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DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

49 CFR Part 213

[Docket No. FRA–2005–22522]

RIN 2130–AB71

Track Safety Standards; Inspections of Joints in Continuous Welded Rail (CWR)

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: FRA is amending the Federal Track Safety Standards to improve the inspection of rail joints in continuous welded rail (CWR). On November 2, 2005, FRA published an Interim Final Rule (IFR) addressing the inspection of rail joints in CWR. FRA requested comments on the provisions of the IFR and stated that a final rule would be issued after a review of those comments. This final rule adopts a portion of the IFR and makes changes to other portions. This final rule requires track owners to develop and implement a procedure for the detailed inspection of CWR rail joints and also requires track owners to keep records of those inspections.

DATES: This final rule is effective October 31, 2006.

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SUPPLEMENTARY INFORMATION:

Background

I. Continuous Welded Rail (CWR)

A. General

CWR refers to the way in which rail is joined together to form track. In CWR, rails are welded together to form one continuous rail that may be several miles long. Although CWR is normally one continuous rail, there can be joints [1] in it for one or more reasons: the need for insulated joints that electrically separate track segments for signaling purposes, the need to terminate CWR installations at a segment of jointed rail, or the need to remove and replace a section of defective rail.

B. Statutory and Regulatory History of CWR

The Federal Railroad Administration (FRA) issued the first Federal Track Safety Standards in 1971. *See* 36 FR 20336 (October 20, 1971). FRA addressed CWR in a rather general manner, stating, in § 213.119, that railroads must install CWR at a rail temperature that prevents lateral displacement of track or pull-aparts of rail ends and that CWR should not be disturbed at rail temperatures higher than the installation or adjusted installation temperature.

In 1982, FRA deleted § 213.119, because FRA believed it was so general in nature that it provided little guidance to railroads and it was difficult to enforce. *See* 47 FR 7275 (February 18, 1982) and 47 FR 39398 (September 7, 1982). FRA stated: ''While the importance of controlling thermal stresses within continuous welded rail has long been recognized, research has not advanced to the point where specific safety requirements can be established.'' 47 FR 7279. FRA explained that continuing research might produce reliable data in this area in the future.

The Rail Safety Enforcement and Review Act of 1992 (Public Law 102–365, September 3, 1992), required that FRA evaluate procedures for installing and maintaining CWR. In 1994, Congress required DOT to evaluate cold weather installation procedures for CWR (Federal Railroad Safety Reauthorization Act (Pub. L. 103–272, July 5, 1994)). In light of the evaluation of those procedures, as well as information resulting from FRA's own research and development, FRA addressed CWR procedures by adding § 213.119 during its 1998 revision of the Track Safety Standards. *See* 63 FR 33992 (June 22, 1998).

Section 213.119, as added in 1998, requires railroads to develop procedures that, at a minimum, provide for the installation, adjustment, maintenance, and inspection of CWR, as well as a training program and minimal recordkeeping requirements. Section 213.119 does not dictate which procedures a railroad must use in its CWR plan. It allows each railroad to develop and implement its individual CWR plan based on procedures which have proven effective for it over the years. Accordingly, procedures can vary from railroad to railroad.

On August 10, 2005, President Bush signed the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU), (Pub. L. 109–59, August 10, 2005) into law. Section 9005(a) of SAFETEA–LU amended 49 U.S.C. 20142 by adding a new subsection (e) as follows:

> (e) Track Standards.—
>
> (1) In General.—Within 90 days after the date of enactment of this subsection, the Federal Railroad Administration shall—
>
> (A) require each track owner using continuous welded rail track to include procedures (in its procedures filed with the Administration pursuant to section 213.119 of title 49, Code of Federal Regulations) to improve the identification of cracks in rail joint bars;
>
> (B) instruct Administration track inspectors to obtain copies of the most recent continuous welded rail programs of each railroad within the inspectors' areas of responsibility and require that inspectors use those programs when conducting track inspections; and
>
> (C) establish a program to review continuous welded rail joint bar inspection data from railroads and Administration track inspectors periodically.
>
> (2) Inspection.—Whenever the Administration determines that it is necessary or appropriate, the Administration may require railroads to increase the frequency of inspection, or improve the methods of inspection, of joint bars in continuous welded rail.

Pursuant to this mandate, on November 2, 2005, FRA revised the Track Safety Standards of 49 CFR part 213 by publishing the IFR, 70 FR 66288, which addresses CWR. FRA requested comments on the IFR and provided the Railroad Safety Advisory Committee (RSAC) with an opportunity to review the comments on the IFR. On February 22, 2006, RSAC established the Track Safety Standards Working Group (working group). The working group was given two tasks: (1) Resolution of comments on the IFR, and (2) recommendations regarding FRA's role in oversight of CWR programs, including analysis of data to determine effective management of CWR safety by the railroads. The first task, referred to as ''Phase I'' of the CWR review, includes analyzing the IFR on inspection of joint bars in CWR territory, reviewing the comments to the IFR, and preparing recommendations for the final rule. The publication of this final rule concludes ''Phase I'' of RSAC's referral to the working group. The working group is currently reviewing ''Phase II'' of RSAC's referral, which involves an examination of all of § 213.119. The working group plans to

[1] Rail joints commonly consist of two joint bars that are bolted to the sides of the rail and that contact the rail at the bottom surface of the rail head and the top surface of the rail base.

report on its Phase II task to the RSAC at the next full RSAC meeting.

II. Railroad Safety Advisory Committee (RSAC) Overview

In March 1996, FRA established RSAC, which provides a forum for developing consensus recommendations to FRA's Administrator on rulemakings and other safety program issues. The RSAC includes representation from all of the agency's major customer groups, including railroads, labor organizations, suppliers and manufacturers, and other interested parties. A list of group members follows:

American Association of Private Railroad Car Owners (AARPCO);
American Association of State Highway & Transportation Officials (AASHTO);
American Chemistry Council;
American Petrochemical Institute;
American Public Transportation Association (APTA);
American Short Line and Regional Railroad Association (ASLRRA);
American Train Dispatchers Association (ATDA);
Association of American Railroads (AAR);
Association of Railway Museums (ARM);
Association of State Rail Safety Managers (ASRSM);
Brotherhood of Locomotive Engineers and Trainmen (BLET);
Brotherhood of Maintenance of Way Employees Division (BMWED);
Brotherhood of Railroad Signalmen (BRS);
Chlorine Institute;
Federal Transit Administration (FTA);*
Fertilizer Institute;
High Speed Ground Transportation Association (HSGTA);
Institute of Makers of Explosives;
International Association of Machinists and Aerospace Workers;
International Brotherhood of Electrical Workers (IBEW);
Labor Council for Latin American Advancement (LCLAA)*;
League of Railway Industry Women*;
National Association of Railroad Passengers (NARP);
National Association of Railway Business Women*;
National Conference of Firemen & Oilers;
National Railroad Construction and Maintenance Association;
National Railroad Passenger Corporation (Amtrak);
National Transportation Safety Board (NTSB)*;
Railway Supply Institute (RSI);
Safe Travel America (STA);
Secretaria de Comunicaciones y Transporte*;
Sheet Metal Workers International Association (SMWIA);
Tourist Railway Association Inc.;
Transport Canada*;
Transport Workers Union of America (TWU);
Transportation Communications International Union/BRC (TCIU/BRC);
Transportation Security Administration (TSA); and
United Transportation Union (UTU).

*Indicates associate, non-voting membership.

When appropriate, FRA assigns a task to RSAC, and after consideration and debate, RSAC may accept or reject the task. If the task is accepted, RSAC establishes a working group that possesses the appropriate expertise and representation of interests to develop recommendations to FRA for action on the task. These recommendations are developed by consensus. A working group may establish one or more task forces to develop facts and options on a particular aspect of a given task. The task force then provides that information to the working group for consideration. If a working group comes to unanimous consensus on recommendations for action, the package is presented to the full RSAC for a vote. If the proposal is accepted by a simple majority of RSAC, the proposal is formally recommended to FRA. FRA then determines what action to take on the recommendation. Because FRA staff plays an active role at the working group level in discussing the issues and options and in drafting the language of the consensus proposal, FRA is often favorably inclined toward the RSAC recommendation.

However, FRA is in no way bound to follow the recommendation, and the agency exercises its independent judgment on whether the recommended rule achieves the agency's regulatory goal, is soundly supported, and is in accordance with policy and legal requirements. Often, FRA varies in some respects from the RSAC recommendation in developing the actual regulatory proposal or final rule. Any such variations would be noted and explained in the rulemaking document issued by FRA. If the working group or RSAC is unable to reach consensus on recommendations for action, FRA moves ahead to resolve the issue through traditional rulemaking proceedings.

III. RSAC Track Safety Standards Working Group

After its establishment on February 22, 2006, the working group reconvened on April 4–5, 2006, April 26–28, 2006, May 24–25, 2006, and July 19–20, 2006 to discuss revisions to the IFR for this final rule. The working group considered all the comments and reached consensus on recommendations for a final rule. These recommendations were presented to the RSAC and on August 11, 2006, the RSAC accepted these recommendations. The RSAC voted to forward these recommendations to FRA as the basis for a final rule on the inspection of CWR joints.

FRA has worked closely with the RSAC in developing its recommendations and believes that the RSAC has effectively addressed inspection of CWR joints. FRA has greatly benefitted from the open, informed exchange of information during the meetings. There is a general consensus among the railroads, rail labor organizations, state safety managers, and FRA concerning the primary principles FRA sets forth in this final rule. The working group has also benefitted from participation of NTSB staff. FRA believes that the expertise possessed by the RSAC representatives enhances the value of the recommendations, and FRA has made every effort to incorporate them in this rule.

IV. Train Accidents Involving Joints in CWR

Since FRA's 1998 revision of the Track Safety Standards, there have been a number of train accidents in which the failure of a rail joint in CWR was a factor. The NTSB investigated three recent accidents and made recommendations to FRA concerning joints in CWR. The NTSB recommendations closely parallel the statutory mandate requiring this IFR. The three accidents and subsequent NTSB recommendations are described below.

A. Derailment of Canadian Pacific Railroad Train 292–16 Near Minot, ND

On January 18, 2002, Canadian Pacific Railway (CPR) freight train 292–15 derailed 31 of its 112 cars about ½ mile west of the city limits of Minot, North Dakota. Five tank cars carrying anhydrous ammonia, a liquefied compressed gas, catastrophically ruptured, and a vapor plume covered the derailment site and surrounding area. About 11,600 people occupied the area affected by the vapor plume. One resident was fatally injured, and 60 to 65 residents of the neighborhood nearest the derailment site were rescued. As a result of the accident, 11 people sustained serious injuries, and 322 people, including the two train crew members, sustained major injuries. Damages exceeded $2 million, and more than $8 million has been spent in environmental remediation.

In its Railroad Accident Report,[2] the NTSB determined that the probable

[2] NTSB Railroad Accident Report: Derailment of Canadian Pacific Railway Freight Train 292–16 and Subsequent Release of Anhydrous Ammonia Near Minot, North Dakota, January 18, 2002 (NTSB/RAR–04–01) (March 9, 2004).

cause of the derailment was ''an ineffective Canadian Pacific Railway inspection and maintenance program that did not identify and replace cracked joint bars before they completely fractured and led to the breaking of the rail at the joint.'' The NTSB found that the catastrophic failure of five tank cars and the instantaneous release of 146,700 gallons of anhydrous ammonia also contributed to the severity of the accident.

The NTSB issued several findings in its report. The NTSB found that the train derailed because joint bars at the east end of the plug rail [3] fractured (either under the previous train or as the accident train passed over the joint), and then, after the joint bars fractured, the rail itself also fractured and broke away. The NTSB found that CPR's inspection procedures regarding rail joint bars in CWR were inadequate to properly inspect and maintain joints within CWR, and those inadequate procedures allowed undetected cracking in the joint bars at the accident location to grow to a critical size. In a similar vein, the NTSB found that FRA's requirements regarding rail joint bars in CWR were ineffective, because they did not require on-the-ground visual inspections or nondestructive testing adequate to identify cracks before they grow to critical size and result in joint bar failure.

The NTSB also found that FRA's oversight of CPR's CWR program was ineffective, because FRA neither reviewed the CWR program nor ensured that its track inspectors had copies of the CWR programs to determine if the railroad was in compliance with it. As a result of these findings, the NTSB made seven safety recommendations, of which the most relevant are quoted below.

Require all railroads with continuous welded rail track to include procedures (in the programs that are filed with the Federal Railroad Administration) that prescribe on-the-ground visual inspections and nondestructive testing techniques for identifying cracks in rail joint bars before they grow to critical size. (R–04–1).

Establish a program to periodically review continuous welded rail joint bar inspection data from railroads and Federal Railroad Administration track inspectors and, when determined necessary, require railroads to increase the frequency or improve the methods of inspection of joint bars in continuous welded rail. (R–04–2).

Instruct Federal Railroad Administration track inspectors to obtain copies of the most recent continuous welded rail programs of the railroads that fall within the inspectors' areas of responsibility and require that inspectors use those programs when conducting track inspections. (R–04–3).

B. Derailment of Amtrak Train No. 58 Near Flora, MS

On April 6, 2004, National Railroad Passenger Corporation (Amtrak) train No. 58 (*City of New Orleans*) derailed on Canadian National Railway Company track near Flora, Mississippi. The entire train derailed, including one locomotive, one baggage car, and eight passenger cars. The derailment resulted in one fatality, three serious injuries, and 43 minor injuries. The equipment costs associated with the accident totaled about $7 million.

In its Railroad Accident Report,[4] the NTSB determined that the probable cause of the accident was ''the failure of the Canadian National Railway Company to properly maintain and inspect its track, resulting in rail shift and the subsequent derailment of the train, and the Federal Railroad Administration's ineffective oversight to ensure proper maintenance of the track by the railroad.'' The NTSB made two recommendations to FRA, one of which is relevant to the discussion here.

Emphasize to your track inspectors the importance of enforcing a railroad's continuous welded rail program as a part of the Federal Track Safety Standards, and verify that inspectors are documenting noncompliance with the railroad's program. (R–05–05).

C. Derailment of Union Pacific Train ZLAMN–16 Near Pico Rivera, CA

On October 16, 2004, Union Pacific (UP) freight train ZLAMN–16 derailed 3 locomotives and 11 cars near Pico Rivera, California. Small amounts of hazardous materials were released from the transported cargo. There were no injuries to area residents, the train crew, or the emergency response personnel. UP estimated the monetary damage at $2.7 million.

In its Railroad Accident Brief,[5] the NTSB determined ''that the probable cause of the derailment was the failure of a pair of insulated joint bars due to fatigue cracking. Contributing to the accident was the lack of an adequate on-the-ground inspection program for identifying cracks in rail joint bars before they grow to critical size.''

The NTSB reiterated two of the recommendations that it had made to FRA after the Minot, North Dakota accident: (1) R–04–01 about on-the-ground visual inspections and nondestructive testing techniques and (2) R–04–02 about a program to review joint bar inspection data. The NTSB stated further in its brief:

The CWR track involved in the Pico Rivera accident had all the inspections required by the UP and the FRA. In some instances, the inspections were done more frequently than required. Nevertheless, the inspections failed to detect the developing problems and ultimate failure. Additionally, during the 2 days after the last inspection, more than 100 trains passed over the insulated joint bars without either discovering or reporting a defect. Trains traversed the area after the insulated joint bars were completely broken, as evidenced by the rail batter in both directions.

Several indications of an imminent or actual defect were present before this accident, which the inspection from a moving vehicle did not discover:

- The epoxy bead was missing from the center section of the insulated joint bar, indicating vertical movement.
- The joint bars cracked before they completely fractured. Part of each crack was visible on the lower outer portion of the bar for some time before its failure.
- Rail end batter developed when the joint bars completely fractured and trains continued to pass over them in both directions.

These indications developed over time, and a close visual inspection from the ground would have likely uncovered the emerging problem and allowed corrective action to be taken to avoid the accident.

V. FRA's Approach to CWR in This Final Rule

Earlier versions of § 213.119 did not require track owners to include any provisions in their CWR plans related to joints in CWR. Track owners were required simply to address joints in CWR in the same manner as they addressed joints in conventional jointed rail. *See* 49 CFR 213.121. The IFR required track owners to specifically address joints in CWR in their respective CWR plans. The IFR focused on the track owner maintaining and submitting to FRA a joint inventory which would enable the track owner to identify joints due for periodic inspections. FRA's gathering of this information would have satisfied its obligations under SAFETEA–LU. While this final rule also requires track owners to specifically address joints in CWR in their CWR plans, it eliminates the joint inventory requirement of the IFR. Alternatively, this final rule requires track owners to inspect CWR joints at minimum intervals specific to the class of track, annual tonnage, and whether the track is used for freight or passenger trains. *See* § 213.119(g)(6)(i). This final

[3] A ''plug rail'' describes a short piece of rail inserted into a length of CWR to replace a similar piece that was removed because of defects or damage.

[4] Railroad Accident Report: Derailment of Amtrak Train No. 58, City of New Orleans, Near Flora, Mississippi, April 6, 2004 (NTSB/RAR–05/02) (July 26, 2005).

[5] NTSB Railroad Accident Brief: Accident No. DCA–05–FR–002 (NTSB/RAB–05/02) (March 9, 2004).

rule also requires the track owner to submit a Fracture Report when a cracked or broken CWR joint is discovered pursuant to a § 213.119, § 213.233, or § 213.235 inspection. The Fracture Reports will give FRA the information that a joint inventory would have provided. *See* § 213.119(g)(7)(ii).

To meet the statutory requirement that FRA issue this regulation within 90 days of the enactment of SAFETEA–LU, FRA issued the IFR on November 2, 2005. This final rule addresses 49 U.S.C. 20142(e)(1)(A) and (e)(1)(C) (hereinafter referred to as (e)(1)(A) and (e)(1)(C)). Because 49 U.S.C. 20142(e)(1)(B) does not require regulatory action on the part of FRA, FRA is not addressing it in this rulemaking.

Paragraph (e)(1)(A) mandates that FRA require each track owner to ''include procedures * * * to improve the identification of cracks in rail joint bars.'' Congress did not specify how FRA should effect that improvement. One way of improving the identification of such cracks is through on-foot inspection of joints in CWR. Because most cracks in joint bars can be detected by eye before they grow to failure, on-foot inspections can be of great value in identifying joint failure. Accordingly, FRA is requiring railroads to conduct periodic on-foot inspections of CWR joints. *See* § 213.119(g)(1).

Rather than limit these on-foot inspections to the identification of joint bar cracks, FRA is requiring track owners to also inspect for joint conditions that can lead to the development of joint bar cracks. Track owners should inspect all safety-critical aspects of joints, including any indications of potential failure of the joint itself; any indications of potential failure of any components of the joint (e.g., rails, bolts, supporting crossties, and track fasteners); and the track itself in the vicinity of the joint (including the effectiveness of rail anchors or other devices for restraint of longitudinal movement of the rail). In this final rule, FRA lists examples of conditions that may indicate potential failure. This list is not all-inclusive. There are other conditions that could indicate failure, and FRA urges track owners to consider all conditions, not just the listed examples.

In doing this, railroads will address a preemptive solution—i.e., preventing cracks from developing—rather than merely reacting to cracks after they have developed. It is understood that certain conditions involving rail joints and the surrounding CWR contribute to the development and propagation of cracks in rail joints. If track inspectors inspect for these conditions, detect these conditions, and provide information so that railroads can correct these conditions, it will reduce the probability of joint failures and subsequent train accidents.

Furthermore, this preventive approach is more appropriate given that the development of a crack in a rail joint bar can progress at an unpredictable rate. Some cracks might exist for years without causing a rupture of the joint, while other cracks can progress rapidly from an undetectable size to complete failure. For example, a joint can completely fail under a single impact load if the joint is subjected to low temperatures and very high-tension forces.

FRA believes that the time and effort it takes a track inspector to perform a complete inspection will be minimal while the benefit of a complete inspection will be high. Once a track inspector arrives at a location to inspect a joint and begins inspecting that joint, it takes little time and effort (beyond the effort to search for and identify cracks in joint bars) for him or her to note the condition of the entire joint and its surroundings. There are both safety and management benefits to a complete inspection. The safety benefit is obvious in that it prevents derailments. As for management benefits, track owners will save money and time, because it is easier and more cost effective to repair incipient joint conditions than actual joint cracks. For example, it is more economical to replace joint bolts or to reset rail anchors (i.e., potential failure conditions) than it is to replace a joint bar after it has developed a crack.

FRA realizes that inspections at a frequency that could detect incipient cracks prior to the possibility of failure in every case are not feasible given the current levels of railroad staffing and railroad traffic, and in light of the impediments to train operations that would result from restrictions required to provide for the safety and mobility of inspection personnel. Proper preparation and maintenance of joints, however, together with appropriate joint inspection instructions, can reduce the frequency of crack formation and also prevent rapid propagation in most cases—making a sound program of inspection both feasible and more cost effective.

Paragraph (e)(1)(C) requires that FRA ''establish a program to [periodically] review continuous welded rail joint bar inspection data'' from railroads and FRA track inspectors. Clearly, FRA can gather and review the joint bar inspection data from its own inspectors' inspections. In order for FRA to review railroad CWR joint bar inspection data, however, track owners must gather that data and make it available to FRA for review. Accordingly, this rule now requires track owners to compile a Fracture Report and submit it to FRA. *See* § 213.119(g)(7)(ii). As discussed in more detail below, a Fracture Report is a record which the track owner must prepare whenever a cracked or broken CWR joint is discovered pursuant to a § 213.119, § 213.233, or § 213.235 inspection.

There is not yet an established, efficient method for detecting cracks in joint bars by traditional means of automated non-destructive testing (NDT). FRA believes that such a system might be developed, and that a requirement for effective joint bar inspection by either visual or other effective means can provide an incentive for the railroad industry to develop such a system. FRA is aware that some railroads do employ portable, hand-held equipment to conduct NDT of joint bars. The use of NDT will be discussed further in the section-by-section analysis of § 213.119(g)(8).

NDT technology, in addition to careful visual inspection, could be used where judged effective. FRA notes, however, that there is insufficient engineering data to establish the effectiveness of NDT techniques as applied to joint bars in the service environment. Further, as illustrated by the examination of NDT technology and services by the joint FRA/industry Rail Integrity Task Force,[6] operator qualification and quality control remain areas of concern. Accordingly, FRA focuses the ''benchmark'' inspection requirements of this IFR on visual inspection by a qualified track inspector.

VI. Response to Public Comments

FRA received seventeen comments in response to the IFR. The comments addressed concerns over a variety of issues, including: inspection frequencies, the economic analysis of the regulation, the training of track inspectors, the availability of CWR plans, the joint inventory requirement of

[6] The Rail Integrity Task Force is a joint FRA/industry working group. It was convened in April 2002 to identify ''best practices'' within the railroad industry regarding the inspection, maintenance, and replacement of rail. The goal of the task force is to ''reduce rail-related accidents and casualties resulting from derailments caused by broken rail.''

The task force is comprised of subject-matter experts from the major heavy-haul railroads, the AAR, FRA's Office of Safety Assurance and Compliance, FRA's Office of Railroad Development, as well as technical support from the Volpe National Transportation Systems Center. The task force has also requested and received input from all of the service providers in the field of nondestructive testing of rail.

the IFR, the recordkeeping requirements, and other various issues. The working group addressed each comment in its meetings. A more detailed discussion of the public comments will be found in the section-by-section analysis.

A. Inspection Frequency

The IFR required a track owner's CWR plan to specify the timing of joint inspections based on the configuration and condition of the particular joint. The IFR provided minimum inspection intervals of every 190 days for track classes 4 and higher and every 370 days for class 3 track and class 2 track on which passenger trains operate. Public comments on the required inspection frequency were numerous and varied. For example, BMWED desired much more frequent inspections (i.e., monthly), while other commenters suggested risk-based (variable) inspection intervals taking into account the presence of passenger trains, hazardous materials or the proximity of railroad operations to population centers. Suggestions to increase inspection frequency dominated comments addressing inspection frequency. Further, railroad commenters were almost unanimously opposed to the inventory requirements imposed by the IFR, and some implied that the inventory was far more burdensome than increased inspection frequency would be.

Several Senators urged FRA to increase the required inspection frequencies. In a filing supported by three members of the California congressional delegation and several local officials, the California Public Utilities Commission recommended that FRA require more frequent inspections and take into consideration more factors in determining inspection intervals, such as population density and risk associated with hazardous materials. FRA and the RSAC carefully considered these comments. FRA also took into account the fact that railroad CWR procedures filed in response to the IFR failed to address circumstances that might warrant more frequent inspection.

The FRA decided upon an inspection frequency in lieu of an inventory requirement after considering many different approaches. The inspection frequency was based upon model results developed by the Department of Transportation's Volpe Center (Volpe), the practical realities of railroad operations, as well as discussions, negotiations, and compromises combining practicality, enforceability, and effectiveness. The RSAC working group discussed all of these considerations at its meetings.

Volpe developed several engineering models to estimate the loads imposed on a rail joint. As is true of all models, they were simplifications of reality designed to give insight into underlying facts. The models considered the effects of various joint characteristics such as rail section, rail end gap, batter, height mismatch and vertical support. Loads were used to infer stresses in the joint bar which permitted the conduct of a fatigue analysis to determine the tonnage, expressed as million gross tons (MGT), required to develop a fatigue crack in the bar. The models were based on an assumed rectangular cross section, which, although very different from the actual joint bar shape, seemed to give adequate direction when later compared to actual experience. Under the assumed baseline joint conditions, bar fatigue life was estimated to be greater than 5,000 MGT.

Fatigue life is only tangentially related to a reasonable inspection interval. Crack growth life after crack initiation is far more important. Volpe applied fracture mechanics principles to estimate the tonnage required to grow the crack from a barely detectable size to the size at which the bar would fracture under the next train. For the same baseline joint conditions, the analysis yielded a fatigue crack growth life estimate of 13 MGT, using a minimum detectable crack size of one-sixteenth of an inch. Smaller initial crack sizes yielded dramatically longer fatigue lives, and larger initial crack sizes yielded dramatically shorter fatigue lives. Further, the fatigue and crack growth lives are extremely sensitive to the conditions of the joint. Poor joint conditions result in shorter estimated lifetimes, while better conditions increase the expected joint bar life. For each case, Volpe fatigue life estimates are conservative, as the analysis predicts first percentile life. That is, the fatigue life estimate is the tonnage at which one percent of joint population can be expected to have formed a crack—a standard engineering approach to estimating fatigue life. The Volpe crack growth models also have some conservative features. The Volpe model seemed to forecast slightly more failures than are being realized in actual railroad service, but FRA will compare the model to actual data once fracture reports become available.

These results were considered by the RSAC working group and compared to real life experiences. Many railroads already had inspection plans for their CWR joints. During the RSAC working group meetings, numerous inspection intervals were suggested. Certain parties suggested that 40 MGT be used, while others wanted 10 MGT. A consensus was reached that 20 MGT would be a reasonable inspection interval. Although Volpe's model had suggested 13 MGT, the Volpe representatives assured FRA that 20 MGT is an appropriate inspection interval. Given the practical realities of conducting the required on-foot visual inspections required under the new rule, and FRA's heightened concerns about tracks with 40–60 MGT per year, certain trade-offs were made by RSAC in recommending the inspection frequency schedule. FRA has adopted the RSAC recommendations regarding inspection frequency.

For freight-only operations, the inspection interval depends on the annual tonnage and the FRA track class. The inspection interval is approximately once every 20 MGT up to 60 MGT (or three times per year) for Class 4 and Class 5 track, with less frequent intervals for Class 3 track. These intervals are greater than the estimated crack growth life; however, they represent a practical baseline and account for the likely increased severity of accidents on higher track classes. They are also reflective of the vast majority of freight traffic in the U.S. as most lines accumulate an average of approximately 60 MGT per year. Higher annual tonnage lines generally represent unit train operations consisting of coal, for example. Track with higher speeds is subject to more frequent inspections, because higher speed accidents are likely on the average to be more severe. The inspection intervals provide some balance between risk and cost of inspection.

For track upon which passenger trains operate, a different schedule was developed which considers the potentially greater severity, especially in terms of loss of life, from possible future passenger train accidents. The inspection intervals are again graduated based on track class and whether the line experiences more or less than 20 MGT per year with more frequent inspections required for higher classes of track. If a track owner operates both freight and passenger trains over a given segment of track and there are two different possible inspection interval requirements, the more frequent inspection interval applies.

FRA also provided relief requested by ASLRRA on behalf of smaller railroads, which run occasional passenger service. Pursuant to the frequency chart in § 213.119(g)(6)(i), those railroads can run passenger trains at the maximum speed authorized for the next lower

class of track. FRA believes this is safe, because track with freight service is inspected at frequencies higher or equal to the inspection frequency of the next lower class track with passenger service.

FRA considered adding further complexity to the required inspection frequency, but decided that would not be either necessary or productive. It is not necessary because the inspection strategy embodied in this final rule should be sufficient to address joint integrity issues (conditions that foster development of cracks) and to detect cracks before failure in the vast majority of cases. Further complexity would not be productive because available information does not support development of a useful inspection strategy built on other factors. For instance, protecting nearby populations from hazardous material accidents is always a desirable objective; however, most hazardous materials releases (which are infrequent events) occur along the railroads in unpopulated areas or in small rural communities—thousands of which lie along major rail lines. Hazardous materials shipments traverse most rail lines, yet there is no data suggesting that the volume of shipments predicts the likelihood of a release in a train accident. After discussion of these issues, the RSAC agreed that an inspection strategy based on class of track, tonnage, and presence or absence of passenger traffic was the best approach. The RSAC also developed the Fracture Report process, which may lead to further refinement of inspection intervals over time.

B. Economic Analysis

AAR had extensive comments on the IFR's economic analysis. First, AAR stated that the recordkeeping costs were underestimated, and stressed that the IFR's proposed inventory requirement would be more costly than estimated by FRA. FRA agrees that the cost estimates developed in connection with the IFR were based on an excessively optimistic assumption regarding the extent of railroads' use of electronic technology which would have been necessary to keep inventory costs reasonable. As FRA is no longer requiring an inventory, these costs will not be analyzed further for the final rule.

AAR also stated that FRA underestimated the burden imposed upon inspectors by underestimating the time per inspection and by underestimating the number of joints to be inspected. In response to this comment, FRA will use a longer time period for inspection as part of a sensitivity analysis; four minutes will be allocated for each joint inspection in this analysis and the originally proposed one minute per joint inspection in a separate analysis. Although FRA worked with the AAR to obtain more accurate data to better estimate the number of joints to be inspected and the frequency to which they will be inspected, the AAR was not able to provide significantly improved data in the time available. In its comments, AAR had estimated the number of joints by extrapolating a total number from a six-and-a-half mile segment of track. FRA believes its estimates are at least as good as AAR's extrapolation from a six-and-a-half mile segment.

C. Joint Inventory Requirement in the IFR

Commenters such as AAR, Long Island Railroad (LIRR) and Metro-North found the joint inventory requirements in the CFR to be extremely burdensome. In response to these comments and discussions of the RSAC working group, FRA has eliminated the inventory requirement of the IFR. The RSAC working group agreed that in lieu of the data supplied by a CWR Joint Inventory, the track owner would be required to submit Fracture Reports to the FRA twice annually. FRA will analyze the data provided in the reports to enhance industry knowledge with regard to the factors causing broken joint bars.

D. Training

FRA received a comment from BMWED suggesting that there should be annual re-training of track inspectors on joint bar inspections. FRA interprets this comment as pertaining to CWR training in general. As FRA did not change the CWR training provision in the IFR, FRA has resolved to address training concerns in Phase II of the working group's task of reviewing all of § 213.119.

E. Availability of CWR Plans

FRA received comments that CWR written procedures (designated ''CWR plans'' under this final rule) were not made readily available for inspectors. FRA has resolved this issue by making all CWR plans it receives pursuant to Part 213 available to all FRA and State inspectors. However, FRA agrees that greater clarity is desirable. FRA will ask the working group to include a more suitable process for submission and dissemination of CWR plans in Phase II of its activities.

F. Other Comments

FRA accepted AAR's suggestion to remove the reference to impact loads in the final rule. FRA also added an exception to the inspection frequency requirements to allow for irregularly scheduled passenger trains. *See* § 213.119(g)(6)(ii). To further address this concern, FRA added a definition of ''unscheduled detour operation'' to the list of definitions in § 213.119(j). In response to a comment regarding irregularly scheduled passenger trains, FRA created an exception for tourist and excursion operations in § 213.119(g)(6)(iii). Accordingly, FRA added a definition for Tourist, Scenic, Historic, or Excursion Operations in § 213.119(j).

VII. Section-by-Section Analysis

Section 213.119

FRA is revising § 213.119 by requiring track owners to incorporate into their CWR plans written procedures on the inspection of joints in CWR. This will require most track owners to amend their existing CWR plans. Track owners must also create and maintain records of these inspections. FRA provides details of these new provisions below, which affect § 213.119(g)–(j). Paragraphs (a)–(f) of this section are not changed with this final rule.

Paragraph (g)

In the IFR, this paragraph required track owners to specifically address joints in CWR in their respective CWR plans. This final rule adopts a number of changes to the IFR's provisions. Principal among those changes are the Fracture Report requirement and the increased minimum inspection frequencies. Both of these new requirements will be discussed in further detail below.

This paragraph requires each track owner to include in its CWR plan provisions for the scheduling and conducting of joint inspections. A person who is qualified under § § 213.7 to perform inspections of CWR track should perform the inspections required by this paragraph on foot at the joint.

Paragraph (g)(1)

This paragraph governs periodic inspections of CWR joints. Track owners are required to establish procedures for conducting these inspections. Upon identifying actual conditions of joint failures (*i.e.*, broken or cracked joint bars) or potential conditions of joint failure, track owners must initiate the appropriate corrective action and keep the appropriate records. *See* §§ 213.119(g)(5) and 213.119(g)(7). In addition, when a track owner discovers CWR joints that are not in compliance with the requirements of Part 213, the track owner must take the appropriate

remedial action required by Part 213. FRA notes that nothing in this paragraph interferes with the track owners' continuing obligation to conduct track inspections under § 213.233.

Periodic inspections, as referenced herein, are on-foot inspections of CWR joints that track owners must conduct on a regular basis. Track owners are required to conduct periodic inspections at the minimum intervals specified in paragraph (g)(6). Track owners, of course, are free to conduct such inspections more frequently than required.

The IFR had also included special inspections in this paragraph. As a result of working group discussions, FRA removed the discussion of special inspections from this paragraph. Although FRA has removed the discussion of special inspections from § 213.119(g), FRA intends to place it elsewhere in § 213.119. FRA will include the discussion of special inspections (*e.g.*, sun kinks, pull aparts, etc.) in the broader review of § 213.119, during Phase II of this project.

Paragraph (g)(2)

This paragraph requires track owners to identify joint bars with visible or otherwise detectable cracks and conduct remedial action pursuant to § 213.121. The IFR had included cracked joint bars under the list of actions items, which this final rule addresses in paragraph (g)(3). Although the working group placed the identification of cracked joint bars under the list of action items as well, FRA decided to address them separately in this final rule. As SAFETEA–LU mandates FRA to promulgate regulations to improve the identification of cracks in joint bars, FRA is distinguishing between joint bars that are already cracked and joint bars that have the potential of cracking in the future. When a track owner discovers a cracked joint bar, he must take the remedial action specified in § 213.121; however, if he discovers a joint bar with actual or potential joint failure, he must take the corrective action specified by his CWR plan. Corrective action will be further addressed in paragraph (g)(5).

Paragraph (g)(3)

This paragraph identifies those items relating to joint inspections that track owners must address in their CWR plans. FRA notes that these items are the minimum that track owners should address. Of course, track owners are free to include additional items in their respective CWR plans. Track inspectors should identify and record these listed items during their inspection of joints because these items are related to the integrity of the joint, and thus, to the safety of trains that operate over these joints.

The IFR mentioned these items, but it did not specifically state that they were conditions of potential joint failure. FRA notes this list is not all-inclusive. There are other conditions that could indicate failure, and FRA urges track owners to consider all conditions, not just these listed examples.

Loose, bent, or missing joint bolts. The bolts through the joint bars and rail ends are a vital component of the joint. Bolts are meant to keep joint bars firmly supported against the joint. If bolts are missing, loose, or bent, the bolts will fail to keep the joint bars firmly in contact with the rails. The rails are then liable to separate when there is cold weather which causes high-tension forces through the joint. Bolts in joints with bars that are separated from the web of the rail at the bolt holes tend to fail when the bolts bend. When the bolts bend beyond their elastic limit, they lose their design tension, and they are no longer capable of holding the joint bars firmly against the rail. The joint then permits the rails to move in relation to each other under passing wheels, causing increased impact loads on the joint and battering of the adjoining rail ends. This can potentially lead to cracks and eventually fracture of the joint bars or rail ends.

Rail end batter or mismatch that contributes to instability of the joint. Rail end batter refers to the deformation of the running surface at the end of the rail. Rail end batter occurs when wheels pass over a joint and (1) the rails are pulled apart to the extent that the wheels can drop slightly into the gap, or (2) the rail ends are mismatched, or both. Rail ends can be mismatched because joint bolts are loose or because the rails do not match when installed. Excessive rail end batter causes high impact forces on all components of the joint; this can cause the joint bar or the rail to rupture. Also, vibrations at a battered joint can cause loss of consolidation of ballast at the joint, leaving the joint vulnerable to thermal buckling when high compressive forces are generated in the rails.

The IFR included the term ''impact loads'' as another defect to which rail end batter or mismatch could contribute. The RSAC working group determined that it was redundant to keep the term ''impact loads'' in the rule text, as it is understood that these conditions can cause extreme impact loads. Since other conditions, such as rail end gap, can have the same effect, FRA decided to remove the phrase ''impact loads'' from the final rule.

Evidence of excessive longitudinal rail movement in or near the joint, including, but not limited to, wide rail gap, defective joint bolts, disturbed ballast, surface deviations, gap between tie plates and rail, or displaced rail anchors. Longitudinal rail movement is evidence that the rails might not be securely anchored, that excessive tension forces are developing in the rail when it is cold, or that the joint bolts have lost their clamping properties after being stretched in bending. As wheels pass over and drop into the gap, there are high impact forces on the joint. This can have the same consequences as described above for rail end batter. When a joint is not properly supported, it will deflect vertically (or swing), creating substantially increased stress in the joint bars and rail. Irregular surface deviations develop from a vertically displaced joint, which leads to increased lateral loading and stress at the joint. These tension forces, combined with additional impact loads, have a tendency to cause cracks and to cause rupture of joint bars and rail.

Paragraph (g)(4)

This paragraph requires track owners to include procedures in their CWR plans for the inspection of CWR joints that are imbedded in highway-rail grade crossings or in other structures that prevent a complete inspection of the joint (e.g., pans in fueling facilities, scales, passenger walkways at stations that cover the track, etc.). The plans must also include procedures for the removal of loose material or other temporary material from the joint. FRA is adding this paragraph in response to comments by AAR and to subsequent discussions at RSAC working group meetings, as the IFR did not mention ''imbedded'' joints.

Some working group members were concerned that they would be unable to inspect these ''imbedded'' joints, which are sometimes not fully visible on the sides and bottoms of the joint bars. Railroads did not want to be penalized for their inability to see, and therefore inspect, these joints. FRA understands that a small percentage of the joints in CWR are ''imbedded'' joints. FRA acknowledges that railroad engineering personnel have made efforts to remove these imbedded joints where possible, and that, nonetheless, some of these joints remain.

With respect to the procedures for ''imbedded'' joints, FRA does not expect that railroads will need to disassemble or remove the track structure (e.g., remove pavement or crossing pads) to

conduct an inspection of CWR joints. However, FRA does expect that railroads will make every effort, to the extent practicable, to inspect the joints in these structures.

FRA is aware that CWR joints may sometimes be temporarily buried during maintenance (e.g where ballast is distributed in the middle of the track and along the track) and therefore unavailable for inspection. FRA expects that railroads will take necessary measures to conduct inspections of these CWR joints. FRA expects that railroads will schedule their maintenance so as to allow for a complete inspection of these joints. Where CWR joints are buried (e.g., by ballast), FRA expects that railroad maintenance personnel will wait for the completion of the track surfacing and dressing of the ballast before conducting their joint bar inspections. Alternatively, railroads may use hand tools or mechanical means to remove ballast from the sides of track joints, so that they can conduct an inspection of those track joints.

Finally, FRA notes that components of the track (such as crossties, fasteners, tie plates, etc.) are also not fully visible in highway-rail crossings and similar structures. FRA has never specifically exempted these items from the inspections required under Part 213. Instead, FRA expects that the railroads will inspect these areas to the maximum extent possible.

Paragraph (g)(5)

This paragraph requires track owners to specify in their CWR plans the appropriate corrective actions that must be taken when track inspectors find conditions of actual or potential joint failure. The IFR required track owners to specify in their plans the appropriate remedial actions. FRA notes the difference between the terms ''remedial actions'' and ''corrective actions.'' Remedial actions are those actions which track owners are required to take as a result of requirements of Part 213 to address a non-compliant condition. For example, if a track owner discovers a cracked joint bar, he must replace it. *See* 49 CFR 213.121. Corrective actions, on the other hand, are those actions which track owners specify in their CWR plans to address conditions of potential joint failure, including, as applicable, repair, restrictions on operations, and additional on-foot repair. To ensure clarity, FRA has defined these terms in § 213.119(j).

Follow-up inspections, as referenced herein, are joint-specific and conducted in response to conditions that a track owner discovers during periodic inspections. Track owners will identify in their CWR plans the conditions that trigger follow-up inspections. For example, where a track owner identifies ''replace bolt or inspect weekly'' as a corrective action for a bent bolt, if a track inspector discovers a bent bolt during a periodic inspection and does not immediately replace it, then the track inspector will have to conduct follow-up inspections at that joint.

Paragraph (g)(6)

This paragraph requires railroad owners to specify the timing of periodic inspections. As previously mentioned, commenters criticized the IFR's minimum joint inspection frequency. The IFR provided minimum inspection intervals of every 190 days for track classes 4 and higher and every 370 days for class 3 track and class 2 track on which passenger trains operate. To address both public comments and discussions during RSAC working group meetings, FRA increased the minimum number of required joint inspections. The minimum number of required joint inspections are addressed in the table in paragraph (g)(6)(i). As previously discussed, the timing periods in this paragraph represent the minimum of what is expected. Railroad owners are encouraged to implement additional inspection periods as they determine necessary.

The IFR did not allow for any exceptions to the minimum joint inspection frequency. Pursuant to RSAC working group recommendations, in paragraphs (g)(6)(ii)–(iv), FRA is allowing exceptions to the minimum inspection frequencies for unscheduled detours, certain passenger trains, and items that are already inspected on a monthly basis pursuant to 49 CFR 213.235. Each of these exceptions will be discussed in more detail below.

Paragraph (g)(6)(i)

The table contained in this paragraph provides guidance for the minimum required inspection frequency of CWR joints. The working group developed this table to specify inspection frequencies for each class of track. The table contains two footnotes clarifying the inspection frequencies in the table.

The first footnote provides that where a track owner operates both freight and passenger trains over a given segment of track, and there are two different possible inspection interval requirements, the more frequent inspection interval applies. This footnote was developed by the working group to address concerns over track shared by freight and passenger trains. It was anticipated that there could be a potential conflict with the inspection frequency required for the track if the track owner were to follow the chart for both types of trains. By requiring the more frequent inspections in situations of conflict, this footnote ensures greater safety and protection to track used for mixed purposes.

The second footnote is added in response to concerns over sensitivity of extreme regional weather conditions. This concern was raised in the working group by industry representatives with regard to the difficulty of inspecting CWR joints in northern regions when there is a large amount of snow. The working group acknowledged that there could be times when it would be extremely difficult for a track owner to clear snow and ice from the joint in order for it to be seen for inspection. This footnote allows some flexibility for track owners in such a situation.

Paragraph (g)(6)(ii)

This paragraph allows track owners to operate passenger trains without lowering the track speed for a limited period of time without adhering to the required inspection frequencies for passenger trains pursuant to the table in § 213.119(g)(6)(i). This provision accommodates for unplanned outages, derailments, accidents, and other emergency situations. Track owners are still required to adhere to the applicable freight inspection frequencies. This provision is intended to provide relief to railroads that operate passenger trains and that have a last minute emergency situation. However, if a track owner operates passenger trains at the normal track speed for more than fourteen days, the track must be inspected at the appropriate passenger train levels as detailed in the table at § 213.119(g)(6)(i).

Paragraph (g)(6)(iii)

As defined in § 213.119(j), tourist, scenic, historic, or excursion operations mean railroad operations that carry passengers with the conveyance of the passengers to a particular destination not being the principal purpose. These types of operations typically run less frequently than intercity or commuter passenger trains and occur most often on short-line railroads. If a track owner has an operation of this type on the track and does not want to take that operation into account in determining inspection frequency, the owner must drop the track speed one class with regard to that operation. This way, the track owner will still be in compliance with the inspection frequency mandated by the table in paragraph (g)(6)(i) regardless of the class of freight the owner runs on the track. As the first

footnote to the table in paragraph (g)(6)(i) states, where there are two different possible inspection interval requirements, the more frequent inspection interval applies.

Paragraph (g)(6)(iv)

In this paragraph, FRA exempts the following items from the periodic inspection frequency intervals: switches, turnouts, track crossings, lift rail assemblies or other transition devices on moveable bridges. Track owners already inspect these items on a monthly basis pursuant to 49 CFR 213.235. Rather than apply the additional periodic inspection requirements (i.e, apply the intervals in the table in § 213.119(g)(6)(i) to switches and turnouts, etc), FRA believes it is more appropriate to have track owners conduct their inspections of joints at these locations during their monthly 49 CFR 213.235 inspections.

With respect to turnouts, FRA has historically understood and operated under the assumption that a turnout extends from the point of the switch to the heel of the frog. FRA will continue to operate under that assumption, and accordingly, all joints in turnouts, switches, etc. must be inspected monthly pursuant to 49 CFR 213.235 and records of these inspections must be kept in accordance with 49 CFR 213.241. The final rule does not require that the data elements listed in § 213.119(g)(7)(i) appear on the 49 CFR 213.235 inspection record. The reason for this is that, with more frequent inspections, the track inspector should be better able to manage joint conditions without maintaining detailed records.

All joints that extend beyond the point of a switch or beyond the point of the heel of the frog need not be inspected monthly and instead can be inspected at the frequency intervals identified in § 213.119(g)(6)(i). However, track owners are free to include, in their monthly 49 CFR 213.235 inspection, these joints that are located in track structure that is adjacent to turnouts and switches. If track owners choose to do this, they must clearly define the parameters of that arrangement in their CWR plan. In other words, the track owner should clearly identify the physical limits of the adjacent track structure (e.g., insulated joints up until the signal), and they must clearly identify the inspection interval for joints in that adjacent track (e.g., ''inspect all insulated joints to the signal during the monthly 49 CFR 213.235 inspection.'')

In addition, as long as track owners clearly define the parameters in the CWR plans, the track owner need not keep two sets of records (i.e., a record from the 49 CFR 213.235 inspection and a record from the § 213.119(g)(6)(i) inspection) for inspections of these ''adjacent'' joints. For example, if the track owner's CWR plan indicates that joints in crossovers between turnouts must be inspected during the monthly 49 CFR 213.235 inspection, and a railroad track inspector inspects the joints in the crossover during the monthly 49 CFR 213.235 inspection, then it is sufficient for the track owner to create and maintain only the 49 CFR 213.235 record.

FRA believes this option is useful, because it avoids the confusion and duplication that might otherwise result. Without this option, railroad track inspectors would be unsure what to note in their records and which track inspections require which records. In addition, FRA notes that it would be burdensome for track inspectors to inspect those ''adjacent'' joints monthly and make a note of the inspection in the monthly 49 CFR 213.235 record and also be required to make an additional § 213.119(g)(6)(i) record every couple of months.

Paragraph (g)(7)

This paragraph requires track owners to keep records specific to CWR joint bars. As previously mentioned, the IFR required track owners to maintain and submit to FRA a joint inventory. In response to comments that this requirement was too burdensome, FRA has eliminated the joint inventory requirement and replaced it with the new recordkeeping requirements in this paragraph. FRA has distinguished between two major categories of records: (i) records pertaining to periodic follow-up inspections, and (ii) fracture reports.

Paragraph (g)(7)(i)

This paragraph addresses the inspection reports that have to be created after periodic inspections required by paragraph (g)(6)(i) and follow-up inspections as required by the track owner's CWR plan. The inspection reports of the periodic inspections shall be prepared on the day the inspection is made and are to contain the required information. The periodic inspection record can be combined with other records required pursuant to 49 CFR 213.241.

Paragraph (g)(7)(ii)

This paragraph requires railroads to submit Fracture Reports to the FRA. Railroads should complete Fracture Reports when they find cracks during routine inspections pursuant to §§ 213.119(g), 213.233, or 213.235 on track that is required under § 213.119(g)(6)(i) to be inspected. FRA encourages track owners to complete Fracture Reports whenever cracks are discovered, in addition to the required inspections. Track owners, however, do not need to complete a Fracture Report for cracks found in excepted track, Class 1 track, and Class 2 track without passenger service.

The Fracture Reports will enable the FRA to conduct an analysis to further the understanding of the factors causing CWR joint failures. The Fracture Reports are for data collection to expand the agency's expertise concerning joint failures; the FRA does not intend to use the Fracture Reports for enforcement purposes. Likewise, inadvertent errors on the Fracture Report will not be subject to civil penalties. Of course, should FRA encounter repeated failure to prepare and complete such reports, or come upon a persistent and recurring pattern of non-reporting, FRA will take appropriate enforcement action. Track owners are not required to keep the Fracture Reports pursuant to the requirements of 49 CFR 213.241. However, FRA intends for the Fracture Reports to be kept until the track owner has received confirmation that FRA has received the data.

FRA proposes to give the track owner a variety of means of submitting the Fracture Reports. The first option proposed is through an electronic data submission using eXtensible Markup Language (XML) format. FRA plans to have a transaction summary generated that will report the number of records submitted, the number of records accepted to the database, and the number of records rejected due to validation errors, which will be streamed back to the railroad. The second option involves FRA developing a special web page from which railroads can register and receive credentials to access a web data entry form (with validation capabilities) to input individual Fracture Reports. FRA is also considering making available a formatted Excel spreadsheet, into which railroads can input their Fracture Reports. This spreadsheet could be submitted via e-mail, electronic media, or uploaded to the FRA Office of Safety Analysis' Web site. As a final option, FRA plans to make available a printable version of the OMB approved Fracture Report form for download. More specific instructions regarding submission of the Fracture Reports will be made available prior to January 2, 2007, on the Office of Safety Analysis' Web site, *http://safetydata.fra.dot.gov*.

Paragraph (g)(7)(ii)(A)

This paragraph requires that the Fracture Report be prepared on the day the cracked or broken CWR joint bar is found. The CWR Joint Bar Fracture Report was developed by a Task Force comprised of members of the RSAC working group. The Fracture Report is to be completed whenever a cracked or broken joint bar is discovered during the period inspections required by § 213.119(g)(6)(i), as well as those currently required by 49 CFR 213.233 and 213.235. The fracture reporting requirement was implemented in order to comply, in part, with 49 U.S.C. 20142 as amended by SAFETEA–LU (Pub. L. 109–59, August 10, 2005). The Fracture Reports will address 29 U.S.C. 20142(e)(1)(A)'s instruction to improve the identification of cracks in rail joint bars, § 20142(e)(1)(C)'s mandate to ''establish a program to review continuous welded rail joint bar inspection data from railroads and Administration track inspectors periodically,'' and § 20142(e)(2)'s direction to adjust the frequency of inspection or improve the method of inspection of CWR joint bars as necessary.

The Fracture Reports specifically address the statutory language in three specific ways. First, the report provides information on joint conditions as it addresses most joint attributes known to contribute to premature joint failure such as rail end batter and wide rail end gap. It is believed that the joint inspections and the reports generated when cracked or broken bars are discovered will provide useful data to the railroads regarding joint conditions which lead to bar failure and perhaps lead to early preventive measures when these conditions are discovered before a crack develops. Second, in addition to the joint bar inspection records retained by the railroads, the Fracture Reports provide FRA with additional insight into the effectiveness of the new inspection requirements. Finally, as the inspection frequency was developed based in part on modeling results, the Fracture Report data can be used to evaluate the reasonableness of the model predictions. Certain data elements in the report can be used to estimate joint bar crack growth rates, which is crucial to enabling establishment of proper inspection intervals. Based on the number of Fracture Reports submitted to the FRA and the data they provide, an assessment of the appropriateness of the inspection intervals can be made.

The annual gross million ton information requested in the Fracture Report should be entered on the report by an appropriate employee of the railroad, since the railroad track inspector may not have ready access to this information (even though the inspector should impliedly be aware of the range within which the value falls as a result of instructions provided concerning the frequency of inspection required).

Paragraph (g)(7)(ii)(B)

This paragraph requires the track owner to submit the information contained in the Fracture Reports twice annually to the FRA. FRA is collecting the Fracture Report data and will analyze it because SAFETEA–LU mandates that FRA create and gather such data. This information will be periodically submitted so that FRA can analyze the conditions that exist where cracked or broken bars were discovered. FRA requested that railroads submit data more frequently than annually because the agency decided that this practice would foster better analysis. The RSAC working group proposed a semi-annual submission of data. The group determined that more frequent submissions would be burdensome on the railroads. After having collected and analyzed a few years of data, FRA will determine whether it is necessary to continue collecting the data and whether to propose that inspection methods and minimum inspection frequencies should be varied.

Paragraph (g)(7)(ii)(C)

This paragraph allows any track owner to petition FRA after February 1, 2010, to conduct a technical conference to assess whether there is a continued need for the collection of Fracture Report data. During the technical conference, the FRA would review the data collected, the analysis done to date, and determine if sufficient data has been collected to enable FRA to make a technically competent determination of CWR joint bar failure causes and contributing conditions.

Paragraph (g)(8)

This paragraph, which maintains a provision from the IFR, permits a track owner to devise an alternate program for the inspection of joints in CWR. A track owner seeking to deviate from the minimum inspection frequencies specified in § 213.119(g)(6) should submit the alternate procedures and a supporting statement of justification to FRA's Associate Administrator for Safety (Associate Administrator). In the supporting statement, the track owner must include data and analysis that establishes to the satisfaction of the Associate Administrator that the alternate procedures provide at least an equivalent level of safety across the railroad.

If the Associate Administrator approves the alternate procedures, the Associate Administrator will notify the track owner of such approval in writing. In that written notification, the Associate Administrator will specify the date on which the alternate procedures will become effective. After that date, the track owner shall comply with the approved procedures. If the Associate Administrator determines that the alternate procedures do not provide an equivalent level of safety, the Associate Administrator will disapprove the alternate procedures in writing. While a determination is pending with the Associate Administrator, the track owner shall continue to comply with the requirements contained in § 213.119(g)(6).

FRA expects that the track owner will include a risk analysis in its supporting statement of justification for alternate procedures. The risk analysis, whether qualitative or quantitative, should demonstrate that the track owner's program is at least as good (as applied across the entire railroad) as the benchmark level of inspection that FRA mandates in this final rule. The risk analysis would likely address such issues as tonnage, grades, curvature, prior joint failure rates (with respect to frequency), type of traffic, average train speed, and proximity to populations. The track owner might use risk analysis techniques to focus more frequent inspections in areas of greater risk (*e.g.*, approaches to bridges, close proximity to populated areas, heavy tonnage, significant hazardous materials traffic), while utilizing a lesser frequency at other locations and optimizing safety and efficiency.

As mentioned earlier, FRA encourages the use of new technologies for inspecting joint bars and new means of determining information relevant to future joint integrity. FRA's Office of Research and Development has funded research to develop an automated, vehicle-mounted, visual imaging system that can survey joint bars across a territory by recording digital photographic images and generating the data to exception reports. Use of such a system in combination with less frequent walking inspections that employ appropriate attention to joint condition action items might reduce the cost of joint bar inspections while enhancing prevention of joint failure.

The Rail Integrity Task Force [7] has also considered the conditions under which railroads can more effectively detect joint bar cracks. One of the primary objectives of this Task Force is to review industry best practices for the inspection, maintenance, and replacement of rail. The Task Force discussed options for vehicle-mounted non-destructive testing that might, at a future date, provide the ability to detect both internal defects as well as cracks in joint bars. Both FRA and the AAR, through the Transportation Technology Center, Inc., are working on non-destructive testing techniques that may be useful in the future for this purpose. Such systems may have the potential to identify cracks before they become visible to the eye or through visual imaging.

Technology (including frequent automated track geometry surveys) and sound CWR management, including prompt removal of so-called ''temporary'' joints, may provide the additional information required to verify the ongoing integrity of joints in CWR. The alternative procedures provision of this final rule will allow track owners to take advantage of these new approaches as they become available.

Paragraphs (h)–(j)

With the addition of a new paragraph 213.119(g), FRA has renumbered the old paragraphs (g), (h), and (i). The training requirements previously located in paragraph (g) are now located in paragraph (h). The recordkeeping requirements previously located in paragraph (h) are now located in paragraph (i). The definitions section formerly located in paragraph (i) is now located in paragraph (j).

Paragraph (i)

Paragraph (i) contains the recordkeeping requirements for railroads that have track constructed of CWR. At a minimum, a track owner must keep records of the items listed in paragraph (i)(1) through (i)(3). Paragraph (i)(1) requires a track owner to keep a record of the rail temperature, location and date of CWR installations. Paragraph (i)(2) requires a track owner to keep a record of any CWR installation or maintenance work that does not conform with the written procedures. Paragraph (i)(3) requires a track owner to keep records of information on inspection of rail joints as specified in paragraph (g)(7).

The IFR required the track owner to maintain a joint inventory in this paragraph. Pursuant to comments received and working group negotiations, FRA has eliminated the joint inventory requirement; alternatively, FRA now requires the track owner to keep records of each periodic and follow-up inspection, as specified in paragraph (g)(7).

Paragraph (j)

This paragraph defines that terms used throughout § 213.119. In this final rule, FRA is adding definitions for ''Action Item,'' ''Corrective Actions,'' ''CWR Joint,'' and ''Remedial Actions'' to clarify their usage.

Action Items mean the rail joint conditions that track owners identify in their CWR plans pursuant to paragraph (g)(3) which require a corrective action. Section 213.119(g)(3) identifies the broad categories that track owners need to address (*e.g.*, rail end batter or mismatch). Track owners will need to identify specific criteria/thresholds in their respective CWR plans (*e.g.*, how many inches of rail end batter is permissible, at what amount of mismatch must railroads take corrective actions, and what corrective actions must they take). FRA would like to note that these broad categories are only the required minimums. Track owners are free to identify additional categories and set thresholds for these categories.

Corrective Actions mean those actions which track owners specify in their CWR plans to address conditions of actual or potential joint failure, including, as applicable, repair, restrictions on operations, and additional on-foot inspections. This term is used in § 213.119(g)(5).

CWR Joint means (a) any joint directly connected to CWR, and (b) any joint(s) in a segment of rail between CWR strings that are less than 195 feet apart, except joints located on jointed sections on bridges. CWR joint had not been defined in the past, and the RSAC working group defined ''CWR joint'' to clarify to which joints the new provisions would apply. The working group agreed that the force exerted by CWR extends beyond the joint at the end of the string. This definition is intended to include joints affected by CWR, and joints that are intended to be in CWR but by the addition of temporary joints may not be directly attached to a CWR string, such as an insulated joint plug rail. As many bridges have jointed rail by design, this definition would not include jointed rail joints on bridges.

Remedial Actions are those items which track owners are required to take as a result of requirements in Part 213 to address a non-compliant condition.

VIII. Regulatory Impact

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This final rule has been evaluated in accordance with existing policies and procedures and determined to be non-significant under both Executive Order 128566 and DOT policies and procedures. *See* 44 FR 11034; February 26, 1979. As part of the regulatory impact analysis, FRA has assessed a quantitative measurement of costs and benefits expected from the implementation of this final rule. The major costs anticipated from implementing this final rule include: the modification of existing CWR plans, conduct of some additional required on-foot inspections, and preparation and submission of Fracture Reports. The major benefit anticipated from implementing this final rule will be a decrease in rule-affected accidents.

This final rule is not anticipated to have very much economic impact, as track owners are already inspecting many of the joints covered by the final rule. This final rule will create annual benefits of $790,000 for an initial cost of $58,000 and recurring annual costs of $85,000 to $120,000. This final rule is therefore expected to create net societal benefits in every year of its application, including the initial year.

B. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (the Act) (5 U.S.C. 601 *et seq.*) requires a review of proposed and final rules to assess their impact on small entities. The U.S. Small Business Administration (SBA) stipulates in its ''Size Standards'' that the largest a railroad business firm that is ''for-profit'' may be, and still be classified as a ''small entity'' is 1,500 employees for ''Line-Haul Operating Railroads,'' and 500 employees for ''Switching and Terminal Establishments.'' ''Small entity'' is defined in the Act as a small business that is not independently owned and operated, and is not dominant in its field of operation. SBA's ''size standards'' may be altered by federal agencies after consultation with SBA and in conjunction with public comment. Pursuant to that authority, FRA has published a final policy that formally establishes ''small entities'' as railroads which meet the line haulage revenue requirements of a Class III railroad. The revenue requirements are currently $20 million or less in annual operating revenue. The $20 million limit (which is adjusted by applying the railroad revenue deflator adjustment) is based on the Surface Transportation Board's (STB) threshold for a Class III

[7] *See* footnote 6 supra.

railroad carrier. FRA uses the same revenue dollar limit to determine whether a railroad or shipper or contractor is a small entity.

Approximately 200 small railroads have CWR and are affected by this final rule. Relatively few Class 3 railroads have CWR. For the minority of Class 3 railroads that have CWR, the portion of their railroad which is CWR is more likely to be small. To the extent they have CWR, Class 3 railroads will be subject to most of the provisions of this rule. Small railroads were consulted frequently during the RSAC Working Group deliberations. Small railroads were most greatly concerned that the inventory requirements of the IFR was unduly burdensome. FRA has eliminated the requirement for an inventory in this final rule. Small railroads were also concerned about infrequent passenger service and its effect on inspection frequency. By allowing for such a scenario pursuant to § 213.119(g)(6)(ii), FRA has resolved this issue in a manner which will minimize any impact on small railroads.

C. Paperwork Reduction Act

The information collection requirements in this final rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995, 44 U.S.C. 3501 *et seq*. The section that contains the new information collection requirements is noted, and the estimated time and cost to fulfill each of the other requirements are as follows:

CFR section	Respondent universe	Total annual responses	Average time per response	Total annual burden hours	Total annual burden cost ($)
213.4 Excepted Track:					
Designation of track as excepted	200 railroads	20 orders	15 minutes	5	200
Notification to FRA about removal of excepted track.	200 railroads	15 notifications	10 minutes	3	120
213.5 Responsibility of track owners	685 railroads	10 notifications	8 hours	80	3,200
213.7 Designation of qualified persons to supervise certain renewals and inspect track:					
Designations	687 railroads	1,500 names	10 minutes	250	10,000
Designations (partially qualified) under paragraph (c) of this section.	687 railroads	250 names	10 minutes	42	1,680
213.17 Waivers	687 railroads	6 petitions	24 hours	144	5,760
213.4 Excepted Track:					
Designation of track as excepted	200 railroads	20 orders	15 minutes	5	200
Notification to FRA about removal of excepted track.	200 railroads	15 notifications	10 minutes	3	120
213.5 Responsibility of track owners	685 railroads	10 notifications	8 hours	80	3,200
213.7 Designation of qualified persons to supervise certain renewals and inspect track:					
Designations	687 railroads	1,500 names	10 minutes	250	10,000
Designations (partially qualified) under paragraph (c) of this section.	687 railroads	250 names	10 minutes	42	1,680
213.57 Curves, elevation and speed limitations:					
Request to FRA for approval	687 railroads	2 requests	40 hours	80	3,200
Notification to FRA with written consent of other affected track owners.	687 railroads	2 notifications	45 minutes	2	80
Test Plans for Higher Curving Speeds.	1 railroad	2 test plans	16 hours	32	1,280
213.110 Gage Restraint Measurement Systems (GRMS):					
Implementing—Notices & Reports	687 railroads	10 notifications + 2 tech rpts.	45 min./4 hours	16	640
GRMS Vehicle Output Reports	687 railroads	50 reports	5 minutes	4	160
GRMS Vehicle Exception Reports	687 railroads	50 reports	5 minutes	4	160
GRMS/PTLF—Procedures for Data Integrity.	687 railroads	4 proc. Docs	2 hours	8	320
GRMS Training Program/Sessions	687 railroads	2 prog. + 5 sess	16 hours	112	4,480
GRMS Inspection Records	687 railroads	50 records	2 hours	100	4,000
213.119 Continuous welded rail (CWR), general:					
(g) Written procedures for CWR (New).	239 railroads/ ASLRRA.	240 modif. proc	3 hrs./1 hr	320	(1)
Fracture Report for Each Broken CWR Joint Bar (New).	239 railroads/ ASLRRA.	12,000 reports	10 minutes	2,000	74,000
Alternate Procedures For Rail Joints (New).	239 railroads	7 letters + 7 proc	30 min. + 953 hrs	6,675	701,035
Training Programs for CWR procedures (New).	239 railroads/ ASLRRA.	240 training Prog	2 hea/12 hrs	490	19,600
Recordkeeping (Previous)	239 railroads	2,000 records	10 minutes	333	13,320
Recordkeeping for CWR Rail Joints (New).	239 railroads	360,000 rcds	2 minutes	12,000	480,000

CFR section	Respondent universe	Total annual responses	Average time per response	Total annual burden hours	Total annual burden cost ($)
Periodic Records for CWR Rail Joints (New).	239 railroads	480,000 rcds.	1 minute	8,000	320,000
213.233 Track inspection	687 railroads	2,500 inspections	1 minute	42	1,554
213.241 Inspection records	687 railroads	1,542,089 rcds	Varies	1,672,941	61,898,817
213.303 Responsibility for Compliance	2 railroads	1 petition	8 hours	8	320
213.305 Designation of qualified individuals; general qualifications.	2 railroads	150 designations	10 minutes	25	1,000
Designations (Partially qualified)	2 railroads	20 designations	10 minutes	3	120
213.317 Waivers	2 railroads	1 petition	24 hours	24	960
213.329 Curves, elevation and speed limitations:					
FRA approval of qualified equipment and higher curving speeds.	2 railroads	3 notifications	40 hours	120	4,800
Written notifications to FRA with written consent of other affected track owners.	2 railroads	3 notifications	45 minutes	2	80
213.4 Excepted Track:					
Designation of track as excepted	200 railroads	20 orders	15 minutes	5	200
Notification to FRA about removal of excepted track.	200 railroads	15 notifications	10 minutes	3	120
213.5 Responsibility of track owners	685 railroads	10 notifications	8 hours	80	3,200
213.7 Designation of qualified persons to supervise certain renewals and inspect track:					
Designations	687 railroads	1,500 names	10 minutes	250	10,000
Designation (partially qualified) under pargraph (c) of this section.	687 railroads	250 names	10 minutes	42	1,680
213.333 Automated Vehicle Inspection System:					
Track Geometry Measurement System.	3 railroads	18 reports	20 hours	360	14,400
Track/Vehicle Performance Measurement System:					
Copies of most recent exception printouts.	2 railroads	13 printouts	20 hours	260	10,400
213.341 Initial inspection of new rail and welds:					
Mill inspection	2 railroads	2 reports	8 hours	16	640
Welding plan inspection	2 railroads	2 reports	8 hours	16	640
Inspection of field wells	2 railroads	125 records	20 minutes	42	1,680
213.343 Continuous welded rail (CWR) Recordkeeping	2 railroads	150 records	10 minutes	25	1,000
213.345 Vehicle qualification testing	1 railroad	2 reports	16 hours	32	1,280
213.347 Automotive or Railroad Crossings at grade					
Protection Plans	1 railroad	2 plans	8 hours	16	640
213.369 Inspection Records:					
Record of inspection	2 railroads	500 records	1 minutes	8	296
Internal defect inspections and remedial action taken.	2 railroads	50 records	5 minutes	4	148

[1] $0 (Included in RIA).

All estimates include the time for reviewing instructions; searching existing data sources; gathering or maintaining the needed data; and reviewing the information.

Organizations and individuals desiring to submit comments on the collection of information requirements should direct them to the Office of Management and Budget, *Attention:* Desk Officer for the Federal Railroad Administration, Office of Information and Regulatory Affairs, Washington, DC 20503.

OMB is required to make a decision concerning the collection of information requirements contained in this final rule between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication.

FRA cannot impose a penalty on persons for violating information collection requirements which do not display a current OMB control number, if required. FRA intends to obtain current OMB control numbers for any new information collection requirements resulting from this rulemaking action prior to the effective date of the final rule. The OMB control number, when assigned, will be announced by separate notice in the **Federal Register**.

D. Environmental Impact

FRA has evaluated these revised track safety regulations in accordance with its procedures for ensuring full consideration of the potential

environmental impacts of FRA actions, as required by the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*), other environmental statutes, Executive Orders, and DOT Order 5610.1c. This final rule meets the criteria that establish this as a non-major action for environmental purposes.

E. Federalism Implications

Executive Order 13132, ''Federalism'' (64 FR 43255, Aug. 10, 1999), requires FRA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' are defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.'' Under Executive Order 13132, the agency may not issue a regulation with Federalism implications that imposes substantial direct compliance costs and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, the agency consults with State and local governments, or the agency consults with State and local government officials early in the process of developing the regulation. Where a regulation has Federalism implications and preempts State law, the agency seeks to consult with State and local officials in the process of developing the regulation.

This final rule has preemptive effect. Subject to a limited exception for essentially local safety hazards, its requirements will establish a uniform Federal safety standard that must be met, and state requirements covering the same subject are displaced, whether those standards are in the form of state statutes, regulations, local ordinances, or other forms of state law, including common law. Section 20106 of Title 49 of the United States Code provides that all regulations prescribed by the Secretary related to railroad safety preempt any State law, regulation, or order covering the same subject matter, except a provision necessary to eliminate or reduce an essentially local safety hazard that is not incompatible with a Federal law, regulations, or order and that does not unreasonably burden interstate commerce. This is consistent with past practice at FRA, and within the Department of Transportation.

FRA has analyzed this final rule in accordance with the principles and criteria contained in Executive Order 13132. This final rule will not have a substantial effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among various levels of government. This final rule will not have federalism implications that impose any direct compliance costs on State and local governments.

FRA notes that RSAC, which endorsed and recommended the majority of this rule, has as permanent members two organizations representing State and local interests: AASHTO and ASRSM. Both of these State organizations concurred with the RSAC recommendation endorsing this rule. The RSAC regularly provides recommendations to the FRA Administrator for solutions to regulatory issues that reflect significant input from its State members. To date, FRA has received no indication of concerns about the Federalism implications of this rulemaking from these representatives or of any other representatives of State government. Consequently, FRA concludes that this final rule has no federalism implications, other than the preemption of state laws covering the subject matter of this final rule, which occurs by operation of law under 49 U.S.C. 20106 whenever FRA issues a rule or order.

F. Unfunded Mandate Reform Act of 1995

Pursuant to Section 201 of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4, 2 U.S.C. 1531), each Federal agency ''shall, unless otherwise prohibited by law, assess the effects of Federal regulatory actions on State, local, and tribal governments, and the private sector (other than to the extent that such regulations incorporate requirements specifically set forth in law).'' Section 202 of the Act (2 U.S.C. 1532) further requires that ''before promulgating any general notice of proposed rulemaking that is likely to result in the promulgation of any rule that includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more (adjusted annually for inflation) in any 1 year, and before promulgating any final rule for which a general notice of proposed rulemaking was published, the agency shall prepare a written statement'' detailing the effect on State, local, and tribal governments and the private sector. This final rule will not result in the expenditure, in the aggregate, of $128,100,000 or more in any one year, and thus preparation of such a statement is not required.

G. Energy Impact

Executive Order 13211 requires Federal agencies to prepare a Statement of Energy Effects for any ''significant energy action.'' *See* 66 FR 28355 (May 22, 2001). Under the Executive Order a ''significant energy action'' is defined as any action by an agency that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking: (1)(i) that is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action. FRA has evaluated this final rule in accordance with Executive Order 13211. FRA has determined that this final rule is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Consequently, FRA has determined that this final rule is not a ''significant energy action'' within the meaning of the Executive Order.

H. Privacy Act Statement

Anyone is able to search the electronic form of all comments received into any of DOT's dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc). You may review DOT's complete Privacy Act Statement published in the **Federal Register** on April 11, 2000 (Volume 65, Number 70, Pages 19477–78) or see *http://dms.dot.gov*.

IX. Effective Date

This final rule is effective on October 31, 2006 in order to supersede the IFR's impracticable October 31, 2006 joint inventory compliance date. Accordingly, the good cause exception of the Administrative Procedure Act applies. *See* 5 U.S.C. 553(d)(3).

List of Subjects in 49 CFR Part 213

Penalties, Railroad safety, Reporting and recordkeeping requirements.

The Rule

■ For the reasons discussed in the preamble, the Federal Railroad Administration amends part 213 of

chapter II, subtitle B of Title 49, Code of Federal Regulations, as follows:

PART 213—[AMENDED]

■ 1. The authority citation for part 213 continues to read as follows:

Authority: 49 U.S.C. 20102–20114 and 20142; 28 U.S.C. 2461, note; and 49 CFR 1.49(m).

■ 2. Section 213.119 is amended by revising the introductory language and paragraphs (g) through (j) to read as follows:

§ 213.119 Continuous welded rail (CWR); general

Each track owner with track constructed of CWR shall have in effect and comply with a plan that contains written procedures which address: the installation, adjustment, maintenance, and inspection of CWR; inspection of CWR joints; and a training program for the application of those procedures. The plan shall be submitted to the Federal Railroad Administration. FRA reviews each plan for compliance with the following—

* * * * *

(g) Procedures which prescribe the scheduling and conduct of inspections to detect cracks and other indications of potential failures in CWR joints. On and after January 1, 2007, in formulating the procedures under this paragraph, the track owner shall—

(1) Address the inspection of joints and the track structure at joints, including, at a minimum, periodic on-foot inspections;

(2) Identify joint bars with visible or otherwise detectable cracks and conduct remedial action pursuant to § 213.121;

(3) Specify the conditions of actual or potential joint failure for which personnel must inspect, including, at a minimum, the following items:

(i) Loose, bent, or missing joint bolts;

(ii) Rail end batter or mismatch that contributes to instability of the joint; and

(iii) Evidence of excessive longitudinal rail movement in or near the joint, including, but not limited to; wide rail gap, defective joint bolts, disturbed ballast, surface deviations, gap between tie plates and rail, or displaced rail anchors;

(4) Specify the procedures for the inspection of CWR joints that are imbedded in highway-rail crossings or in other structures that prevent a complete inspection of the joint, including procedures for the removal from the joint of loose material or other temporary material;

(5) Specify the appropriate corrective actions to be taken when personnel find conditions of actual or potential joint failure, including on-foot follow-up inspections to monitor conditions of potential joint failure in any period prior to completion of repairs.

(6) Specify the timing of periodic inspections, which shall be based on the configuration and condition of the joint:

(i) Except as provided in paragraphs (g)(6)(ii) through (iv), track owners must specify that all CWR joints are inspected, at a minimum, in accordance with the intervals identified in the following table—

MINIMUM NUMBER OF INSPECTIONS PER CALENDAR YEAR [1]

	Freight trains operating over track with an annual tonnage of:			Passenger trains operating over track with an annual tonnage of:	
	Less than 40 mgt	40 to 60 mgt	Greater than 60 mgt	Less than 20 mgt	Greater than or equal to 20 mgt
Class 5 & above	2	[2]3	[2]4	[2]3	[2]3
Class 4	2	[2]3	[2]4	2	[2]3
Class 3	1	2	2	2	2
Class 2	0	0	0	1	1
Class 1	0	0	0	0	0
Excepted Track	0	0	0	n/a	n/a

4 = Four times per calendar year, with one inspection in each of the following periods: January to March, April to June, July to September, and October to December; and with consecutive inspections separated by at least 60 calendar days.

3 = Three times per calendar year, with one inspection in each of the following periods: January to April, May to August, and September to December; and with consecutive inspections separated by at least 90 calendar days

2 = Twice per calendar year, with one inspection in each of the following periods: January to June and July to December; and with consecutive inspections separated by at least 120 calendar days.

1 = Once per calendar year, with consecutive inspections separated by at least 180 calendar days.

[1] Where a track owner operates both freight and passenger trains over a given segment of track, and there are two different possible inspection interval requirements, the more frequent inspection interval applies.

[2] When extreme weather conditions prevent a track owner from conducting an inspection of a particular territory within the required interval, the track owner may extend the interval by up to 30 calendar days from the last day that the extreme weather condition prevented the required inspection.

(ii) Consistent with any limitations applied by the track owner, a passenger train conducting an unscheduled detour operation may proceed over track not normally used for passenger operations at a speed not to exceed the maximum authorized speed otherwise allowed, even though CWR joints have not been inspected in accordance with the frequency identified in paragraph (g)(6)(i), provided that:

(A) All CWR joints have been inspected consistent with requirements for freight service; and

(B) The unscheduled detour operation lasts no more than 14 consecutive calendar days. In order to continue operations beyond the 14-day period, the track owner must inspect the CWR joints in accordance with the requirements of paragraph (g)(6)(i).

(iii) Tourist, scenic, historic, or excursion operations, if limited to the maximum authorized speed for passenger trains over the next lower class of track, need not be considered in determining the frequency of inspections under paragraph (g)(6)(i).

(iv) All CWR joints that are located in switches, turnouts, track crossings, lift rail assemblies or other transition devices on moveable bridges must be inspected on foot at least monthly, consistent with the requirements in § 213.235; and all records of those

inspections must be kept in accordance with the requirements in § 213.241. A track owner may include in its § 213.235 inspections, in lieu of the joint inspections required by paragraph (g)(6)(i), CWR joints that are located in track structure that is adjacent to switches and turnouts, provided that the track owner precisely defines the parameters of that arrangement in the CWR plans.

(7) Specify the recordkeeping requirements related to joint bars in CWR, including the following:

(i) The track owner shall keep a record of each periodic and follow-up inspection required to be performed by the track owner's CWR plan, except for those inspections conducted pursuant to § 213.235 for which track owners must maintain records pursuant to § 213.241. The record shall be prepared on the day the inspection is made and signed by the person making the inspection. The record shall include, at a minimum, the following items: the boundaries of the territory inspected; the nature and location of any deviations at the joint from the requirements of this Part or of the track owner's CWR plan, with the location identified with sufficient precision that personnel could return to the joint and identify it without ambiguity; the date of the inspection; the remedial action, corrective action, or both, that has been taken or will be taken; and the name or identification number of the person who made the inspection.

(ii) The track owner shall generate a Fracture Report for every cracked or broken CWR joint bar that the track owner discovers during the course of an inspection conducted pursuant to §§ 213.119(g), 213.233, or 213.235 on track that is required under § 213.119(g)(6)(i) to be inspected.

(A) The Fracture Report shall be prepared on the day the cracked or broken joint bar is discovered. The record shall include, at a minimum: the railroad name; the location of the joint bar as identified by milepost and subdivision; the class of track; annual million gross tons for the previous calendar year; the date of discovery of the crack or break; the rail section; the type of bar (standard, insulated, or compromise); the number of holes in the joint bar; a general description of the location of the crack or break in bar; the visible length of the crack in inches; the gap measurement between rail ends; the amount and length of rail end batter or ramp on each rail end; the amount of tread mismatch; the vertical movement of joint; and in curves or spirals, the amount of gage mismatch and the lateral movement of the joint.

(B) The track owner shall submit the information contained in the Fracture Reports to the FRA Associate Administrator for Safety (Associate Administrator) twice annually, by July 31 for the preceding six-month period from January 1 through June 30 and by January 31 for the preceding six-month period from July 1 through December 31.

(C) After February 1, 2010, any track owner may petition FRA to conduct a technical conference to review the Fracture Report data submitted through December of 2009 and assess whether there is a continued need for the collection of Fracture Report data. The track owner shall submit a written request to the Associate Administrator, requesting the technical conference and explaining the reasons for proposing to discontinue the collection of the data.

(8) In lieu of the requirements for the inspection of rail joints contained in paragraphs (g)(1) through (7) of this section, a track owner may seek approval from FRA to use alternate procedures.

(i) The track owner shall submit the proposed alternate procedures and a supporting statement of justification to the Associate Administrator for Safety (Associate Administrator).

(ii) If the Associate Administrator finds that the proposed alternate procedures provide an equivalent or higher level of safety than the requirements in paragraphs (g)(1) through (g)(7) of this section, the Associate Administrator will approve the alternate procedures by notifying the track owner in writing. The Associate Administrator will specify in the written notification the date on which the procedures will become effective, and after that date, the track owner shall comply with the procedures. If the Associate Administrator determines that the alternate procedures do not provide an equivalent level of safety, the Associate Administrator will disapprove the alternate procedures in writing, and the track owner shall continue to comply with the requirements in paragraphs (g)(1) through (7) of this section.

(iii) While a determination is pending with the Associate Administrator on a request submitted pursuant to paragraph (g)(8) of this section, the track owner shall continue to comply with the requirements contained in paragraphs (g)(1) through (7) of this section.

(h) The track owner shall have in effect a comprehensive training program for the application of these written CWR procedures, with provisions for periodic re-training, for those individuals designated under § 213.7 as qualified to supervise the installation, adjustment, and maintenance of CWR track and to perform inspections of CWR track.

(i) The track owner shall prescribe and comply with recordkeeping requirements necessary to provide an adequate history of track constructed with CWR. At a minimum, these records must include:

(1) Rail temperature, location and date of CWR installations. This record shall be retained for at least one year;

(2) A record of any CWR installation or maintenance work that does not conform with the written procedures. Such record shall include the location of the rail and be maintained until the CWR is brought into conformance with such procedures;

(3) Information on inspection of rail joints as specified in paragraph (g)(7) of this part.

(j) As used in this section—

Action Items mean the rail joint conditions that track owners identify in their CWR plans pursuant to paragraph (g)(3) which require the application of a corrective action.

Adjusting/De-stressing means the procedure by which a rail's temperature is re-adjusted to the desired value. It typically consists of cutting the rail and removing rail anchoring devices, which provides for the necessary expansion and contraction, and then re-assembling the track.

Buckling Incident means the formation of a lateral misalignment sufficient in magnitude to constitute a deviation from the Class 1 requirements specified in § 213.55. These normally occur when rail temperatures are relatively high and are caused by high longitudinal compressive forces.

Continuous Welded Rail (CWR) means rail that has been welded together into lengths exceeding 400 feet.

Corrective Actions mean those actions which track owners specify in their CWR plans to address conditions of actual or potential joint failure, including, as applicable, repair, restrictions on operations, and additional on-foot inspections.

CWR Joint means (a) any joint directly connected to CWR, and (b) any joint(s) in a segment of rail between CWR strings that are less than 195 feet apart, except joints located on jointed sections on bridges.

Desired Rail Installation Temperature Range means the rail temperature range, within a specific geographical area, at which forces in CWR should not cause a buckling incident in extreme heat, or a pull-apart during extreme cold weather.

Disturbed Track means the disturbance of the roadbed or ballast

section, as a result of track maintenance or any other event, which reduces the lateral or longitudinal resistance of the track, or both.

Mechanical Stabilization means a type of procedure used to restore track resistance to disturbed track following certain maintenance operations. This procedure may incorporate dynamic track stabilizers or ballast consolidators, which are units of work equipment that are used as a substitute for the stabilization action provided by the passage of tonnage trains.

Rail Anchors means those devices which are attached to the rail and bear against the side of the crosstie to control longitudinal rail movement. Certain types of rail fasteners also act as rail anchors and control longitudinal rail movement by exerting a downward clamping force on the upper surface of the rail base.

Rail Temperature means the temperature of the rail, measured with a rail thermometer.

Remedial Actions mean those actions which track owners are required to take as a result of requirements of this part to address a non-compliant condition.

Tight/Kinky Rail means CWR which exhibits minute alignment irregularities which indicate that the rail is in a considerable amount of compression.

Tourist, Scenic, Historic, or Excursion Operations mean railroad operations that carry passengers with the conveyance of the passengers to a particular destination not being the principal purpose.

Train-induced Forces means the vertical, longitudinal, and lateral dynamic forces which are generated during train movement and which can contribute to the buckling potential of the rail.

Track Lateral Resistance means the resistance provided by the rail/crosstie structure against lateral displacement.

Track Longitudinal Resistance means the resistance provided by the rail anchors/rail fasteners and the ballast section to the rail/crosstie structure against longitudinal displacement.

Unscheduled Detour Operation means a short-term, unscheduled operation where a track owner has no more than 14 calendar days' notice that the operation is going to occur.

* * * * *

Issued in Washington, DC, on September 29, 2006.

Joseph H. Boardman,

Federal Railroad Administrator.

[FR Doc. 06–8599 Filed 10–10–06; 8:45 am]

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