers to make mistakes that can lead to accidents or near accidents. To encourage railroads to produce thorough, as opposed to superficial, risk analyses, a companion provision in the bill bars public disclosure by FRA of records required under the safety risk reduction program, except for Federal law enforcement purposes. Also in order to encourage thorough risk analyses by railroads, the provision forbids discovery by private litigants in civil litigation for damages of any information compiled or collected under the program, and forbids admission into evidence of same information in civil litigation by private parties for damages.

To help improve the alertness of railroad operating personnel, the bill would permit FRA, as the Secretary's delegate, to replace the hours of service laws (49 U.S.C. chapter 211) with scientifically based regulations, after first seeking consensus recommendations from the agency's Railroad Safety Advisory Committee. The hours of service laws, first enacted in 1907 and currently delegated to FRA to administer, contain no substantive rulemaking authority over duty hours. FRA's lack of regulatory authority over duty hours, unique to FRA among all the safety regulatory agencies in the Department, precludes FRA from making use of almost a century of scientific learning on the issue of sleep-wake cycles and fatigue-induced performance failures. FRA's general safety rulemaking power under chapter 201 of title 49 would provide ample authority to deal with the entire subject of maximum work periods and minimum rest periods in light of current research on those subjects; however, the hours of service laws effectively bar such a rational regulatory initiative because the chapter 201 authority may be used only to supplement the pre-1970 railroad safety statutes, not to supplant them. Where the hours of service laws set a rigid requirement, e.g., maximum on-duty and minimum off-duty periods for train crews, a regulation could not lawfully vary from them. FRA would refrain from adopting new requirements relating to fatigue if the agency determines that voluntary activities are adequately addressing topics of concern, and the agency would be authorized to allow a railroad to comply with an approved fatigue management plan as an alternative to compliance with the usual regulatory regimen. The regulations would be subject to review under the Congressional Review Act (5 U.S.C. 801) as the sole and exclusive means of review.

In addition to taking important steps to combat operating employee fatigue, the bill seeks to prevent highway-rail grade crossing collisions, which cause more than a third of all rail-related deaths each year. To make crossings safer, the bill proposes two major provisions. One measure would improve the Department's National Crossing Inventory (Inventory), a large, online database containing vital safety information on the identification, location, physical characteristics, and other salient features of at-grade and grade-separated highway-rail crossings nationwide. FRA is the custodian of the National Crossing Inventory. Currently, reporting to the Inventory by both States and railroads is voluntary; some information is missing, and some is very outdated. The bill would require initial reports on all previously unreported crossings and periodic updates on all

crossings, so that each crossing can be accurately ranked according to its relative risk. These improved rankings will assist States in identifying which of the crossings are the most hazardous and in channeling Federal safety improvement funds to the most hazardous crossings first and will help the Department and the transportation research community to identify the most promising strategies for further reducing largely preventable traffic collisions and casualties at crossings. A second provision of the bill would encourage the development and use of new safety technology at highway-rail grade crossings by establishing a Federal policy to support the development of new crossing safety technology and providing relief from tort liability for an accident at a crossing based upon selection of that technology if the Secretary has approved the use of the technology and if the technology has been installed at the crossing in accordance with the conditions set by the Secretary.

Finally, another provision would expand FRA's existing disqualification authority to reach individuals who are unfit for safety-sensitive service in the railroad industry because of a violation of the Hazardous Materials Regulations related to transporting hazardous material by rail. Currently, FRA may disqualify an individual only for a violation of the rail safety laws or regulations, not the Hazardous Materials Regulations, even though violation of the Hazardous Materials Regulations may involve a greater accident risk or consequence (in the event of an accident)..

In summary, enactment of the Federal Railroad Safety Accountability and Improvement Act would promote safety in five main ways: by allowing FRA (1) to launch a safety risk reduction program that will make railroads more accountable for their safety performance; (2) to issue scientifically sound rules on hours of service that will reduce the fatigue of safety-critical employees; (3) to get vital, up-to-date data on all highway-rail crossings; (4) to foster the development of new crossing-safety technology; and (5) to disqualify railroad personnel from safety-sensitive service based on their violation of the Hazardous Materials Regulations.

III. Concerns in the San Antonio Region

FRA recognizes the special circumstances that prompted the Subcommittee to hold this hearing in San Antonio. Beginning in late 2003, UP experienced several serious accidents in south Texas, including the collision at Macdona on June 28, 2004, which resulted in the release of chlorine gas and the death of a railroad employee and two local residents. Although simple explanations are always inadequate to fully describe the many factors that result in specific events, we believe that several of the respective accident investigations did reveal the influence of a severe rail service crisis. During that period, UP was impacted by short staffing and congested facilities as a result of unanticipated traffic demand during a period of sustained employee attrition. This resulted in long hours and difficult working conditions, as everyone concerned worked to get on top of the situation.

Since that time, numerous public and private actions have been taken to restore safe and fluid operations. UP has continued aggressive hiring of agreement employees, particularly in the transportation department, and has enhanced facilities, so that basic switching operations can be accomplished more readily, and thus with greater safety. Both of these actions have reduced stress and fatigue that adversely affect safety performance.

As a result of Macdona and other accidents, FRA entered into safety compliance agreements with UP on November 12 and December 2, 2004, addressing three geographical UP service units of concern (the San Antonio, Houston, and Livonia Service Units). The agreements required UP to re-instruct all of the testing managers in these service units on the railroad's program of operational tests and inspections. Thereafter, UP was to formulate monthly plans and conduct operational tests and inspections in order to improve its employees' compliance with the railroad's operating rules. Subsequent FRA inspection of UP's entire southern region indicated that the railroad was making progress implementing the requirements of the agreements. On its own initiative, the railroad extended elements of the agreements to the balance of its system to strengthen management oversight of its program of operational tests. In part as a result of these compliance agreements between the railroad and FRA, the railroad has revitalized the management of its program of operational tests and restored rules compliance to more acceptable levels. The railroad has also strengthened its cadre of experienced supervisors.

Here in San Antonio, FRA is assisting the railroad and its employees in implementing "peer-to-peer" observations that endeavor to build a positive safety culture through grass-roots-level leadership. Since mid-2004 FRA's Research and Development Office (R&D) has been providing funding and evaluation support for a peer-to-peer accident-prevention program on the UP Southern Region in Texas. This innovative demonstration program is designed to prevent train accidents and incidents similar to those described earlier and to evaluate the safety impact of this approach for its potential effectiveness and application to other work practices in the railroad industry. This program grew out of private efforts that began in early 2004, when UP management and local labor unions initiated a collaborative safety effort called Cab Red Zone (CRZ). The UP's CRZ effort focuses attention on improving in-cab safety practices, such as proper radio communications, calling signals, and maintaining vigilance. In May 2004, FRA R&D funded a consultant, Behavioral Sciences Technology, Inc., to develop an objective behavior-based safety and continuous improvement process to support CRZ safety, which became known as C.A.B., or Changing At-risk Behaviors. Its focus is to clarify, enable, and encourage safe in-cab behaviors related to CRZ. Since then, a similar pilot program using the same peer-to-peer observation process, called Safety Through Employees Exercising Leadership (S.T.E.E.L.), has been implemented in Livonia, Louisiana, to help reduce the risks of accidents in switching operations.

Key driving forces of both the C.A.B. and S.T.E.E.L. accident-prevention process include peer-to-peer observations with immediate non-confrontational feedback, and

strong labor-management relations that include a barrier-removal and corrective-action process. This risk reduction approach emphasizes the systematic collection, analysis, and objective reporting of risk exposure, followed by barrier removal and corrective actions to reduce the probability of personal injury, collisions, or other accidents. It complements existing FRA audits, rules, and other compliance-based oversight and enforcement activities. It is preventive in that it seeks to find and reduce risks before they can lead to accidents and incidents. It also includes extensive training in safety leadership for supervisors, managers, and senior safety leaders in both union and management ranks.

Currently, both the C.A.B. and S.T.E.E.L. demonstration projects at UP are still in the implementation phase. An evaluation plan has been developed to evaluate the overall impact on safety, safety climate, and the overall culture of this accident-prevention process, and its potential benefit and application to the railroad industry. Early evaluation results suggest a significant decrease in at-risk behaviors associated with the risk of collisions since beginning the C.A.B. process. Over the last 13 months, the proportion of observed at-risk behaviors, for example, has been cut about in half. This decrease has been found in both the behavioral data collected by workers and in the operations field testing conducted by management concerning CRZ-related practices. Local management at the site also reported a 60-percent decrease in locomotive engineer de-certifications associated with the same type of CRZ at-risk behaviors. In addition, the October 4th edition of UPOnline, an online newsletter produced by UP, reported human factor derailments in the San Antonio Service Unit down 25 percent from this time last year and personal injuries down by 18 percent. While these reports have not been corroborated statistically with the FRA's evaluation team, it is promising that a number of safety outcomes are showing positive improvement.

Despite strong efforts by all concerned, we continue to experience some mishaps, and each one is magnified in public perception because of the increased appreciation for potential consequences gained from prior accidents. For instance, on October 17, 2006, UP experienced a significant derailment in the San Antonio area that resulted in damage to two residences. This accident resulted from use of excessive dynamic braking. Dynamic braking uses traction motors, which would normally take electrical energy and rotate the locomotive axles, to generate electricity that is used to slow the train. The electric current is then dissipated as heat in resistor banks. In order to prevent the build up of excessive compressive ("buff") forces within the train, railroads limit the number of axles of dynamic brakes that are permitted to be operative, and FRA requires that locomotive engineers be advised of how much dynamic braking effort they have. In the case of this accident, neither requirement was met. The locomotive consist was improperly set up at Ft. Worth, and neither the crew at the time of the accident nor the two prior crews noted the problem. FRA is processing recommendations for civil penalty assessments to drive home the point that compliance is not optional. UP has instituted procedures to highlight available dynamic brake axles on it train consists, and checks have been made to determine that information and actual brake status match up. We will continue to monitor this issue, among many that can affect the safety of train operations.

IV. Looking Ahead

FRA is very aware that risk attends transportation functions today, as it has in the past. Together with participating States, including the Texas Department of Transportation, we work with railroads and labor organizations every day to drive down risk and add layers of protection. In the field of human factors, we should take courage from the fact that every day railroad workers perform hundreds of thousands of tasks safely; and systems are designed, as much as possible, to mitigate occasional but highly consequential failures. New technologies are coming on line that will help to provide additional safety nets, and other steps we are taking at the National level will contribute to safer operations here in San Antonio. Building on our strengths, we can look to better days ahead.

APPENDIX

The Railroad Industry's Safety Record

The railroad industry's overall safety record is very positive, and most safety trends are moving in the right direction. While not even a single death or injury is acceptable, progress is continually being made in the effort to improve railroad safety. This improvement is demonstrated by an analysis of the Federal Railroad Administration's (FRA) database of railroad reports of accidents and incidents that have occurred over the nearly three decades from 1978 through 2006. See 49 CFR part 225. (The worst year for rail safety in recent decades was 1978, and 2006 is the last complete year for which preliminary data are available.) Between 1978 and 2006, the total number of rail-related accidents and incidents has fallen from 90,653 to 12,833, an all-time low representing a decline of 86 percent. Between 1978 and 2006, total rail-related fatalities have declined from 1,646 to 915, a reduction of 44 percent. From 1978 to 2006, total employee cases (fatal and nonfatal) have dropped from 65,193 to 5,035, the record low; this represents a decline of 92 percent. In the same period, total employee deaths have fallen from 122 in 1978 to 16 in 2006, a decrease of 87 percent.

Contributing to this generally improving safety record has been a 74-percent decline in train accidents since 1978 (a total of 2,834 train accidents in 2006, compared to 10,991 in 1978), even though rail traffic has increased. (Total train-miles were up by 8.5 percent from 1978 to 2006.) In addition, the year 2006 saw only 28 train accidents out of the 2,834 reported in which a hazardous material was released, with a total of only 69 hazardous material cars releasing some amount of product, despite about 1.7 million movements of hazardous materials by rail.

In other words, over the last almost three decades, the number and rate of train accidents, total deaths arising from rail operations, employee fatalities and injuries, and hazardous materials releases all have fallen dramatically. In most categories, these improvements have been most rapid in the 1980s, and tapered off in the late 1990s. Causes of the improvements have included a much more profitable economic climate for freight railroads following deregulation in 1980 under the Staggers Act (which led to substantially greater investment in plant and equipment), enhanced safety awareness and safety program implementation on the part of railroads and their employees, and FRA's safety monitoring and standard setting (most of FRA's safety rules were issued during this period). In addition, rail remains an extremely safe mode of transportation for passengers. Since 1978, more than 11.2 billion passengers have traveled by rail, based on reports filed with FRA each month. The number of rail passengers has steadily increased over the years, and since 2000 has averaged more than 500 million per year. Although 12 passengers died in train collisions and derailments in 2005, none did in 2006. On a passenger-mile basis, with an average about 15.5 billion passenger-miles per year since the year 2000, rail travel is about as safe as scheduled airlines and intercity bus transportation and is far safer than private motor vehicle travel. Rail passenger accidents–while always to be avoided–have a very high passenger survival rate.

As indicated previously, not all of the major safety indicators are positive. Grade crossing and rail trespasser incidents continue to cause a large proportion of the deaths associated with railroading. Grade crossing and rail trespassing deaths accounted for 97 percent of the 915 total rail-related deaths in 2006. In recent years, rail trespasser deaths have replaced grade crossing fatalities as the largest category of rail-related deaths. In 2006, 530 persons died while on railroad property without authorization, and 362 persons lost their lives in grade crossing accidents. Further, significant train accidents continue to occur, and the train accident rate per million train-miles has not declined at an acceptable pace in recent years. It actually rose slightly in 2003 and 2004 (to 4.05 and 4.38, respectively) compared to that in 2002 (3.76), although it dropped in 2005 (to 4.08) and 2006 (to 3.47). As stated in the main testimony, the causes of train accidents are generally grouped into five categories: human factors; track and structures; equipment; signal and train control; and miscellaneous. The great majority of train accidents are caused by human factors and track. In recent years, most of the serious events involving train collisions or derailments resulting in release of hazardous material, or harm to rail passengers, have resulted from human factor or track causes. Accordingly, the National Rail Safety Action Plan makes human factors and track the major target areas for improving the train accident rate.

Testimony
of
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24125 Aldine Westfield Road
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March 16, 2007

Before the

U.S. House of Representatives
Committee on Transportation and Infrastructure
Subcommittee on Railroads, Pipelines, and Hazardous Materials

Good morning, my name is Lance Fritz, and I am the Vice President of Union Pacific Railroad's Southern Region, which includes our facilities and operations in the state of Texas. I am pleased to be here today, and I thank you for the opportunity to testify about our programs in the area of human factor incident prevention and the improvements in performance we and our stakeholders have realized as a result.

We recognize why this hearing is being held in San Antonio. All of us at Union Pacific regret the accidents that have occurred in San Antonio and Bexar County. We work very hard to prevent accidents of any kind on our railroad and have implemented numerous measures to help ensure a safe operating environment for our employees and the communities through which we operate. Having said that, I have been advised by our counsel not to discuss any specific accidents as they may be subject to litigation.

I am here to tell you of the many positive things our employees are involved in – both here in San Antonio and across our rail system. Our objective with these programs is to provide safe, reliable rail service that supports this region's growing transportation needs. Moreover, I can assure you that the initiatives I cite here are happening simultaneously on a system, regional, and local level to ensure support and sustainability.

Over the past several years we have increased employee training and testing. Our managers provide more ride evaluations, and we review more event recorder (black box) downloads to ensure compliance with operating rules. In addition, we employ a state-of-the-art train simulator in San Antonio so our engineers and conductors can take advantage of advances in computer based training and evaluation. What we have learned from our intense reviews in San Antonio has led to several system-wide operating rules changes, including changes in locomotive cab communication rules to avoid distractions at critical times called the "cab red zone," or CRZ. This process is similar to that used by airline pilots during take off and landing to ensure enhanced focus on operations.

In addition, working with our union leaders in the San Antonio Service Unit, we have implemented a safety center to facilitate daily start of shift communications for all our employees. Prior to starting a shift, each employee must call into this center for the safety message of the day. In addition labor and management, working with the FRA and Behavioral Sciences Technology, have implemented the employee-led, peer-to-peer, CAB (Changing At Risk Behavior) process to reduce and eliminate human factor incidents in train operations. Through this process, and with the help of the FRA, our employees are deploying specialized safety training that creates involvement in incident prevention right at the front line.

We have also invested heavily in San Antonio's infrastructure (ties, rails, and switches) to improve capacity and help provide a safe operating environment. In 2005, we invested $54 million in track and infrastructure and another $8 million in 2006. In 2007, we will invest an additional $17 million. We have also supported job growth in the area with a $26 million investment to serve a new Toyota facility as well as constructing a new $100 million intermodal facility, which is currently underway.

We regularly evaluate our operations including infrastructure – track and facilities – as well as situational, commodity, and other potential risks. In addition we have increased the frequency of visual track inspections and the use of the geometry car on our

mainline tracks in San Antonio. This car allows us to more closely watch for signs that a problem is developing – and to be proactive with repairs – long before the track is out of compliance.

Fatigue management programs, increased emphasis on rules compliance, improved infrastructure, and terminal and main line process improvements have resulted in a more predictable operating plan in San Antonio. This has led to increased velocity, a lower recrew rate, and has resulted in fewer overtime hours or Hours of Service tie-ups. We have also added a substantial number of employees with the addition of 13 managers and 166 agreement employees. As we have minimized variability in the operation, the workplace stabilizes as a result – allowing for a more predictable work life.

The results are beginning to reflect these activities. Since 2004, the Union Pacific system has seen an over 25% improvement in the employee safety incident rate and an over 23% reduction in the rail equipment incidents. The San Antonio Service Unit has recorded a 24% improvement in the employee safety incident rate and an over 36% reduction in the rail equipment incidents. We are very proud of these gains, but more can be done, and we will continue our efforts to improve. Zero tolerance is our strategy!

We also recognize we have a responsibility to the community, and we have established a Community Advisory Panel in San Antonio. This panel is made up of a diverse group of residents in San Antonio and the goal is to exchange ideas with the general public about safety, health, environment, education, public information, and economic issues involving the community and company. This panel meets every other month, and so far, we feel it has been a very positive forum. We have also made a significant investment in new gen-set low emissions switching locomotives. These new, state-of-the-art locomotives mean cleaner air for San Antonio and compliment our road fleet equipped with Tier II technology and automatic shut down devices.

Madame Chairwoman and Members of the Subcommittee, let me conclude by saying that Union Pacific is committed to providing safe, reliable rail service – not only

in San Antonio, but across our system, and we will continue to work toward that end. One final comment on human factor issues and it deals with the Hours of Service Act and fatigue. While I know you have already held a hearing on this subject, and our industry association testified, I just want to reiterate that we look forward to working with you to develop changes to the Hours of Service Act. No one in our industry wants tired or fatigued crews, and we have long been working to develop and implement fatigue countermeasures. However, combating fatigue is a shared responsibility of railroads and individual employees. We look forward to working with you and rail labor to find ways to take the variability out of the work/rest cycle and create a more scheduled system.

With that, I will be happy to answer questions, and thank you again for the opportunity to appear here today.

WRITTEN TESTIMONY OF
PHIL HARDBERGER
MAYOR OF THE CITY SAN ANTONIO, TEXAS

SUBMITTED TO

THE UNITED STATES HOUSE OF REPRESENTATIVES

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON RAILROADS, PIPELINES, AND HAZARDOUS MATERIALS

CITY OF SAN ANTONIO COUNCIL CHAMBER

FRIDAY, MARCH 16, 2007

CONCERNING

ROLE OF HUMAN FACTORS IN RAIL ACCIDENTS

Chairwoman Corrine Brown, Ranking Member Bill Shuster and Members of the Subcommittee:

Chairwoman Brown, members of the committee, my name is Mayor Phil Hardberger, and on behalf of the City Council and the Citizens of San Antonio, I want to welcome you to San Antonio and to our Council Chamber for today's hearing. We are very grateful for the leadership of our hometown Congressman, Charlie Gonzales, on the issue of Rail Safety, and thank this subcommittee for holding a field hearing here in San Antonio.

San Antonio is the second-most populous city in the state of Texas and seventh largest in the United Sates. As of the 2005 U.S. Census estimate, our city had a population of over 1.2 million. San Antonio covers over 400 square miles on the northern edge of the South Texas region and southeast of the Texas Hill Country.

In 1691, an expedition of Spanish explorers and missionaries came upon the river on the feast day of Portuguese Saint Anthony of Padua, and named the river after "San Antonio." The actual founding of the city took place in 1718 by Father Antonio Olivares, upon establishing Mission San Antonio de Valero. Later San Antonio de Béxar was soon transformed into an early Spanish settlement in the Americas, by Spanish soldiers and Canary Islanders.

San Antonio, known as Military City U.S.A., has a strong military presence—it is home to Fort Sam Houston, Lackland Air Force Base, Randolph Air Force Base, and Brooks City-Base. San Antonio is home to the South Texas Medical Center, the largest and only medical research and care provider in the South Texas region. Famous for our River Walk, the Alamo, Tejano culture, and being home to several theme parks and other tourist attractions, the city is visited by 20 million tourists per year. San Antonio is also the site of the first museum of modern art in Texas—the Marion Koogler McNay Art Museum.

San Antonio has a diversified economy with four primary focuses: financial services, health care, national defense, and tourism. Twenty million tourists visit the city and its attractions every year, contributing substantially to the city's economy. The San Antonio Convention Center hosts more than 300 events each year with over 750,000 convention delegates from around the world. San Antonio's corporate profile includes AT&T, Clear Channel Communications, Frost National Bank, Southwest Research Institute, Tesoro Petroleum Corp., USAA, Valero Energy Corp., and Zachry Construction, which are all headquartered in the city.

Chairwoman Brown and members of the subcommittee, Congressman Gonzalez has shared numerous concerns with you about rail safety in San Antonio, which is served almost exclusively by Union Pacific Railroad. Despite local investments made by Union Pacific in track infrastructure, this community has been witness to several major derailments in recent years, including one that resulted in a tragic release of chlorine gas. On October 15, 2006, another Union Pacific derailment occurred in a highly populated neighborhood near the central business district. A nearby house was destroyed, but fortunately no lives were lost. The statistics do not convey how fortunate we were that none of the 17 derailed cars contained flammable or toxic materials. The cause of the accident: the operator failed to brake correctly.

Bexar County Judge Nelson Wolff and I have both written to the National Transportation Safety Board and congressional leaders urging more scrutiny and enforcement of rail safety. We are also seeking support from the current Texas Legislature to provide funding to begin relocating rail traffic out of highly populated areas. The cost to relocate tracks and other infrastructure in order to bypass San Antonio is estimated at approximately $2 billion. Clearly, relocation is a long-term project, where as eliminating human error, greater inspection, and other safety factors are initiatives that we can and must do now to protect the health, safety and welfare of our citizens.

In recent testimony given to this committee by Mr. Calvin Scovel, Inspector General with the Department of Transportation, Mr. Scovel shared information about the amount of hazardous materials (1.7 million carloads) that are transported by rail in the United States each year, and the potential catastrophic consequences that arise from the release of hazardous materials from rail cars. In Mr. Scovel's testimony, he reports that from 2003-2006, railroads reported 145 rail incidents that involved hazardous materials, resulting in 19 fatalities, and 423 injuries. According to Mr. Scovel, these accidents resulted in the evacuation of 17,384 people from their homes and businesses, caused at least $17 million in track damages and resulted in about $71 million in equipment damages.

Mr. Scovel stated that the overall data for 1995-2005 showed train accidents increased by 31%, and that human factors and track problems were responsible for 72% of the train accidents that occurred from 1996 through 2005. Mr. Scovel recommended a "proactive rather than reactive" strategy. I agree with that statement.

Action must be taken now to reduce the likelihood of a tragic chemical release in a populated area. I urge the subcommittee to:

- Encourage the FRA to renew the Safety Compliance Agreement it signed with Union Pacific's San Antonio Service Unit in November 2004, which required Union Pacific to re-instruct all of its railroad testing managers on the contents and requirements of its field testing (FTX Program) and other important safety-related actions;

- Urge the FRA to implement the National Transportation Safety Board's "Most Wanted" recommendations to implement positive train control;

- Provide an update and timeline for enacting stricter tank care construction rules to improve the structural integrity of cares transporting toxic inhalants;

- Monitor the movements of hazardous rail cargo and to encourage rerouting of hazardous cargo to avoid large urban populations and sensitive environmental areas when possible; and

- Urge Department of Transportation Secretary Peters to follow through with the FRA's National Rail Safety Action plan announced in 2005 that addressed the core rail safety issues.

We believe the rail safety reauthorization process which is underway in your subcommittee will likely provide a legislative vehicle by which many of these recommendations may be implemented.

The City of San Antonio would like this committee to consider granting local governments the authority to create a multi-jurisdictional rail district that would share manifests, identify hazardous cargo, and seek alternative routes for such cargo to avoid populated areas. The information sharing would also give our HazMat teams advanced notice of hazardous cargo and its routes so it could be on stand-by in the event of an accident. The long-term goal would be to develop alternative routes that would allow hazardous cargo to bypass San Antonio completely. Another recommendation would be to develop universal markings for hazardous cargo tank cars that all first responders would recognize.

The City of San Antonio is also requesting $1,000,000 for a Train Derailment Simulation Site Classroom. The Union Pacific Railroad is intending to donate a derailment site prop consisting of 3 tank cars, railing, water, and roadway for use in regionalized training of first responders to train derailments. SAFD is in need of a classroom that can accommodate as many as 50 students who would attend this training on site prior to conducting the hands-on portion of the training curriculum.

The delivery of the regional training will be conducted by a tank car expert, who will be provided by Union Pacific. As part of the agreement with Union Pacific the San Antonio Fire Department will have a minimum of eight instructors trained at the Train-the-Trainer level. This process will allow the SAFD to continue training additional personnel in tank care operations, and provide the ability to have long-term continuing education with incumbent personnel. SAFD would also serve as a regional trainer for first responders from around the south-central Texas region.

Chairman Brown, members of the subcommittee, we ask for your support in these requests and ask that you work with Congressman Gonzalez in moving these recommendations forward. Your doing so will make our city a safer place for our citizens and our guests. I know that you are committed to reducing the risk of rail transportation and ensuring that rail cargo passes safely through San Antonio. Thank you again for coming to San Antonio and listening to our concerns.

Rail Safety:
A National Security Concern

Introduction

Good Morning Ladies and Gentlemen:

My name is A.R.Velasquez,

The reason I was invited to speak here, is because my family and I are survivors of one of the most devastating train accidents to hit our state and community in recent memory.

But first I would like to thank you for coming to our wonderful city and community. San Antonio is blessed with cultural diversity and intellectual flavors whose contributions make up this alluring caldo of cultures we call home. I want to also thank the voters of our community for electing the excellent representatives under whose leadership and stewardship San Antonio will lead the nation in finding lasting solutions to the rail transportation problems plaguing our nation. These are avoidable situations that no community should ever be exposed to much less experienced.

Congressman Charlie Gonzales, thank you for spearheading investigations initiated at the highest levels and for providing leadership and your incredible staff during this time of pain, confusion and uncertainty.

State Representative Mike Villareal, thank you for your continued efforts at seeking options and exploring avenues through grassroots investigations and community participation

County Judge Nelson Wolfe, thank you for bringing all the affiliated parties together and involving our community at all levels in finding the cause of this tragedy

City Councilwoman Delicia Herrera, thank you for being there from the very beginning. You asked the tough questions and sought answers to many of the questions that my family and others had.

Also, to the many citizens that opened their hearts and their prayers but especially to the numerous first responders who bravely and courageously performed their duty where persons of lesser stature would have buckled under the horror of the situation, I thank you.

The primary reason for my testimony is to present an opinion on rail safety and to offer suggestions that might provide venues to increasing public safety but first I should begin with a first person narrative of the incidences that led to that fateful event.

History

There is nothing that can be done to undo the incredible pain and continued suffering of those of us who have had the misfortune to experience what many have said is similar to the inhumanity experienced by our grandfathers and great-grandfathers during the chemical gas attacks used during World War I. The horror and effects witnessed by the world caused such uproar that this type of warfare was outlawed.
I can now say that,

The Other Side of Tranquility is Hell

There are many places to begin and end a story and it is often best to begin from the beginning. But being a Mexican-American, I will begin at the end, with the tragedy that marked new beginnings for another time. For myself, life began with the birth of my first child Nicole and has continued or renewed itself with the subsequent births of each of my children, The uniqueness of each of their births has given rise to hope in my life so that I may atone for the sins of the past by striving to make this a better world in which to pass on to the future. Surviving this tragedy required a greater strength that I could have ever possessed and for that I am eternally grateful.

It all began on a rain soaked Sunday morning in Rockport, Texas. My children and I were invited to attend a week-end at the coast with a few friends at a fishing tournament. After a long week of work, a rare get-a way seemed like a great idea, but unfortunately Mother Nature had other ideas and decided to rain incessantly. Although we did get periodic breaks from the rain we did manage to cast a few lines and catch a few fish. We threw them back as soon as we caught them for it was the experience that my kids enjoyed; besides they were pretty ***chavalones as far as fish*** were concerned, it was the thrill of the struggle and the catch that excited the kids. But the rain only put a damper on the opportunity not ***the ganas.*** As luck would have it, after we decided to pack up and come home that Sunday morning, the rain subsided and allowed us to have a nice drive home. Otherwise we might have stayed with the rest of the people another day. We later contemplated how close we came to staying that extra day to enjoy the respite from the inclimate week-end weather. This decision proved fateful.

On the drive home, the kids slept, talked and sang. Remarkably, there were no regrets or arguments. Everyone seemed to be at peace and harmony with each other. As we got closer to San Antonio the kids got more excited and were anxious to see their mother. Although we have been divorced for about ten years we are still a family and she had stayed at the ranch while we were gone. When we got back to the front gate of the ranch we all thanked God and Our Lady of Guadalupe the Virgin Mary for getting us home safely. The ride down the caliche road was quiet but once the kids saw their mom they were all excited and happy to tell her all the stories, especially Billie's story of the fish that got away. I was tired and after cleaning and putting up our gear I decided to rest.

The evening was quiet and tranquil. My brother David had come by late that afternoon with his kids and visited. My nephew Diego decided to stay the night and have a play station marathon that night with the kids. After all it was summer and the kids were planning on having a wonderful summer and Forth of July weekend. So they played well into the night, laughing and taunting *each* other to do better till they later fell asleep *about* four in the morning not knowing that only a few minutes away, a horrifying event was about to take place and impact their lives forever. Thus began the night of terror.

It was 4:48am in the morning when my oldest son Ralph awaken me from a deep slumber. He said: "Daddy, there is a strange noise outside!" When you live out in the country, it is wise to investigate noises that are out of the ordinary. But, being as comfortable that only hard work and exhaustion can insure, I reluctantly got out of bed clad only in boxer shorts and chanklas and went outside to investigate those strange noises. The morning had yet to show its face and the darkness still ruled the night. The night was sticky with a nice cool breeze blowing from the southeast. Most of the time these types of winds are welcomed as it is customarily to sleep with the windows wide open and the gentle whirling sound of the ceiling fans sets you at ease and sleep is never far behind.

As I walked toward the front yard gate with my dogs around me as if in a protective circle, I heard the normal train traffic and the usual sound of sticking brakes. Although the unusual sound of heavy tracked machinery did sound a little bit out of the ordinary. But, I thought that the railroad was unloading machinery to repair the signal at the siding that they had been working on the previous week. It was a little strange but being half asleep I didn't pay much attention to it and went back inside to finish resting before I had to get up and go to work, which was in about an hour. As I lay back on my bed I fell into a deep uneasy sleep not knowing that in only a few moments' events that would forever change the lives of many and end the lives of others was irrevocably in motion.

It was a few minutes after 5am when the dogs began to bark violently and within a few seconds my ex-wife Leticia stood at the doorway of my room and started waving her arms and hands but not saying a word. I got up and went to the kitchen and asked her what she was doing and asked had she spilt Clorox on the floor. Not saying a word and gasping for air she just signaled no. I noticed that the dogs had increased the tone of their barking and began pushing on the doors and windows in a very aggressive and urgent manner. The smell of Chlorine began to get stronger. I rushed outside to investigate the strong smells and the strange and excited behavior of *the* dogs, all the while thinking that someone was up to no good. As I walked around the side of the house and then to the gate in the front yard, the smell of chlorine began to increase and the sense of danger was reaching its peak. Instinctively I turned to the tree-line facing the railroad tracks. At first, with the exception of the smell I didn't notice anything out of the ordinary. Then the tree line began to disappear and take the form of an evil looking cloud, seeping through the groves of large oak and pecan trees that acted as a noise barrier between the tranquility of my home and the bustling of the railroad traffic. This hideous wall of death was rolling towards my home like a giant tidal wave. The immense chlorine and ammonia cloud of white with streaks of gray and black was hugging the ground and rolling in as a thick 50 to 60 foot high cloud of death, reminiscent of the clouds of dust that swept through the streets of New York at ground zero on September 11th, 2001. The speed with which this cloud moved was amazingly fast. By the time I ran back to the porch, yelling for my children to get up and cover their faces and get to the car, the cloud was less than 30 feet from our home. Then it hit with a thud and engulfed the home so thoroughly that the lights seemed to have dimmed because of the dense fog of poison had now replaced the oxygen in our home. The adrenaline and fear for the safety of my family kept me moving, making sure that everyone was in the Ford Explorer that was parked next to the house. I tried to round up the dogs but the pungent smell was so strong and visibility was very near zero, that breathing became difficult at best and I could not wait any longer. As I rounded the back of the vehicle, I saw our hero, Cesar the mix Rottweiler-Laborador sitting on the other side of the fence just

looking at me with those big excited brown eyes as if to say Goodbye. This was an extremely difficult time for me but I had to get the rest of the family to safety. With the doors to our home *left* wide open I hoped and prayed that the dogs and cats would find shelter. When I got into the car my youngest daughter Nadia asked "Will the dogs die, we can't just leave them, they saved our lives!" Then she sat and cried in silence and remained in a semi-catatonic state until we arrived at the hospital later that morning.

As we plowed our way through the high brush towards the back gate, the gate near the barn which had been used by our neighbor earlier that evening was inadvertently wrapped and impossibly secured by bailing wire. All attempts to open the gate were futile. The gas was now burning our eyes, the children were scared and visibility was now zero. The only alternative was to back-up and crash through the gate. With splinters and timber crashing through the sun roof and busting the front windshield we made it through to the next gate. Fortunately, this gate was only secured with a horseshoe. Our lucky break, I thought our good fortune had turned and that we were able to outrun the cloud. But, the thick coverage and lack of visibility was so intense that there was nowhere to turn. All that week, the rains had muddied the fields and the back roads making them impassible. Over time the sunflowers in the back field had grown to over six feet high and were all over the place. Aggravated by the eerie yet blinding whiteness of the ever-present fog, all exits and hope seemed to have vanished. This incredible sense of hopelessness and desperation, compounded by the burning effects of the poisons and the lack of oxygen began to take its toll. Through her coughing and tearing, my oldest daughter Nicole asked "Daddy, are we going to die?" This has to be one of the most painful questions asked of any father. I then looked into the eyes of all my children and my nephew Diego and knew that failure meant death. Despite the lack of oxygen and reduced vision outside of the vehicle, I continued to try and find a way out.

The only hope of escape was the one back road available. A road that although muddied and narrow, would lead us to the back gate or fence line of Lackland A.F.B where I had planned to break through and alarm the security forces to the danger that had befallen our community. With the poisonous cloud ever present and visibility frightening low, the road somehow seemed to get much muddier and unmanageable with each second that passed. Suddenly, as if to calm a frightened child, me, I heard a voice or was it my subconscious, that told me to slow down and stop, uncharacteristically, I complied. Not knowing why I stopped the vehicle and for a split second, sat and contemplated what to do next. Just as fast, I exited the vehicle and ran ahead to see what was in front of us. The sounds of my children pleading "what are you doing daddy, don't leave us daddy was excruciatingly painful. What am I doing? What if I don't make it back? The road ahead of us turned out to be a sea of mud. All routes out were now blocked. With the poisons taking their toll and the burning of the lungs and eyes at a very painful level, I slammed the car in reverse and sped along that slippery path that we had just traveled.

Not being able to see a thing I asked Diego and my son Billy to guide me backwards. They were also burning and scared but they did their job admirably. Their instructions to go left, turn right was often spattered with go ups and downs because of the bumpy terrain, nonetheless, got us out of a muddy predicament. In time we were able to turn around and go through the fields of giant sunflowers and enormous weeds. I asked God to intercede and

help these brave kids. I remember praying and saying that I was a sinner, but my children had their whole life ahead of them. Please save them and give me the strength not to quit. As luck would have it, the stalks and weeds kept us from sinking into the mud and kept us on a path that only through divine intervention could have guided us through this frightful blind cross-country escape. The next thing I remember was seeing a patch of black out in the distance and headed straight toward what I knew had to be night and oxygen. After from what seemed like an eternity we were out of the cloud. I saw vehicle lights in *the* distance and the familiar amber lights of the nearby Dominguez Correctional Facility. I now had an idea of where we were. But the dilemma was to go straight toward the highway and get out of the area as fast as possible or go and get my neighbor out. There was no choice. I went and warned my neighbor and after some time left through their gate and headed toward the Citgo Service Station to call 911 and get help for my children and my neighbors.

I now know that had it not been for divine intervention, my family would not have survived. Although this was an extremely precarious and dangerous environment, it was far beyond my capacity and impossible to survive, but it was not our time. I give all thanks and praise to Our Lord Jesus Christ and to His Mother, Our Lady of Guadalupe. Without their intercession we would not be here today.

After calling 911 several times to try and get help for ourselves and our neighbors, all the while coughing up blood, bleeding from the nose and with eyes burning, the horror began to sink in and the frustration level had reached its limit. But this is an issue that I will not place blame and hope that the proper authorities be provided the wisdom and guidance to correct this emergency response system. As instructed and after some time, we found the emergency staging area where medical help and assistance was sure to be available, only to find it vacant. By now my patience had been sorely tried. Anger began to take hold. Why was this place vacant? Did the tragedy expand and was I heading back into the nightmare. Did they know something we didn't know? All kinds of things circulate in one's mind when faced with the critical unknown. The only thing that I could think of was to go to the nearest hospital and get medical attention for my children. But how do I get there? Just then I ran into a roadblock manned by Deputy Sheriffs and was instructed to go to the military hospital at Wilford Hall.

We must have been the first people to arrive at the hospital, because the guards at the front gate knew nothing of the accident. They were very professional and their helpfulness was greatly appreciated. The blood in the vehicle and stress on our faces must have convinced them of the severity of the situation for they called ahead and led us to the emergency room doors where a medical team was waiting for us. We were rushed into an area where we were immediately stripped of all clothing and went through the decontamination process. This process and the subsequent medical processes went very fast and for me became a blur. I found out that after receiving the necessary emergency care and chemical neutralizing, my family was stabilized and were released later in the evening. I was hospitalized in the CICU for treatment and observation then released later the next day. The effects of chlorine and ammonia are still not widely known. But we have been diagnosed many lung and respiratory deficiencies in addition to the other illnesses and problems associated with severe trauma and exposure to these types of chemicals.

Plan

So what do we do to avoid such tragedies in the future? There is enough blame to go around. But that does not accomplish anything other than to alienate and stifle meaningful cooperation and potential partnerships.

Relocation

There has been much talk of relocating these hazardous lines out of the city proper and moving them out to the rural part of our county. This type of reactionary vision albeit well meaning, may pit the working class south side against the affluent north. This type of divisive strategies serves no one but speculators and developers

I do not feel that moving the lines out of the city is the answer. This would only expose other neighborhoods and future communities to the possibilities of this happening to them. It will also create incredible economic hardships on those small businesses that rely on the spur tracks that supply them with materials and merchandise. These businesses may not have the economic ability to relocate. Therefore, we must explore alternative materials and methods that are safe for safety sake not for expedience and convenience.

I feel that we must theoretically deconstruct the affiliated systems and strategically rebuild the system with safety and security as a partner to the development of efficient and effective transportation strategies.

Concrete Ties

Compare the advantages and disadvantages of utilizing concrete ties as they do in Europe and elsewhere. Replacing the wooden ties with concrete would reduce the opening of the rail gauges because of the natural tendency of wood to expand and contract. These types of wide gauges are often the cause of derailments.

In addition to saving trees, concrete will not have to be pressure treated with wood preservatives such as creosote, thus reducing contamination seeping into our water sources.

Thirdly, replacing wood with concrete may promote economic development through the creation of new industries in research and development and the production of safe rail products for the future.

Containers

Next, we must enforce the new container regulations that were developed after 9-11. Container cars manufactured before 1987 are generally suffering from severe metal fatigue and fractures and should be removed from service. The newer container cars that have been developed may not guarantee complete safety but it is much better that the alternative.

To enhance the safety of the community and the train crews, hazardous container cars should be relocated to the rear of the manifest where historically the likelihood of derailments and accidents are greatly reduced.

Manufacturers of hazardous materials should be required to transport their products only on approved containers that meet or exceed all federal regulations and guidelines.

Closing

In closing, I want to thank my Congressmen and our great elected body that is gathered here today, as well as all those brave first responders, you are all a credit to our community but please remember that the other side of tranquility is hell.

Respectfully Submitted

A.R.Velasquez

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Congressional Hearings
San Antonio, Texas

March 16, 2007

Testimony of State Representative Michael Villarreal (TX-123)
Before the Subcommittee on Railroads, Pipelines and Hazardous Materials
U.S. House Committee on Transportation an Infrastructure
March 16, 2007

I am the State Representative for Texas House District 123 in San Antonio. My constituents have learned first hand of the dangers associated with train derailments and asked me to do everything I can to help keep them safe. I appreciate the opportunity to testify before this committee.

Hundreds of train cars carrying hazardous materials are passing through our community. Train engineers are worked too long and trained too little. Protecting our community from train derailments has been difficult due to the federal nature of rail regulations. One step I have taken is filing House Bill 1345, which would require the community to prepare for possible train accidents/incidents near schools. In my district, about 60,000 students meet this criteria. There also must be a joint effort between the state and federal government to improve the overall condition of rail safety. Steps must be taken not only to protect children who attend school within 1000 yards of active rail lines--what my legislation aims to accomplish--but also to protect our communities as a whole. For this reason I have also filed House Concurrent Resolution 91, which respectfully requests that the federal government take appropriate steps to address our concerns with rail safety.

Background

From January to December 2006, Texas had highest number of rail accidents/incidents of any state. Of the 1,344 train accidents that occurred in Texas, 94 occurred in Bexar County alone. That is the third-highest incidence of rail accidents of all 254 counties in Texas. There has been a steady occurrence of severe rail accidents in Central Texas, in my home city of San Antonio, and in the district I represent. In 2004, accidents included a train derailment near Brackenridge High School and a two-train collision in Macdona. The train derailment near Brackenridge High School, a school within my district, injured three individuals and spilled 5,600 gallons of diesel fuel. Even more devastating, a two-train collision southwest of San Antonio killed three people and hospitalized fifty more, mostly from exposure to chlorine gas. A year later, in 2005, seven rail cars containing hazardous materials derailed in San Marcos and prompted a 200-person evacuation. Most recently, in late 2006, a 17-car derailment in the Beacon Hill neighborhood of my district severely damaged two houses. The damage could have been much worse.

I have begun to address the dangers of train accidents/incidents by filing legislation that aims to prepare those students who attend class within 1000 yards of rail lines for the worst-case scenario. I have also taken into account that most rail regulations fall within the jurisdiction of the federal government and have filed House Concurrent Resolution 91 imploring you to improve rail safety. Today, I ask you to consider the following recommendations.

Recommendations

- Minimum requirements for training must be updated:
  - The "Safety Compliance Agreement" between Union Pacific and the Federal Railroad Administration (FRA) acknowledged that Union Pacific's Field Training and Testing Program (FTX) on the San Antonio Unit is unsatisfactory: "the FTX program has not been effectively utilized to provide UP with a realistic evaluation of the level of employee compliance with operating and safety rules and Federal regulations."
  - According to the testimony of the United Transportation Union's Assistant National Legislative Director James Stern before the House Transportation and Infrastructure Committee, "the rail carriers have attempted to make training of new employees an issue reserved exclusively for collective bargaining, where the carrier's only concern is the cost of the training."

- Steps must be taken to improve the predictability and regularity of engineers' and conductors' work schedules:
  - Union Pacific and most other railroads use a work system in which an engineer or conductor have a set time for rest, but may be called in at any time after that period has passed. According to Union Pacific's Director of Fatigue Management, such a work schedule results in "erratic, unpredictable shifts."
  - A collision between a Union Pacific train and a Burlington Northern and Santa Fe train in Macdona, Texas on June 28, 2004 resulted in three deaths and the hospitalization of 50 individuals from exposure to chlorine gas, which emanated from a ruptured tank car. This accident has been directly correlated with engineer/conductor fatigue.
  - The National Transportation Safety Board (NTSB), in testimony before the U.S. House of Representatives Committee on Transportation and Infrastructure's Subcommittee on Railroads, Pipelines and Hazardous Materials, reported, "there is a need for legislative change that would provide the FRA authority to establish hours of service regulations and to address scheduling practices that affect fatigue."

- The FRA must enforce current regulations more aggressively:
  - In the aforementioned 2004 accident in Macdona, the FRA's failure to fine or sanction the companies involved is another example of the serious lack of enforcement. The NTSB report notes: "The safety board examined FRA inspection data for calendar years 2003 and 2004 . . . No FRA violation reports were submitted during that period for noncompliance."

- The FRA must improve the process for track and locomotive inspections, possibly by employing the use of more state officials in the process:
    - In 2005, the combined percentage of train accidents/incidents attributable to track and equipment defects totaled 45%. In 2006, that percentage increased to 48%.

- The FRA and the NTSB should improve information-sharing practices regarding rail safety, accident reporting, and investigation with the states.
    - Information sharing and collaboration are powerful tools for empowering each level of government to increase its impact on rail safety.

Conclusion

I appreciate the Subcommittee's efforts on this important issue and thank the members for traveling to San Antonio to learn about our communities' concerns. I urge the Subcommittee to bear in mind these recommendations and the concerns of my constituents as it works to improve rail safety.

STATEMENT OF

NELSON W. WOLFF
BEXAR COUNTY JUDGE

BEFORE THE
U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

SUBCOMMITTEE ON RAILROADS, PIPELINES, AND
HAZARDOUS MATERIALS

HEARING ON ROLE OF HUMAN FACTORS IN RAIL ACCIDENTS

MARCH 16, 2007

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Testimony of Bexar County Judge Nelson W. Wolff
Before the
U.S. House of Representatives
Committee on Transportation and Infrastructure
Subcommittee on Railroads, Pipelines and Hazardous Materials
Role of Human Factors in Rail Accidents
March 16, 2007

Good morning Chairwoman Brown, Ranking Member Shuster and Members of the Subcommittee. My name is Nelson Wolff and I serve as the Bexar County Judge. On behalf of the citizens of Bexar County I would like to thank you, the Members of the Subcommittee and staff for inviting me to testify today on the topic of the Role of Human Factors in Rail Accidents and for your interest in improving the safety of rail transportation.

I believe it is appropriate that this meeting is being held in San Antonio as it was here in this community just before daybreak on June 28, 2004 where one of the most significant human factor caused rail accidents in local history occurred. On that morning, a west bound Union Pacific Railroad train collided with an east bound BNSF Railway train at Macdona. The derailment and resulting leak of 60 tons of chlorine gas caused the death of 3 people and injured 50 others. Additional deaths and injuries were minimized by the fact that the derailment occurred in a sparsely populated rural area of Bexar County.

Less than six months later on November 10, 2004 an employee of a rental car company conducting business inside an office at Crystal Cold Storage was crushed by a refrigerated boxcar that had been shoved uncontrolled into the building after the engineer failed to stop after losing radio communication with the conductor who was controlling the movement.

The National Transportation Safety Board investigated both these accidents and concluded that human failures caused both. According to the Safety Board, the MacDona accident was caused the train crew failed to properly respond to signals. The Board concluded that the conductor in fact was most likely asleep and that the engineer may have been asleep as well. In the Crystal Cold Storage case, the Board concluded that the engineer did not stop the train as required by Union Pacific radio communication operating rules.

Following these incidents, my office received almost daily reports from both citizens and current and former railroad employees expressing concerns about rail safety. I learned of freight trains being parked in sidings with locomotives left running and unsecured leaving them readily accessible to any who might want to board and set the train in motion. I heard from employees who were left waiting hours for transportation back to their terminals following expiration of their available hours-of-service. Employees also reported that they were being called back to work on such a frequent basis that they could not get their proper rest.

Some of the factors that contributed to these events have been corrected. Other, bigger issues, have not. For example, following the 2004 accidents, the Union Pacific quickly moved to make local managerial changes. The UP also worked with its employees to reemphasize the need to properly follow operating rules. The Federal Railroad Administration assisted by sending teams of inspectors to San Antonio. There thankfully has been an improvement.

However, the bigger issues that contributed to these accidents remain. The Hours-of-Service law is one of those issues. After the derailments of 2004, I had the opportunity to learn quite a bit about the railroad industry and some of its regulations with the assistance of Matt Rose, the CEO of the BNSF, and Jim Young, the CEO of the Union Pacific. I am still astonished that under the current Federal Hours-of-Service provisions a railroad engineer is allowed to operate a train through our communities for up to 432 hours per month. This is more than four times as much time as an airline pilot and nearly double the hours of either shipboard personnel or a truck driver. Hazardous cargo laden trains should not be operated through our communities with fatigued crews. The law needs to be changed. Congress should also consider doing something about so called "limbo" time in which crews awaiting transportation to their final release point are credited with neither time on duty nor time off duty. From my point of view, both the railroad and its employees would benefit by moving these crews more quickly to their destinations to allow them to get their rest. Until these changes are made the cumulative fatigue issue will continue to set the preconditions for another MacDona.

Until these rule changes are made, perhaps Congress could do more to encourage the development of new technology to step in when humans fail. I understand the National Transportation Safety Board has for 17 years recommended the implementation of positive train control which could bring a train safely to a stop automatically when its human operator does not. I look forward to learning of its successful implementation.

Finally, I understand that humans fail. However the consequences of train operation related human failures is too great for these failures to continue. The rail industry and its regulators have a responsibility to use whatever means necessary to minimize these failures. In doing so, the benefit to all will be maximized.

Madame Chairwoman, this completes my statement, and I will be happy to respond to any questions you may have. Thank you again for inviting me to testify. I also would like to thank Congressman Gonzales and the other members of our local congressional delegation for their work on this issue.

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