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, 2010)

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Basis for this Report

This report responds to Section 106 of the Rail Safety Improvement Act of 2008 (RSIA), 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 2009 Report

In preparing this report on behalf of the Secretary of Transportation, the Federal Railroad Administration (FRA) has relied upon the report that it prepared as of December 2009 and transmitted to the appropriate Congressional committees to fulfill this annual requirement. Mandates and recommendations, either added to or removed from the December 2009 Report, are noted below.

Treatment of Mandates in the RSIA

The RSIA introduced numerous mandates regarding railroad safety. A number of these mandates require action to be taken after completion of this report, and FRA has not included in this report those mandates with statutory deadlines after December 30, 2010.

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 all Congressional rail safety mandates. This process uses Microsoft SharePoint, an Intranet-based application accessible to 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 (RPDT). In addition, the Office of Policy in the Office of the Secretary of Transportation has a separate, Intranet-based tracking system that uses a different type of software called the Legislative Implementation Plan System. FRA has a parallel legislative implementation plan for the RSIA 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 for tracking rulemakings. The FRA would be glad to provide additional information on these tracking systems and its progress in implementing the various mandates.

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

Exhibit A lists FRA's 18 Congressional rail safety mandates that were unmet as of December 30, 2010, and actions to implement them.[1] Congressional rail safety mandates that were previously implemented or not yet due have been excluded from Exhibit A. Item Nos. 1 (SAFE TRANSPORT OF CERTAIN RADIOACTIVE MATERIALS), 3 (PEDESTRIAN CROSSING SAFETY), 7 (MINIMUM TRAINING STANDARDS AND PLANS), 12 (DEVELOPMENT AND USE OF RAIL SAFETY TECHNOLOGY), and 17 (ESTABLISHMENT OF TASK FORCE) are unmet mandates that were listed in the December 2009 Report. Item Nos. 2; 4 through 6; 8 through 11; and 13 through 18 are newly listed in this report.

Of the nine unmet mandates listed in the December 2009 Report, FRA has fulfilled the mandate in Title IX, Section 9005(b), of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Pub. L. No. 109-59, to "conduct a comprehensive analysis to determine the impact resistance of the steels in the shells of pressure tank cars constructed before 1989" and "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." Having earlier prepared and published the report in October 2009, which is available on FRA's Web site at www.fra.dot.gov/downloads/Research/ord0918.pdf, FRA transmitted the report to the Congressional committees in January 2010, thereby fulfilling the mandate.

In addition, FRA has fulfilled the mandate in Section 202(a) of the RSIA to "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." The FRA issued a final rule implementing this mandate on June 28, 2010. See 75 Fed. Reg. 36551. The FRA has also implemented the mandates in Section 417 of the RSIA concerning bridge safety assurance, namely to "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." The FRA issued a final rule on Bridge Safety Standards on July 15, 2010. See 75 Fed. Reg. 41281.

Further, FRA is current in its obligations under Section 102 of the RSIA to develop a long-term strategy for improving railroad safety, assess the progress in achieving its strategic goals, and report that progress to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Transportation and Infrastructure at the same time as the President's budget submission. This mandate is therefore not listed in Exhibit A.

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

[1] Since December 30, 2010, 3 of these 18 mandates have been met. See Item Nos. 4, 11, and 13 in Appendix A.

has a process in place to meet these mandates. The FRA would be glad to separately report 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 44 National Transportation Safety Board (NTSB) rail safety recommendations to FRA that were open as of December 30, 2010, and FRA's actions to address them. As previously explained, 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 FRA would be glad to provide additional information on this tracking system. The FRA has also committed to ensuring that the NTSB receives an initial response to each recommendation within 90 days of issuance. The FRA's practice is to submit a tentative implementation schedule as part of that initial response for each rail safety recommendation that needs to be implemented, and periodically update the implementation schedule.

Of the 52 recommendations listed in the December 2009 Report, the NTSB has closed the following safety recommendation numbers (Rec. Nos.): R-09-20, with the classification "Closed – Acceptable Action"; R-05-01 and R-06-24, with the classification "Closed – Acceptable Alternate Action"; R-06-25 and R-06-27, with the classification "Closed – Reconsidered"; R-07-03, with the classification "Closed – Unacceptable Action/Superseded"; and R-89-48, R-04-04, R-04-05, and R-05-16, with the classification "Closed – Unacceptable Action." These recommendations are therefore not listed in Exhibit B.

Open – Acceptable Response

Item Nos. 1 through 18, and 24 through 26, in Exhibit B, corresponding to NTSB Rec. Nos. R-92-22; R-00-01 through R-00-04; R-01-02; R-01-17; R-02-01; R-02-24 through R-02-26; R-04-06; R-04-07; R-05-02; R-05-09; R-05-17; R-06-07; and R-06-19; and R-08-09 through R-08-11, remain classified as "Open – Acceptable Response," as in the December 2009 Report.

A number of open safety recommendations that remain on the list from the December 2009 Report have been reclassified as "Open – Acceptable Response." Item Nos. 19 through 23, and 27 through 31, in Exhibit B, corresponding to NTSB Rec. Nos. R-06-026, R-07-01, and R-08-05 through R-08-07, and R-09-01 through R-09-03, R-09-21, and R-09-22, were previously classified as either "Open – Awaiting Response" or "Open – Response Received."

Open – Acceptable Alternate Response

Item No. 32, corresponding to NTSB Rec. No. 05-14, remains classified as "Open – Acceptable Alternate Response."

Open – Response Received

In 2010, NTSB issued to FRA two new rail safety recommendations, listed as Item Nos. 33 and 34, corresponding to NTSB Rec. Nos. R-10-01 and R-10-02 in Exhibit B. FRA has responded to each of these new rail safety recommendations, as noted.

Open – Unacceptable Response

Item Nos. 38, 41, 42, and 44, corresponding to NTSB Rec. Nos. R-02-05, R-05-10, R-06-10, and R-08-12, remain classified as "Open – Unacceptable Response."

Item Nos. 35 through 37, 39, and 40, corresponding to NTSB Rec. Nos. R-97-15, R-97-17, and R-98-56, and R-03-12 and R-04-01, have been reclassified as "Open –Unacceptable Response" from "Open – Acceptable Response." Item No. 43, corresponding to NTSB Rec. No. R 07-02, has been reclassified as "Open – Unacceptable Response" from "Open – Response Received."

The FRA has an ongoing dialogue with the NTSB to further the favorable closure of each open rail safety recommendation.

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

Exhibit C is a list of the two rail safety recommendations by the Department's Office of Inspector General (OIG) that were open as of December 30, 2010, and FRA's actions to address them. Item Nos. 1 and 2 are the same recommendations that were listed in the December 2009 report as Item Nos. 2 and 3. The OIG has favorably closed Item No. 1 in the December 2009 report, which concerned strengthening the oversight of highway-rail grade crossing safety.

Conclusion

The Department 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 FRA's progress in doing so and on the status of any mandate or recommendation.

EXHIBIT A. UNMET CONGRESSIONAL RAIL SAFETY MANDATES (AS OF DECEMBER 30, 2010)

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. FRA, with the assistance of DOT's Volpe National Transportation Systems Center (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). FRA expects to issue an NPRM in FY 2012. 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 as the Secretary deems appropriate.

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2	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 108 (HOURS OF SERVICE REGULATORY AUTHORITY) Amended Title 49, U.S.C. by adding new Section 21109	"(e) PILOT PROJECTS.—(1) IN GENERAL.—Not later than 2 years after the date of enactment of the Rail Safety Improvement Act of 2008, the Secretary shall conduct at least 2 pilot projects of sufficient size and scope to analyze specific practices which may be used to reduce fatigue for train and engine and other railroad employees as follows: (A) A pilot project at a railroad or railroad facility to evaluate the efficacy of communicating to employees notice of their assigned shift time 10 hours prior to the beginning of their assigned shift as a method for reducing employee fatigue. (B) A pilot project at a railroad or railroad facility to evaluate the efficacy of requiring railroads who use employee scheduling practices that subject employees to periods of unscheduled duty calls to assign employees to defined or specific unscheduled call shifts that are followed by shifts not subject to call, as a method for reducing employee fatigue."	In order to successfully fulfill this mandate, FRA must first receive requests from railroads and rail labor organizations to participate in the pilot projects. FRA has not yet received any requests but continues to encourage affected parties to use this option.	Continue to encourage affected parties to participate in the pilot projects.

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3	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."	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. FRA had previously completed and published a compilation of pedestrian control devices that are currently being used. FRA has drafted a preliminary guidance document with input in particular from the General Passenger Safety Task Force of RSAC's Passenger Safety Working Group. In January 2011, the preliminary guidance document was sent to Congress and posted on FRA's Web site at: http://www.fra.dot.gov/downloads/safety/PedestrianGradeXingGuidanceDraft.pdf. The task force is being given an opportunity to review and recommend revisions to the preliminary guidance. FRA will prepare a final guidance document, after receipt of any recommended revisions, which will be published and posted in final on FRA's Web site.	Complete and issue final guidance document.

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4	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 203 (ROADWAY USER SIGHT DISTANCE AT HIGHWAY-RAIL GRADE CROSSINGS) Amended Title 49, U.S.C. by adding new Section 20159	"Not later than 18 months after the date of enactment of the Rail Safety Improvement Act of 2008, the Secretary, after consultation with the Federal Railroad Administration, the Federal Highway Administration, and States, shall develop and make available to States model legislation providing for improving safety by 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, as recommended by the Inspector General of the Department of Transportation in Report No. MH–2007–044."	FRA has been working on such a model law with advice from the Federal Highway Administration (FHWA), and FRA has consulted at length on its content within the rail industry and discussed the model law at the National Conference of State Legislatures in July 2009, including information on how to provide feedback on the FRA draft. FRA also met with the AAR in January 2010 to receive its input in drafting the model law. FRA finalized the resulting model law in coordination with FHWA. On January 7, 2011, FRA submitted the model law to the relevant Congressional committees, the Governor of each State, and local organizations. The model legislation has also been posted on FRA's Web site at: http://www.fra.dot.gov/Pages/1730.shtml.	None.

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5	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 205 (NOTIFICA-TION OF GRADE CROSSING PROBLEMS) Amended Title 49, U.S.C. by adding new Section 20152	"(a) IN GENERAL.—Not later than 18 months after the date of enactment of the Rail Safety Improvement Act of 2008, the Secretary of Transportation shall require each railroad carrier to—(1) establish and maintain a toll-free telephone service for rights-of-way over which it dispatches trains, to directly receive calls reporting—(A) malfunctions of signals, crossing gates, and other devices to promote safety at the grade crossing of railroad tracks on those rights-of-way and public or private roads; (B) disabled vehicles blocking railroad tracks at such grade crossings; (C) obstructions to the view of a pedestrian or a vehicle operator for a reasonable distance in either direction of a train's approach; or (D) other safety information involving such grade crossings; (2) upon receiving a report pursuant to paragraph (1)(A) or (B), immediately contact trains operating near the grade crossing to warn them of the malfunction or disabled vehicle; (3) upon receiving a report pursuant to paragraph (1)(A) or (B), and after contacting trains pursuant to paragraph (2), contact, as necessary, appropriate public safety officials having jurisdiction over the grade crossing to provide them with the information necessary for them to direct traffic, assist in the removal of the disabled vehicle, or carry out other activities as appropriate; (4) upon receiving a report pursuant to paragraph (1)(C) or (D), timely investigate the report, remove the obstruction if possible, or correct the unsafe circumstance; and (5) ensure the placement at each grade crossing on rights-of-way that it owns of appropriately located signs, on which shall appear, at a minimum— (A) a toll-free telephone number to be used for placing calls described in paragraph (1) to the railroad carrier dispatching trains on that right-of-way; (B) an explanation of the purpose of that toll-free telephone number; and (C) the grade crossing number assigned for that crossing by the National Highway-Rail Crossing Inventory established by the Department of Transportation."	An emergency notification system (ENS) is provided and signage is posted at a majority of public highway-rail grade crossings in the United States, as set forth in FRA's May 2006 Report to Congress titled, "Pilot Programs for Emergency Notification Systems at Highway-Rail Grade Crossings," which is available on FRA's Web site at: http://www.fra.dot.gov/downloads/safety/1_800_report.pdf. Section 205 requires that FRA mandate such systems for private crossings as well, and FRA published an NPRM proposing to do so on March 4, 2011. See 76 Fed. Reg. 11992. FRA notes that the benefits that result from these systems are directly related to the numbers of trains and motor vehicles utilizing the subject crossings. As most of the crossings with the greatest number of trains and motor vehicles are on the Class I railroads, the ENS systems currently in place with FRA encouragement already capture the vast majority of benefits that are available.	Issue regulations as necessary.

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6	Rail Safety Improvement Act of 2008, Pub. L. No. 110-43,. Div. A, October 16, 2008.	Section 208 (MODEL LEGISLATION ON VIOLATIONS OF HIGHWAY-RAIL GRADE CROSSING TRAFFIC CONTROL DEVICES) (49 U.S.C. 20151)	"Not later than 18 months after the date of enactment of the Rail Safety Improvement Act of 2008, the Secretary, after consultation with State and local governments and railroad carriers, shall develop and make available to State and local governments model State legislation providing for civil or criminal penalties, or both, for violations of highway-rail grade crossing signs, signals, markings, or other warning devices."	A draft model State law that addresses violations of highway-rail grade crossing traffic control devices has been completed and provided to a large number of organizations representing State and local governments and the railroad industry for their comment and input.	Issue model law in final after consultation with the various stakeholder groups.

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7	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."	FRA informed Congress by letter on January 16, 2009, that FRA would not meet the 12-month timetable. 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. 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. In February 2010, RSAC accepted the task of assisting FRA in developing recommendations for minimum training standards and plans through the Training Standards Working Group. The Working Group has been actively addressing the statutory considerations and associated issues, and publication of an NPRM is expected by fall 2011.	Issue regulations as necessary.

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8	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 402 (CERTIFICA-TION OF TRAIN CONDUCTORS) Amended Title 49, U.S.C. by adding Section 20163	"(a) REGULATIONS.—Not later than 18 months after the date of enactment of the Rail Safety Improvement Act of 2008, the Secretary of Transportation shall prescribe regulations to establish a program requiring the certification of train conductors. In prescribing such regulations, the Secretary shall require that train conductors be trained, in accordance with the training standards developed pursuant to [49 U.S.C.] section 20162."	The rulemaking was offered to the RSAC on December 10, 2008, and the Conductor Certification Working Group was formed to develop recommendations on a proposed regulation. The resulting NPRM, which took into consideration the RSAC recommendations, was published on November 10, 2010. 75 Fed. Reg. 69166. FRA intends for the Working Group to develop recommendations on the handling of comments received on the proposed rule.	Issue regulations as necessary.

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9	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 403 (TRACK INSPECTION TIME STUDY)	"(a) STUDY.—Not later tha[n] 2 years after the date of enactment of this Act, the Secretary shall transmit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report containing the results of a study to determine whether—(1) the required intervals of track inspections for each class of track should be amended; (2) track remedial action requirements should be amended; (3) different track inspection and repair priorities or methods should be required; and (4) the speed at which railroad track inspection vehicles operate and the scope of the territory they generally cover allow for proper inspection of the track and whether such speed and appropriate scope should be regulated by the Secretary. (b) CONSIDERATIONS.—In conducting the study the Secretary shall consider—(1) the most current rail flaw, rail defect growth, rail fatigue, and other relevant track- or rail-related research and studies; (2) the availability and feasibility of developing and implementing new or novel rail inspection technology for routine track inspections; (3) information from National Transportation Safety Board or Federal Railroad Administration accident investigations where track defects were the cause or a contributing cause; and (4) other relevant information, as determined by the Secretary. (c) UPDATE OF REGULATIONS.—Not later than 2 years after the completion of the study required by subsection (a), the Secretary shall prescribe regulations based on the results of the study conducted under subsection (a)."	FRA organized an independent study by an outside contractor and developed a questionnaire used to gather information from railroad track inspectors throughout the country; interviews with railroad and union officials were also conducted for additional perspectives. The study has been completed, and a report is in final coordination. Any appropriate regulatory effort will commence upon completion of the report.	Complete the report and transmit to Congress. Issue regulations as necessary.

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10	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 403 (CONCRETE CROSS TIES)	"(d) CONCRETE CROSS TIES.—Not later than 18 months after the date of enactment of this Act, the Secretary shall promulgate regulations for concrete cross ties. In developing the regulations for class 1 through 5 track, the Secretary may address, as appropriate— (1) limits for rail seat abrasion; (2) concrete cross tie pad wear limits; (3) missing or broken rail fasteners; (4) loss of appropriate toeload pressure; (5) improper fastener configurations; and (6) excessive lateral rail movement."	Currently, the Track Safety Standards contain specific requirements for concrete crossties only for track used for high-speed operations (Class 6 track and above). Although this approach works well for addressing the main safety concerns with concrete crossties themselves, it does not specifically address the critical issue of rail seat abrasion (the failure of the concrete surface between the rail and the crossties). On August 26, 2010, FRA published an NPRM based on recommendations that were developed by the Concrete Crosstie Task Force of RSAC's Track Safety Standards Working Group. See 75 Fed. Reg. 52490. The proposed rule would establish with respect to track Classes 1–5 (the lower speed classes of track) specific requirements for concrete crossties, rail fastening systems connected to such crossties, automated inspections of track constructed with such crossties, and training track inspectors whose territories include such track on handling exceptions involving rail seat abrasion. FRA is considering the public comments and is developing a final rule.	Issue final rule as necessary.

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11	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 404 (STUDY OF METHODS TO IMPROVE OR CORRECT STATION PLATFORM GAPS)	"Not later than 2 years after the enactment of this Act, the Secretary shall complete a study to determine the most safe, efficient, and cost-effective way to improve the safety of rail passenger station platforms gaps in order to increase compliance with the requirements under the Americans with Disabilities Act (ADA) (42 U.S.C. 12101 et seq.), including regulations issued pursuant to section 504 of such Act (42 U.S.C. 12204) and to minimize the safety risks associated with such gaps for railroad passengers and employees."	In December 2007, FRA published the "Gap Guide" ("FRA Approach to Managing Gap Safety"), prepared by the RSAC General Passenger Safety Task Force. The Gap Guide identifies methods to improve the safety of passenger station platform gaps but is not targeted to increase compliance with the ADA. Although the original plan was to supplement this safety report with an additional safety report responsive to this mandate, it was decided to address both the safety and the ADA aspects in a single report. FRA prepared that report and transmitted it to Congress in January 2011.	None.

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12	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 406 (DEVELOP-MENT 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."	FRA has prioritized the review of railroad plans and product safety submissions under the Positive Train Control (PTC) mandate of Section 104; indeed, many dark-territory lines will be equipped with PTC during that effort (largely mooting the issue of lesser technology for those lines). With the progress made in implementing the PTC mandate, on September 23, 2010, the full RSAC accepted the task to provide advice regarding development of standards, guidance, regulations, or orders governing the development, use, and implementation of rail safety technology in dark territory. RSAC member organizations have submitted formal expressions of interest and member nominations for participating in this Dark Territory Working Group, whose formation was approved by the full RSAC in December 2010. With the assistance of the working group, we expect to develop standards, guidance, or orders responsive to the legislative mandate by late 2011.	Act on recommendations of the Dark Territory Working Group.

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13	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 411 (RAILROAD CARRIER EMPLOYEE EXPOSURE TO RADIATION STUDY)	"(a) STUDY.—The Secretary of Transportation shall, in consultation with the Secretary of Energy, the Secretary of Labor, the Administrator of the Environmental Protection Agency, and the Chairman of the Nuclear Regulatory Commission, as appropriate, conduct a study of the potential hazards to which employees of railroad carriers and railroad contractors or subcontractors are exposed during the transportation of high-level radioactive waste and spent nuclear fuel (as defined in section 5101(a) of title 49, United States Code), supplementing the report submitted under section 5101(b) of that title, which may include—(1) an analysis of the potential application of 'as low as reasonably achievable' principles for exposure to radiation to such employees with an emphasis on the need for special protection from radiation exposure for such employees during the first trimester of pregnancy or who are undergoing or have recently undergone radiation therapy; (2) the feasibility of requiring real-time dosimetry monitoring for such employees; (3) the feasibility of requiring routine radiation exposure monitoring in fixed railroad locations, such as yards and repair facilities; and (4) a review of the effectiveness of the Department's packaging requirements for radioactive materials. (b) REPORT.—Not later than 18 months after the date of enactment of this Act, the Secretary of Transportation shall transmit a report on the results of the study required by subsection (a) and any recommendations to further protect employees of a railroad carrier or of a contractor or subcontractor to a railroad carrier from unsafe exposure to radiation during the transportation of high-level radioactive waste and spent nuclear fuel to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Transportation and Infrastructure."	FRA has determined that a very small amount of high-level radioactive waste and spent nuclear fuel is actually being transported by rail at this time. Shipments that are occurring are intermittent, thus making it difficult to conduct and obtain any meaningful field measurements for the purposes of the study. FRA assembled a team that includes representatives of the Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA), the Department of Energy, the Department of Labor's Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency, and the Nuclear Regulatory Commission. The team developed a plan to conduct the study in light of the very limited amount of this type of radioactive material being transported by rail. FRA has followed the plan and compiled data from exposure assessments done by one American railroad and two European agencies to characterize the expected exposures when these materials are transported by rail. FRA has completed this report and transmitted it to Congress in January 2011.	None.

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14	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 412 (ALCOHOL AND CONTROLLED SUBSTANCE TESTING FOR MAINTEN-ANCE-OF-WAY EMPLOYEES)	"Not later than 2 years following the date of enactment of this Act, the Secretary of Transportation shall complete a rulemaking proceeding to revise the regulations prescribed under section 20140 of title 49, United States Code, to cover all employees of railroad carriers and contractors or subcontractors to railroad carriers who perform maintenance-of-way activities."	FRA has been holding outreach meetings with industry stakeholders to determine issues related to this proceeding. Additionally, FRA is using this rulemaking to address several related, open NTSB recommendations and other important proposed clarifications. FRA is preparing a proposed rule to accomplish all of this, and FRA anticipates that an NPRM will be published in 2011.	Issue regulations as necessary.

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
15	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 413 (EMERGENCY ESCAPE BREATHING APPARATUS) Amended Title 49, U.S.C. by adding new Section 20166	"Not later than 18 months after the date of enactment of the Rail Safety Improvement Act of 2008, the Secretary of Transportation shall prescribe regulations that require railroad carriers—(1) to provide emergency escape breathing apparatus suitable to provide head and neck coverage with respiratory protection for all crewmembers in locomotive cabs on freight trains carrying hazardous materials that would pose an inhalation hazard in the event of release; (2) to provide convenient storage in each freight train locomotive to enable crewmembers to access such apparatus quickly; (3) to maintain such equipment in proper working condition; and (4) to provide their crewmembers with appropriate training for using the breathing apparatus."	FRA completed a contract study to determine the feasibility of providing appropriate breathing apparatus capable of protecting crew members from the chemicals that may pose inhalation hazards. 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. Using information contained in the report and consultations with railroad industry hygienists, FRA published an NPRM on October 5, 2010. 75 Fed. Reg. 61386. Publication of a final rule is expected by fall 2011.	Issue final rule.

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
16	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 420 (EMPLOYEE SLEEPING QUARTERS) (49 U.S.C. 21106)	"(c) REGULATIONS.—Not later than April 1, 2010, the Secretary of Transportation, in coordination with the Secretary of Labor, shall prescribe regulations to implement subsection (a)(1) to protect the safety and health of any employees and individuals employed to maintain the right of way of a railroad carrier that uses camp cars, which shall require that all camp cars comply with those regulations by December 31, 2010. In prescribing the regulations, the Secretary shall assess the action taken by any railroad carrier to fully retrofit or replace its camp cars pursuant to this section."	To craft the proposed regulation, FRA has coordinated with the Department of Labor and examined OSHA regulation of temporary labor camps, FRA's existing guidelines on camp cars, and Food and Drug Administration authority over potable water on vehicles in interstate commerce. An NPRM was published on January 3, 2011. See 76 Fed. Reg. 64.	Issue regulations as necessary.

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
17	Rail Safety Improvement Act of 2008, Pub. L. No. 110-432, Div. A, October 16, 2008.	Section 503 (ESTABLISH-MENT OF TASK FORCE) (49 U.S.C. 1139 note)	"(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 was formed, drafted a model plan (based on the family assistance plan for the aviation mode), and developed recommendations to assist in the conduct of matters relating to the notification of family members of passengers involved in passenger rail accidents. FRA anticipates releasing a final report in spring 2011.	Issue report and transmit to Congress.

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
18	Passenger Rail Investment and Improvement Act of 2008, Pub. L. No. 110-432, Div. B, October 16, 2008.	Section 212 (NORTHEAST CORRIDOR INFRASTRUCT-URE AND OPERATIONS IMPROVE-MENTS) (49 U.S.C. 24905)	"(f) NORTHEAST CORRIDOR SAFETY COMMITTEE.—(1) IN GENERAL.—The Secretary shall establish a Northeast Corridor Safety Committee composed of members appointed by the Secretary. The members shall be representatives of—(A) the Department of Transportation, including the Federal Railroad Administration; (B) Amtrak; (C) freight carriers operating more than 150,000 train miles a year on the main line of the Northeast Corridor; (D) commuter rail agencies; (E) rail passengers; (F) rail labor; and (G) other individuals and organizations the Secretary decides have a significant interest in rail safety or security. (2) FUNCTION; MEETINGS.—The Secretary shall consult with the Committee about safety and security improvements on the Northeast Corridor main line. The Committee shall meet at least two times per year to consider safety and security matters on the main line. (3) REPORT.—At the beginning of the first session of each Congress, the Secretary shall submit a report to the [Northeast Corridor Infrastructure and Operations Advisory] Commission and to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the status of efforts to improve safety and security on the Northeast Corridor main line. The report shall include the safety and security recommendations of the Committee and the comments of the Secretary on those recommendations."	To help address operational safety issues in the Northeast Corridor, FRA formed the Northeast Corridor Risk Reduction Committee, which is comprised of FRA, Amtrak, and commuter railroads along the Corridor. While the Northeast Corridor Safety Committee (Committee) has not yet been established as mandated, the Risk Reduction Committee provides a forum for sharing information to address safety concerns in the Corridor. FRA notes that the Northeast Corridor Infrastructure and Operations Advisory Commission (Commission), which was separately mandated by Section 212 of the RSIA and is to receive bi-annual reports conveying the Committee's recommendations, held its inaugural meeting on September 27, 2010.	Establish Committee and begin consultations. Submit bi-annual report conveying Committee's recommendations to the Commission and the respective Congressional Committees.

EXHIBIT B. OPEN RAIL SAFETY RECOMMENDATIONS BY THE NATIONAL TRANSPORTATION SAFETY BOARD (NTSB) TO THE FEDERAL RAILROAD ADMINISTRATION[1] (AS OF DECEMBER 30, 2010)

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-92-22	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. 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.govdownloads/Research/ord0910.pdf. This study was Phase II of the "Development and Application of Methodology" study referenced above. FRA is also working with industry to develop probability of detection (POD) curves for all DOT-authorized, non-destructive evaluation methods. These curves will enable tank car owners to determine the minimum detectable defect size and along with an acceptable fatigue analysis determine appropriate inspection intervals to ensure a defect is detected and repaired before growing to a critical size. Further, in conjunction with PHMSA, FRA is developing a rulemaking to incorporate Special Permit 12095 into the hazardous materials regulations (HMR). This Special Permit currently authorizes an alternative qualification program for tank cars other than that provided in the HMR and allows tank car owners to develop an inspection and maintenance plan for their tank car fleet based on service reliability and evaluation of the plan's effectiveness at detecting defects.	Complete research projects and disseminate findings and tools.

[1] NTSB recommendations are listed in the following order by NTSB classification: Item Nos. 1 through 31, "Open – Acceptable Response"; Item No. 32, "Open – Acceptable Alternate Response"; Item Nos. 33 through 34, "Open – Response Received"; and Item Nos. 35 through 44, "Open – Unacceptable Response." Within each 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	01/13/00	R-00-01	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.	Open – Acceptable Response. In 2002, NTSB officials met with members of FRA's RSAC to discuss concerns with NTSB Rec. Nos. R-00-01 through R-00-04 and clarify their intent. In 2007, RSAC's Medical Standards Working Group was established to address these recommendations and other fitness-for-duty (FFD) concerns. Although the working group was able to achieve consensus on some of the text for a Medical Standards NPRM during 2010, the group remained unable to agree on such issues as the scope of the rule, whether it will set minimum or uniform standards, and what its dispute resolution procedures will be. At its August 31-September 1, 2010 meeting, the group decided to transfer the issue of medications reporting and education to the forthcoming alcohol and drug (49 CFR Part 219) rulemaking. The group's Doctors Task Force (DTF) will continue its work on drafting standards for hearing, vision, stroke, cardiac conditions, insulin-dependent diabetes, syncope, and obstructive sleep apnea.	Issue regulations as necessary.
3	01/13/00	R-00-02	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. See Item No. 2.	Complete and publish guidance document. Issue regulations as necessary.
4	01/13/00	R-00-03	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.	Open – Acceptable Response. See Item No. 2.	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
5	01/13/00	R-00-04	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.	Open – Acceptable Response. In 2002, NTSB officials met with members of FRA's RSAC to discuss concerns with NTSB Rec. Nos. R-00-01 through R-00-04 and clarify their intent. FRA had already been 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 had 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 the NTSB and RSAC's Medical Standards Working Group in support of the need to include therapeutic drug use management in the forthcoming Medical Standards NPRM. 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 develop a proposed rulemaking in 2011 that would update 49 CFR Part 219 to reflect the expanded panel and to provide a mechanism for reporting non-controlled substance results to railroads. Once the final rule is published, FRA will begin reporting the results for the drugs on the expanded panel.	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
6	03/12/01	R-01-02	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.	Open – Acceptable Response. Regardless of the regulated commodity transported in a tank car, conditions may exist that result in deterioration of an in-service, pressure relief valve. There is not a way to determine the existence or extent of deterioration without disassembling the valve for visual inspection. It is FRA's expectation that at the time of qualification all valves are removed from the tank car, disassembled, inspected and reassembled prior to reapplication to the tank car. In 2009-2010, FRA performed research to determine the effect of increasing the acceptance tolerance of relief valve performance at the time of retest. The research was performed using Analysis of Fire Effects on Tank Cars (AFFTAC) software, which simulates the behavior of specific tank car designs in pool or torch fire environments. A paper on this research has been circulated among industry experts and is under final editing and review. Based on the results and methodologies of this research, FRA and PHMSA will evaluate development of in-service testing criteria for relief valves. Another option under evaluation is to decrease the periodic inspection interval itself, while allowing alternative inspection intervals for specific tank cars based on a tank car owner's demonstration of equivalent safety.	Evaluate research results and work with PHMSA to issue regulations as necessary.
7	09/24/01	R-01-17	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.	Open – Acceptable Response. In August 2001, an extensive revision of 49 CFR § 219.201(b) concluded shortly before the 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 CFR Part 219 that is expected to be published in 2011.	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
8	02/15/02	R-02-01	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.	Open – Acceptable Response. 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 CFR 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.
9	11/27/02	R-02-24	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.	Open – Acceptable Response. On September 21, 2006, FRA tasked RSAC with establishing standards and procedures for determining the medical FFD of personnel engaged in safety-critical functions. At the August 31–September 1, 2010 Medical Standards Working Group meeting, FRA decided to narrow the scope of the rule to cover only locomotive engineers and conductors. The working group's DTF is preparing a standard Health History form, including sleep disorder questions, and FRA plans to issue a proposed rule in 2011.	Issue regulations as necessary.
10	11/27/02	R-02-25	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.	Open – Acceptable Response. On September 21, 2006, FRA tasked RSAC with establishing standards and procedures for determining the medical FFD of personnel engaged in safety-critical functions. A proposed rule, which will cover locomotive engineers and conductors, is being developed with the assistance of RSAC's Medical Standards Working Group to address these specific concerns, with publication expected in 2011. The draft rule under discussion includes a specific assignment of employee responsibility to report specified medical conditions that have significant potential for sudden incapacitation or could seriously impair hearing or vision.	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
11	11/27/02	R-02-26	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.	Open – Acceptable Response. On September 21, 2006, FRA tasked RSAC with establishing standards and procedures for determining the medical FFD of personnel engaged in safety-critical functions. A proposed rule, which will cover locomotive engineers and conductors, is being developed with the assistance of RSAC's Medical Standards Working Group to address these specific concerns, with publication expected in 2011. The draft rule under discussion makes specific provision for the evaluation of medical conditions that have significant potential for sudden incapacitation or could seriously impair hearing or vision.	Issue regulations as necessary.
12	03/15/04	R-04-06	NTSB recommended that FRA validate the predictive model that FRA is developing to quantify the maximum dynamic forces acting on railroad tank cars under accident conditions.	Open – Acceptable Response. 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. 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.	Conduct additional modeling and, if appropriate, full-scale testing.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
13	03/15/04	R-04-07	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.	Open – Acceptable Response. FRA, in conjunction with the Advanced Tank Car Collaborative Research Project (ATCCRP), is sponsoring research to evaluate the puncture force of impactors having a variety of sizes and shapes. In addition, the research will examine the effect of different impact scenarios such as location and angle of impact. The results of the research will be used to develop a puncture resistance performance standard as well as a standard methodology that all designers will use to evaluate their tank car designs. This will allow for a consistent and objective evaluation of submitted designs. Additionally, the industry, also in conjunction with the ATCCRP, is sponsoring research that will correlate steel properties to puncture resistance. This research will enable development of a battery of tests that will allow for the prediction of the behavior of particular steel in accident conditions. The improved constitutive relationships will increase the value of the simulation results. This research will begin early in 2011.	Continue research.
14	02/03/05	R-05-02	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.	Open – Acceptable Response. On September 9, 2008, FRA issued an NPRM to revise 49 CFR 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 adding train accident cause code T224—rail defect originating from bond wire attachment. The final rule was published on November 8, 2010. 75 Fed. Reg. 68862. Accident cause code T224 had been added to FRA's Guide for Preparing Accident/Incident Reports, prior to publication of the final rule.	None, completed.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
15	11/23/05	R-05-09	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. 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. 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. Moreover, in 2010 FRA installed the Cab Technology Integration Laboratory (CTIL) at the Volpe Center. The CTIL is a locomotive simulator that will help researchers to improve the design of controls and displays to minimize potential errors, increase situational awareness, enhance an engineer's awareness of the movements of other trains and hazards that may appear on the right-of-way, and study the impact of impairment on human perception and sensation. It will also expand the transportation community's knowledge of safety policy, operating procedures, and organizational factors that promote safe rail operations, and could be used to help develop operating scenarios and training methods consistent with this recommendation.	Develop and issue guidelines.
16	12/12/05	R-05-17	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.	Open – Acceptable Response. 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. FRA notes that Section 413 of the RSIA (49 U.S.C. 20166) mandates that the Secretary prescribe a rule that would require, inter alia, 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. See Item No. 15 in Exhibit A. Using information from the report and consultations with railroad industry hygienists, FRA issued an NPRM on October 5, 2010. 75 Fed. Reg. 61386. Publication of a final rule is expected by fall 2011.	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
17	06/07/06	R-06-07	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.	Open – Acceptable Response. In response to the recommendation, FRA conducted a review of the railroads' usage and practices concerning power-assisted switch machines in other than signaled territory to determine whether regulations are needed. Meanwhile, Section 406 of the RSIA (49 U.S.C. 20164) mandated that 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. See Item No. 12 in Exhibit A.	Issue regulations as necessary.
18	10/25/06	R-06-19	NTSB recommended that FRA extend its Track Safety Standards to all classes of track having concrete crossties. The Track Safety Standards should address, at a minimum, the following: limits for rail seat abrasion; concrete crosstie 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 crossties. 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's Concrete Crosstie Task Force, which reported consensus recommendations for a proposed rule that were accepted by RSAC on December 10, 2008. FRA prepared an NPRM on concrete ties, which was published on August 26, 2010. See 75 Fed. Reg. 52490. FRA is considering the public comments and is working with RSAC in developing a final rule. Currently, the Track Safety Standards contain specific requirements for concrete crossties only for track used for high-speed operations (Class 6 track and above). Although this approach works well for addressing the main safety concerns with concrete crossties themselves, it does not specifically address the critical issue of rail seat abrasion (the failure of the concrete surface between the rail and crossties). The proposed rule would establish with respect to track Classes 1–5 (the lower speed classes of track) specific requirements for concrete crossties, rail fastening systems connected to such crossties, automated inspections of track constructed with such crossties, and training track inspectors whose territories include such track on handling exceptions involving rail seat abrasion. Note that this rulemaking will fulfill the mandate in Section 403(d) of the RSIA, which was based on this NTSB recommendation. See Item No. 10 in Exhibit A.	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
19	12/21/06	R-06-26	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.	Open – Acceptable Response. FRA informed NTSB that the requirements of the Passenger Equipment Safety Standards at 49 CFR § 238.233 are consistent with this recommendation in that they expressly provide for (but do not require) the dynamic, sled testing of seat assemblies. See § 238.233(g). As NTSB encouraged, FRA worked with the American Public Transportation Association (APTA) in revising APTA's standard for the design, manufacture, and testing of passenger seating to address this recommendation. APTA recently revised its standard, requiring dynamic testing of seats under a vertical upward load, and a lateral load. See APTA SS-C&S-016-99, Rev. 2, Standard for Passenger Seats in Passenger Rail Cars. APTA's standard does not require a dynamic test in the downward vertical direction, however, as no incident could be identified in which vertical downward loads have caused seat components to detach.	Issue regulations as necessary.
20	04/25/07	R-07-01	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 – Acceptable Response. FRA's RSAC Locomotive Standards Working Group reached agreement to recommend that FRA amend the Locomotive Safety Standards (49 CFR Part 229) to require alerters on all new freight locomotives operated at speeds exceeding 25 mph and within five years for each existing freight locomotive operated in the lead at speeds exceeding 25 mph. In fact, after consulting with the Working Group, the AAR has adopted an alerter standard for freight locomotives. Passenger locomotives are already subject to requirements for alerters under the Passenger Equipment Safety Standards in 49 CFR Part 238. NTSB has advised that pending FRA's requirement for the installation of alerters on the lead locomotives of freight trains operating in other than PTC territory, the recommendation is classified "Open-Acceptable Response." An NPRM proposing to do so was issued in December 2010. See 76 Fed. Reg. 2200.	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
21	04/10/08	R-08-05	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 – Acceptable Response. FRA has included a reference to this objective in its PTC final rule issued on December 30, 2009. (See 49 CFR § 236.1015(d)(13) at 75 Fed. Reg. 2598, 2709.) FRA believes that properly configured PTC systems will effectively address this need. However, at this time, there are no plans for universal PTC deployment on the general rail system. FRA brought concerns about roadway worker safety to RSAC's attention in September 2008 and will continue to raise them in industry meetings. FRA established a working group (Fatality Analysis Maintenance-of-Way Employees and Signalmen (FAMES)) to study fatalities involving maintenance-of-way (MOW) roadway workers. The working group is in the process of collecting factual data in order to perform an analysis to determine what procedures or safety redundancies could further protect workers and could prevent undesired removal of protection for roadway workers receiving track occupancy authority.	Collect and analyze data. Advise railroads of needed procedures/ safety redundancies.
22	04/10/08	R-08-06	NTSB recommended that FRA require redundant signal protection, such as shunting, for MOW work crews who depend on the train dispatcher to provide signal protection.	Open – Acceptable Response. FRA is preparing an NPRM to amend the roadway worker protection requirements in 49 CFR Part 214. As part of the rulemaking process, FRA is analyzing all available options that would allow redundant signal protection for MOW work crews. FRA is aware of alternative means of redundant protection, and its analysis of all available options, if fully implemented, will satisfy the intent of this recommendation.	Issue regulations, as necessary.
23	04/10/08	R-08-07	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 – Acceptable 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 RSIA that MOW employees 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. See Item No. 14 in Exhibit A.	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
24	05/22/08	R-08-09	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. FRA has 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. Moreover, the Rail Integrity Task Force, under the RSAC 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. The task force believes that new technologies have been developed for improving rail flaw detection associated with rail surface conditions. The task force has reached consensus on a number of changes to FRA's rail inspection requirements, including recommending a new provision defining minimum requirements for the training of a rail flaw detector car operator. FRA is currently preparing an NPRM for issuance by summer 2011 based on the consensus recommendations made and proposals for which no consensus has been reached.	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
25	05/22/08	R-08-10	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. RSAC's Rail Integrity Task Force was formed in 2007 to help provide 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. FRA is currently preparing an NPRM for issuance by summer 2011. 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 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
26	05/22/08	R-08-11	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. Although sufficient studies are not available that would provide FRA with sufficient criteria to designate a critical rail head wear maximum for all rail sections utilized by railroads, the Rail Integrity Task Force has recommended requiring the rail flaw detector car operator to categorize the size of transverse-oriented defects to reflect the amount of rail head loss present in a rail specimen. Rail head wear is a crucial factor in the development of rail defects and rail service failure, and the task force has also reached consensus that it be utilized in determining performance- based testing intervals. 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.	RSAC has 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
27	04/02/09	R-09-01	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.	Open – Acceptable Response. 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 has urged each railroad to review its program of qualifications under 49 CFR Part 240 to ensure that any such ambiguities are identified and specifically evaluated during skills testing. Further, if conflicting meanings of the same signal aspect are discovered by FRA on a single railroad within the same existing train crew district, FRA will generally take enforcement action to prompt the responsible railroad to address the nonconformance. 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 also notes that with the implementation of PTC, as mandated by the RSIA, 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. In addition, the PTC system will have the ability to enforce the meaning of the signal display, if necessary.	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
28	04/02/09	R-09-02	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 – Acceptable Response. See Item No. 27, above.	Issue safety advisory.
29	04/02/09	R-09-03	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 – Acceptable 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 CFR § 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. NTSB has advised that pending FRA's implementation of a requirement that emergency exits provide for rapid exit by crewmembers and rapid entry by emergency responders, this safety recommendation is classified "Open-Acceptable Response."	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
30	09/22/09	R-09-21	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.	Open – Acceptable Response. FRA has surveyed all FRA-regulated railroads to determine their possible use of audio frequency track circuits for train detection. FRA field personnel contacted appropriate representatives of every railroad to determine their awareness of this recommendation and the circumstances involved in the Washington Metropolitan Area Transit Authority (WMATA) accident that precipitated it. Various railroads reported using a form of audio frequency track circuits; however, all but one instance involved uses of a totally different nature that did not implicate the same safety concerns. In one instance, the Southeastern Pennsylvania Transportation Authority (SEPTA) was found to use the same type of circuitry, but only on a branch line. Further, SEPTA was fully aware of the NTSB's findings and recommendations related to the WMATA accident and had already tested each such circuit. In addition, SEPTA had already revised its associated circuitry testing procedures so as to identify any similar condition, and had enhanced its monitoring of the circuitry by increasing the periodic testing interval from yearly to monthly. FRA believes that the purpose of the recommendation has been fulfilled.	None.
31	09/22/09	R-09-22	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.	Open – Acceptable Response. See Item No. 30, above.	None.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
32	12/12/05	R-05-14	NTSB recommended that FRA require that, along main lines in non-signaled territory, railroads install an automatically activated device, independent of the switch banner that will, visually or electronically, compellingly capture the attention of employees involved with switch operations and clearly convey the status of the switch both in daylight and in darkness.	Open – Acceptable Alternate Response. FRA strongly supported NTSB's intent to reduce 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 encouraging railroads to deploy similar technology. Norfolk Southern Railway Company and CSX Transportation, Inc., are implementing similar technology. Meanwhile, Section 406 of the RSIA (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. See Item No. 12 in Exhibit A. This recommendation will be largely addressed in implementing that mandate, as many thousands of miles of track segments currently non-signaled will require switch position monitoring by which to provide input to the PTC systems that will be installed. The areas required to install PTC include routes where either passenger or intercity commuter service is provided, or routes on Class I railroads having in excess of 5 million gross tons of traffic annually, and over which any poisonous-by-inhalation hazardous materials are transported.	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
33	2/23/2010	R-10-01	NTSB recommended that FRA require the installation, in all controlling locomotive cabs and cab car operating compartments, of crash- and fire-protected inward- and outward-facing audio and image recorders capable of providing recordings to verify that train crew actions are in accordance with rules and procedures that are essential to safety as well as train operating conditions. The devices should have a minimum 12-hour continuous recording capability with recordings that are easily accessible for review, with appropriate limitations on public release, for the investigation of accidents or for use by management in carrying out efficiency testing and systemwide performance monitoring programs.	Open – Response Received. FRA recognizes the value of voice and image recording for accident investigation purposes, and believes that the information gathered could also play a constructive role in a concerted risk reduction effort having the support of employee representatives and progressive carrier management. However, FRA is also confident that the use of voice and image recording for railroad disciplinary purposes would erode morale and offer manifold opportunities for selective enforcement and possible retaliation against employees for reasons having nothing to do with safety. FRA is exploring options that will seek to affirm NTSB's interest in accident investigation and prevention, while avoiding unwarranted publication of private conversations and guarding against further erosion of working relationships among employees and their supervisors and managers.	Identify and pursue appropriate options to promote accident investigation and prevention through the use of audio and image recording devices.
34	2/23/2010	R-10-02	NTSB recommended that FRA require that railroads regularly review and use in-cab audio and image recordings (with appropriate limitations on public release), in conjunction with other performance data, to verify that train crew actions are in accordance with rules and procedures that are essential to safety.	Open – Response Received. See Item No. 33.	See Item No. 33.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
35	08/28/97	R-97-15	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.	Open – Unacceptable Response. 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 mph (Tier II passenger equipment), but did not address kick-out panels in doors for trains traveling at or below 125 mph (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 to further enhance egress requirements. 73 Fed. Reg. 6412. FRA's RSAC Emergency Preparedness Task Force has reviewed this recommendation and, through the Passenger Safety Working Group, reported its own recommendations for removable panels in certain interior doors to the full RSAC body on February 20, 2008, which in turn accepted the task force's recommendations. The RSAC recommendations apply to new passenger cars and do not implicate concerns associated with retrofitting existing doors to accommodate removal panels that would be suitable for emergency egress. Publication of an NPRM is expected by spring 2011. In addition, FRA's Office of Railroad Policy 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. The NTSB has reclassified this recommendation as "Open – Unacceptable Response" pending FRA efforts to implement this recommendation in all passenger cars, both new and existing.	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
36	08/28/97	R-97-17	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.	Open – Unacceptable Response. On May 12, 1999, FRA published the Passenger Equipment Safety Standards, which 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 APTA to develop industry standards to improve emergency lighting systems in all passenger cars, including the survivability of the systems. See APTA SS-E-013-99, Rev. 1, Standard for Emergency Lighting System Design for Passenger Cars. On February 20, 2008, RSAC's Passenger Safety Working Group recommended proposed rule language to the full RSAC body that would incorporate this new APTA standard by reference. While the APTA standard does provide for emergency lighting in existing passenger cars, thereby complementing FRA's original regulations, the standard does not specify that the lighting in existing cars be powered by a self-contained source independent of the main car battery. The full RSAC accepted the working group's recommendations, and FRA is preparing an NPRM for publication by spring 2011. The NTSB has reclassified this recommendation as "Open – Unacceptable Response," pending efforts not only to implement emergency lighting in existing passenger cars but also to provide that those systems operate on a power source independent of the main car battery.	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	09/16/98	R-98-56	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.	Open – Unacceptable Response. This recommendation arose from investigation of Amtrak accidents in which seats were found to have rotated, raising concern that undesired seat rotation may pose a risk of passenger injury. Subsequently, Amtrak improved its seat-locking mechanism. FRA's Passenger Equipment Safety Standards also addressed seat securement in passenger cars but did not address seat rotation per se. Nonetheless, undesired seat rotation has been identified in Amtrak accidents as recently as 2004. FRA's Office of Railroad Policy and Development has examined alternative seat-locking designs and conducted dynamic testing of prototype seat-locking systems in cooperation with Amtrak. FRA also notes that APTA's Standard for Passenger Seats in Passenger Rail Cars addresses seat rotation. See APTA SS-C&S-016-99, Rev. 2, Section 5.3.1. Yet, FRA and NTSB accident investigations have not established a nexus between undesired seat rotation and passenger injuries. Further, any system to inhibit passenger disengagement of the seat-locking mechanism—whether by inadvertent or intentional passenger action —should not place employees at risk of injury when rotating the seats in their desired orientation. The NTSB has reclassified this recommendation as "Open – Unacceptable Response." NTSB believes that FRA should further act to ensure that seats are secure from undesired rotation, either by issuance of a regulation for positive seat securement or development an acceptable alternative to ensure that seats cannot disengage from their locking mechanisms.	Discuss further with industry.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
38	03/21/02	R-02-05	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 response to this recommendation. See 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 helping to revise the requirements for rail integrity, including replacement rail. FRA is currently preparing an NPRM for issuance by summer 2011. 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. The NTSB has advised that it will consider reclassifying the status of this recommendation pending development of proposed regulatory language to address this issue.	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
39	08/15/03	R-03-12	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.	Open – Unacceptable Response. FRA entered into an agreement with TSA and Amtrak to fund a study through the 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. 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. NTSB has advised FRA that it continues to believe in the feasibility of this recommendation and has classified the recommendation as "Open – Unacceptable Response."	Continue dialogue with NTSB

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
40	03/15/04	R-04-01	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 – Unacceptable Response. On October 11, 2006, FRA published a regulation that required railroads to establish a program for the periodic visual inspection of joint bars in CWR track by January 1, 2007. 71 Fed. Reg. 59677. However, the regulation did not require non-destructive testing of joint bars on a periodic basis. FRA stated that there was insufficient engineering data to establish the effectiveness of non-destructive testing techniques as applied to joint bars in the service environment. 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, new technology was recently developed by a non-destructive test company in the United States that has the capability to perform a dynamic ultrasonic inspection of the upper portion of the joint bar structure. This technology is currently performing trial tests on one Class I railroad to determine the effectiveness and accuracy of the system. On August 25, 2009, FRA published a final rule to enhance requirements for CWR generally. 74 Fed. Reg. 43002. Nevertheless, NTSB has advised FRA that, to fully meet the intent of the recommendation, the required inspection procedures need to include nondestructive testing techniques for identifying cracks in rail joint bars.	Develop and issue a specific regulation if determined necessary, when suitable technology becomes available.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
41	11/23/05	R-05-10	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 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 audio and image recording (Rec. No. R-10-01, which superseded Rec. No. 07-03), if possible, refining options previously presented to and discussed in two RSAC working groups.	Determine whether an alternative solution can be implemented.
42	06/29/06	R-06-10	NTSB recommended that FRA prohibit the use of after-arrival track warrants for train movements in dark (non-signaled) territory not equipped with a positive train control system.	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. Nevertheless, FRA's final rule on PTC provides that PTC systems will enforce contingencies in mandatory directives issued in non-signaled territory, eliminating the hazard in PTC territory. See 75 Fed. Reg. 2598, 2701.	Issue regulations as determined necessary.

Item No.	Issue Date	Rec. No.	Open NTSB Recommendation	NTSB Classification and Actions Taken by FRA	Actions Needed to Be Taken by FRA
43	04/25/07	R-07-02	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.	Open – Unacceptable Response. 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. NTSB has requested that FRA work with PHMSA to pursue the development and requirement of a national system that can electronically track tank car shipments of hazardous materials, and has classified the recommendation as "Open – Unacceptable Response," pending initiation of rulemaking efforts to implement it.	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
44	05/022/08	R-08-12	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 did not find it necessary to disturb the established and very effective in-train placement and separation requirements for cars containing hazardous material. (The report is available on FRA's Web site at http://www.fra.dot.gov/downloads/safety/safe_placement_report_june1605.pdf.) FRA responded to the NTSB's recommendation by citing this report, as well as the facts of the underlying accident giving rise to the recommendation, the safe history of unit train hazardous materials transportation, and PHMSA and FRA rulemaking activities involving tank cars transporting hazardous materials, with the request that this recommendation be classified as "Closed – Acceptable Action." NTSB subsequently classified this recommendation as "Open – Unacceptable Response," citing specific concerns with unit trains transporting hazardous materials. FRA intends to work with PHMSA to conduct further research 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 determine whether or not a rulemaking is needed to clarify and revise the current DOT requirements related to the use of buffer cars.	Conduct study. If necessary clarify the requirements on buffer car use.

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

(AS OF DECEMBER 30, 2010)

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 work with the Federal Highway Administration 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 has been working on such a model law with advice from FHWA, and FRA has consulted at length on its content within the rail industry and discussed the model law at the National Conference of State Legislatures in July 2009, including providing formation on how to give feedback on the FRA draft. FRA also met with the AAR in January 2010 to receive its input in drafting the model law. FRA finalized the resulting model law in coordination with FHWA. On January 7, 2011, FRA submitted the model law to the relevant Congressional committees, the Governor of each State, and local organizations. The model legislation has also been posted on FRA's Web site at: http://www.fra.dot.gov/Pages/1730.shtml. See Item No. 4 in Exhibit A concerning implementing Section 203 of the RSIA, which references this OIG recommendation.	None.

Item No.	Issue Date	Report Title and No.	Open OIG Recommendation	Actions Taken by FRA	Actions Needed to Be Taken by FRA
2	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 flaw testing to require the railroads to report all track locations (milepost numbers and track miles) covered during internal rail flaw testing.	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. FRA agrees that its track safety regulations should be revised to require railroads to report all track locations covered during internal rail flaw 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. Task force recommendations were accepted by the full RSAC membership in September 2010, and FRA is currently preparing an NPRM for issuance by summer 2011.	Issue regulations as necessary.