



U.S. Department
of Transportation

Federal Railroad
Administration

**Actions on Unmet Statutory Mandates
and Open Recommendations
by the National Transportation Safety Board
and the Department of Transportation's
Inspector General
Regarding Railroad Safety**

(December 30, 2009)

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Basis for this Report

This report responds to Section 106 of the Rail Safety Improvement Act of 2008 (RSIA of 2008) Pub. L. No. 110-432, Div. A, 122 Stat. 4848 et seq., enacted on October 16, 2008. Section 106 reads as follows:

SEC. 106. REPORTS ON STATUTORY MANDATES AND RECOMMENDATIONS.

Not later than December 31, 2008, and annually thereafter, the Secretary shall transmit a report to the House of Representatives Committee on Transportation and Infrastructure and the Senate Committee on Commerce, Science, and Transportation on the specific actions taken to implement unmet statutory mandates regarding railroad safety and each open railroad safety recommendation made by the National Transportation Safety Board or the Department's Inspector General.

Reliance on FRA's December 2008 Report

In preparing this report on behalf of the Secretary of Transportation, the Federal Railroad Administration (FRA) relied upon the first report prepared in December 2008 to fulfill this requirement. Mandates and recommendations either added to or removed from the December 2008 report are noted below.

Treatment of Mandates in the RSIA of 2008

The RSIA of 2008 introduced numerous new mandates regarding railroad safety. A number of these mandates require action to be taken after completion of this report, and FRA has not included those mandates with such statutory deadlines in the future.

The FRA reiterates its commitment to meet each new statutory deadline to the extent practicable and has a centralized process for tracking and monitoring implementation of Congressional rail safety mandates. This process uses Microsoft SharePoint, an intranet-based application accessible for FRA leadership and assigned staff to review and edit information to facilitate the planning and managing of work assignments. This system is called Regulations and Program Development Tracking, or RPDT. In addition, the Office of Policy in the Office of the Secretary of Transportation has a separate, intranet-based tracking system using a different type of software called the Legislative Implementation Plan System. The FRA has a parallel legislative implementation plan for the RSIA of 2008 employing that software.

The Office of the Secretary of Transportation also has other systems for tracking the status of Congressionally-mandated reports to Congress and rulemakings. The FRA would be happy to provide additional information on these tracking systems and its progress in implementing the new mandates.

Discussion of Exhibit A, "Unmet Congressional Rail Safety Mandates"

Exhibit A lists FRA's nine unmet Congressional rail safety mandates and actions to implement them, as of December 30, 2009. Congressional rail safety mandates that were previously implemented, or are not yet due, have been excluded from Exhibit A. Item numbers one and two are unmet mandates that were listed in the December 2008 Report, while item numbers three through nine are new.

Of the three mandates listed in the December 2008 Report, FRA has fulfilled the mandate from Title IX, Section 9005(b), of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Pub. L. No. 109-59, to "validate a predictive model to quantify the relevant dynamic forces acting on railroad tank cars under accident conditions within 1 year after the date of enactment of this section." Please see the report prepared by the Department of Transportation's (DOT) Volpe National Transportation Systems Center titled, "Engineering Studies on Structural Integrity of Railroad Tank Cars Under Accident Loading Conditions," which was published in October 2009, and is available on FRA's Web site at <http://www.fra.dot.gov/downloads/Research/ord0918.pdf>.

The FRA has excluded from Exhibit A the ongoing Congressional rail safety mandates that require FRA to take periodic action with no specific deadline. The FRA has taken action to fulfill these mandates, recognizes the need to take additional periodic action in the future, and has a process in place to meet these mandates. The FRA would be glad to report separately on the status of any Congressional rail safety mandate not included in Exhibit A.

Discussion of Exhibit B, "Open Rail Safety Recommendations by the National Transportation Safety Board to the Federal Railroad Administration"

Exhibit B is a list of the 52 open National Transportation Safety Board (NTSB) rail safety recommendations to FRA and our actions to address them, as of December 30, 2009. The FRA has improved its processes and procedures to address NTSB recommendations in a more timely manner. In particular, FRA has enhanced its centralized process for tracking each rail safety recommendation through the use of Microsoft SharePoint by establishing the NTSB Recommendation Tracking System, and would be glad to provide additional information on this tracking system. As reported last year, FRA has also committed to ensure that NTSB receives an initial response to each recommendation within 90 days of issuance, will submit a tentative implementation schedule as part of the initial response for each rail safety recommendation that needs to be implemented, and will periodically update the implementation schedule.

Of the 47 recommendations listed in the December 2008 Report, NTSB has closed safety recommendation number (Rec. No.) R-03-001 with the classification "Closed-Acceptable Alternate Action." Items 1 through 25 in Exhibit B are the same items corresponding to the same numbers as in the December 2008 Report. However, NTSB has re-classified four open safety recommendations that remain on the list from the December 2008 Report. Item 26 through 28 in Exhibit B, corresponding to NTSB Rec. Nos. R-08-009, R-08-010, and R-08-011, have been re-classified as "Open-Acceptable Response" from "Open-Await Response."

Item 52 in Exhibit B, corresponding to NTSB Rec. No. R-08-012, has been re-classified as "Open-Unacceptable Response" from "Open-Await Response." Nevertheless, FRA has requested that NTSB favorably re-classify a number of safety recommendations based on actions taken to address the recommendations.

In 2009, NTSB issued to FRA six new rail safety recommendations, listed as Item 41 through 46 in Exhibit B. The FRA has responded to each of these new rail safety recommendations, as noted.

Discussion of Exhibit C, "Open Rail Safety Recommendations by the Office of Inspector General"

Exhibit C is a list of the three open rail safety recommendations by the Department's Office of Inspector General (OIG) and FRA's actions to address them, as of December 30, 2009. Item numbers one and two are the same recommendations that were listed in the December 2008 report. Item number three is a new recommendation that the OIG issued to FRA in 2009.

Conclusion

The FRA recognizes the significance of each unmet statutory mandate and open recommendation of the NTSB and OIG regarding rail safety. The FRA has focused its efforts on implementing each unmet mandate and addressing each open recommendation in a timely manner to the extent practicable. We would be glad to provide any additional information on its progress in doing so and on the status of any mandate or recommendation.

EXHIBIT A. UNMET CONGRESSIONAL RAIL SAFETY MANDATES (AS OF DECEMBER 30, 2009)

Item No.	Short Title, Public Law Citation, and Enactment Date	Section and U.S. Code Citation, If Any	Unmet Statutory Mandate	Actions Taken by FRA	Actions Needed to Be Taken by FRA
1	Hazardous Materials Transportation Uniform Safety Act of 1990, Pub. L. No. 101-615, November 16, 1990.	15 Amended Section 116(b) of the Hazardous Materials Transportation Act (then Title 49, U.S.C. App. 1813); provision now codified at 49 U.S.C. 5105(c))	"(b) SAFE RAIL TRANSPORT OF CERTAIN RADIOACTIVE MATERIALS - Within 24 months after the date of enactment of this section taking into consideration the findings of the study conducted pursuant to subsection (a), the Secretary shall amend existing regulations as the Secretary deems appropriate to provide for the safe transportation by rail of high-level radioactive waste and spent nuclear fuel by various methods of rail transportation, including by dedicated train."	The study was submitted to Congress on September 22, 2005, but this mandate has not been completely fulfilled. The Department's Fiscal Year (FY) 2008 Appropriations Act included funds that FRA plans to use to conduct additional research on the safe transportation of spent nuclear fuel. The FRA, with the assistance of the Volpe Center, has been reviewing Association of American Railroads' (AAR) Standard S-2043, Performance Specification for Trains Used to Carry High-Level Radioactive Material, as a basis for a notice of proposed rulemaking (NPRM). The FRA expects to issue an NPRM in FY 2010. Recent events have drastically lengthened the timeline for anticipated increases in rail transport activity of spent nuclear fuel (SNF)/high-level radioactive waste (HLRW). Very little non-freight containerized SNF/HLRW currently moves by rail with no anticipated increase to occur in the foreseeable future.	Complete additional research and review of AAR Standard. Prepare an NPRM and final rule, based on results of research and review.

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2	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Pub. L. No. 109-59, August 10, 2005.	Title IX, Section 9005 Amended Title 49, U.S.C. by adding new Section 20155	“(b) OLDER TANK CAR IMPACT RESISTANCE ANALYSIS AND REPORT.—Within 1 year after the date of enactment of this section, the Federal Railroad Administration shall conduct a comprehensive analysis to determine the impact resistance of the steels in the shells of pressure tank cars constructed before 1989. Within 6 months after completing that analysis the Administration shall transmit a report, including recommendations for reducing any risk of catastrophic fracture and separation of such cars, to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.”	The Southwest Research Institute (a subcontractor to FRA's contractor—the Volpe Center) has produced a research report on its work in analyzing and testing the impact resistance of the steels in the shells and heads of pre-1989 tank cars, including basic material characterization, tensile property evaluation, chemical makeup, and Charpy v-notch toughness at three different temperatures. The report was published in January 2009 and is available on FRA's Web site at http://www.fra.dot.gov/us/content/2108 . On January 13, 2009, the Pipeline and Hazardous Materials Safety Administration (PHMSA) published a final rule, which it developed jointly with FRA, focusing on improving the crashworthiness protection of rail tank cars designed to transport poison inhalation hazard (PIH) materials. 74 Fed. Reg. 1796. The rule, in part, requires that when retiring or removing tank cars from PIH service, car owners prioritize the retirement or replacement of tank cars constructed before 1989 with non-normalized steel in the head or shell. This action demonstrates the Department's focus on reducing risk.	Prepare and transmit a report to congressional committees.

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3	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 102 (RAILROAD SAFETY STRATEGY) (49 U.S.C. 20101 note)	“(a) SAFETY GOALS.—In conjunction with existing federally-required and voluntary strategic planning efforts ongoing at the Department and the Federal Railroad Administration as of the date of enactment of this Act, the Secretary shall develop a long-term strategy for improving railroad safety to cover a period of not less than 5 years.” ***** (c) SUBMISSION WITH THE PRESIDENT’S BUDGET.—The Secretary shall submit the strategy and annual plan to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Transportation and Infrastructure at the same time as the President’s budget submission. (d) ACHIEVEMENT OF GOALS.—(1) PROGRESS ASSESSMENT.—No less frequently than annually, the Secretary shall assess the progress of the Department toward achieving the strategic goals described in subsection (a). The Secretary shall identify any deficiencies in achieving the goals within the strategy and develop and institute measures to remediate such deficiencies. The Secretary and the Administrator shall convey their assessment to the employees of the Federal Railroad Administration and shall identify any deficiencies that should be remediated before the next progress assessment. (2) REPORT TO CONGRESS.—Beginning in 2009, not later than November 1 of each year, the Secretary shall transmit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Transportation and Infrastructure on the performance of the Federal Railroad Administration containing the progress assessment required by paragraph (1) toward achieving the goals of the railroad safety strategy and annual plans under subsection (a).”	The FRA has completed the first strategy plan, which is under review with the Office of Management and Budget (OMB) and which provides a five-year Government Performance and Results Act forecast and overview of safety programs. Evaluation of the strategy plan will begin after it has been presented to Congress in the President’s FY 2011 budget. A complete analysis of a year’s performance is not possible until the FY 2011 year has ended and data is available to analyze. The FRA notes that over the past years it has provided extensive testimony to Congress, and that testimony conveys FRA goals and strategic objectives addressing the reduction of injuries to persons and damage to property.	Submit plan to Congress along with the FY 2011 budget.

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4	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432. Div. A, October 16, 2008.	Section 201 (PEDESTRIAN CROSSING SAFETY) (49 U.S.C. 20134 note)	"Not later than 1 year after the date of enactment of this Act, the Secretary shall provide guidance to railroads on strategies and methods to prevent pedestrian accidents, incidents, injuries, and fatalities at or near passenger stations, including—(1) providing audible warning of approaching trains to the pedestrians at railroad passenger stations; (2) using signs, signals, or other visual devices to warn pedestrians of approaching trains; (3) installing infrastructure at pedestrian crossings to improve the safety of pedestrians crossing railroad tracks; (4) installing fences to prohibit access to railroad tracks; and (5) other strategies or methods as determined by the Secretary."	The FRA has been working with the Federal Transit Administration and the industry stakeholders on this issue, and it was an active Railroad Safety Advisory Committee (RSAC) task when the law was enacted. The FRA has completed and published a compilation of pedestrian control devices that are currently being used. This document will be made part the overall guidance document. The FRA has drafted a guidance document and, in October 2009, presented it to the General Passenger Safety Task Force of RSAC's Passenger Safety Working Group for its consideration and input.	Complete and issue guidance document.

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5	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 202 (STATE ACTION PLANS) (49 U.S.C. 22501 note)	"(a) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Secretary shall identify the 10 States that have had the most highway-rail grade crossing collisions, on average, over the past 3 years and require those States to develop a State grade crossing action plan within a reasonable period of time, as determined by the Secretary."	On September 2, 2009, FRA published a direct final rule requiring the ten States with the most highway-rail grade crossing collisions, on average, over the past three years, to develop State highway-rail grade crossing action plans. 74 Fed. Reg. 45336. The FRA received one adverse comment regarding the direct final rule. Under FRA regulations (49 C.F.R. 211.33), FRA must withdraw a direct final rule if an adverse comment is submitted. As a result, on November 13, 2009, FRA published a removal of the direct final rule provisions, which removes the changes effected by the direct final rule. The FRA also contemporaneously published an NPRM to comply with the statutory mandate. 74 Fed. Reg. 58589.	Issue final rule.

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6	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 401 (MINIMUM TRAINING STANDARDS AND PLANS) Amended Title 49, U.S.C. by adding Section 20162	“(a) IN GENERAL.—The Secretary of Transportation shall, not later than 1 year after the date of enactment of the Rail Safety Improvement Act of 2008, establish— (1) minimum training standards for each class and craft of safety-related railroad employee (as defined in section 20102) and equivalent railroad carrier contractor and subcontractor employees, which shall require railroad carriers, contractors, and subcontractors to qualify or otherwise document the proficiency of such employees in each such class and craft regarding their knowledge of, and ability to comply with, Federal railroad safety laws and regulations and railroad carrier rules and procedures promulgated to implement those Federal railroad safety laws and regulations; (2) a requirement that railroad carriers, contractors, and subcontractors develop and submit training and qualification plans to the Secretary for approval, including training programs and information deemed necessary by the Secretary to ensure that all safety-related railroad employees receive appropriate training in a timely manner; and (3) a minimum training curriculum, and ongoing training criteria, testing, and skills evaluation measures to ensure that safety-related railroad employees, and contractor and subcontractor employees, charged with the inspection of track or railroad equipment are qualified to assess railroad compliance with Federal standards to identify defective conditions and initiate immediate remedial action to correct critical safety defects that are known to contribute to derailments, accidents, incidents, or injuries, and, in implementing the requirements of this paragraph, take into consideration existing training programs of railroad carriers.”	The FRA informed Congress by letter on January 16, 2009, that FRA would not meet the 12-month timetable. The FRA noted that it already has in place significant training requirements for a variety of subjects, and it has regularly included training elements in each of the new and revised regulatory programs that FRA has issued in recent years. See, e.g., the final rule on hours of service recordkeeping and reporting (74 Fed. Reg. 25330; May 27, 2009). Nevertheless, given the number of technical disciplines represented on the railroad properties and the breadth of the knowledge, skills, and abilities required to execute the tasks that they are required to accomplish safely, this provision requires an extensive effort. The FRA requested that Class I and commuter railroads provide training information to use in this effort, but FRA found the information insufficient for data analysis when received in May 2009. The FRA is utilizing personnel from its technical disciplines, as well as adult learning experts on agency staff whose primary role is the training of FRA personnel, to help meet this mandate.	Develop draft of training requirements and present to RSAC for its consideration. Issue regulations.

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7	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 406 (DEVELOPMENT AND USE OF RAIL SAFETY TECHNOLOGY) Amended Title 49, U.S.C. by adding new Section 20164	“(a) IN GENERAL.—Not later than 1 year after enactment of the [Rail] Safety [Improvement] Act of 2008, the Secretary of Transportation shall prescribe standards, guidance, regulations, or orders governing the development, use, and implementation of rail safety technology in dark territory, in arrangements not defined in section 20501 or otherwise not covered by Federal standards, guidance, regulations, or orders that ensure the safe operation of such technology, such as—(1) switch position monitoring devices or indicators; (2) radio, remote control, or other power-assisted switches; (3) hot box, high water, or earthquake detectors; (4) remote control locomotive zone limiting devices; (5) slide fences; (6) grade crossing video monitors; (7) track integrity warning systems; or (8) other similar rail safety technologies, as determined by the Secretary.”	The FRA has previously published research results on a switch position monitoring system developed through research partially funded by FRA; and on April 19, 2007, conducted a hearing as part of a special safety inquiry conference on this topic. See 72 Fed. Reg. 14641. Although these efforts have been useful in preparing technology for use and for evaluating, in a preliminary way, the challenges associated with selecting and deploying technology in dark territory, much more work needs to be done. This effort requires the same technical skills and personnel that are required to review railroad plans and product safety submissions under the positive train control (PTC) mandate in Section 104 of the RSIA of 2008; and, indeed, many dark-territory lines will be equipped with PTC during that effort (largely mooted the issue of lesser technology for those lines). Accordingly, until the PTC mandate is fulfilled or additional resources are available, FRA must defer further action related to dark territory technology.	The FRA anticipates that, following review of initial PTC Implementation Plans, Development Plans, and initial Safety Plans in FY 2010, it may be feasible to initiate this effort in FY 2011.

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8	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 417 (RAILROAD BRIDGE SAFETY ASSURANCE) (49 U.S.C. 20103 note)	“(a) IN GENERAL.—Not later than 12 months after the date of enactment of this Act, the Secretary shall promulgate a regulation requiring owners of track carried on one or more railroad bridges to adopt a bridge safety management program to prevent the deterioration of railroad bridges and reduce the risk of human casualties, environmental damage, and disruption to the Nation’s railroad transportation system that would result from a catastrophic bridge failure. ***** (c) USE OF BRIDGE MANAGEMENT PROGRAMS REQUIRED.—The Secretary shall instruct bridge experts to obtain copies of the most recent bridge management programs of each railroad within the expert’s areas of responsibility, and require that experts use those programs when conducting bridge observations. (d) REVIEW OF DATA.—The Secretary shall establish a program to periodically review bridge inspection and maintenance data from railroad carrier bridge inspectors and Federal Railroad Administration bridge experts.”	On August 17, 2009, FRA published an NPRM proposing to standardize and establish Federal requirements for railroad bridges. 74 Fed. Reg. 41557. This proposed rule would require track owners to implement bridge management programs that include annual inspections of railroad bridges. The proposed rule would also require the audit of the bridge management programs and the inspections. RSAC’s Railroad Bridge Working Group convened on December 15, 2009, to review and discuss comments received on the NPRM. Publication of a final rule is expected in spring 2010.	Issue final rule, based on RSAC recommendations.

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9	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 503 (ESTABLISHMENT OF TASK FORCE) (49 U.S.C. 1139 note)	Unmet Statutory Mandate “(a) ESTABLISHMENT.—The Secretary, in cooperation with the National Transportation Safety Board, organizations potentially designated under section 1139(a)(2) of title 49, United States Code, rail passenger carriers (as defined in section 1139(h)(2) of title 49, United States Code), and families which have been involved in rail accidents, shall establish a task force consisting of representatives of such entities and families, representatives of rail passenger carrier employees, and representatives of such other entities as the Secretary considers appropriate. (b) MODEL PLAN AND RECOMMENDATIONS.—The task force established pursuant to subsection (a) shall develop—(1) a model plan to assist rail passenger carriers in responding to passenger rail accidents; (2) recommendations on methods to improve the timeliness of the notification provided by passenger rail carriers to the families of passengers involved in a passenger rail accident; (3) recommendations on methods to ensure that the families of passengers involved in a passenger rail accident who are not citizens of the United States receive appropriate assistance; and (4) recommendations on methods to ensure that emergency services personnel have as immediate and accurate a count of the number of passengers onboard the train as possible. (c) REPORT.—Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit a report to the House of Representatives Committee on Transportation and Infrastructure and the Senate Committee on Commerce, Science, and Transportation containing the model plan and recommendations developed by the task force under subsection (b).”	The task force has been established. The FRA has worked with NTSB to develop a draft plan, modeled after aviation assistance plans. The plan has been circulated to task force members for comment. Due to other commitments for FRA's resources, it is estimated that it will take an additional 180 days beyond October 16, 2009, to finalize the plan and recommendations.	Finalize plan and recommendations. Issue report to Congress.

EXHIBIT B. OPEN RAIL SAFETY RECOMMENDATIONS BY THE NATIONAL TRANSPORTATION SAFETY BOARD (NTSB) TO THE FEDERAL RAILROAD ADMINISTRATION¹ (AS OF DECEMBER 30, 2009)

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
1	12/31/92	R-92-022	NTSB recommended that FRA develop and promulgate, with DOT's Research and Special Programs Administration (RSPA)** , requirements for the periodic testing and inspection of rail tank cars that help to ensure the detection of cracks before they propagate to critical length. These requirements are to establish inspection intervals that are based on the defect size detectable by the inspection method used, the stress level, and the crack propagation characteristics of the structural component (requirements based on a damage-tolerance approach). ** Effective February 20, 2005, RSPA was succeeded by PHMSA and the Research and Innovative Technology Administration (RITA). 70 Fed. Reg. 8301 (Feb. 18, 2005), implementing Pub. L. No. 108-426, enacted Nov. 30, 2004.	Open - Acceptable Response. RSPA published a final rule on September 21, 1995, to increase the frequency of required testing and inspections of rail tank cars, based on accumulated and average mileage, and to authorize adjustment of inspection intervals, based on damage-tolerance analysis. 60 Fed. Reg. 49047. To address damage tolerance, FRA sponsored two research projects. The reports for these efforts are "Tank Car Reliability Design and Analysis," which is available on FRA's Web site at www.fra.dot.gov/downloads/Research/ord0705.pdf; and "Development and Application of Methodology for Reliability Assessment of Tank Car Structures: Phase I," also available on FRA's Web site at www.fra.dot.gov/downloads/Research/ord0729.pdf. Phase II of the technical study is currently under review. Additional studies with the Transportation Technology Center, Inc., (TTC) are underway to support the derivation of the probability of detection curves and the application of these methods to tank car substructures. This is a collaborative effort with the tank car industry. To date, two reports have been published from this effort: "Railroad Tank Car Nondestructive Methods Evaluation," available on FRA's Web site at www.fra.dot.gov/downloads/Research/ord0104.pdf, and "Quantitative Nondestructive Testing of Railroad Tank Cars Using the Probability of Detection Evaluation Approach," available at www.fra.dot.gov/downloads/Research/ord0910.pdf.	Complete the research projects and disseminate findings and tools.

¹ NTSB recommendations are listed in the following order by NTSB classification: Item Nos. 1 through 28, "Open - Acceptable Response"; Item Nos. 29 and 30, "Open - Acceptable Alternative Response"; Item Nos. 31 through 46, "Open - Await Response"; and Item Nos. 47 through 52, "Open - Unacceptable Response." Within the NTSB classification, NTSB recommendations are listed in chronological order by the date of issuance of the recommendation, and within the same date of issuance, by the number of the recommendation (Rec. No.).

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
2	08/28/97	R-97-015	NTSB recommended that FRA require all passenger cars have either removable windows, kick panels, or other suitable means for emergency exiting through the interior and exterior passageway doors where the door could impede passengers exiting in an emergency and that FRA take appropriate emergency measures to ensure corrective action until these measures are incorporated into minimum Passenger Car Safety Standards.	<u>Open - Acceptable Response.</u> On May 12, 1999, FRA published the Passenger Equipment Safety Standards for rail passenger service. 64 Fed. Reg. 25660. These regulations addressed kick-out panels in doors for trains traveling 126 to 150 miles per hour (Tier II passenger equipment); however, these regulations did not address kick-out panels in doors for trains traveling at or less than 125 miles per hour (Tier I passenger equipment). These regulations did address egress through doors and windows for Tier I passenger equipment, and on February 1, 2008, FRA published a final rule amending the Passenger Equipment Safety Standards that further enhanced egress requirements. 73 Fed. Reg. 6412. The FRA's RSAC Emergency Preparedness Task Force reviewed the remaining safety issues and, through the Passenger Safety Working Group, reported recommendations for removable panels in certain interior doors to the full RSAC body on February 20, 2008, which in turn accepted the recommendations. Publication of an NPRM is expected in spring 2010. In addition, FRA's Office of Research and Development utilized the Small Business Innovative Research Program to research the viability of integrating removable panels/windows into end-frame doors in cab cars and multiple-unit locomotives. The research focused on developing requirements and design concepts for these removable panels/windows. It was found that if a removable panel/window were to be placed in such a door, the panel/window would have to withstand substantial loading forces in order to maintain the integrity of the end frame structure and meet existing FRA regulations.	Issue regulation on removable panels in certain interior doors.

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3	08/28/97	R-97-017	NTSB recommended that FRA require all passenger cars contain reliable emergency lighting fixtures that are each fitted with a self-contained independent power source and that FRA incorporate the requirements into minimum Passenger Car Safety Standards.	<u>Open - Acceptable Response.</u> On May 12, 1999, FRA published the Passenger Equipment Safety Standards. These regulations required emergency lighting for passenger cars ordered on or after September 8, 2000, or those placed into service for the first time on or after September 9, 2002. Subsequently, FRA worked with the American Public Transportation Association (APTA) to develop industry standards to improve emergency lighting systems, including survivability of the systems. On February 20, 2008, RSAC's Passenger Safety Working Group recommended proposed rule language to the full RSAC body that would incorporate the new standards by reference. The full RSAC in turn accepted the recommendations. Publication of an NPRM is expected in spring 2010.	Issue regulations.
4	09/16/98	R-98-056	NTSB recommended that FRA include in the Passenger Car Safety Standards a requirement for positive seat securement systems to prevent the disengagement and undesired rotation of seats in all new passenger cars purchased after January 1, 2000, and require the incorporation of such a system into existing passenger cars when they are scheduled for overhaul.	<u>Open - Acceptable Response.</u> On May 12, 1999, FRA published the Passenger Equipment Safety Standards. These regulations addressed seat securement in passenger cars, but did not address rotating-seat issues. Amtrak had previously improved its seat-locking mechanism, but the rotation of some seats continues to occur. The FRA's Office of Research and Development examined alternative seat-locking designs and conducted dynamic testing of prototype seat-locking systems in cooperation with Amtrak for use by railroads and/or inclusion in future regulations. The FRA and NTSB accident investigations have not established a nexus between seat rotation and passenger injuries.	Discuss findings with industry and issue revised regulations, as necessary.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
5	01/13/00	R-00-001	NTSB recommended that FRA establish, with assistance from experts on the effects of pharmacological agents on human performance and alertness, procedures or criteria by which train operating crewmembers who medically require substances not on DOT's list of approved medications may be allowed, when appropriate, to use those medications when performing their duties.	<u>Open - Acceptable Response.</u> In 2002, NTSB officials met with members of FRA's RSAC to discuss concerns with NTSB Rec. Nos. R-00-001 through R-00-004. At that meeting, NTSB clarified the intent of Rec. Nos. R-00-001 through R-00-004. In 2007, RSAC's Medical Standards Working Group (WG) was established to address these recommendations and other fitness-for-duty (FFD) concerns. Although the WG was able to achieve consensus on some of the text for a Medical Standards NPRM during 2008, the WG was unable reach consensus on proposed text for therapeutic drug reporting and assessment, dispute resolution, and other important FFD issues. During 2009, FRA developed proposed text for those requirements, and the WG's Doctors Task Force (DTF) developed medical criteria and protocols to assess the medical FFD of safety-critical employees. FRA and the DTF presented this text and the medical FFD criteria and protocols, respectively, to the WG for review and comment at the Working Group's meeting in December 2009. The draft text presented to the WG would require that safety-critical employees report use of therapeutic drugs and other significant medical conditions and events, and undergo FFD assessments to determine whether the employees are medically fit for duty with restrictions, without restrictions or not fit for duty. The documents are now in WG coordination pending review and revision of these documents by the WG. WG members agreed to caucus and provide drafts of proposed revisions to these documents, with an accompanying rationale, for presentation at the next WG meeting to be held during February 2010. FRA is planning to issue a Medical Standards NPRM later in 2010.	Issue regulations.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
6	01/13/00	R-00-002	NTSB recommended that FRA develop, then periodically publish, an easy-to-understand source of information for train operating crewmembers on the hazards of using specific medications when performing their duties.	Open - Acceptable Response. In 2002, NTSB officials met with members of FRA's RSAC to discuss concerns with NTSB Rec. Nos. R-00-001 through R-00-004. At that meeting, NTSB clarified the intent of Rec. Nos. R-00-001 through R-00-004. In 2007, RSAC's Medical Standards WG was established to address these recommendations and other FFD concerns. The WG was unable reach consensus on therapeutic drug reporting and assessment requirements during 2008. During 2009, FRA developed proposed draft NPRM text for therapeutic drug reporting and assessment requirements, and an easy to understand therapeutic drug guidance document addressing adverse effects of over-the-counter (OTC) and prescription drugs, requirements for therapeutic drug reporting and FFD assessment, and actions safety-critical employees must take to reduce the chance that the employee will become impaired by a therapeutic drug or medical condition while performing safety-critical service. FRA and the DTF presented the draft regulatory text and the therapeutic drug guidance document to the WG for review and comment at its meeting in December 2009. The documents are now in WG coordination pending review and revision of these documents by the WG. WG members agreed to caucus and provide drafts of proposed revisions to these documents, with an accompanying rationale, for presentation at the next WG meeting to be held during February 2010. FRA is planning to issue a Medical Standards NPRM later in 2010.	Complete and publish guidance document. Issue regulations.

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7	01/13/00	R-00-003	NTSB recommended that FRA establish and implement an educational program targeting train operating crewmembers that, at a minimum, ensures that all crewmembers are aware of the source of information described in NTSB Rec. No. R-00-002 regarding the hazards of using specific medications when performing their duties.	<u>Open - Acceptable Response.</u> In 2002, NTSB officials met with members of FRA's RSAC to discuss concerns with NTSB Rec. Nos. R-00-001 through R-00-004. At that meeting, NTSB clarified the intent of Rec. Nos. R-00-001 through R-00-004. In 2007, RSAC's Medical Standards WG was established to address these recommendations and other FFD concerns. The WG was unable reach consensus on therapeutic drug reporting and assessment requirements during 2008. During 2009, FRA developed proposed draft NPRM text for therapeutic drug reporting and assessment requirements. FRA also drafted an easy to understand therapeutic drug guidance document addressing adverse effects of OTC and prescription drugs, requirements for therapeutic drug reporting and FFD assessment, and actions safety-critical employees must take to reduce the chance that the employees will become impaired by a therapeutic drug or medical condition while performing safety-critical service. FRA and DTF presented the draft regulatory text and the therapeutic drug guidance document to the WG for review and comment at its meeting in December 2009. The documents are now in WG coordination pending review and revision of these documents by the WG. WG members agreed to caucus and provide drafts of proposed revisions to these documents, with an accompanying rationale, for presentation at the next WG meeting to be held during February 2010. FRA is planning to issue a Medical Standards NPRM later in 2010.	Issue regulations.

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8	01/13/00	R-00-004	NTSB recommended that FRA establish, in coordination with DOT, the Federal Motor Carrier Safety Administration, the Federal Transit Administration, and the U.S. Coast Guard, comprehensive toxicological testing requirements for an appropriate sample of fatal highway, railroad, transit, and marine accidents to ensure the identification of the role played by common prescription and over-the-counter medications. FRA is to review and analyze the results of such testing at intervals not to exceed every five years.	<u>Open - Acceptable Response.</u> In 2002, NTSB officials met with members of FRA's RSAC to discuss concerns with NTSB Rec. Nos. R-00-001 through R-00-004. At that meeting, NTSB clarified the intent of Rec. Nos. R-00-001 through R-00-004. FRA was already testing for benzodiazepines and barbiturates, in addition to the "SAMSHA [Substance Abuse and Mental Health Services Administration]-5" drug groups and alcohol, in its post-accident program. FRA also conducted blind testing of extant archive samples to determine the prevalence of other-drug use in the population of accident-involved employees. FRA presented those results to NTSB and RSAC's Medical Standards WG in support of the need to include therapeutic drug use management in the forthcoming medical standards NPRM.	Issue regulations.
				The FRA has recently expanded its post-accident testing panel to include additional medications that are of safety concern. Currently, the results for these drugs are being reported only to FRA. FRA is working to publish a Federal Register announcement in early 2010 informing the railroad industry of the expanded panel. Once this notice is published, the test results for the added medications will be reported to the employee and the railroad for handling. This panel expansion is consistent with FRA's current alcohol and drug regulations (contained in Part 219), but FRA intends to make clarifying changes to Part 219 to reflect the expansion. FRA is presently working on a significant change to Part 219, which was precipitated by the requirements in the RSIA of 2008. The clarification amendments regarding the post-accident testing panel will be included in this rulemaking.	

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
9	03/12/01	R-01-002	NTSB recommended that FRA evaluate, with the assistance of RSPA, the AAR, and the Railway Progress Institute, the deterioration of pressure relief devices through normal service and then develop inspection criteria to ensure that the pressure relief devices remain functional between regular inspection intervals. FRA is to incorporate these inspection criteria into DOT's Hazardous Materials Regulations.	<u>Open - Acceptable Response.</u> An AAR task force collected over 5,000 inspection reports on pressure relief devices. After the AAR Tank Car Committee completes its review of the data and shares its findings with the Department, PHMSA and FRA plan to consider regulatory changes as appropriate.	Evaluate the results of the review and work with PHMSA to issue regulations, as necessary.
10	09/24/01	R-01-017	NTSB recommended that FRA modify Title 49 of the Code of Federal Regulations, Section 219.201(b), as necessary to ensure that the exemption from mandatory post-accident drug and alcohol testing for those involved in highway-rail grade crossing accidents does not apply to any railroad signal, maintenance, and other employees whose actions at or near a grade crossing involved in an accident may have contributed to the occurrence or severity of the accident.	<u>Open - Acceptable Response.</u> In August 2001, an extensive revision of 49 C.F.R. 219.201(b) concluded shortly before NTSB issued this recommendation. However, FRA agrees that the exemption portion of its alcohol and drug testing regulation should be narrowed from its present universal exclusion of all railroad employees from post-accident toxicological testing when highway-rail grade crossing accidents occur. To address this issue, FRA will include an appropriate proposal in an NPRM for revising 49 C.F.R. Part 219 that is expected to be published in spring 2010.	Issue regulations.
11	02/15/02	R-02-001	NTSB recommended that FRA, for all railroads that install new or upgraded grade crossing warning systems that include crossing gates and that are equipped with event recorders, require that the information captured by event recorders include the position of the deployed gates.	<u>Open - Acceptable Response.</u> FRA currently has no regulation requiring the railroads install event recorders in highway-rail grade crossing signal systems, or specifically the information they record. FRA is contemplating opening 49 C.F.R. Part 234 (Grade Crossing Signal System Safety) for possible rulemaking/revision and would raise this issue within that process. Meanwhile, almost all new and updated grade crossing warning systems that have crossing gates and that are equipped with event recorders are recording the position of the deployed gates in accordance with this recommendation.	Issue regulations, as necessary.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
12	11/27/02	R-02-024	NTSB recommended that FRA develop a standard medical examination form that includes questions regarding sleep problems and require that the form be used, pursuant to Title 49 of the Code of Federal Regulations, Part 240, to determine the medical fitness of locomotive engineers; the form should also be available for use to determine the medical fitness of other employees in safety-sensitive positions.	<u>Open - Acceptable Response.</u> On September 21, 2006, FRA tasked RSAC with establishing standards and procedures for determining the medical fitness for duty of personnel engaged in safety-critical functions. The Medical Standards WG is preparing a standard form, including sleep disorder questions, and FRA plans to issue a proposed rule in 2010.	Issue regulations.
13	11/27/02	R-02-025	NTSB recommended that FRA require that any medical condition that could incapacitate, or seriously impair the performance of, an employee in a safety-sensitive position be reported to the railroad in a timely manner.	<u>Open - Acceptable Response.</u> On September 21, 2006, FRA tasked RSAC with establishing standards and procedures for determining the medical fitness-for-duty of personnel engaged in safety-critical functions. A proposed rule is being developed with the assistance of RSAC's Medical Standards WG to address these specific concerns, with publication expected in 2010. The draft rule under discussion includes a specific assignment of employee responsibility to report specified medical conditions that have significant potential for incapacitation or impairment.	Issue regulations.
14	11/27/02	R-02-026	NTSB recommended that FRA require that, when a railroad becomes aware that an employee in a safety-sensitive position has a potentially incapacitating or performance-impairing medical condition, the railroad prohibit that employee from performing any safety-sensitive duties until the railroad's designated physician determines that the employee can continue to work safely in a safety-sensitive position.	<u>Open - Acceptable Response.</u> On September 21, 2006, FRA tasked RSAC with establishing standards and procedures for determining the medical fitness-for-duty of personnel engaged in safety-critical functions. FRA will issue regulations based on the work completed by the RSAC Medical Standards WG. The draft rule under discussion makes specific provision for the evaluation of medical conditions that are potentially impairing. FRA plans to issue a proposed rule in 2010.	Issue regulations.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
15	08/15/03	R-03-012	NTSB recommended that FRA, in cooperation with the Transportation Security Administration (TSA), develop and implement an accurate passenger and crew accountability system for all long-distance, overnight, and reserved passenger trains that will immediately provide an accurate count and identity of the people on board the train in case of emergency at any time during the trip.	<u>Open - Acceptable Response.</u> The FRA entered into an agreement with TSA and Amtrak to fund a study through DOT's Volpe Center to examine what available technologies exist to develop an accurate passenger train manifest. In December 2005, FRA published a report that concluded that an improved passenger manifest was possible, but the costs would be very substantial and benefits would be questionable. The FRA has informed NTSB staff that FRA concurs with the findings of the report. Although Amtrak's passenger manifest information is generally reliable, the presence of numerous station stops, many of which are at locations where no Amtrak personnel are employed, and the difficulty of monitoring individual passengers with a limited onboard staff, make full accomplishment of the Board's laudable objective presently unachievable. Further, given the potential presence of members of the general public in the vicinity of any accident scene, prudent emergency response will continue to include rapid and thorough surveys of the entire scene to verify that all affected persons have been identified and evaluated for medical attention. Consequently, FRA has requested that this recommendation be classified as "Closed - Reconsidered."	Await response from NTSB.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
16	03/15/04	R-04-001	NTSB recommended that FRA require all railroads with continuous welded rail (CWR) track include procedures (in the programs that are filed with FRA) that prescribe on-the-ground visual inspections and non-destructive testing techniques for identifying cracks in rail joint bars before they grow to critical size.	Open - Acceptable Response. On October 11, 2006, FRA published a regulation that required railroads establish a program for the periodic visual inspection of joint bars in CWR track by January 1, 2007. However, the regulation did not require non-destructive testing of joint bars on a periodic basis. The FRA stated that there were insufficient engineering data to establish the effectiveness of non-destructive testing techniques as applied to joint bars in the service environment. The FRA and the AAR (through the TTC) are working on non-destructive testing techniques that may be useful in the future. Meanwhile, FRA has successfully demonstrated optical recognition technology designed to identify very small joint bar cracks on a production basis, and that technology is now being commercialized. In addition, on August 25, 2009, FRA published a final rule to enhance requirements for CWR generally. 74 Fed. Reg. 43002.	Develop and issue a specific regulation, when suitable technology becomes available.
17	03/15/04	R-04-004	NTSB recommended that FRA conduct a comprehensive analysis to determine the impact resistance of the steels in the shells of pressure tank cars constructed before 1989. At a minimum, the safety analysis should include the results of dynamic fracture toughness tests and/or the results of nondestructive testing techniques that provide information on material ductility and fracture toughness. The data should come from samples of steel from the tank shells from original manufacturing or from a statistically representative sampling of the shells of the pre-1989 pressure tank car fleet.	Open - Acceptable Response. In 2005, SAFETEA-LU required FRA to conduct a comprehensive analysis to determine the impact resistance of the steels in the shells of pressurized tank cars constructed before 1989. To address this SAFETEA-LU requirement and NTSB's recommendation, the Southwest Research Institute (a subcontractor to the Volpe Center) produced a research report on its work in analyzing and testing the impact resistance of the steels in the shells and heads of pre-1989 tank cars, including basic material characterization, tensile property evaluation, chemical makeup, and Charpy v-notch toughness at three different temperatures. The report was published in January 2009 and is available at http://www.fra.dot.gov/us/content/2108 . The FRA has requested that this recommendation be classified as "Closed - Acceptable Action."	Await response from NTSB.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
18	03/15/04	R-04-005	NTSB recommended that, based on the results of FRA's comprehensive analysis to determine the impact resistance of steels in the shells of pressure tank cars constructed before 1989, as addressed in Rec. No. R-04-004, FRA establish a program to rank those cars according to their risk of catastrophic fracture and separation and implement measures to eliminate or mitigate this risk. This ranking should take into consideration operating temperatures, pressures, and maximum train speeds.	<u>Open-Acceptable Response.</u> The FRA has preliminarily concluded that the results of the research reported under Rec. No. R-04-004 do not demonstrate a clear trend between chemical, tensile, or Charpy v-notch toughness properties and tank car build date, and thus do not support creating a program specifically to rank the tank cars according to their risk. However, on January 13, 2009, PHMSA published a final rule it developed jointly with FRA focusing on improving the crashworthiness protection of rail tank cars designed to transport PIH materials. 74 Fed. Reg. 1796. The rule, in part, requires that when retiring or removing tank cars from PIH service, car owners prioritize the retirement or replacement of tank cars constructed before 1989 with non-normalized steel in the head or shell. The FRA has requested that this recommendation be classified as "Closed - Acceptable Alternate Action."	Await response from NTSB.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
19	03/15/04	R-04-006	NTSB recommended that FRA validate the predictive model FRA is developing to quantify the maximum dynamic forces acting on railroad tank cars under accident conditions.	Open - Acceptable Response. The FRA, through the Volpe Center, has worked over the last several years to validate its predictive model designed to quantify the maximum dynamic forces acting on railroad tank cars under accident conditions. The Volpe Center has prepared a final report on all three phases of its research, "Engineering Studies on Structural Integrity of Railroad Tank Cars Under Accident Loading Conditions," which was published in October 2009 and is available on FRA's Web site at http://www.fra.dot.gov/downloads/Research/ord0918.pdf. The FRA will use that research to determine the appropriate course of action. Although FRA has successfully validated its predictive model, FRA recognizes NTSB's concern that more technically rigorous models be developed and validated. As FRA pursues continued research and development on advanced tank car design, FRA will continue to further refine its quantification of the dynamic forces acting on railroad tank cars through additional modeling and, if appropriate, full-scale testing. The FRA has requested that this recommendation be classified as "Closed - Acceptable Action."	Await response from NTSB.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
20	03/15/04	R-04-007	NTSB recommended that FRA develop and implement Tank Car Design-Specific Fracture Toughness Standards, such as a minimum average Charpy value, for steels and other materials of construction for pressure tank cars used for the transportation of the Department's Class 2 hazardous materials, including those in "low temperature" service. The performance criteria must apply to the material orientation with the minimum impact resistance and take into account the entire range of operating temperatures of the tank car.	<u>Open - Acceptable Response.</u> The FRA has preliminarily concluded that the results of the research reported under Rec. No. R-04-004 do not demonstrate that a workable steel specification could be developed. However, FRA is continuing to examine the dynamic fracture toughness of steels used in the construction of hazardous materials tank cars, and FRA has requested that the NTSB continue the same classification of this recommendation. Nevertheless, the final rule PHMSA developed jointly with FRA and published on January 13, 2009, addresses concerns regarding the use of non-normalized steels in tank car construction and focuses on improving the crashworthiness protection of rail tank cars designed to transport PIH materials. See Item No. 18, above. The final rule requires that cars used for the transportation of PIH materials be constructed of normalized steel.	Continue review.
21	02/03/05	R-05-002	NTSB recommended that FRA require in Title 49 of the Code of Federal Regulations, Part 225 (Railroad Accidents/Incident: Reports Classification, and Investigations) that derailments caused by rail cracks originating from bond wire attachments be reported with a specific cause code and that information on the methods and locations of those wire attachments be provided in the accident narrative.	<u>Open - Acceptable Response.</u> On September 9, 2008, FRA issued an NPRM to revise 49 C.F.R. Part 225, including revisions to Appendix C of the train accident cause codes in FRA's Guide for Preparing Accident/Incident Reports. 73 Fed. Reg. 52520. The revisions include FRA accident cause code T224 - rail defect originating from bond wire attachment.	Issue final rule.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
22	11/23/05	R-05-009	NTSB recommended that FRA develop guidelines for locomotive engineer simulator training programs that go beyond developing basic skills and teach strategies for effectively managing multiple concurrent tasks and atypical situations.	Open - Acceptable Response. The FRA agrees that developing guidelines for locomotive engineer skill development that would contribute to good situational awareness is worthy of consideration, both as a further contribution to the quality of existing training programs and as a means of benchmarking the various programs. The Volpe Center has a locomotive simulator that could be used to develop operating scenarios and training methods consistent with this recommendation, and will soon have a different type of simulator to facilitate the modeling and testing of cab technologies, such as PTC, with regard to human performance. Moreover, as part of FRA's ongoing human factors research, FRA has indeed focused on the performance of locomotive engineers. See, e.g., "Technology Implications of a Cognitive Task Analysis for Locomotive Engineers," January 2009, available on FRA's Web site at http://www.fra.dot.gov/downloads/Research/ord0903.pdf. However, given other demands on FRA's resources for research projects, FRA has not yet identified the funds needed to initiate this specific action and cannot undertake it until such funds are identified.	Identify and secure funding. Develop and issue guidelines.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
23	12/12/05	R-05-017	NTSB recommended that FRA determine the most effective methods of providing emergency escape breathing apparatuses for all crewmembers on freight trains carrying hazardous materials that would pose an inhalation hazard in the event of unintentional release and require railroads to provide these breathing apparatus to their crewmembers along with appropriate training.	<u>Open - Acceptable Response.</u> The FRA has completed a study to address all aspects of this recommendation. The study included the types of emergency escape breathing apparatuses available, how the equipment should be used, what training would be required for its use, and the cost. The study report is available on FRA's Web site at http://www.fra.dot.gov/downloads/Research/ord0911.pdf The FRA notes that Section 413 of the RSLA of 2008 (49 U.S.C. 20166) mandates that the Secretary prescribe a rule by April 16, 2010, that would require, <u>inter alia</u>, that railroads provide certain emergency escape breathing apparatus for all crewmembers in the locomotive cabs of freight trains carrying hazardous materials that pose an inhalation hazard. Using information from the report and consultations with railroad industry hygienists, FRA has developed a draft regulatory proposal that is being readied for publication.	Issue regulations, as mandated.
24	06/07/06	R-06-007	NTSB recommended that FRA require railroads to implement for all power-assisted switch machines, regardless of location, a formal commissioning procedure and a formal maintenance program that includes records of inspections, tests, maintenance, and repairs.	<u>Open - Acceptable Response.</u> The FRA stated that it would conduct an internal review of the railroads' usage and practices concerning power-assisted switch machines in other than signaled territory and determine whether regulations are needed. Meanwhile, Section 406 of the RSIA of 2008 (49 U.S.C. 20164) mandates that by October 16, 2009, the Secretary prescribe "standards, guidance, regulations, or orders" governing rail safety technology, including switch technology, in non-signaled territory. This recommendation will be addressed in implementing that mandate.	Complete an internal review. Issue regulations and/or guidance as mandated by Section 406 of the RSIA of 2008.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
25	10/25/06	R-06-019	NTSB recommended that FRA extend its Track Safety Standards to all classes of track having concrete crossies. The Track Safety Standards should address, at a minimum, the following: limits for rail seat abrasion; concrete crossie pad wear limits; missing or broken rail fasteners; loss of appropriate toe load pressure; improper fastener configurations; and excessive lateral rail movement.	Open - Acceptable Response. In April 2006, FRA created a task force to study the safety aspects of concrete crossies. The task force's purpose was to determine a recommended course of action for a safety advisory on that subject. Findings from that initial effort were transferred to RSAC's Track Safety Standards Working Group, which reported consensus recommendations for a proposed rule that were accepted by RSAC on December 10, 2008. FRA is preparing a proposed rule. Meanwhile, Section 403(d) of the RSIA of 2008 mandates that the Secretary prescribe a rule addressing concrete crossies by April 16, 2010. Section 403(d) states as follows: "In developing the regulations for class 1 through 5 track, the Secretary may address, as appropriate," the aspects recommended by NTSB. This was already accomplished within RSAC.	Issue regulations as mandated by Section 403(d) of RSIA of 2008.
26	05/22/08	R-08-009	NTSB recommended that FRA review all railroads' internal rail defect detection procedures and require changes to those procedures as necessary to eliminate exceptions to the requirement for an uninterrupted, continuous search for rail defects.	Open - Acceptable Response. The Rail Integrity Task Force of RSAC's Track Safety Standards Working Group has been charged with examining internal rail flaw inspection procedures and systems within the regulated community, identifying any deficiencies in the procedures or systems, and making necessary recommendations to address them. FRA has also established the Rail Integrity Group as part of its Track and Structures Division to review all railroads' internal rail defect detection procedures and recommend changes, as needed, to ensure that an uninterrupted, continuous search for rail flaws is conducted by the railroad. In addition, FRA has implemented a rail flaw detection audit process as part of its National Safety Program Plan.	Issue regulations based on RSAC recommendations.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
27	05/22/08	R-08-010	NTSB recommended that FRA require railroads to develop rail inspection and maintenance programs based on damage-tolerance principles, and approve those programs, and include in the requirement that railroads demonstrate how their programs will identify and remove internal defects before they reach critical size and result in catastrophic rail failures. NTSB also recommended that each program take into account, at a minimum, accumulated tonnage, track support, residual stresses in the rail, rail defect growth rates, and temperature differentials.	Open – Acceptable Response. In 2007, FRA's RSAC formed the Rail Integrity Task Force under the Track Safety Standards Working Group, to help ensure a common understanding of the requirements for internal rail flaw inspections within the regulated community. Through this task force, FRA is gaining a more thorough understanding of rail inspection and maintenance programs. The task force has reached consensus on a Volpe Center-recommended model for performance-based testing intervals using failure and defect rates, annual tonnage, performance targets, and crack growth. The task force is also examining issues concerning submission of internal flaw detection programs for FRA approval, annual updates to the program, and access to defect and failure data. Knowledge gained from FRA's continued involvement in these areas will be utilized to determine any future recommendations for improvement based on damage-tolerance principles. FRA also continues to fund research to enhance rail flaw detection technology.	Issue regulations.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
28	05/22/08	R-08-011	NTSB recommended that FRA require railroads use methods that accurately measure rail head wear to ensure that deformation of the head does not affect the accuracy of the measurements.	Open – Acceptable Response. Through the RSAC process, FRA is identifying and addressing operational limitations of rail flaw test systems that are attributable to the presence of rail head surface and wear conditions. Through the RSAC Rail Integrity Task Force, FRA initiated a study to determine the magnitude and conditions that can result in a “loss of bottom” signal during the test process. The study was completed in 2008 and the task force determined that it is common to find rail defects when there is a “loss of bottom” present. Nevertheless, the study also found that “loss of bottom” incidence is minimal in comparison to total mileage tested, and, because of the limited magnitude of the problem, the task force did not recommend further action. The task force did recommend, however, that a qualified test operator be used to ensure the validity of any test conducted. FRA is continually involved with the current rail flaw detection technology utilized by the railroads through its Rail Integrity Group, and is also funding additional research to pursue new development in the laser-based ultrasonic and guided waves technologies. Until rail flaw detection technology is developed that will consistently circumvent the influence of rail head surface and wear conditions, FRA believes it is possible that we could continue to see adverse effects on the accuracy of test measurements, and positive identification of all defects below a critical threshold will have detection limitations.	The Rail Integrity Task Force reached consensus that this NTSB recommendation be closed.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
29	02/03/05	R-05-001	NTSB recommended that FRA require in Title 49 of the Code of Federal Regulations, Part 213 (Track Safety Standards), that rail cracks originating from bond wire attachments be identified as rail defects and that information be collected on the methods and locations of those attachments.	Open - <u>Acceptable Alternative Response</u>. FRA agrees that it is important to track rail cracks originating from bond wire attachments, in the interest of prevention and for identifying the scope of the problem. However, FRA suggested an alternate approach to NTSB's recommendation and to the collection of information on the methods and locations of bond wire attachments. FRA added a new defect code to its Railroad Inspection System for Personal Computers (RSPIC). RSPIC provides inspectors with the ability to enter inspection data electronically via their personal computers, which facilitates data analysis. In April 2007, FRA also revised its Track Safety Standards Compliance Manual to provide guidance to field inspectors concerning rail bond welds. FRA's RSAC had been tasked to review this matter and in December 2008 agreed that no change to the Code of Federal Regulations was needed, based on the alternative action taken. FRA has asked that NTSB classify this recommendation as "Closed - Acceptable Alternate Action."	A wait response from NTSB.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
30	12/12/05	R-05-014	NTSB recommended that FRA require that, along main lines in non-signalized territory, railroads install an automatically activated device, independent of the switch banner that will, visually or electronically, compellingly capture the attention of employees involved with switch operations and clearly convey the status of the switch both in daylight and in darkness.	Open - Acceptable Alternative Response. FRA strongly supported NTSB's interest in reducing the risk of train accidents caused by an improperly lined hand-operated switch, but suggested an alternate approach. FRA initiated a joint project with the BNSF Railway Company to implement the Switch Position Monitoring System, which detects an improper switch point alignment and conveys information automatically to the dispatcher. FRA is aggressively encouraging railroads to deploy similar technology. Norfolk Southern Railway Company and CSX Transportation, Inc., are implementing similar technology. Meanwhile, Section 406 of the RSIA of 2008 (49 U.S.C. 20164) mandates that by October 16, 2009, the Secretary prescribe "standards, guidance, regulations, or orders" governing rail safety technology, including switch technology, in non-signalized territory. This recommendation will be addressed in implementing that mandate.	Update NTSB. Identify plans to promote similar technology to the rail industry. Issue regulations and/or guidance as mandated by Section 406 of the RSIA of 2008.
31	12/21/06	R-06-024	NTSB recommended that FRA immediately require all rail passenger car seat backs be secured to the seat assembly.	Open - Await Response. FRA concluded that the intent of NTSB's recommendation had been met, based on its review of the requirements of existing safety regulations. On January 30, 2008, FRA sent a letter to APTA to advise the commuter railroads that passenger seat backs must be secured in accordance with the Passenger Equipment Safety Standards. In March 2008, FRA sent a letter to NTSB requesting this recommendation be classified as "Closed - Acceptable Action." Subsequently, in May 2009 FRA sent a letter to NTSB requesting that it classify this recommendation as "Open - Response Received," until NTSB has determined a classification based on FRA's March 2008 response.	FRA is awaiting a response from NTSB.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
32	12/21/06	R-06-025	NTSB recommended that FRA revise the language in Title 49 of the Code of Federal Regulations, Section 238.233, to define "seat" to include all components of the seat assembly, such as seat cushions and seat backs, that could become dislodged when subjected to accelerations specified in that section.	<u>Open - Await Response.</u> FRA concluded that the intent of NTSB's recommendation had been met, based on its review of the requirements of existing safety regulations. On January 30, 2008, FRA sent a letter to APTA to advise the commuter railroads that passenger seat backs must be secured in accordance with the standards. In March 2008, FRA sent a letter to NTSB requesting this recommendation be classified as "Closed - Acceptable Action." Subsequently, in May 2009 FRA sent a letter to NTSB requesting that it classify this recommendation as "Open - Response Received," until NTSB has determined a classification based on FRA's March 2008 response.	FRA is awaiting a response from NTSB.
33	12/21/06	R-06-026	NTSB recommended that FRA require all rail passenger car seat assemblies be dynamically tested to withstand the accelerations specified in Title 49 of the Code of Federal Regulations, Section 238.233, and require both upward and downward vertical acceleration tests.	<u>Open - Await Response.</u> FRA stated that the requirements of 49 C.F.R. 238.233 are consistent with this recommendation. In March 2008, FRA sent a letter to NTSB requesting this recommendation be classified as "Closed - Acceptable Action." Subsequently, in May 2009 FRA sent a letter to NTSB requesting that it classify this recommendation as "Open - Response Received," until NTSB has determined a classification based on FRA's March 2008 response.	FRA is awaiting a response from NTSB.
34	12/21/06	R-06-027	NTSB recommended that FRA establish crashworthiness standards for passenger car body floor structure systems.	<u>Open - Await Response.</u> FRA stated that establishing crashworthiness standards for the floor structure would not provide any increase in collision safety. In March 2008, FRA sent a letter to NTSB requesting this recommendation be classified as "Closed - Acceptable Action." Subsequently, in May 2009 FRA sent a letter to NTSB requesting that it classify this recommendation as "Open - Response Received," until NTSB has determined a classification based on FRA's March 2008 response.	FRA is awaiting a response from NTSB.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
35	04/25/07	R-07-001	NTSB recommended that FRA require railroads ensure that the lead locomotives used to operate trains on tracks not equipped with a positive train control system are equipped with an alerter.	Open - Await Response. FRA's RSAC Locomotive Standards Working Group has reached tentative agreement to recommend that FRA amend the Locomotive Safety Standards to require alerters on all new freight locomotives operated at speeds exceeding 25 mph and within five years for each lead freight locomotive operated at speeds exceeding 25 mph. In addition, the AAR has adopted an alerter standard for freight locomotives, after consulting with the Working Group, and passenger locomotives are already subject to requirements for alerters under the Passenger Equipment Safety Standards in 49 C.F.R. Part 238. In October 2007, FRA sent a letter to NTSB requesting this recommendation be classified as "Open - Acceptable Action." Subsequently, in May 2009 FRA sent a letter to NTSB requesting that it classify this recommendation as "Open - Response Received," until NTSB has determined a classification based on FRA's October 2007 response.	FRA is awaiting a response from NTSB. Complete details in RSAC Working Group and issue regulations.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
36	04/25/07	R-07-002	NTSB recommended that FRA assist PHMSA in developing regulations to require that railroads immediately provide to emergency responders accurate, real-time information regarding the identity and location of all hazardous materials on a train.	<u>Open - Await Response.</u> FRA regulations require that information on the identity and location of hazardous materials shipments on a train be maintained for the benefit of emergency responders. However, with FRA's encouragement, the AAR issued a circular offering to provide hazardous materials information on the top 25 commodities to local emergency response organizations to assist in training and preparing for emergencies. The most current version of the circular is available on the AAR/Bureau of Explosives Web site at http://boe.aar.com/boe/download/circular_ot-55-j.pdf. In addition, with FRA's encouragement, CSX Transportation, Inc., and Chemtrec established a real-time information process that provides car content and train consist information on a "one-call" basis. FRA continues to evaluate this process to determine if additional regulations are necessary. In October 2007, FRA sent a letter to NTSB requesting this recommendation be classified as "Open - Acceptable Action." Subsequently, in November 2009 FRA sent a letter to NTSB requesting that it classify this recommendation as "Open - Response Received," until NTSB has determined a classification based on FRA's October 2007 response.	FRA is awaiting a response from NTSB. Issue regulations, as necessary.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
37	04/25/07	R-07-003	NTSB recommended that FRA require the installation of a crash- and fire-protected locomotive cab voice recorder, or a combined voice and video recorder (for the exclusive use in accident investigations and with appropriate limitations on the public release of such recordings) in all controlling locomotive cabs and cab car operating compartments. The recorder should have a minimum two-hour continuous recording capability, microphones capable of capturing crewmembers' voices and sounds generated within the cab, and a channel to record all radio conversations to and from crewmembers.	Open - Await Response. FRA has brought proposals for addressing this recommendation before two RSAC working groups, but no agreement was reached. FRA will explore a compromise approach to implementation of this recommendation that can support accident investigation needs and also assist in risk reduction. In October 2007, FRA sent a letter to NTSB requesting this recommendation be classified as "Open - Acceptable Action." Subsequently, in May 2009 FRA sent a letter to NTSB requesting that it classify this recommendation as "Open - Response Received," until NTSB has determined a classification based on FRA's October 2007 response.	FRA is awaiting a response from NTSB. Issue regulations, as necessary.
38	04/10/08	R-08-005	NTSB recommended that FRA advise railroads of the need to examine their train dispatching systems and procedures to ensure that appropriate safety redundancies are in place for establishing protection and preventing undesired removal of protection for roadway workers receiving track occupancy authority.	Open - Await Response. FRA has included a reference to this objective in its PTC final rule issued on December 30, 2009 (see 49 C.F.R. 236.1015(d)(13) at 75 Fed. Reg. 2598, 2709) and FRA believes that properly configured PTC systems will effectively address this need. However, PTC will not be deployed universally on the general rail system during the initial implementation. FRA brought these concerns to RSAC's attention in September 2008 and will continue to raise them in industry meetings. FRA also intends to issue a safety advisory to inform railroads of the dangers associated with granting and releasing exclusive track occupancies and the importance of redundant protection. In September 2008, FRA sent a letter to NTSB requesting that this recommendation be classified as "Closed - Acceptable Action." In August 2009, FRA requested that this recommendation be classified as "Open - Response Received," until NTSB has determined a classification based on FRA's September 2008 response.	FRA is awaiting a response from NTSB. Issue safety advisory.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
39	04/10/08	R-08-006	NTSB recommended that FRA require redundant signal protection, such as shunting, for maintenance-of-way work crews who depend on the train dispatcher to provide signal protection.	Open – Await Response. FRA is preparing an NPRM to amend the roadway worker protection requirements in 49 C.F.R. Part 214. As part of the rulemaking process, FRA is analyzing all available options that would allow redundant signal protection for maintenance-of-way work crews. If a reasonable procedure is found, FRA will consider full implementation of this recommendation. In September 2008, FRA sent a letter to NTSB requesting that this recommendation be classified as "Open – Acceptable Response."	FRA is awaiting a response from NTSB. Issue regulations, as necessary.
40	04/10/08	R-08-007	NTSB recommended that FRA revise the definition of "covered employee" under Title 49 of the Code of Federal Regulations, Part 219, for purposes of Congressionally mandated alcohol and controlled substances testing programs to encompass all employees and agents performing safety-sensitive functions as described in Title 49 of the Code of Federal Regulations, Sections 209.301 and 209.303.	Open – Await Response. Since the inception of the railroad alcohol/drug program in 1986, FRA has required testing of the remains of any railroad employee killed in a train incident or train accident, regardless of craft. However, in other respects, testing has been limited to employees subject to the hours of service laws. FRA is concerned that the scope of implementing this safety recommendation involves other crafts for which there are few historical safety data and that the recommendation raises other implementation issues. While FRA had begun a comprehensive study and review of this matter, Congress weighed these issues and mandated in Section 412 of the RSLA of 2008 that maintenance-of-way employees (MOW) be included in the existing alcohol/drug program by October 16, 2010. Accordingly, FRA will proceed to implement the mandate; and, in connection with this action, FRA will request public comment on inclusion of employees performing other safety-sensitive functions. In September 2008, FRA sent a letter to NTSB requesting that this recommendation be classified as "Open – Acceptable Response." In August 2009, FRA requested that this recommendation be classified as "Open – Response Received," until NTSB has determined a classification based on FRA's September 2008 response.	FRA is awaiting a response from NTSB. Complete Part 219 NPRM that will propose expanding FRA's alcohol and drug program to MOW employees and request public comment on including other employees who perform safety-sensitive duties. Issue regulations.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
41	04/02/09	R-09-001	NTSB recommended that FRA establish uniform signal aspects that railroads must use to authorize a train to enter an occupied block, and prohibit the use of these aspects for any other signal indication.	<u>Open - Await Response.</u> Existing FRA regulations address necessary and uniform basic signal aspects and their associated indications. However, the benefits that would flow from a determination of standard aspects and replacement of signal locations not conforming to those aspects would likely be far outweighed by the costs, including confusion among crews presently accustomed to the aspects currently displayed on their territory. FRA believes that this issue is best addressed through reviews conducted on the various properties to determine where conditions exist, within territories of existing crew districts, that present the potential for ambiguity and misrepresentation of the intended signal indication. Accordingly, FRA is urging each railroad to review its program of qualifications under 49 C.F.R. Part 240 to ensure that any such ambiguities are identified and specifically evaluated during skills testing. In support of this effort, FRA personnel are compiling the results of a study of Class I railroads' signal aspect and indication rules. FRA will analyze railroad signal system rules to identify vulnerabilities in existing variances among signal aspects and indications. FRA will then issue a safety advisory requesting the necessary action by the railroads and will conference with the railroads, with the objective of addressing variances with the greatest potential for noncompliance and for impact on the safety of train operations. FRA will then determine whether further regulatory action is needed. FRA has requested that NTSB classify this recommendation and Rec. No. R-09-002 as "Open - Acceptable Response," pending the issuance of the safety advisory and the widespread implementation of PTC. See the response to Rec. No. R-09-002, below.	Issue safety advisory.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
42	04/02/09	R-09-002	NTSB recommended that FRA study the different signal systems for trains, identify ways to communicate more uniformly the meaning of signal aspects across all railroad territories, and require the railroads to implement as many uniform signal meanings as possible.	Open - Awaiting Response. See Item No. 41, above. FRA also notes that with the implementation of PTC, as mandated by the RSLA of 2008, the functionality of the PTC onboard display units will be such that the meaning of all signal displays encountered will be shown to the crewmembers in a way that will eliminate any discrepancy or misunderstanding of the operating limitations of the signal aspect displayed.	Issue safety advisory.
43	04/02/09	R-09-003	NTSB recommended that FRA require that emergency exits on new and remanufactured locomotive cabs provide for rapid egress by cab occupants and rapid entry by emergency responders.	Open - Awaiting Response. FRA shares the NTSB's concern that means of rapid egress and rescue access be provided for locomotive cabs. FRA regulations require that locomotives manufactured on or after January 1, 2009, provide for emergency egress. See 49 C.F.R. 229.206. FRA has also funded research into locomotive egress and crew rescue. Moreover, FRA has developed and disseminated a training video titled "Locomotive Emergency Response Operations" to local emergency responders throughout the country and is exploring additional educational opportunities. FRA will present this recommendation and its actions to RSAC's Locomotive Standards Working Group for further consideration. Meanwhile, FRA has requested that NTSB classify this recommendation as "Open - Acceptable Action."	Continue educational efforts. Consult with RSAC.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
44	09/22/09	R-09-020	NTSB recommended that FRA advise all railroads that use audio frequency track circuits in their train control systems that post-accident testing following the June 22, 2009, collision between two rail transit trains near the Fort Totten Station in Washington, D.C., identified that a spurious signal generated in a track circuit module transmitter by parasitic oscillation propagated from the transmitter through a metal rack to an adjacent track circuit module receiver, and through a shared power source, thus establishing an unintended signal path. The spurious signal mimicked a valid track circuit signal, bypassed the rails, and was sensed by the module receiver so that the ability of the track circuit to detect the train was lost.	<u>Open - Await Response.</u> FRA field personnel have directly contacted all FRA-regulated railroads that utilize any signal or train control system to advise them of the NTSB findings and to determine if they use any audio frequency track circuits for the purpose of providing train detection within the control circuitry of their signal or train control system. Initial findings have shown that use of this type of audio frequency track circuits in the described safety-critical manner is extremely limited among FRA-regulated railroads. FRA has also found that the railroads contacted were well aware of NTSB findings associated with the accident and NTSB's subsequent recommendations.	Follow-up directly with each affected railroad.
45	09/22/09	R-09-021	Require all railroads that use audio frequency track circuits in their train control systems to examine track circuits that may be susceptible to parasitic oscillation and spurious signals capable of exploiting unintended signal paths and eliminate those adverse conditions that could affect the safe performance of their train control systems. This work should be conducted in coordination with their signal and train control equipment manufacturers.	<u>Open - Await Response.</u> See Item No. 44, above. FRA has begun contacting appropriate management of each FRA-regulated railroad found to utilize audio frequency track circuits for providing the train detection function within their signal or train control system. FRA will ascertain precisely what actions each railroad has taken or will take regarding their examination of such track circuits and the elimination of any like potential failure.	Follow-up directly with each affected railroad.
46	09/22/09	R-09-022	Require all railroads that use audio frequency track circuits in their train control systems to develop a program to periodically determine that electronic components in their train control systems are performing within design tolerances.	<u>Open - Await Response.</u> See Item Nos. 44 and 45, above. FRA has begun contacting appropriate management of each FRA-regulated railroad found to utilize audio frequency track circuits for providing the train detection function within their signal or train control system. FRA will ascertain what program each railroad has in place or will institute to periodically determine that electronic components in their signal or train control systems are performing within design tolerances.	Follow-up directly with each affected railroad.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
47	07/14/89	R-89-048	NTSB recommended that FRA assist and cooperate with RSPA in amending Title 49 of the Code of Federal Regulations, Part 179, to require that closure fittings on tank cars carrying hazardous materials be designed to maintain their integrity in accidents that are typically survivable by the rail tank car.	Open - Unacceptable Response. FRA, PHMSA (as RSPA's successor), and the rail industry are continuing to work together to address NTSB's recommendation. On January 13, 2009, PHMSA issued a final rule establishing interim design standards for rail tank cars designed to transport PIH materials. 74 Fed. Reg. 1796. The final rule was jointly developed by FRA and PHMSA. The rule requires tank cars designed for the transportation of PIH materials to be equipped with either (1) a top fittings protection system and tank nozzle designed to survive a rollover with a 9-mph velocity; or (2) a tank nozzle designed to survive a 9-mph rollover and top fittings protection system that prevents the release of product from any top fitting in the case of an accident where any top fitting would be sheared off. FRA continues to research alternative top fittings protection strategies. The industry has developed several improved top fittings designs. Although some of these designs are still undergoing service trials, each has been found to improve the ability of the fittings to withstand accident conditions and not release the car's contents (and not adversely affect the potential for non-accident releases), work with industry's existing loading and unloading practices, and maintain compatibility with current emergency response equipment. FRA has requested that NTSB classify this recommendation as "Open - Acceptable Alternate Response," until such time as FRA, PHMSA, and the rail industry are able to fully address this recommendation.	Work with PHMSA and the rail industry to address recommendation.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
48	03/21/02	R-02-005	NTSB recommended that FRA require railroads to conduct ultrasonic or other appropriate inspections to ensure that rail used to replace defective segments of existing rail is free from internal defects.	Open - Unacceptable Response. On March 8, 2006, FRA issued Safety Advisory 2006-02 in direct response to NTSB's recommendation. 71 Fed. Reg. 11700. The purpose of this advisory was to reduce the number of rail defects that occur when second-hand rail is used and to recommend practices for testing, classifying, and reusing second-hand rail. However, NTSB responded that FRA's advisory be revised to recommend that all railroads conduct ultrasonic or other appropriate inspections to ensure that all rail used as replacement rail is tested and determined to be free from internal defects. Subsequently, FRA has worked intensively on this issue through the Rail Integrity Task Force of RSAC's Track Safety Standards Working Group, which is considering revising the requirements for rail integrity, including replacement rail. FRA has also established the Rail Integrity Group as part of its Track and Structures Division to review all railroads' internal rail defect detection procedures and recommend changes, as needed, to ensure that an uninterrupted, continuous search for rail flaws is conducted by the railroad. FRA has asked that NTSB classify this recommendation as "Open - Acceptable Alternate Response," until such time as FRA has developed a regulatory proposal to fully address this recommendation.	Continue FRA review and monitoring. Issue regulations.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
49	11/23/05	R-05-010	NTSB recommended that FRA require train crews call out all signal indications over the radio, including clear signals, at all locations that are not equipped with automatic cab signals with enforcement of a positive train control system.	Open - Unacceptable Response. FRA's RSAC reviewed this recommendation, but there was significant opposition on the grounds of impracticality, radio congestion, and other factors. FRA notes that the mandate for PTC contained in the RSIA of 2008 should, to a considerable extent, lead to this becoming a moot issue. FRA recognizes that the purpose of this recommendation is to ensure that personnel responsible for safe train movements are actively engaged in responding appropriately to all signals governing their movements. FRA will explore a further alternative approach in connection with resolution of this recommendation and the recommendation concerning voice recording (Rec. No. R-07-003), if possible, refining options previously presented to and discussed in two RSAC working groups. In September 2009, FRA requested that NTSB classify this recommendation as "Open - Acceptable Response," until such time as FRA has determined the proper alternative approach needed to fully address the intent of this recommendation.	Determine whether an alternative solution can be implemented.
50	12/12/05	R-05-016	NTSB recommended that FRA require railroads implement operating measures, such as positioning tank cars toward the rear of trains and reducing speeds through populated areas, to minimize impact forces from accidents and reduce the vulnerability of tank cars transporting chlorine, anhydrous ammonia, and other liquefied gases designated as poisonous by inhalation.	Open - Unacceptable Response. On January 13, 2009, PHMSA published a final rule it developed jointly with FRA focusing on improving the crashworthiness protection of rail tank cars designed to transport PIH materials. 74 Fed. Reg. 1796. This final rule includes operational restrictions for trains hauling rail tank cars containing PIH materials, among other requirements. In particular, the final rule imposes a 50-mph speed limit on all loaded tank cars transporting PIH materials. DOT believes that this speed restriction achieves the goal of the recommendation as far as possible without introducing additional safety risks and an extreme economic burden on the industry. FRA has requested that NTSB classify this recommendation as "Closed - Reconsidered."	FRA is awaiting a response from NTSB.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
51	06/29/06	R-06-010	NTSB recommended that FRA prohibit the use of after-arrival track warrants for train movements in dark (non-signalized) territory not equipped with a positive train control system.	Open - Unacceptable Response. FRA's RSAC Operating Rules Working Group met with NTSB staff while studying after-arrival track warrants. FRA prepared a draft rule that would strictly limit use of after-arrival track warrants and discussed it extensively with the Working Group. Since the Working Group was not able to reach a resolution, FRA intends to proceed with an NPRM as soon as practicable, given the competing requirements of the RSIA of 2008. Moreover, FRA's final rule on PTC provides that PTC systems will enforce contingencies in mandatory directives issued in non-signalized territory, eliminating the hazard in PTC territory. See 75 Fed. Reg. 2598, 2701. FRA has requested that NTSB classify this recommendation as "Open - Acceptable Response."	Issue regulations.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
52	05/022/08	R-08-012	NTSB recommended that FRA assist PHMSA in its evaluation of the risks posed to train crews by unit trains transporting hazardous materials, determination of the optimum separation requirements between occupied locomotives and hazardous materials cars, and any resulting revision to Title 49 of the Code of Federal Regulations, Section 174.85.	Open – Unacceptable Response. In 2005, FRA issued a report to Congress titled, "Safe Placement of Train Cars," in which FRA found unnecessary disturbing the established and very effective in-train placement and separation requirements for cars containing hazardous material. In an August 28, 2008 response to NTSB, FRA cited this report, the facts of the underlying accident giving rise to the NTSB's recommendation, the safe history of unit train hazardous materials transportation, and PHMSA and FRA rulemaking activities involving tank cars transporting hazardous materials, in support of its request that this recommendation be classified as "Closed – Acceptable Action." Nevertheless, in a July 28, 2009 letter, NTSB classified this recommendation as "Open – Unacceptable Response," to reconsider NTSB's specific concerns with unit trains transporting hazardous materials. FRA intends to work with PHMSA to initiate a research project to study the effectiveness of using buffer cars to separate the crew from hazardous materials cars in unit trains used for transporting hazardous materials. Pending the outcome of the study, FRA will work with PHMSA to initiate a rulemaking that clarifies and revises the current DOT requirements related to the use of buffer cars.	Conduct study. Clarify requirements on buffer car use.

EXHIBIT C. OPEN RAIL SAFETY RECOMMENDATIONS BY THE OFFICE OF INSPECTOR GENERAL (OIG)

(AS OF DECEMBER 30, 2009)

Item No.	Issue Date	Report Title and No.	Open OIG Recommendation	Actions Taken by FRA	Actions Needed to Be Taken by FRA
1	05/03/07	The Federal Railroad Administration Can Improve Highway-Rail Grade Crossing Safety by Ensuring Compliance With Accident Reporting Requirements and Addressing Sight Obstructions MH-2007-044	FRA should strengthen safety oversight by ensuring that the railroads comply with mandatory requirements to report each grade crossing collision to FRA by issuing a violation and assessing a civil penalty each time a railroad fails to submit a grade crossing collision report in accordance with Federal requirements, on a consistent basis. Moreover, FRA should assess higher civil penalties against each railroad that repeatedly fails to report crossing collisions.	In 2005, FRA adopted a policy of issuing violations for all clear-cut failures to report highway-rail grade crossing incidents and other accidents/incidents. That policy has been observed in intervening audit and FRA has incorporated that guidance in its compliance manuals. On December 5, 2006, FRA issued proposed statements of agency policy (proposed schedules of civil penalties for rail safety violations) that included a line item increasing the dollar amount of the civil penalty ordinarily assessed against a railroad for failing to report a reportable accident/incident, including a grade crossing collision. 71 Fed. Reg. 70589. Under this proposal, the guideline fine for failing to report a grade crossing collision would increase from \$2,500 to \$6,500, and the guideline penalty for a willful violation of this requirement would increase from \$5,000 to \$9,000. The ordinary maximum civil penalty at the time that the proposal was issued was \$11,000. In September 2007, pursuant to the Federal Civil Penalties Inflation Adjustment Act (Inflation Act), FRA issued a final rule increasing the ordinary maximum civil penalty for a rail safety violation from \$11,000 to \$16,000. Subsequently, on October 16, 2008, Section 302 of the RSIA of 2008 amended the statutory provisions on rail safety civil penalties to increase the ordinary maximum civil penalty per rail safety violation from \$16,000 to \$25,000. This section also increased the aggravated maximum civil penalty. Accordingly, on December 30, 2008, FRA published a final rule implementing these and related changes. 73 Fed. Reg. 79698. FRA seeks to issue a final statement of agency policy for line-item changes to the penalty schedules that reflect these changes.	Issue penalty schedules as a final statement of agency policy.

Item No.	Issue Date	Report Title and No.	Open OIG Recommendation	Actions Taken by FRA	Actions Needed to Be Taken by FRA
2	05/03/07	The Federal Railroad Administration Can Improve Highway-Rail Grade Crossing Safety by Ensuring Compliance With Accident Reporting Requirements and Addressing Sight Obstructions MH-2007-044	FRA should work with the Federal Highway Administration (FHWA) to develop model legislation for States to improve safety by addressing sight obstructions at grade crossings that are equipped solely with signs, pavement markings, and other passive warnings.	FRA, in consultation with FHWA, has prepared an initial draft of model legislation for States to improve safety by addressing sight obstructions at grade crossings that have passive (non-automated) warning signs. FRA has solicited informal comments on the draft from the rail industry. Meanwhile, on October 16, 2008, the RSIA of 2008 was enacted. Section 203 of the Act references this OIG recommendation and directs the Secretary, after consultation with FRA, FHWA, and States, to develop and make available to States by April 16, 2010, model legislation addressing sight obstructions, including vegetation growth, topographic features, structures, and standing railroad equipment, at highway-rail grade crossings that are equipped solely with passive warnings. Pursuant to the statutory mandate, FRA distributed the draft model legislation at the National Conference of State Legislatures and invited comment on it; no comment has been received.	Complete outreach and consultations with States, per RSIA of 2008 mandate. Issue the model legislation and make it available to States.

Item No.	Issue Date	Report Title and No.	Open OIG Recommendation	Actions Taken by FRA	Actions Needed to Be Taken by FRA
3	02/24/09	Enhancing the Federal Railroad Administration's Oversight of Track Safety Inspections CR-2009-038	FRA should revise its track safety regulations for internal rail flow testing to require the railroads to report all track locations (milepost numbers and track miles) covered during internal rail flow testing.	The Rail Integrity Task Force of RSAC's Track Safety Standards Working Group has been charged with examining internal rail flow inspection procedures and systems within the regulated community, identifying any deficiencies in the procedures or systems, and making necessary recommendations to address them. FRA has also established the Rail Integrity Group as part of its Track and Structures Division to review all railroads' internal rail defect detection procedures and recommend changes, as needed, to ensure that an uninterrupted, continuous search for rail flaws is conducted by the railroad. FRA agrees that our track safety regulations should be revised to require railroads to report all track locations covered during internal rail flow testing. Within the task force, consensus has been reached on a revision to 49 CFR § 213.241 (Inspection records) on enhancing FRA access to documentation that confirms a continuous test was performed on all tracks where required. Discussion is continuing within the task force on other issues, such as the requirements for rail flow remedial action.	Issue regulations.