

## **RAILROAD SAFETY ADVISORY COMMITTEE (RSAC)**

### **Minutes of Meeting May 18, 2005**

The twenty-sixth meeting of the RSAC was convened at 9:31 a.m., in the Franklin Room of the Washington Plaza Hotel, 10 Thomas Circle, N.W., Washington, D.C. 20005, by the RSAC Chairperson, the Federal Railroad Administration's (FRA) Deputy Associate Administrator for Safety Standards and Program Development, Grady C. Cothen, Jr.

As RSAC members, or their alternates, assembled, attendance was recorded by sign-in log. Sign-in logs for each daily meeting are part of the permanent RSAC Docket. Eight of the forty-eight voting RSAC members were absent: The American Short Line and Regional Railroad Association (ASLRRRA) (1 of 3 seats), The Brotherhood of Locomotive Engineers and Trainmen (BLET) (1 of 3 seats), The Brotherhood of Maintenance of Way Employees Division (BMWED) (1 of 2 seats), The International Association of Machinists and Aerospace Workers (1 seat), The National Conference of Firemen and Oilers (1 seat), The National Railroad Construction and Maintenance Association (1 seat), Safe Travel America (1 seat), and The Transport Workers Union of America (TWU) (1 of 2 seats). Five of seven non-voting/advisory RSAC members were absent: The Federal Transit Administration (FTA), The Labor Council for Latin American Advancement, The League of Railway Industry Women, The National Association of Railway Business Women, and Secretaria de Comunicaciones y Transporte (Mexico). Total meeting attendance, including presenters and support staff, was approximately 115.

Chairperson Cothen welcomes RSAC Members and attendees. He asks Alan Misiaszek (FRA Office of Safety) to give a hotel meeting room safety briefing.

Mr. Misiaszek identifies the hotel meeting room's fire and emergency exits. He asks for volunteers with cardiopulmonary resuscitation (CPR) qualification to identify themselves. A large number of RSAC attendees acknowledge having completed this training. Mr. Misiaszek advises that a large number of RSAC attendees have cellular telephones, but volunteers himself to call the emergency telephone number, 911, should an emergency occur.

Chairperson Cothen makes opening remarks. He informs RSAC members that Acting FRA Administrator Robert D. Jamison regrets that he is unable to attend today's meeting. He responds to queries that FRA Administrator Designate, Joseph H. Boardman's first official day of duty will be June 1, 2005. Chairperson Cothen looks forward to a full and productive day. He introduces Daniel C. Smith as FRA's Office of Safety's new Associate Administrator for Safety. Mr. Smith is familiar to RSAC members having formerly been the Assistant Chief Counsel for Safety in FRA's Office of

Chief Counsel. He asks Mr. Smith for a presentation on the National Rail Safety Action Plan.

Daniel Smith (FRA) relates that ordinarily the Associate Administrator for Safety is also the RSAC Chairperson. However, he has asked Grady Cothen to remain in that role as long as he is willing to serve. In addition, Acting FRA Administrator Jamison had planned to make the presentation on the National Rail Safety Action Plan before RSAC. However, a new arrival to his family occurred on May 15, 2005, and he is attending to the many responsibilities that accompany the addition of a baby to a family. Mr. Smith says the National Rail Safety Action Plan had its formal introduction in Columbia, South Carolina, on May 16, 2005, not far from the tragic January 6, 2005, Graniteville, South Carolina, train accident. That accident released chlorine gas from a ruptured tank car, resulting in nine fatalities, including one railroad employee, and the evacuation of more than 5,000 residents. Introduced by U.S. Secretary of Transportation Norman Mineta and Acting FRA Administrator Jamison, the National Rail Safety Action Plan will target the most frequent, highest-risk causes of rail accidents, focus Federal oversight and inspection resources, and accelerate research into new technologies that can vastly improve rail safety.

Mr. Smith uses a Microsoft PowerPoint presentation, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. In addition, the U.S. Department of Transportation (DOT) press release related to the introduction of the National Rail Safety Action Plan, with Internet links to Secretary Mineta's speech and the National Rail Safety Action Plan is available at FRA's Internet Web Site (click-on "Safety," click-on "National Rail Safety Action Plan), or at [www.dot.gov/affairs/dot7805.htm](http://www.dot.gov/affairs/dot7805.htm).

Under the viewgraph, "Introduction," Mr. Smith says that rail safety measures are generally moving in a positive direction. Between 1994 and 2004, total rail accidents/incidents declined 39 percent. However, there has been little improvement in the rate of train accidents since the early 1990s and significant train accidents continue to occur. With the increase in both rail traffic and highway traffic, the exposure to potential train accidents/incidents at highway-rail grade crossings is also rising. FRA's National Rail Safety Action Plan is designed to drive down the risk of train accidents, including the consequences from the release of hazardous materials (hazmat), and the risk of collisions at highway-rail grade crossings. Under the viewgraph, "Delivering Results," a bar chart shows the decline of total rail accidents/incidents from 19,592 in 1995 to 13,737 in 2004. Under the viewgraph, "Train Accident Rate," train accidents per million train miles were 3.67 in 1995 and preliminary results for 2004 report the rate to be 4.09. But the trend throughout the 1995-2004 period shows the train accident rate to be stubbornly fixed. Under the viewgraph, "Major Causes of Train Accidents," 38.4 percent of train accidents between 2000 and 2004 (values for 2004 are preliminary), excluding highway-rail grade crossing accidents, are related to human factors and 33.9 percent are related to track. FRA's strategy to reduce train accidents is to: (1) target

the most frequent, highest risk causes of train accidents, i.e., human factor and track; (2) focus oversight and inspection processes; and (3) accelerate research that has the most potential to mitigate the largest risks. Under the viewgraph, "Reducing Human-Factor Accidents," FRA's accident/incident database shows that the top 10 human-factor cause-codes account for 59 percent of human-factor accidents. The leading human-factor caused accident category is "switch improperly lined," with 16.6 percent of reported accidents/incidents attributed to this class. To address human factor accidents, FRA will ask RSAC, at today's meeting, to accept a Task to produce a proposed rule that establishes greater accountability for railroad operating rules compliance. Should RSAC not accept the Task, or produce timely recommendations, FRA will act without RSAC's advice. FRA is considering (1) mandatory compliance with major rules, i.e., "Federalizing" certain railroad operating rules, and (2) a review of railroad training and oversight requirements. In addition, in March 2005, FRA signed a "Memorandum of Understanding," with several railroad labor organizations and management to develop pilot programs to document "close calls," i.e., unsafe events that do not result in a reportable accident but very well could have. In other industries such as aviation, implementation of "close call" reporting systems, which shield the reporting employee from discipline (and the employer from punitive sanctions levied by the regulator), have contributed to major reductions in accidents. The idea is: "what is causing the cause." Finally, to reduce human-factor accidents, FRA will continue to encourage the development and deployment of positive train control systems, which are made possible by the nationwide differential global positioning system (NDGPS). Under the viewgraph, "Reducing Human-Factor Accidents—Role of Fatigue," (1) railroad operating crews work long and often unpredictable schedules; (2) employee "hours of service" are governed by a 1907 law that was last updated in 1969; (3) the service demands for railroads and railroad employees are growing; (4) rail employee education and awareness of fatigue issues is well developed; (5) there remains significant pockets of fatigued employees due to crew calling practices and collective bargaining agreements; (6) fatigue is believed to be a significant contribution to human factor accidents; (7) solutions to fatigue is a continuing effort of the North American Rail Alertness Partnership; and (8) once validated, a fatigue model for the railroad industry will be made available for evaluation and planning of crew scheduling practices. Under the viewgraph, "Improving Track Safety," Mr. Smith explains that total track-caused accidents for Class I railroads decreased slightly between year 2000 and 2004, while revenue ton-miles of freight, i.e., traffic volume, increased. Nevertheless, track-caused accidents remain a leading cause of train accidents/incidents. FRA knows that the Agency needs to increase track structure flaw detection capabilities, especially for joint bar cracks and internal rail flaws. FRA is also accelerating research on methods of detecting track geometry defects that are not easily spotted. Under the viewgraph, "Automated Track Geometry Program," Mr. Smith says that as of May 18, 2005, a new self-propelled Gage Restraint Measurement System (GRMS) track inspection vehicle (T-18) was put into full time service by Secretary of Transportation Mineta during ceremonies in Baton Rouge, Louisiana. The T-18 utilizes a specially designed fifth axle that applies continuous loads to each rail—regardless of the roll, pitch or vertical movement of the carbody, or curvature of the track—to detect weak ties and fasteners.

Two additional T-18 GRMS track inspection vehicles are under construction—one will be a towed vehicle; one will be a self-propelled vehicle—and are expected to be placed into service within 18 months. The T-18 fleet will target major hazardous materials and passenger routes and are part of the National Rail Safety Action Plan. FRA's T-18 vehicle is owned by the Agency's Office of Railroad Development. Under the viewgraph, "Track Research," FRA is accelerating research on methods of detecting major causes of track defects that are not spotted easily such as cracked joint bars and internal rail flaws. A new photo imaging device will aid in the detection of cracks.

A large part of the National Rail Safety Action Plan deals with hazmat transportation. Under the viewgraph, "Hazardous Materials Transportation," hazmat releases in train accidents and other hazmat releases from rail cars are both at or near all-time lows. However, recent train accidents and fears of terrorism have heightened concerns about hazmat releases. Under the viewgraph, "Hazardous Materials Safety," efforts are proceeding to ensure that emergency responders have access to hazmat information (a pilot project will be put in place in July 2005), and tank car structural integrity research is being accelerated (to the extent funds permit). Under the viewgraph, "Non-Accident Release Trends," releases between year 1995 and 2004 are reduced, but rail employees are still being injured.

Under the viewgraph, "Focused Inspections," DOT's Office of the Inspector General issued a report suggesting that better use of FRA's accident/incident databases was needed to help FRA allocate its inspector resources. FRA has fewer than 400 inspectors who are responsible for administering rules that cover intercity passenger and commuter service and freight service involving 140,000 route miles of track, 1.3 million pieces of rolling stock, 1.7 million hazardous materials shipments annually, and over 200,000 rail employees. To help FRA apply its limited inspector resources, Mr. Smith briefly describes FRA's new National Inspection Plan. It is data-driven; allocation of inspector resources is by railroad and by State within inspection disciplines; and the plan can be adjusted as new information is provided.

Under the viewgraph, "Highway-Rail Grade Crossing Safety," Mr. Smith says that FRA works with States, local governments, railroads, and other DOT administrations to improve safety at over 148,000 public grade crossing and 98,000 private grade crossings. Compared to 1994, preliminary data for 2004 show that highway-rail grade crossing incidents are down 39 percent and fatalities are down 40 percent. However, there was an increase in highway-rail grade crossing incidents and fatalities in 2004, compared to 2003, particularly involving pedestrians. Under the viewgraph, "Improving Grade Crossing Safety," although fatalities from highway-rail grade crossing accidents have trended in the right direction for many years, these accidents are still causing over 300 deaths per year. Under the viewgraph, "Improving Grade Crossing Safety," (1) FRA continues to build partnerships with State and local law enforcement, i.e., a Safety Advisory was issued on May 2, 2005 (Safety Advisory 2005-03; Highway-Rail Grade Crossing Safety), to facilitate improved cooperation in the investigation of collisions at highway-rail grade crossings; (2) FRA continues to improve data available

for safety analysis, i.e., the Train Horn Rule will help update the highway-rail grade crossing inventory; (3) FRA is working with the State of Louisiana on its State Action Plan (the first pilot for this approach) to improve grade crossing safety; and (4) FRA is using data to focus on pedestrian fatalities at highway-rail grade crossings. Under the viewgraph, "Summary," Mr. Smith says FRA intends to reduce accidents and casualties by: (1) focusing resources on major risks through better use of data; (2) using technology and new products of research strategically; and (3) forming partnerships with State and local agencies and others to prevent and mitigate the consequences of accidents. In conclusion, Mr. Smith announces that the narrative summary of the National Rail Safety Action Plan can be found on FRA's Internet Web Site (click-on "Safety," click-on "National Rail Safety Action Plan.")

Mr. Smith asks for questions.

Rick Inclima (BMWED) says as he looks through the National Rail Safety Action Plan, there is an emphasis on human factors. He believes that human factor-related accidents are the result of the failings of something other than the individual worker. He believes the interplay of railroad operating rules is important in examining human factor-caused accidents.

Mr. Smith agrees and says that FRA has received a directive from the Secretary of Transportation to look at human factor-caused accidents. A Human Factors-related Task will be proposed today that will ask an RSAC Working Group to look into the details of this topic. He believes that RSAC and FRA need to elevate those railroad operating rules that can help reduce this type of accident.

Mr. Inclima references hazardous materials releases. He asks if there is any move by FRA or the rail industry to provide "escape packs," or "escape hoods," for train crew member use in train accidents such as the Graniteville, South Carolina, accident in which deadly chlorine gas was released?

Mr. Smith responds that a train crew member's mother expressed that comment to the Secretary of Transportation during the introduction of the National Rail Safety Action Plan in Columbia, South Carolina. He does not know the particulars of what apparatus is appropriate considering the potential releases of different kinds of hazmat.

Ross Capon (National Association of Railroad Passengers (NARP)) asks if FRA has given consideration to notifying communities about the types of hazmat that are transported on a regular basis through their communities?

Mr. Smith responds that railroads will need to provide input to this subject. The Circular that the Association of American Railroads (AAR) issued recently may deal with this topic.

Michael Rush (AAR) explains that railroads have been sitting down with communities for years. Each railroad does it in its own particular way.

John Samuels (AAR) says that FRA has a strong research program. However, he sees a problem. He asks: How does FRA get the “research” side of its efforts over to the “safety” side to produce fact-driven rules? There is an absence of DOT modal Administrators when accidents are being investigated. He believes there is a need to better link government modal Administrators to accident investigations. The rail industry needs to share its problems, for example, trespassers being struck on railroad property by moving equipment, with different DOT modal Administrators. This is not just a problem for the “railroad” modal Administrator.

Mr. Smith responds that FRA has a good working relationship with the Federal Highway Administrator. But it may not be apparent to parties outside of DOT. He adds that FRA’s Office of Safety employees have a “passion” about safety. Sometimes the passion may not be based on facts. But FRA agrees that safety requirements must be supported by facts and reasonable inferences from those facts.

With no further questions of Mr. Smith, Chairperson Cothen asks Charles Bielitz (FRA–Office of Safety) for an activity report on Passenger Safety Working Group (WG) activities.

Charles Bielitz (FRA) explains that the General Mechanical Task Force has a delay in completing its work. It has been asked to look into testing requirements for locomotive hand brakes and baggage car standards, i.e., adding inspections for adequate heat, lighting, and operable doors. He asks Al MacDowell (FRA–Office of Safety) and Larry Kelterborn (American Public Transportation Association (APTA)–LDK Engineering) to report on Track Vehicle Interaction (TVI) Task Force (TF) activities.

Al MacDowell (FRA) uses a series of Microsoft PowerPoint presentations, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Mr. MacDowell explains that the TF has been meeting about every two months. The first meeting was April 20, 2004, and the most recent meeting was April 7, 2005. Generally, a technical subgroup of the TF meets at about the same intervals. Under the viewgraph, “Task Force Ongoing Issues,” Mr. MacDowell explains that Items G1-1, Wheel Flange Angle, G1-2, Wheel Conicity, and G1-3, Truck Equalization, are still being debated at the APTA PRESS (Passenger Rail Equipment Safety Standards) Committee. Therefore, there is nothing to report to the full RSAC on these items at this time. For WG Item G3-1, 49 Code of Federal Regulations (CFR) § 213/ § 238 language consolidation, the TF has drafted a Proposed Consolidation/Revision of TVI Requirements in Parts 213 and 238. However, the Working Group is still cross referencing these changes and there is nothing to report to the full RSAC on this item. Under the viewgraph, “Item G2: Instrumented Wheelset (IWS) Testing Requirements,” Mr. MacDowell explains that a lot of research and

Modeling is required before the TF can report progress on this issue. However, the TF is considering (1) surrogate IWS testing measures; (2) how to revise qualification requirements for new equipment on Class 6 track (90-110 mph), i.e., for Class 6 track and cant deficiencies up to 5 inches, the IWS testing requirement has been replaced with simulation of performance with no requirement for re-qualification on other tracks; and (3) simulation of performance, in which IWS measurements, or accelerometer measurements will be conducted using an industry-recognized methodology on a segment representative of the full route on which the equipment is intended to operate. Under the viewgraph, "Item G2–Qualification Requirements," Mr. MacDowell explains that four tests will be applied to new equipment, based on the amount of cant deficiency. They are: (1) static lean test; (2) acceleration test; (3) simulation; and IWS test. Mr. MacDowell says that simulations and examination of the route track geometry will be used to determine a segment statistically representative of the route and inclusive of the most severe conditions. Simulations will also be conducted on an analytically-defined track segment representative of minimally compliant track conditions for the respective track class. Any IWS or accelerometer test must be accompanied by a track geometry survey within two weeks of the test. The TF is also working on establishing procedures for allowing qualified equipment to be run on other tracks of the same class without the use of IWS testing. For Class 6 track and cant deficiencies up to 5 inches, the IWS testing requirement has been replaced with "simulation-of-performance" with no requirement for re-qualification on other tracks. The technical sub group of the TF will establish predefined analytical anomalies representative of minimally acceptable conditions for each track class. Finally, the simulation of vehicle performance over the developed analytical geometry as well as over actual track, along with acceleration measurements, will be used to extend equipment qualification to untested tracks. The TF discussion on this issue is ongoing; there are no proposals to present to the full RSAC at this time.

Mr. MacDowell asks Larry Kelterborn to continue the presentation on Track Vehicle Interaction TF activities.

Larry Kelterborn (APTA) uses a series of Microsoft PowerPoint presentations, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Mr. Kelterborn explains that most Track Vehicle Interaction TF activities involve technical issues that need to be studied before they can be resolved. Under the viewgraph, "Item G3-2: Revision of Acceleration Criteria," carbody accelerations and truck stability issues are being studied for passenger carrying equipment and non-passenger carrying equipment, under transient acceleration and sustained acceleration conditions. The TF discussion on this issue is ongoing; there are no proposals to present to the full RSAC at this time. Under the viewgraph, "Item G3-3: Revision of Wheel-to-Rail Forces in TVI Limits Table of 49 CFR § 213.333," ongoing further analysis is needed involving proposed net axle limits with dependency on vehicle weight. Analysis shows that the current single limit may be sufficiently conservative for all vehicle types. There is also a proposal for single wheel

unloading limit to 20 percent of nominal static weight—the existing rule may not have a sufficient margin of safety. The TF discussion on these issues is ongoing; there are no proposals to present to the full RSAC at this time. Under the viewgraph, “Item G4: Reconsider Adequacy of Track Geometry Limits,” very time-consuming Modeling is underway to show what happens when factors are varied. The TF is establishing a matrix of track conditions over which vehicles will be modeled and to validate the relationship between TVI safety limits and track geometry limits. Analysis will consider limits for short warp for Track Class 6 and higher. “Warp” is the difference in cross level in two segments of track, i.e., anything less than 60 feet. The TF is attempting to determine the relationship between track geometry and cant deficiency by Modeling. Computer Models will include Amtrak’s Acela Power Car, Amtrak’s Acela trailer car, Amtrak’s AEM-7, FRA’s T-16 track geometry car, and Amtrak’s Amfleet cars. The TF discussion on this issue is ongoing; there are no proposals to present to the full RSAC at this time. Under the viewgraph, “Item G5–1–Cant Deficiency Regulations,” the TF is proposing to establish minimum requirements of track maintenance based on the maximum cant deficiency allowed. Presently Track Class is based solely on speed. Ultimately, Track Class may be determined by either cant deficiencies or speed. The TF discussion on this issue is ongoing; there are no proposals to present to the full RSAC at this time. Under the viewgraph, “Item G7–Elimination of Class 9 Track Standards Reference,” the TF accepted the APTA recommendation that FRA delete all requirements and references to Class 9 Track Standards (maximum allowable speed is 200 miles per hour (mph)) from the current Track Safety Standards and reduce the maximum operating speed for Class 8 Track to 150 mph (currently 160 mph). At the April 7, 2005, TF meeting, FRA presented draft rule text language to accomplish this change, which was accepted and will be forwarded to the Working Group for consideration at its next scheduled meeting, September 6-8, 2005. Finally, in recommending the elimination of requirements and references to Class 9 Track Standards, Mr. Kelterborn notes that FRA requires a rule of particular applicability for any operations above 150 mph to address safety issues presented by the system at those operating speeds.

Mr. Kelterborn asks for questions.

With no questions of Mr. Kelterborn, Chairperson Cothen announces a 10-minute break.

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M O R N I N G   B R E A K   11:05 A.M. - 11:18 A.M.

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Mr. Cothen calls the meeting to order. He recognizes the following meeting attendees: Tom Streicher (ASLRRA), Robert Smith (AAR–Canadian Pacific Railroad), Bill Parsons (AAR–Metra North), and Ken Briers (NARP).

Chairperson Cothen asks David Tyrell (DOT–Volpe National Transportation Systems Center (Volpe)) for a report on Crashworthiness/Glazing TF activities.



David Tyrell (Volpe) uses a series of Microsoft PowerPoint presentations, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Under the viewgraph, "Outline," Mr. Tyrell's presentation will touch on the following topics: (1) glazing; (2) fuel tanks; (3) cab car end frames; (4) crash energy management; and (5) next steps. Under the viewgraph, "Glazing Issues," Mr. Tyrell says the TF has reached consensus for the criteria for the Large Object Impact Test, contingent on conducting the test under prescribed conditions. The test is to be conducted this summer. The following issues remain open: (1) should locomotive side windows meet the more stringent front facing glazing requirements; (2) should there be a higher ballistic test velocity, more representative of current .22 caliber (long rifle) bullets; and (3) should end facing windows in trailing passenger cars be subject to side facing glazing requirements? Under the viewgraph, "Overview of Proposed Glazing Standard," (1) glazing is to be certified by an independent laboratory; (2) glazing material will be recertified every three years using the following criteria: penetration of a 2-mil thick aluminum foil "witness plate," and three of four test samples must pass each test. Under the viewgraph, "Overview of Recommended Front Facing Glazing Tests," Mr. Tyrell describes the Ballistic Impact Test (22 caliber long rifle, using a 40 grain bullet, having an impact velocity of 960 feet per second (fps) and the Large Object Impact Test (12 pound solid steel ball, having an impact velocity of 62.5 fps (43 mph), which tests the glazing system, including glazing, gasket, and frame). Under the viewgraph, "Overview of Recommended Side Facing Glazing Tests," Mr. Tyrell describes the Ballistic Impact Test (22 caliber long rifle, using a 40 grain bullet, having an impact velocity of 960 feet per second (fps), the Large Object Impact Test (12 pound solid steel ball, having an impact velocity of 17 fps (11.6 mph), and the Small Object Impact Test (0.42 pound solid aluminum sphere with an impact velocity of 80.7 fps (55 mph).

Under the viewgraph, "Fuel Tanks," Mr. Tyrell explains that the TF has received presentations on accident survey data and the development of generic passenger and freight locomotive fuel tank crush models.

Under the viewgraph, "Cab Car End Frame Optimization," Mr. Tyrell says the TF has reached tentative consensus on fundamental technical requirements and on the recommended "home" for the standards, i.e., Dynamic Standard (FRA Regulation), Quasi-Static Standard (APTA Standard). This approach parallels the approach taken in the Locomotive Crashworthiness rulemaking, with FRA providing performance standards and AAR's revised S-580 Standard providing a recognized means of implementation. However, consensus has not yet been achieved on values for energy absorption—additional testing is needed. Under the viewgraph, "Cab Car End Frame Tests," Mr. Tyrell outlines the following progress. For Quasi-Static Tests (to help define the APTA Standard), the M-7 collision post test is completed; the M-7 corner post test is planned; the State-of-the-Art (SOA) design corner post test is tentatively planned; and the a further collision post test is tentatively planned. For Dynamic Tests (to help define recommendations for FRA regulations), the 1990's corner posts test is completed; the

SOA corner posts test is completed; and a further collision post test is tentatively planned. Under the viewgraph, "Overview of Draft Cab Car End Frame Standards," Mr. Tyrell describes the Dynamic Standard, which applies to any shape cab car, as cab car impact with a rigid object with prescribed initial locations, weights, and impact speed. Under the "dynamic standard test conditions," there shall be no more than 10 inches of deformation of the collision/corner post. For the Quasi-Static Standard, which applies to flat nose cab cars, the collision/corner post is severely deformed by a load applied 30 inches above the car deck. Under the "quasi-static test conditions," a minimum prescribed amount of energy must be absorbed; no more than 10 inches deflection of the collision/corner post into the operator's cab is allowed; and there shall be no complete separation of cab car attachments. Under the viewgraph, "Crash Energy Management," a summary of research and development has been presented to the TF. An Ad Hoc working group is being formed by FRA, the Federal Transit Administration, APTA, and Metrolink to develop crash energy management specifications. Under the viewgraph, "Crashworthiness-Glazing Task Force Next Steps," Mr. Tyrell says the TF is working towards consensus on both glazing standards and cab car end frame optimization. In addition, the TF will start to develop recommendations for interior occupant protection requirements.

Mr. Tyrell asks for questions.

With no questions of Mr. Tyrell, Chairperson Cothen explains that there is intense interest in push-pull train operations (Locomotives can be positioned at the front of a train consist to "pull" cars, or at the rear of a train consist to "push" cars. When used in commuter rail service, the locomotive will typically "pull" cars in one direction of the commuter train's origin and destination, and then "push" the cars in the opposite direction of the commuter train's service. There are cost savings to commuter rail authorities by operating commuter trains in push-pull service. But critics say that having a locomotive "pull" commuter rail cars are safer.) There is a team activity within the Passenger Safety Working Group that is looking into push-pull operations that hopes to present data analysis shortly. He adds that FRA need to move on implementing crashworthiness standards, either the APTA Standard, or FRA Regulations by the TF's next meeting (August 11-12, 2005). He asks Brenda Moscoso (FRA-Office of Safety) to report on Emergency Preparedness TF activities.

Brenda Moscoso (FRA) uses a series of Microsoft PowerPoint presentations, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Under the viewgraph, "WG Recommended Notice of Proposed Rulemaking," Ms. Moscoso says in March 2005, the WG reached consensus for rules in the following areas: (1) emergency window exits; (2) rescue access windows; (3) emergency roof access; (4) emergency communications; and (5) inspection and repair of emergency systems. Under the viewgraph, "Revised Definition," "main level" means a level of a passenger car that contains a passenger compartment whose length is equal to or greater than half the

length of the car. Thus, intermediate/mezzanine levels on existing equipment are not main levels. Under the viewgraph, "Emergency Window Exits," Ms. Moscoso outlines proposed emergency window exit rules as follows: (1) non-main levels—two in each seating area accessible to passengers without having to pass through an interior door or go to another level; one in each side of the seating area; and may be in an exterior side door in the passenger compartment if it is not "practical" to place in the side of the seating area. (2) non-main level exception for existing equipment—only one required in a seating area if not "practicable" to place in a side of the passenger compartment (due to the presence of such structure as a bathroom, electrical locker, or kitchen) and there are no more than 8 seats in the seating area. (Note: from a dictionary, "practical" means capable of being used or put into effect. "Practicable" means feasible. "Practical" is more flexible.) (3) non-main level exception for new equipment (to address limited space)—only one emergency exit window is required in a seating area if: (a) it is not "practical" to place in a side of the passenger compartment due to the need to provide accessible accommodations under the Americans with Disability Act (ADA) regulations; (b) there are no more than 4 seats in the seating area; and (c) a suitable, alternate arrangement for emergency egress is provided. (4) there is added flexibility for emergency window exit dimensions—26 inches horizontally by 24 inches vertically; however, if located within an exterior side door, the dimensions may be 24 inches horizontally by 26 inches vertically. (5) to address potential hindrances to window removal (e.g., seatbacks, headrests, luggage racks, etc.)—instructions in either written or pictorial format shall state/show the method for allowing rapid and easy removal of the window, taking into account the fixture (hindrance). Under the viewgraph, "Rescue Access Windows," Ms. Moscoso outlines proposed rescue access window rules as follows: (1) for single-level passenger cars and main levels—two rescue access windows, one in each side entirely within 15 feet of the centerline of the car (within 7.5 feet, if the car is less than or equal to 45 feet in length); if the seating level is partitioned into separate seating areas, each separate seating area shall have one in each side, as near to the center of the car as "practical." (2) exceptions to the location requirement for single-level passenger cars and main levels—if 4 emergency window exits also serve as rescue access windows, the requirement is met; for existing equipment, if the rescue access windows are located within exterior side doors, and at least one is in each end and each side of the car, the requirement is met. (3) for non-main levels—the requirements and exceptions are the same as for "emergency window exits in non-main levels." (4) for ease of operability—rescue access windows should be capable of being removed without undue delay by an emergency responder using tools or implements that are commonly available to an emergency responder at the scene, or a provided mechanism. (5) marking and instructions—instructions are to be posted at or near each rescue access window; placement of instructions at car ends only is not sufficient to meet this requirement. Under the viewgraph, "Emergency Roof Access," Ms. Moscoso outlines proposed emergency roof access rules as follows: for new passenger cars—two, as "practical," in diagonally opposite quadrants of the roof; minimum size should be 24 inches laterally and 26 inches longitudinally; there should be instructions and reflective markings for each emergency roof access point, whether it is a roof hatch, or structural weak point in the roof structure. Under the viewgraph, "Emergency

Communications,” Ms. Moscoso outlines proposed emergency communication rules as follows: (1) public address systems—will be required on all new cars; existing cars will need to be retrofitted by year 2012 (note: it is expected that cars currently without public address systems will be retired by year 2012). (2) intercom systems—for new passenger cars, one transmission point in each end (half), unless the car is less than or equal to 45 feet in length. Under the viewgraph, “Inspection and Repair,” Ms. Moscoso outlines proposed inspection and repair requirements for emergency systems as follows: (1) for rescue access markings and instructions—check for presence daily; repair by the 4<sup>th</sup> Calendar Day Inspection; rules provide greater repair flexibility for sleeping cars and cars with significantly more rescue access windows than required. (2) for public address and intercom systems—as part of the daily inspection, public address and intercom systems should operate and function as intended; if defects are found, provide train crew written notification of the non-complying condition; repair by the 4<sup>th</sup> Calendar Day Inspection (exception: for long distance intercity trains, repair by the 8<sup>th</sup> Calendar Day Inspection). (3) for doors—new requirement to provide train crews with written notification of non-complying conditions. (4) for roof access markings—determine presence at the Periodic Mechanical Inspection, but not less frequently than every 184 days. Under the viewgraph, “Other Progress,” Ms. Moscoso explains that the Emergency Preparedness TF is working on the following topics: (1) promoting use of doors for emergency egress; (2) enhancing emergency lighting; (3) incorporating APTA standards; and (4) addressing the Transportation Security Administration (TSA) Directive to lock cab operator doors. Under the viewgraph, “Use of Door Exits,” Ms. Moscoso explains that the TF reached consensus for removable windows/panels in vestibule doors to provide access to side and end frame door exits. The TF has under consideration removable windows/panels in end frame doors that are potentially the preferred exit route from cars that have rolled onto their sides. Under the viewgraph, “Emergency Lighting,” Ms. Moscoso says the goal of this issue is to provide a well-protected emergency power supply for emergency lighting. The TF has agreed in principle to the use of a self-contained power source, i.e., either battery or capacitor, pending a review of cost and a determination of feasibility. Under the viewgraph, “Incorporation by Reference of APTA PRESS Standards,” FRA intends to incorporate by reference, APTA PRESS Standards regarding emergency lighting, emergency signage, and low-location exit path markings (LLEPM). Ms. Moscoso explains that the APTA PRESS Standards for lighting will require emergency lighting to be installed by year 2015 or when equipment is conveyed/transferred/leased, whichever occurs first. Because existing non-HPPL (high-performance photoluminescent lighting) signage stocks are likely exhausted, APTA PRESS Standards will no longer grandfather the use of this signage. Finally, APTA PRESS is still working on an implementation schedule for LLEPM. Some larger railroads may need more time to implement this technology.

Under the viewgraph, “TSA Security Directive,” Ms. Moscoso explains that on May 20, 2004, TSA sent the following Directive to passenger railroads: “if equipped with locking mechanisms, lock all doors which allow access to the engineer’s cab or compartment.” In addition, TSA asked for alternative recommendations to mitigate the effect of this Directive to address any safety concerns. Subsequently, TSA met with the

TF and clarified the directive as follows: (1) the Directive is limited to controlling cabs; (2) if the equipment that is necessary to operate from that cab is removed, the cab is not a controlling cab; and (3) affected commuter railroads need to submit requests for alternative safety measures to TSA on their own, or through APTA, i.e., exemptions for cab doors with no quick release mechanism and exemptions for freight locomotives borrowed for passenger service.

Ms. Moscoso asks for questions.

Dennis Mogan (AAR) references public address system requirements for existing equipment, i.e., 49 CFR § 238.117A(1). He asks for confirmation that the proposed new rules do not require the retrofit of existing cars with intercom systems in each half of the cars.

Ms. Moscoso responds yes, that is correct.

With no further questions of Ms. Moscoso, Chairperson Cothen asks for a motion to approve draft rule text to amend 49 CFR § 238 regulations, as recommended by the Passenger Safety Working Group.

A copy of the draft rule text to amend 49 CFR § 238 regulations, as recommended by the Passenger Safety Working Group, and an accompanying explanation, Emergency Preparedness Notice of Proposed Rulemaking, were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes.

James Stem (United Transportation Union (UTU)) moves that draft rule text to amend 49 CFR § 238 regulations, as recommended by the Passenger Safety Working Group be approved by the full RSAC.

Dennis Mogan (AAR) seconds the motion.

BY UNANIMOUS VOICE VOTE, THE FULL RSAC APPROVES DRAFT RULE TEXT TO AMEND 49 CFR § 238 REGULATIONS, AS RECOMMENDED BY THE PASSENGER SAFETY WORKING GROUP.

Chairperson Cothen thanks the Passenger Safety Working Group for their efforts to advance these rules to the full RSAC. He thanks the full RSAC for approving the draft rule text to amend 49 CFR § 238 regulations.

Chairperson Cothen asks Jeffrey Horn (FRA–Office of Safety) for a presentation on Locomotive Cab Working Conditions Working Group activities.

Jeffrey Horn (FRA) uses a series of Microsoft PowerPoint presentations, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting

attendees. In addition, a document that summarizes "Issues from Public Comments to FRA's Occupational Noise Exposure NPRM" was also distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Previously, the Notice of Proposed Rulemaking for 49 CFR Parts 227 and 229, Occupational Noise Exposure for Railroad Operating Employees, was distributed to meeting employees. This document can also be found on FRA's Internet Web Site. Mr. Horn's introductory remarks review the history of occupational noise exposure for railroad operating employees and repeats the portion of RSAC Task Number: 97-2, Locomotive Cab Working Conditions, i.e., Noise, that is nearing completion. The Working Group member organizations were identified and a brief history of the rulemaking was offered as follows: The NPRM was published in the *Federal Register* (FR) on June 23, 2004 (69 FR 35146). The public comment period for the NPRM ended September 21, 2004. Task Force and Working Group meetings were held to review the public comments and recommend a final rule. The Working Group reached consensus on all issues and its report is forwarded to the full RSAC today for approval. Under the viewgraph, "Statistical Summary of the Public Comments," Mr. Horn says about 50 entities submitted comments to the Public Docket. The comments address approximately 65 recommendations/issues. The Working Group rejected 36 requests for changes to the proposed rule, but accepted (in whole/part or modified) 19 recommendations. Under the viewgraph, "Comment Recommendations that were Accepted," Mr. Horn describes the following: (1) new definitions for "audiogram," "audiometry," and "professional supervisor of the audiometric monitoring program;" (2) a revised definition for "audiologist;" (3) permitting American National Standards Institute (ANSI) Method B for evaluating hearing protector attenuation; (4) adding 8,000 Hertz to audiometric testing frequency requirements; (5) permitting insert earphones for audiometric tests; (6) adding a mandatory Appendix with guidelines for audiometric revisions; (7) revising the upper limit for noise measurement to a sound pressure level of 140 dB(A), from 130 dB(A); and (8) changing the annual offering of hearing conservation training and audiometric testing to "once each calendar year," with the interval between the date offered for a test in a calendar year, and the date offered in the subsequent calendar year to be not more than 15 months. Under the viewgraph, "Comment Recommendations that were Not Accepted," Mr. Horn describes the following: (1) revise the exchange rate, i.e., the manner in which the exposure dose is calculated, from 5dB to 3dB; (2) revise the sound level filter from A-Scale to C-Scale; (3) make the effective date for development and implementation of a noise monitoring program sooner; (4) require 100 percent monitoring instead of a statistical sampling approach to monitoring; (5) change the term (definition), "noise operational controls," to "administrative controls;" (6) require annual audiometric (hearing) tests; (7) eliminate the Occupational Safety and Health Administration (OSHA) age correction charts (Appendix F); (8) require static noise test for all locomotives instead of a statistical sample; (9) mandate relocation of cab roof-mounted horns to the back of the cab on the engine compartment hood; (10) require the railroad industry to use noise canceling headsets with built-in communication; and (11) use the OSHA Hierarchy of Noise Controls instead of the specific requirements in the FRA rule. Mr. Horn concludes his presentation by saying today, the full RSAC will be asked to approve the rule revisions for noise in

locomotive cabs. After the FRA Administrator receives and reviews the RSAC recommendation, the rule will enter a clearance process. FRA hopes that the rule will be published in the *Federal Register* in February 2006. The effective date of the rule will be 90 days after publication in the *Federal Register*. The 49 CFR § 229 noise-related build requirements for locomotives will become effective 18 months after the rules are published in the *Federal Register*.

Mr. Horn asks for questions.

Dennis Mogan (AAR) asks if the requirement to move train horn location would apply to cab cars?

Mr. Horn responds that the public comment recommendation that train horn location be moved was not accepted. There are no rules for train horn re-location.

Robert Harvey (BLET) asks why the publication of the Final Rule is delayed until February 2006?

Chairperson Cothen responds that FRA hopes that it does not take that long. However, the rule is on the agenda as a "significant rule." Therefore, there will be additional scrutiny before the rule can be published.

Daniel Smith (FRA) explains the "significant" rule category. The rule will be reviewed thoroughly by the Office of the Secretary of Transportation and by the Office of Management and Budget. If FRA can move more quickly, it will.

Mr. Harvey says there are a large number of brand new employees that are entering this industry. He wants to help protect their hearing.

With no further questions of Mr. Horn, Chairperson Cothen asks for a motion from the full RSAC to accept the Final Rule for 49 CFR Parts 227 and 229, Occupational Noise Exposure for Railroad Operating Employees.

Jeffrey Moller (AAR) moves that the full RSAC accept the Final Rule for 49 CFR Parts 227 and 229, Occupational Noise Exposure for Railroad Operating Employees.

Robert Harvey (BLET) seconds the motion.

**BY UNANIMOUS VOICE VOTE, THE FULL RSAC APPROVES THE  
LOCOMOTIVE CAB WORKING CONDITIONS WORKING GROUP  
RECOMMENDATIONS FOR FINAL RULES FOR 49 CFR PARTS 227 AND 229,  
OCCUPATIONAL NOISE EXPOSURE FOR RAILROAD OPERATING  
EMPLOYEES.**

Chairperson Cothen thanks the Locomotive Cab Working Conditions Working Group for their efforts to advance these rules to the full RSAC. He thanks the full RSAC for approving the final rule text to amend 49 CFR Parts 227 and 229 regulations.

Chairperson Cothen asks Edward Pritchard (FRA–Office of Safety) and Thomas Herrmann (FRA–Office of Chief Counsel) for a presentation on Event Recorder Work Group activities.

Edward Pritchard (FRA) thanks the 35 members of the Working Group for their hard work to complete this task.

Thomas Herrmann (FRA) uses a series of Microsoft PowerPoint presentations, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. In addition, copies of the proposed final rule for Locomotive Event Recorders were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Under the viewgraph, “Brief History/Background,” Mr. Herrmann explains that the impetus for this proceeding was several National Transportation Safety Board (NTSB) recommendations to develop and implement crashworthiness standards for event recorders in all new locomotives. This rulemaking task was presented to and accepted by the full RSAC in 1997. In November 2003, the full RSAC unanimously voted to concur with the Event Recorder Working Group’s recommendation and submitted an NPRM to FRA. On June 30, 2004, the Locomotive Event Recorder NPRM was published in the *Federal Register*. FRA received comments from 22 parties in response to the NPRM. On September 30, 2004, a public hearing was conducted; the public comment period closed on October 11, 2004. On December 15 and 16, 2004, the Event Recorder Working Group held a meeting to discuss and address the comments received in response to the NPRM. On May 2, 2005, the Event Recorder Working Group reached consensus on the draft final rule proposal, which has been distributed to all members of the full RSAC. Under the viewgraph, “Major Provisions of Final Rule,” Mr. Herrmann describes the following:

(1) requires replacement, over a four-year period (from the effective date of the rule), of each event recorder utilizing magnetic tape as a storage medium with a certified crashworthy event recorder memory module (ERMM) capable of recording at least the same data elements as the recorder it replaces; (2) requires all new lead locomotives, lead manned helper locomotives, and controlling distributive power locomotives (ordered one year after or placed in service four years after the effective date of the rule) to be equipped with a certified crashworthy ERMM capable of recording up to 25 data elements for traditional locomotives and 22 data elements for multiple unit (MU) and diesel MU (DMU) locomotives; (3) requires all remanufactured locomotives (two years after effective date of rule) to be equipped with a certified crashworthy ERMM capable of recording at least the same data elements as the event recorder on that locomotive prior to re-manufacture; (4) requires event recorders originally manufactured after January 1, 2010, and installed on a covered locomotive to be equipped with a certified crashworthy ERMM; (5) contains specific performance criteria for determining



the crashworthiness of an ERMM. These include criteria for fire, impact shock, static crush, fluid immersion, and hydrostatic pressure and contains testing sequence requirements. The criteria are based on existing crashworthiness standards of the Institute of Electrical and Electronics Engineers, Inc. (IEEE), modified for the locomotive environment; (6) requires preservation of event recorder data for a period of one year for any locomotive involved in an accident or incident required to be reported to FRA under Part 225; and (7) provides relief from the periodic inspection requirements for micro-processor based event recorders with self-monitoring features. Requires inspection of these types of event recorders annually.

Mr. Herrmann asks for questions.

Patrick Ameen (AAR) wishes to clarify that the regulations do not contain two testing system requirements. Instead, there is one testing sequence requirement, with a choice. That issue was a major point of the discussions that took place.

With no further questions or comments for Mr. Herrmann, Chairperson Cothen explains that the full RSAC has already given its approval to vote on the final rules for locomotive event recorders by mail ballot. He asks the full RSAC to affirm its prior approval to vote on this issue by mail ballot.

BY UNANIMOUS VOICE VOTE, THE FULL RSAC APPROVES VOTING ON FINAL RULES FOR LOCOMOTIVE EVENT RECORDERS BY MAIL BALLOT.

Chairperson Cothen announces a lunch break.

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LUNCH BREAK 12:22 P.M. - 1:25 P.M.

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Chairperson Cothen reconvenes the meeting. He asks Daniel Smith to introduce to topic of human-factor-caused accidents/incidents.

Daniel Smith (FRA) says he was with Secretary Mineta in Columbia, South Carolina, on May 16, 2005, when the National Rail Safety Action Plan was inaugurated. At that gathering, Secretary Mineta said that he would ask the full RSAC to look at human factor issues during its May 18, 2005, meeting. FRA has been given a deadline of September 2006, by the Secretary of Transportation to act on this topic.

Chairperson Cothen asks Douglas Taylor (FRA–Office of Safety) to continue with a data presentation on human factor-related train accidents.

Douglas Taylor (FRA) uses a series of Microsoft PowerPoint presentations, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are

not excerpted in their entirety in the RSAC Minutes. He explains that FRA looked at the Agency's accident/incident database and captured those accidents/incidents attributed to human factors as determined by accident/incident cause codes. The study period was calendar years 2000 through 2004. However, human factor-related accidents/incidents increased from calendar years 2001 through 2004. While preliminary annual data for calendar year 2005 will not be available until early 2006, the number of highly publicized train accidents/incidents that have already occurred in 2005, which may have a human factor element, are cause for concern at FRA. These are railroad-supplied data. Nothing has been changed. Under the viewgraph, "HF Accidents, All Class of Track By Cause Code," Mr. Taylor shows the most frequent type of HF accident is cause code H702, Switch Improperly Lined. Between 2001 and 2004, there was a 29.5 percent increase in this type of accident. The second most frequent type of HF accident is cause code H306, Shoving Movement, Absence of Man. Between 2001 and 2004, there was a 45.0 percent increase in this type of accident. Under the viewgraph, "HF Accidents, Class 1 Track By Cause Code" [maximum allowable operating speed for freight trains on Class 1 track is 10 mph; for passenger trains, 15 mph (49 Code of Federal Regulations (CFR) § 213.9(a)], Mr. Taylor explains that eight accident cause codes, related to HF accidents on Class 1 track accounted for 49.2 percent of reported accidents. They are: (1) H702, switch improperly lined; (2) H704, switch previously run through; (3) H703, switch not latched or locked; (4) H306, shoving movement, absence of man; (5) H307, shoving movement, failure to control; (6) H302, cars left foul; (7) H301, car(s) shoved out and left out of clear; and (8) H303, derail, failure to apply or remove. Under the viewgraph, "5 Year HF Trends Per Million Train Miles," the rate of HF-related accidents remained low and fairly constant for main line operations between year 2000 and 2004. However, the rate of HF-related accidents in yard operations, already many times higher than main line operations, has been consistently climbing since year 2001. Under the viewgraph, "2001-2004 Totals, HF Accidents on Class 1 Track," Mr. Taylor shows that between 2001 and 2004, 3,515 of 4,548 reported HF accidents (77.3 percent) occurred on Class 1 track. Using a series of bar chart viewgraphs, Mr. Taylor displays the number of HF-related accidents for both yard and main line operations between years 2001 and 2004 for each of the eight major HF cause codes, i.e., (1) H702, switch improperly lined; (2) H704, switch previously run through; (3) H703, switch not latched or locked; (4) H306, shoving movement, absence of man; (5) H307, shoving movement, failure to control; (6) H302, cars left foul; (7) H303, derail, failure to apply or remove; (8) H301, car(s) shoved out and left out of clear. Under the viewgraph, "Cost, HF Accidents, Class 1 Track, 2001-2004," Mr. Taylor says that between 2001 and 2004, railroads reported \$74.3 million in damages resulting from accidents involving the eight major HF cause codes. Under the viewgraph, "2001-2004: Percent of Cost by Cause Code, Total = \$74,261,854," 46 percent of total HF accident cost is attributed to cause code H702, switch improperly lined. Under the viewgraph, "HF Injuries, Class 1 Track," a bar chart shows the distribution of HF-related injuries by the eight major HF cause codes for the years 2001-2004. There were 52 employee injuries (including 1 fatality in 2001), distributed as follows: 2001, 11 injuries and 1 fatality; 2002, 12 injuries; 2003,

11 injuries; and 2004: 17 injuries. Finally, under the viewgraph, "Operating Practices; Inspection Defects by Cause Code," H702, switch improperly lined, has by far the greatest number of reported inspection defects. Mr. Taylor concludes his presentation by emphasizing the three major areas of concern: (1) switches improperly lined, (2) shoving movements, and (3) cars left to foul.

Mr. Taylor asks for questions.

With no questions of Mr. Taylor, Chairperson Cothen asks RSAC members to look at proposed Task Statement Number 05-02, Reduce Human Factor-Caused Accidents/Incidents. Mr. Cothen says the proposed Task Statement combines a previous task statement presented to the Human Factors Workshop on April 14, 2005, and a compromise Task Statement offered by the participants of the Human Factors Workshop. FRA wants an RSAC Working Group to examine only those railroad operating rules that apply to human factor-related activities. Proposed RSAC Task No. 05-02 is intended to be a flexible task statement. The view of FRA today is that some railroad operating rules need to be incorporated into Federal regulations. Over the years, this has been done in other areas, i.e., Blue Signal regulations.

Chairperson Cothen asks for questions.

Robert Harvey (BLET) says that during the Human Factors Workshop, Rick Inclima (BMWED) mentioned that "human factors" is not about "human error." It is about the underlying factors that lead to these errors. Under "issues requiring specific report:" in RSAC Task Statement No.: 05-02, Item (3) reads: "What underlying factors contribute to unsafe actions in violation of railroad operating rules." Mr. Harvey believes that this issue will require much deliberation.

Chairperson Cothen responds that the Working Group does not have to agree on all of the issues by some deadline.

Rick Inclima (BMWED) observes that the focus appears to be on 8-10 human factor accident/incident cause codes and the operation of trains in the railroad environment. He asks what is the scope of this assignment? Is it narrowly focused on the 8-10 human factor cause codes presented at this meeting and the Human Factors Workshop, or is it more global?

Chairperson Cothen responds that the Working Group will initially focus on the 8-10 human factor accident/incident cause codes, as reported.

Daniel Smith (FRA) adds that under the "Description" of Task Statement No.: 05-02, is the following instruction: "Review the "**primary**" (emphasis added) human factor causes of rail accidents/incidents and existing railroad operating rules relevant to **primary** causes."

Mr. Inclima says when he looks at the first bullet under “Description” in Task Statement No.: 05-02, he is troubled by “rail” accidents/incidents. He asks if “rail” can be changed to “train” accidents/incidents?

Chairperson Cothen says FRA has made a preliminary sort of data that the proposed new Working Group will use as it begins work on this task.

Mr. Inclima says he is just trying to narrow the scope of the task. He believes that by substituting “train” for “rail” will narrow the scope.

Joe Mattingly (Brotherhood of Railroad Signalmen (BRS)) believes that under “Purpose” of Task Statement No.: 05-02, “related” should be inserted before “employee,” i.e., To reduce the number of human factor-caused train accidents and “related” employee injuries.

Chairperson Cothen thanks Mr. Mattingly. He recalls that an example of the improper use of a rail cut-out device was given in the Human Factors Workshop. He hopes the Working Group could help answer this issue.

Dennis Mogan (AAR) suggests that some pre-work needs to be accomplished before convening a Working Group. He asks if there are inconsistencies in railroad operating rules? He asks what is the time of day, time of week, and time of year for the human factor-related accidents/incidents? He believes that where the proposed Task Statement uses “operating rules,” it should also include “maintenance of way” rules. He does not believe that pocket of railroad employees should be left out of this activity.

Chairperson Cothen says that 49 CFR § 217, Railroad Operating Rules, are the “operating rules,” which FRA wishes to address in this RSAC Task. [Editorial note: FRA’s construction of Part 217 has historically contemplated that all rules pertinent to the safety of switching operations and train operations should be comprehended within the part. Accordingly, the chairperson’s response was not intended to exclude rules placed elsewhere in railroad rule books.]

Mr. Mattingly believes there is probably a relationship between the amount of freight and ton-miles moved by railroads, the number of employees available to move the freight, and the number of human factor-caused train accidents/incidents. He hopes that this relationship will be examined.

Chairperson Cothen acknowledges that it will not be an easy process.

Robert Chipkevich (NTSB) says as the proposed Task is written, the scope is very broad. He asks if FRA wants the scope to be broad?

Chairperson Cothen responds that FRA wants a narrow focus on this activity within a tight time frame for Agency action.

William Parsons (Metro-North) says that employees who are working in other areas and then transferred to a new job assignment may need training.

Dennis Mogan (AAR) reiterates that “time of day” information needs to be entered into the equation when examining accident/incident data. If the accidents are all occurring at night, that may be the problem that needs addressing.

Chairperson Cothen says there are many things the Working Group will need to examine.

With no further questions or comments, Chairperson Cothen goes over recommended changes to Task Statement No.: 05-02. These include (changes in bold italics): (1) changing the Task Statement to read “Reduce Human Factor-Caused ***Train*** Accidents/Incidents; (2) changing the Purpose Statement to read “To reduce the number of human factor-caused train accidents and ***related*** employee injuries; and (3) substituting “train” for “rail” wherever “rail” appears before “accidents/incidents” in the remainder of the Task text. He offers Revised Task Statement No.: 05-02 to the full RSAC with a notation that there will be a February 10, 2006, Working Group target date for recommendations. He asks for a motion to accept RSAC Task Statement No.: 05-02, Reduce Human Factor-Caused Train Accidents/Incidents, as modified.

Ira Baldwin (Association of State Rail Safety Managers) moves that the full RSAC accept Task Statement No.: 05-02, Reduce Human Factor-Caused Train Accidents/Incidents, as modified.

Ken Briers (NARP) seconds the motion.

BY UNANIMOUS VOICE VOTE, THE FULL RSAC ACCEPTS  
TASK NUMBER 05-02, REDUCE HUMAN FACTOR-CAUSED TRAIN  
ACCIDENTS/INCIDENTS, AS MODIFIED.

A copy of Revised Task Statement No.: 05-02 will be posted on FRA’s Internet Web Site ([WWW.FRA.DOT.GOV](http://WWW.FRA.DOT.GOV)). It will also be entered into the RSAC Docket and is not excerpted in its entirety in the RSAC Minutes.

Chairperson Cothen thanks RSAC for accepting this task. He says that Douglas Taylor will be FRA’s voting member on the Working Group and that members wishing to send representatives to the Working Group should forward their nominations to FRA’s Inga Toye, E-Mail Address is: [Inga.Toye@FRA.DOT.GOV](mailto:Inga.Toye@FRA.DOT.GOV). Her telephone number is: (202) 493-6305.

Daniel Smith (FRA) says that “training” and “oversight” may be the key outcomes from the Working Group’s examination of this issue.

Rick Inclima (BMWED) asks if there is a need for additional information before members sign-up for participating in the Working Group?

Chairperson Cothen says the revised task statement will be circulated to RSAC members and each can make a decision on whether this is necessary.

Chairperson Cothen asks Christopher Schulte (FRA–Office of Safety) for a presentation on Roadway Worker Protection (RWP) Working Group activities.

Christopher Schulte (FRA) uses a Microsoft PowerPoint presentation, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Under the viewgraph, "Session Status," Mr. Schulte explains the first Working Group meeting was held April 12-13, 2005, in Washington, DC. Additional meetings are scheduled as follows: June 22-24, 2005 (Washington, DC), July 11-14, 2005 (Chicago, IL), August 8-11, 2005 (Overland Park, KS), and September 21-23, 2005 (Washington, DC). Under the viewgraph, "Task Framework," Mr. Schulte explains that the Working Group agreed to start discussion on eleven areas of 49 CFR § 214, which need clarification and to include additional items within these areas as necessary. Under the viewgraph, "Initial Eleven Sections," Mr. Schulte outlines the items as follows: (1) Under 49 CFR §214.7, new definitions, or clarification is needed for: interlocking (proposed new); controlled point (proposed new); effective securing device, i.e., a derail (clarification); on-track safety field manual (proposed new); remotely controlled hump yard facility (clarification; and automatic switch or "switch arrangement" (proposed new); (2) Under 49 CFR § 214.309, On-Track Safety Program Documents, clarification of what is required in the document and its accessibility at work sites is needed; (3) Under 49 CFR § 214.317, On-Track Safety Procedures, Generally, clarification is needed for roadway worker use of tunnel niches and crossing tracks when not engaged in work activities; (4) Under 49 CFR § 214.319, Working Limits, Generally, clarification is needed for fouling behind trains; (5) Under 49 CFR § 214.321, Exclusive Track Occupancy, the WG needs to clarify the issue of using work gang number versus employee name; (6) Under 49 CFR § 214.323, Foul Time, the WG needs to clarify the type of work permissible and type of occupancy (if any) within foul time; (7) Under 49 CFR § 214.327, Inaccessible Track, the WG needs to clarify this train coordination issue; (8) Under 49 CFR § 214.329, Train Approach Warning Provided by Watchmen/ Lookouts, clarification is needed for the use of a tactile (touch) warning, provided directly by a watchman/lookout, as an acceptable alternative to visual and audible warnings; work activities that can render the track unsafe for the passage of trains; use of radios by watchmen; and temporary speed restrictions linked to sight distance; (9) Under 49 CFR § 214.337, On-Track Safety Procedures for Lone Workers, clarification is needed for individual train detection at automatic switches and speed restrictions linked to sight distance, i.e., is a speed restriction a maximum authorized speed? (10) Under 49 CFR § 214.339, Audible Warning From Trains, clarification is needed for the term, "on or about the track," the duration/pattern of train whistling, and

electric multiple units without bells; and (11) Under 49 CFR § 214.343, Training and Qualification, General, clarification is needed for on-track safety training of employees associated with RWP, training records for basic employees, and contractor training. Under the viewgraph, "Consensus Items," Mr. Schulte explains the following: (1) clarification of the regulatory language with respect to the On-Track Safety Manual (new term)—elements required to be in the manual (on-track safety protection rules and measures); exception for lone workers when impracticable to have the manual readily available by providing access to information by alternative means; and provision for revisions to on-track safety manual to be in temporary bulletins as long as they are carried with the manual; and (2) provision enabling roadway workers to walk across any track without on-track safety protection. Under the viewgraph, "Items Drafted," Mr. Schulte explains that the Working Group is close to drafting language for "fouling behind"—that establishes working limits while a train is already moving through the same segment of track. Finally, under the viewgraph, "Initial State of Discussion," an informal group of labor and railroad partners within the Working Group is researching the issue of tunnel niches. This issue focuses on clearing the track in areas where a roadway worker might be a few inches closer to the track than the 4-foot fouling zone (but clear of passing equipment). Mr. Schulte concludes his presentation by announcing that the zero (0) roadway worker casualties record that was reported in 2004, has continued through today's meeting date, i.e., May 18, 2005.

Mr. Schulte asks for questions.

With no questions of Mr. Schulte, Chairperson Cothen asks Al MacDowell (FRA—Office of Safety) for a presentation on Rail Integrity Task Force activities.

Al MacDowell (FRA) uses a Microsoft PowerPoint presentation, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Under the viewgraph, "Origins," Mr. MacDowell explains that the Rail Integrity Task Force convened in April 2002, to address the increase in broken rail train derailments. Under the viewgraph, "Charter," the Rail Integrity Task Force goal is to reduce harm resulting from broken rail train derailments. Under the viewgraph, "Harm derivation," Mr. MacDowell outlines the economic costs associated with any accident. For a fatality, the economic cost is \$3 million. For injuries, the economic cost is \$507,000 for serious injuries and \$36,000 for non-serious injuries. If evacuation of residents is necessary because of hazmat involvement, the economic cost is \$500 per evacuee. And the economic cost of property and equipment damage is as reported. Between 1975 and 2004, broken rail accidents comprised 27 percent of all track-caused accidents (for Class 3, 4, and 5 Track only). Between 1990 and 2004, broken rail train accidents comprised 31 percent of all track-caused accidents (for Class 3, 4, and 5 Track only). However, the "harm," i.e., economic cost, from broken rail train accidents represented 36 percent of all track-caused accidents between 1975 and 2004, and 45 percent of all track-caused accidents between 1990 and 2004. Under the viewgraph, "Accomplishments,"

Mr. MacDowell listed the following: (1) with railroad participation, collected data on non-accident broken rail occurrences and railroads' inspection strategies; (2) Determined that most broken rail train derailments are due to certain internal railhead defects which can be difficult to detect reliably; (3) further study focused on this subset of rail defects; (4) developed first draft of updated report on railroads' performance in rail defect management, i.e., an update to the 1994 audit. Certain railroads are performing better than others in rail defect management; (5) held meetings with participation of rail inspection service providers to ensure that all facets of rail defect management were investigated; (6) developed computer programs for distribution to the railroads to assist them in establishing rational inspection intervals and asset management; (7) reviewed railroads' practices regarding the use of plug rails and inspection of joint bars; (8) investigated the effects of wheel impact (dynamic) loads on rail defect growth using railroad-supplied data; (9) developed reporting scheme for use by railroads and FRA field staff to obtain additional accident details not currently required by FRA regulations; (10) helped refine specifications for FRA's R&D Project to develop and test a "smart," i.e., pre-instrumented, rail plug to monitor rail longitudinal force; (11) considered strengths and weaknesses of current inspection technologies and steps to improve detector car utilization; (12) discussed railroads' requirements for qualification and certification of detector car operators; (13) considered safety benefits of various concepts for delayed remedial actions, i.e., detect now—repair later; (14) evaluated railroad field experience in sizing of defects and comparison with actual defect size; (15) obtained information on rail defect management procedures outside North America; (16) discussed railroads' cold weather rail break repair procedures and current NTSB recommendations for inspection of joint bars in continuously welded rail; (17) solicited input from railroads on areas upon which to focus FRA's R&D efforts; and (18) developed an outline of "best practices" for successful rail defect management. Under the viewgraph, "Selected Best Practices," railroads should: (1) follow-up on missed detections aggressively to maintain confidence in inspection quality; (2) adopt procedures for adjustment of rail inspection frequencies based on observed defect rates and seasonal effects; and (3) consider qualification criteria for inspection **systems**, i.e., technology, as well as for operators.

Mr. MacDowell asks for questions.

Daniel Smith (FRA) asks if the Task Force found any predictors for rail failures, such as age of rail, or tonnage?

Mr. MacDowell responds that tonnage, not age, is the most important factor in predicting rail failure.

Rick Inclima (BMWED) asks if the Task Force is looking at criteria for worn rail and will there be changes to 49 CFR § 213?

Mr. MacDowell responds that the Task Force will recommend a "best practices" approach for worn rail and that the Task Force will recommend changes to



49 CFR § 213.

With no further questions of Mr. MacDowell, Chairperson Cothen announces an afternoon break.

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AFTERNOON BREAK 2:50 P.M. - 3:00 P.M.

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Chairperson Cothen reconvenes the meeting. He asks Tom McFarlin (FRA–Office of Safety) for a presentation on the Final Rule for Processor-Based Signal and Train Control Systems.

Tom McFarlin (FRA) uses a Microsoft PowerPoint presentation, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Mr. McFarlin says the Final Rule is commonly called the “PTC Rule” (Positive Train Control Rule). Under the viewgraph, “Synopsis,” Mr. McFarlin explains that the Final PTC Rule was published on March 7, 2005, and will become effective on June 6, 2005. The scope of the rule covers: (1) future signal and train control systems (including conventional ones) with processor-based elements; and (2) some processor-based highway-rail grade crossing warning systems. Exemptions from the rule include: (1) systems in revenue service before June 6, 2005; and (2) systems in design and development prior to March 7, 2005, that will be placed in service before March 7, 2008. Primary actions/requirements of the Final PTC Rule include: (1) software management control plans; (2) Railroad Safety Program Plans (RSPP), a formal document describing a railroad’s system-wide strategy for addressing safety hazards associated with covered products, which shall be submitted to FRA for approval; (3) Product Safety Plans (PSP), which provides a complete description of, and establishes the standards for, a product; (4) an Operations and Maintenance Manual that catalogs and maintains all documents as specified in the PSP for the installation, maintenance, repair, modification, inspection, and testing of a product; and (5) a Training and Qualification Program. In addition, all highway-rail grade crossing processor-based warning systems using new or novel technology, defined as technology not previously recognized for use prior to March 7, 2005, or providing safety-critical data to any signal or train control system governed by subpart H, are subject to the rule. Under the viewgraph, “Major Changes from NPRM,” Mr. McFarlin describes the following changes: (1) the time frame for creating and implementing the Software Management Control Plan was changed from 24 months to 36 months in total; (2) the responsibility for training and qualifications programs is changed to reflect any employer, rather than the railroad solely; (3) software hazard reporting is added; (4) conditions for abbreviated risk assessment are more flexible in the Final Rule, compared to the NPRM; and (5) the Final Rule expressly addresses adjustment of the “Base Case” to be used in comparative risk assessment. Under the viewgraph, “Next Steps,” Mr. McFarlin says that FRA would like to reconvene the PTC Working Group for the following purposes: (1) to develop and recommend cost effective

technical guidelines for implementation and compliance with the rules; and (2) to monitor implementation of new systems and consider any further action that FRA should take to encourage deployment of PTC.

Mr. McFarlin asks for questions.

Robert Harvey (BLET) states that during the deliberations on locomotive event recorders, there was a discussion on PTC elements. It now seems that the Product Safety Plan will be the source for the railroads to submit provisions on PTC elements.

Chairperson Cothen responds yes, that is correct.

With no further questions of Mr. McFarlin, Chairperson Cothen asks Miriam Kloeppel (FRA–Office of Safety) for a presentation on the highlights of the Final Train Horn Rule.

Miriam Kloeppel (FRA) uses a Microsoft PowerPoint presentation, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. Under the viewgraph, “Overview,” Ms. Kloeppel says the Final Rule on the use of locomotive horns at highway-rail grade crossings was published on April 27, 2005, and becomes effective on June 24, 2005. There are three objectives: (1) ensure a high level of public safety; (2) respond to the many communities that have continued to press for relief from unwanted train horn noise; and (3) take into consideration the interests of localities with existing whistle bans. Under the viewgraph, “What the Rule Does,” trains approaching public crossings are required to sound horns to provide a warning. Horns may not be sounded more than one-quarter mile from the crossing. Under the viewgraph, “What’s New in the Final Rule?,” (1) pedestrian crossings are covered; (2) partial (less than 24-hour) quiet zones are allowed; (3) credit is given to pre-existing supplemental safety measures (SSMs) in calculating the Nationwide Significant Risk Threshold (NSRT); and (4) an intermediate quiet zone category is created (areas without train horns after October 9, 1996 and before December 18, 2003). Under the viewgraph, “Notifications,” Ms. Kloeppel describes the following: (1) notice of intent (new Quiet Zone (QZ)); (2) Notice of QZ continuation; (3) notice of detailed plan; and (4) notice of QZ establishment. Under the viewgraph, “Quiet Zones: Three Types,” are the following: (1) Pre-Rule QZ—areas without train horns on October 9, 1996, and on December 18, 2003; (2) Intermediate QZ—areas without train horns after October 9, 1996, and before December 18, 2003; and (3) New QZ—quiet zones that do not qualify as Pre-Rule, or Intermediate QZs. Under the viewgraph, “QZ Qualifying Conditions,” Ms. Kloeppel describes the following conditions that qualify a crossing to be a QZ: (1) supplemental safety measures (SSMs) at each public crossing; (2) a quiet zone risk index (QZRI) that is less than or equal to the nationwide significant risk threshold (NSRT) without additional safety measures; (3) a QZRI that is less than or equal to the NSRT with additional safety measures; and (4) a QZRI that is less than or equal to the Risk Index with Horns (RIWH)—safety measures that reduce QZRI to the risk level that would exist with horns. Under the viewgraph,

“QZs by NSRT,” there will be an annual review of all QZs with recalculations of NSRT and QZRI for each QZ. There is no guarantee that a QZ will remain qualified. If a QZ is decertified, it has 3 years to re-certify. FRA may review any QZ at any time. Under the viewgraph, “Risk at Pre-Rule Quiet Zones,” pre-rule quiet zones are qualified for automatic approval if: (1) QZRI is less than or equal to the NSRT; or (2) QZRI is less than or equal to two times the NSRT, and there have been no relevant collisions in the past 5 years; and (3) QZRI is less than or equal to RIWH. Under the viewgraph, “Alternative Safety Measures (ASMs),” are the following: (1) non-complying SSMs (e.g., shorter traffic channelization devices); (2) photo enforcement; (3) programmatic education and awareness; (4) programmatic enforcement; and (5) engineering treatments. Education and enforcement options must demonstrate a statistically significant improvement in effectiveness and must be approved by FRA. Under the viewgraph, “Pre-Existing SSMs,” included the following: (1) SSMs that comply with Appendix A; (2) SSMs installed before December 18, 2003; and (3) credit given by increasing RIWH to show what risk would have been without the pre-existing SSM. Under the viewgraph, “Partial QZs,” (1) horns are not sounded for a specific period of time each day; (2) new and pre-rule partial QZs must meet all of the requirements for 24-hour QZs; and (3) risk is calculated the same way and over the entire 24-hour period. Under the viewgraph, “New Partial QZs,” (1) all open public crossings must have gates; and (2) the train horn can only be silenced from 10:00 pm to 7:00 am. Under the viewgraph, “Intermediate QZ,” (1) apply to horn restrictions initiated after October 9, 1996, but before December 18, 2003; (2) horn restrictions may be 24 hour or partial; (3) horns will remain silent for 1 year, i.e., until June 24, 2006, if required notification is made; and (4) other than the additional year, an Intermediate QZ is treated exactly like a New QZ. Under the viewgraph, “Notice of Intent,” (1) a Public Authority (PA) must provide written Notice of Intent to establish a New QZ to: (a) all railroads operating over crossings; (b) state highway and road safety agencies; and (c) the state agency responsible for crossing safety; (2) the purpose of a Notice of Intent is to provide the opportunity for comments and recommendations to the PA as it plans the QZ; (3) the PA will allow 60 days for responses to a Notice of Intent; and (4) If there is no Notice of Intent—there can be no QZ. Under the viewgraph, “Pedestrian Crossings New QZs,” Ms. Kloeppel says pedestrian crossings at new QZs: (1) must have a diagnostic review and be equipped per the recommendations; (2) must invite State agencies and railroads into the review process; and (3) at a minimum, “signs,” which are Manual on Uniform Traffic Control Devices (MUTCD) compliant, will advise pedestrians that train horns are not sounded. Under the viewgraph, “Pedestrian Crossings Pre-Rule QZs,” Ms. Kloeppel says pre-rule QZ pedestrian crossings: (1) must be equipped with MUTCD compliant signs by June 24, 2008, advising that horns are not sounded; and (2) if the QZ does not qualify for automatic approval, pedestrian crossings will undergo a diagnostic team review and be treated per the team’s recommendations. Under the viewgraph, “Notice of QZ Continuation (Pre-Rule),” Ms. Kloeppel says a Notice of QZ Continuation (Pre-Rule): (1) must be provided or train horns will sound; (2) must be sent by June 3, 2005; (3) may be sent prior to knowing if the QZ will automatically qualify or not; and (4) establishment of a QZ by automatic approval must be accomplished by December 24, 2005. Under the

viewgraph, "FRA Assistance," Ms. Kloeppele states the following: (1) FRA personnel will be available to help local governments assess safety measures for their crossings; (2) FRA has provided a Quiet Zone Calculator, available on its Internet Web Site, that can be used to develop and store multiple scenarios for each proposed Quiet Zone; and (3) the Internet Web Site address for the Quiet Zone Calculator is: <http://safetydata.fra.dot.gov/quiet>.

Ms. Kloeppele asks for questions.

Timothy DePaepe (BRS) asks if FRA will be compiling data on Quiet Zones, for each specific Quiet Zone, to determine if the rules are working?

Ms. Kloeppele responds FRA is compiling data; reports will be generated.

Mr. DePaepe asks who will be able to access the data?

Chairperson Cothen responds that he does not know how this information will be made available. The rule requires that data be updated. FRA welcomes suggestions on what people want to see in reports that are generated.

Dennis Mogan (AAR) asks about the Chicago, Illinois, area exemption from train horn rules.

Chairperson Cothen responds that six counties surrounding Chicago are exempt from train horn rules. [Editorial note: This exception applies only to pre-rule no-whistle crossings at which railroads retain the option to sound the horn and which remain subject to Illinois Commerce Commission jurisdiction. See final rule for specifics.]

Mr. Mogan responds that counties presently with no Quiet Zones will want Quiet Zones.

Charles Wehrmeister (AAR) asks what State agencies are responsible for Quiet Zones?

Chairperson Cothen responds that in most States, it is the State Department of Transportation; in California, it is a Public Utility Commission (PUC).

Robert Harvey (BLET) references presentation viewgraph four, "What the Rule Does." He has observed field testing of the train horn rule requirements and believes that at train speeds of 45 mph or below, a train engineer can count down the 15-20 seconds as soon as the locomotive reaches one-quarter mile from the crossing. With States' help, he believes the horn sounding requirements will work with visible cues, i.e., sign placement, in the field.

Chairperson Cothen thanks Mr. Harvey for his counsel.

Michael Rush (AAR) agrees that railroads can comply with the 15-20 second "window." However, if the train is not traveling at normal track speeds, railroads are likely to be subject to litigation.

With no further questions of Ms. Kloeppel, Chairperson Cothen asks George Scerbo (FRA–Office of Safety) for a presentation on FRA Safety Advisories.

George Scerbo (FRA) uses a Microsoft PowerPoint presentation, projected onto a screen. Copies of the Microsoft PowerPoint viewgraphs and copies of the *Federal Register* Notice of Safety Advisory 2005-02 (70 FR 20632) were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. In addition, the Notice of Safety Advisory can be found on FRA's Internet Web Site. On April 20, 2005, FRA issued Notice of Safety Advisory 2005-02, which provides information on the potential catastrophic failure of locomotive main reservoir tanks manufactured by R&R Metal Fabricators, Incorporated, and installed on General Electric Transportation System (GETS) locomotives. The GETS has informed FRA that a total of 5,826 suspect main reservoir tanks were manufactured between 1988 and 1995. To date four of these main reservoir tanks have failed catastrophically while in service, and additional tanks have been removed for leaking through the welded seams. Under a series of viewgraphs entitled, "MR (Main Reservoir) Failures on GE (General Electric) Locomotives," Mr. Scerbo expands on the Safety Advisory as follows: (1) GE Rail issued a letter on December 16, 2004, reporting four main reservoir failures due to splitting along the longitudinal weld; (2) although none of the failures resulted in any injury, GE warned that the rapid deformation had the potential to cause serious injuries or death; (3) GE identified 2,700 locomotives that have likely been equipped with the suspect reservoirs; (4) Other GE locomotives may have been equipped with these MRs during maintenance and repair; (5) Installation on a General Motors Electromotive Division locomotive would require major modifications, and is considered unlikely; (6) all R&R Metal Fabricators main reservoirs are identified by a name plate on the skin of the tank; (7) GE has concluded that an out-of-round condition is sufficient to identify reservoirs which are at risk of failure; (8) GE has provided a gauge and Field Maintenance Instruction (FMI-24-15309) to the railroads to locate suspect reservoirs; (9) replacement reservoirs are being provided for those that fail the gauge test; and (10) GE recommended a 120-day cycle for completing the inspection of suspect main reservoirs and replacing those failing the test. This inspection and testing cycle should now be over.

Mr. Scerbo asks for questions.

With no questions of Mr. Scerbo, Chairperson Cothen discusses FRA Safety Advisory 2005-03, Highway-Rail Grade Crossing Safety (warning devices not operating properly). Copies of the *May 2, 2005, Federal Register* Notice of Safety Advisory 2005-03 (70 FR 22750) were distributed to meeting attendees. All meeting handouts will be entered into the RSAC Docket and are not excerpted in their entirety in the RSAC Minutes. In

addition, the Notice of Safety Advisory can be found on FRA's Internet Web Site. Safety Advisory 2005-03 facilitates improved cooperation in the investigation of collisions at highway-rail grade crossings. The advisory describes the roles of the Federal and State governments and of the railroads in highway-rail grade crossing safety. FRA reminds railroads of their responsibility to: properly report any accident involving grade crossing signal failure; properly maintain records relating to credible reports of grade crossing warning system malfunctions; properly preserve the data from all locomotive-mounted recording devices following highway-rail grade crossing collisions; and cooperate fully with local law enforcement authorities during their investigations of such accidents. FRA also offers assistance to local authorities in the investigation of highway-rail grade crossing collisions where information or expertise within FRA's control is required to complete the investigation. Mr. Cothen adds that when warning devices are not operating properly, FRA will go out and investigate this issue. A highway-rail grade crossing warning device activation failure needs to be reported to the National Response Center within 24 hours.

In addition to Notice of Safety Advisory 2005-03, Mr. Cothen says that letters have been sent to various unions and other organizations regarding the following topics: (1) improper use of a manual cut-out at a highway-rail grade crossing; (2) train crew encroachment on a fouling circuit; and (3) design errors in circuits for highway-rail grade crossing warning devices. Mr. Cothen concludes by saying there is an excellent record with highway-rail grade crossing warning devices. Unfortunately, FRA and the rail industry are not "graded" by their successes.

Daniel Smith (FRA) adds that letters were sent to those who these topics affect the most, rather than issue another Safety Advisory.

Timothy DePaepe (BRS) references Safety Advisory 2005-03. He is unhappy with language in the Safety Advisory, which seems to place blame for warning device problems on BRS employees first.

Chairperson Cothen responds that FRA tries to maintain complete objectivity. FRA has no problem working with any organization. However, the public's perception is that FRA has been favoring the railroad industry when it comes to this type of incident.

Mr. DePaepe expresses concern with the way the Safety Advisory is written. BRS would like to see the exemption eliminated. He believes the Safety Advisory has been issued in response to "bad press" (media reports). He sees his co-workers not only subject to railroad rules and discipline, but now civil action as well.

Daniel Smith (FRA) says the Safety Advisory was to make clear that FRA's rules will not impede police investigations. FRA wanted to demonstrate a willingness to sort these things out. His guess is that if someone takes up FRA's offer to assist in these matters, the Agency will give perspective to what is happening. He is sorry that the Safety Advisory is being viewed as a negative.

Robert Harvey (BLET) says that once a month, he sees an instance where a police officer considers a locomotive to be a “motor” vehicle, and therefore, wants to “test” train engineers for drug and alcohol use, following a highway-rail grade crossing accident. Federal law does not require the railroad employee to be tested following a highway-rail grade crossing accident. However, some State criteria may allow the police officer to “test” to determine if someone is “under the influence.”

Mr. Smith responds that a fair reading of the Safety Advisory is an explanation of existing law. He is surprised that the interpretation is for the Safety Advisory to open another door.

Mr. Harvey says that law enforcement officers are asking locomotive engineers to submit their “Driver’s Licenses,” following a highway-rail grade crossing accident. Ultimately, the collection of this data is influencing the “automobile” insurance rates for locomotive engineers.

John Samuels (AAR) responds that the Norfolk Southern Company (NS) dispatches a railroad security officer to the scene of a highway-rail grade crossing accident to assist local law enforcement investigations. He adds that after Quiet Zones are in effect for a couple of years, NS locomotives will be equipped with cameras, which will be helpful to assess Quiet Zone data.

James Stem (UTU) says he has heard this discussion before—about how post-accident testing is to be accomplished. He asks about a “letter” that was being prepared regarding post-accident testing.

Chairperson Cothen says he remembers working on a letter on post-accident testing. He asks that Mr. Stem’s request regarding a “letter,” be submitted to Mark Tessler in FRA’s Office of Chief Counsel.

Dennis Mogan (AAR) says that Metra furnishes all train engineers with a “railroad engineer’s license” that can be used in lieu of a State Driver’s License. The “railroad engineer’s license” says railroad engineers are not required to submit a State Driver’s License and are subject to drug and alcohol testing requirements under Federal law.

With no further questions or comments, Chairperson Cothen asks if there are any corrections to the Minutes for the 25<sup>th</sup> RSAC Meeting? He asks for a motion to approve the Minutes for the 25<sup>th</sup> RSAC Meeting.

Patrick Ameen (AAR) asks that either “enhanced” or “revised” be inserted before “S-580 Standards” to his comments on Page 22 of the meeting Minutes.

**BY UNANIMOUS VOICE VOTE, THE MINUTES FOR THE 24<sup>TH</sup> RSAC MEETING ARE APPROVED, AS CORRECTED.**

Chairperson Cothen asks for a date for the next RSAC Meeting. After a brief discussion involving members' schedules and schedule conflicts, Chairperson Cothen announces that FRA will try to arrange the next RSAC Meeting for October 4 or 5, 2005, in Washington, D.C. [Editorial note: The meeting was later scheduled for October 11, 2005, in Washington, D.C.]

With no further business, Chairperson Cothen adjourns the 26<sup>th</sup> RSAC Meeting at 4:20 p.m.

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MEETING ADJOURNED 4:20 P.M.

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*These minutes are not a verbatim transcript of the proceedings. Also, Microsoft PowerPoint overhead view graphs and handout materials distributed during presentations by RSAC Working Group Members, FRA employees, and consultants, generally become part of the official record of these proceedings and are not excerpted in their entirety in the minutes.*

Respectively submitted by John F. Sneed, Contractor.