

From: [Woolverton, Larry \(FRA\)](#)
To: [Woolverton, Larry \(FRA\)](#)
Subject: FW: RESULTS; Rail Integrity Working Group Consensus Documents for RSAC VOTE
Date: Wednesday, August 12, 2015 1:27:34 PM
Importance: High

From: Woolverton, Larry (FRA)
Sent: Tuesday, July 14, 2015 10:58 AM
To: Railroad Safety Advisory Committee
Cc: Patrick, Carlo (FRA)
Subject: RESULTS; Rail Integrity Working Group Consensus Documents for RSAC VOTE
Importance: High

RSAC Committee Members & Alternates, by an unanimous vote the Railroad Safety Advisory Committee approves the recommendations of the Rail Integrity Working Group as the recommendations of the Committee to the FRA Administrator.

The consensus language will be incorporated into an NPRM in the near future.

Thank you for your continued support and participation!

Regards,

LARRY W. WOOLVERTON
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From: Woolverton, Larry (FRA)
Sent: Monday, June 29, 2015 12:03 PM
To: Railroad Safety Advisory Committee
Cc: Patrick, Carlo (FRA); Kilgore, Kenton (FRA)
Subject: FW: Rail Integrity Working Group Consensus Documents for RSAC VOTE
Importance: High

RSAC Committee Members & Alternates, the Rail Integrity Working Group has completed its work on RSAC Task 14-02 and has reached consensus on 4 areas of that task. The Working Group did not reach consensus on the issue of draft regulatory language allowing continuous testing.

Please find the following consensus documents at the attachments at the attachments for your review and vote;

1. § 49 CFR Part 213.343 Continuous Welded Rail (CWR); Plan Review and Approval
2. § 49 CFR Part 213.369 Inspection Records
3. § 49 CFR Part 213.339 Inspection of Rail in Service
4. § 49 CFR Part 213.340 Qualified Operator

Please consider the attached recommendations of the Rail Integrity Working Group as a package and use the attached electronic ballot to record your vote and return it to my attention. Please do not "reply all" with your submission.

You are requested to return your completed ballot electronically by no later than close of business *Monday, July 13, 2015.*



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§213.343 Continuous welded rail (CWR); plan review and approval.

(a) 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.

(b) The track owner shall file its CWR plan with the FRA Associate Administrator for Railroad Safety/Chief Safety Officer (Associate Administrator). Within 30 days of receipt of the submission, FRA will review the plan for compliance with this subpart. FRA will approve, disapprove or conditionally approve the submitted plan, and will provide written notice of its determination.

(c) The track owner's existing plan shall remain in effect until the track owner's new plan is approved or conditionally approved and is effective pursuant to paragraph (d) of this section.

(d) The track owner shall, upon receipt of FRA's approval or conditional approval, establish the plan's effective date. The track owner shall advise in writing FRA and all affected employees of the effective date.

(e) FRA, for cause stated, may, subsequent to plan approval or conditional approval, require revisions to the plan to bring the plan into conformity with this subpart. Notice of a revision requirement shall be made in writing and specify the basis of FRA's request.

The track owner may, within 30 days of the revision requirement, respond and provide written submissions in support of the original plan. FRA renders a final decision in writing. Not more than 30 days following any final decision requiring revisions to a CWR plan, the track owner shall amend the plan in accordance with FRA's decision and resubmit the conforming plan. The conforming plan becomes effective upon its submission to FRA.

§213.344* Continuous welded rail (CWR); general

The track owner shall comply with the contents of the CWR plan approved or conditionally approved under § 213.343. The plan shall contain the following elements—

(a) Procedures for the installation and adjustment of CWR which include:

(1) Designation of a desired rail installation temperature range for the geographic area in which the CWR is located; and

(2) De-stressing procedures/methods which address proper attainment of the desired rail installation temperature range when adjusting CWR.

(b) Rail anchoring or fastening requirements that will provide sufficient restraint to limit longitudinal rail and crosstie movement to the extent practical, and specifically addressing CWR

rail anchoring or fastening patterns on bridges, bridge approaches, and at other locations where possible longitudinal rail and cross-tie movement associated with normally expected train-induced forces, is restricted.

(c) CWR joint installation and maintenance procedures which require that—

(1) Each rail shall be bolted with at least two bolts at each CWR joint;

(2) In the case of a bolted joint installed during CWR installation after *[insert date xx days after ...]*, the track owner shall either, within 60 days—

(i) Weld the joint;

(ii) Install a joint with six bolts; or

(iii) Anchor every tie 195 feet in both directions from the joint; and

(3) In the case of a bolted joint in CWR experiencing service failure or a failed bar with a rail gap present, the track owner shall either—

(i) Weld the joint;

(ii) Replace the broken bar(s), replace the broken bolts, adjust the anchors and, within 30 days, weld the joint;

(iii) Replace the broken bar(s), replace the broken bolts, install one additional bolt per rail end, and adjust anchors;

(iv) Replace the broken bar(s), replace the broken bolts, and anchor every tie 195 feet in both directions from the CWR joint; or

(v) Replace the broken bar(s), replace the broken bolts, add rail with provisions for later adjustment pursuant to paragraph (d)(2) of this section, and reapply the anchors.

(d) Procedures which specifically address maintaining a desired rail installation temperature range when cutting CWR including rail repairs, in-track welding, and in conjunction with adjustments made in the area of tight track, a track buckle, or a pull-apart. Rail repair practices shall take into consideration existing rail temperature so that;

(1) When rail is removed, the length installed shall be determined by taking into consideration the existing rail temperature and the desired rail installation temperature range; and

(2) Under no circumstances should rail be added when the rail temperature is below that designated by paragraph (a)(1) of this section, without provisions for later adjustment.

(e) Procedures which address the monitoring of CWR in curved track for inward shifts of alignment toward the center of the curve as a result of disturbed track.

(f) Procedures which govern train speed on CWR track when—

(1) Maintenance work, track rehabilitation, track construction, or any other event occurs which disturbs the roadbed or ballast section and reduces the lateral or longitudinal resistance of the track; and

(2) The difference between the average rail temperature and the average rail neutral temperature is in a range that causes buckling-prone conditions to be present at a specific location; and

(3) In formulating the procedures under paragraphs (f) (1) and (f) (2) of this section, the track owner shall—

- (i) Determine the speed required, and the duration and subsequent removal of any speed restriction based on the restoration of the ballast, along with sufficient ballast re-consolidation to stabilize the track to a level that can accommodate expected train-induced forces. Ballast re-consolidation can be achieved through either the passage of train tonnage or mechanical stabilization procedures, or both; and
- (ii) Take into consideration the type of crossties used.

(g) Procedures which prescribe when physical track inspections are to be performed.

(1) At a minimum, these procedures shall address inspecting track to identify—

- (i) Buckling-prone conditions in CWR track, including—
 - (A) Locations where tight or kinky rail conditions are likely to occur; and
 - (B) Locations where track work of the nature described in paragraph (f) (1) (i) of this section has recently been performed; and
- (ii) Pull-apart prone conditions in CWR track, including locations where pull-apart or stripped-joint rail conditions are likely to occur; and

(2) In formulating the procedures under paragraph (g) (1) of this section, the track owner shall—

- (i) Specify when the inspections will be conducted; and
- (ii) Specify the appropriate remedial actions to be taken when either buckling-prone or pull-apart prone conditions are found.

(h) Procedures which prescribe the scheduling and conduct of inspections to detect cracks and other indications of potential failures in CWR joints. 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 §213.351;
- (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 (h)(6)(ii) through (h)(6)(iv) of this section, track owners must specify that all CWR joints are inspected, at a minimum, in accordance with the following:

(1) Class 6 track with:

less than 40 annual MGT is inspected two (2) times per year with one inspection in each of the following periods: January to June and July to December with consecutive inspections separated by at least 120 calendar days. [Note 1]

greater than 40 to less than 60 annual MGT is inspected three (3) times per year with one inspection in each of the following periods: January to April, May to August, and September to December with consecutive inspections separated by at least 90 calendar days. [Note 1]

greater than 60 annual MGT is inspected four (4) times per year with one inspection in each of the following periods: January to March, April to June, July to September, and October to December with consecutive inspections separated by at least 60 calendar days. [Note 1]

(2) Class 7 and 8 track with mixed passenger and freight train operations is inspected a minimum of four (4) times per year or at a frequency equal to the annual tonnage accumulated in the previous calendar year divided by 10 mgt and rounded upward to the nearest integer, whichever is more frequent with at least one inspection in each of the following periods: January to March, April to June, July to September, and October to December with consecutive inspections separated by at least 60 calendar days [Note 1]. These inspections may be accomplished by a combination of a minimum of four (4) on-foot visual inspections with the remainder (if any) performed using alternative technology to be approved by FRA. Any inspection performed using an alternative method approved by FRA that does not fully satisfy the requirements of §213.343(h)(1) through (4) must be done in conjunction with on-ground examination of the joint area to identify other

indications of potential failures in CWR joints to be completed within 15 days of the inspection performed using approved alternative means.

(3) Class 7, 8 and 9 track with dedicated passenger operations is inspected a minimum of four (4) times per year with at least one inspection in each of the following periods: January to March, April to June, July to September, and October to December with consecutive inspections separated by at least 60 calendar days [Note 1]. Alternative methods for performing inspections satisfying the requirements of §213.334(h)(1) through (4) are allowed if approved by FRA pursuant to the requirements at §213.343.

Comment [JG1]: Add preamble language re: should a HS operation begin to approach 40 MGT annually on CI 7-8-9 dedicated, FRA to revisit the number of inspections per annum. Such annual MGT not likely on dedicated HST.

NOTES:

[1] 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 (h)(6)(i) of this section, 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 (h)(6)(i) of this section.

(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 (h)(6)(i) of this section.

(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 weekly, consistent with the requirements in § 213.365(e); and all records of those inspections must be kept in accordance with the requirements in § 213.369. A track owner may include in its § 213.365 inspections, in lieu of the joint inspections required by paragraph (h)(6)(i) of this section, 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 § 213.365 for which track owners must maintain records pursuant to § 213.369. 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) Reserved

(8) In lieu of the requirements for the inspection of rail joints contained in paragraphs (h)(1) through (h)(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 Railroad 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 (h)(1) through (h)(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 (h)(1) through (h)(7) of this section.

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

(i) The track owner shall have in effect a comprehensive training program for the application of these written CWR procedures, with provisions for annual re-training, for those individuals designated under § 213.305(c) as qualified to supervise the installation, adjustment, and maintenance of CWR track and to perform inspections of CWR track. The track owner shall make the training program available for review by FRA upon request.

(j) 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. Each record shall be retained for at least one year;
- (2) A record of any CWR installation or maintenance work that does not conform to 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; and
- (3) Information on inspection of rail joints as specified in paragraph (h) (7) of this section.

(k) The track owner shall make readily available, at every job site where personnel are assigned to install, inspect or maintain CWR, a copy of the track owner's CWR procedures and all revisions, appendices, updates, and referenced materials related thereto prior to their effective date. Such CWR procedures shall be issued and maintained in one CWR standards and procedures manual.

(l) As used in this section—

Adjusting/De-stressing means a procedure by which a rail's neutral 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.

Annual re-training means training every calendar year.

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 of this part. These normally occur when rail temperatures are relatively high and are caused by high longitudinal compressive forces.

Buckling-prone condition means a track condition that can result in the track being laterally displaced due to high compressive forces caused by critical rail temperature combined with insufficient track strength and/or train dynamics.

Continuous welded rail (CWR) means rail that has been welded together into lengths exceeding 400 feet. Rail installed as CWR remains CWR, regardless of whether a joint or plug is installed into the rail at a later time.

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 any joint directly connected to CWR.

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.

Pull apart or stripped joint means a condition when no bolts are mounted through a joint on the rail end, rendering the joint bar ineffective due to excessive expansive or contractive forces.

Pull-apart prone condition means a condition when the actual rail temperature is below the rail neutral temperature at or near a joint where longitudinal tensile forces may affect the fastenings at the joint.

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 neutral temperature is the temperature at which the rail is neither in compression nor tension.

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.

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.

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.

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.

***Note: Section number to be determined by FRA Office of Chief Counsel**



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FRA Proposal

§213.369 Inspection Records

- (a) Each owner of track to which this part applies shall keep a record of each inspection required to be performed on that track under this subpart.
- (b) Each record of an inspection under §213.343* [continuous welded rail] and §213.365 [visual inspections] shall be prepared on the day the inspection is made and signed by the person making the inspection. Records shall specify the track inspected, date of inspection, location and nature of any deviation from the requirements of this part, and the remedial action taken by the person making the inspection. The owner shall designate the location(s) where each original record shall be maintained for at least one year after the inspection covered by the record. The owner shall also designate one location, within 100 miles of each state in which they conduct operations, where copies of records which apply to those operations are either maintained or can be viewed following 10 days notice by the Federal Railroad Administration.
- (c) Records of internal rail inspections required by § 213.339 shall specify the—
- (1) Date of inspection;
 - (2) Track inspected, including beginning and end points;
 - (3) Location and type of defects found under § 213.337;
 - (4) Size of defects found under § 213.337,;
 - (5) Initial remedial action taken and the date thereof; and
 - (6) Location of any track not tested pursuant to § 213.339(d).
- (d) The track owner shall retain a rail inspection record under paragraph (c) of this section for at least two years after the inspection and for one year after initial remedial action is taken.
- (e) The track owner shall maintain records sufficient to demonstrate the means by which it computes the service failure rate on all track segments subject to the requirements of § 213.339(a) for the purpose of determining compliance with the applicable service failure rate target.
- (f) Each track owner required to keep inspection records under this section shall make those records available for inspection and copying by FRA upon request.
- (g) For purposes of complying with the requirements of this section, a track owner may maintain and transfer records through electronic transmission, storage, and retrieval provided that—
- (1) The electronic system is designed so that the integrity of each record is maintained through appropriate levels of security such as recognition of an electronic signature, or

another means, which uniquely identifies the initiating person as the author of that record.

No two persons shall have the same electronic identity;

- (2) The electronic storage of each record shall be initiated by the person making the inspection within 24 hours following the completion of that inspection;
- (3) The electronic system shall ensure that each record cannot be modified in any way, or replaced, once the record is transmitted and stored;
- (4) Any amendment to a record shall be electronically stored apart from the record which it amends. Each amendment to a record shall be uniquely identified as to the person making the amendment;
- (5) The electronic system shall provide for the maintenance of inspection records as originally submitted without corruption or loss of data;
- (6) Paper copies of electronic records and amendments to those records that may be necessary to document compliance with this part shall be made available for inspection and copying by FRA at the locations specified in paragraph (b) of this section; and
- (7) Track inspection records shall be kept available to persons who performed the inspections and to persons performing subsequent inspections.

***Note: Section number to be determined by FRA Office of Chief Counsel**



FRA Proposal

§ 213.339 Inspection of rail in service

(a) In addition to the inspections required by § 213.365 and 213.333, each track owner shall conduct internal rail inspections sufficient to maintain service failure rates per rail inspection segment in accordance with this paragraph (a) for a 12-month period, as determined by the track owner and calculated within 45 days of the end of the period. These rates shall not include service failures that occur in rail that has been replaced through rail relay since the time of the service failure. Rail used to repair a service failure defect is not considered relayed rail. The service failure rates shall not exceed—

- (1) 0.05 service failure per year per mile of track for all Class 6 track and
- (2) 0.04 service failure per year per mile of track for all Class 7 track;
- (3) 0.03 service failure per year per mile of track for all Class 8 track; and
- (4) 0.02 service failure per year per mile of track for all Class 9 track

(b) Each rail inspection segment shall be designated by the track owner no later than (Date of Final Rule), for track Classes 6 through 9 and is used to determine the milepost limits for the individual rail inspection frequency. Segments may include locations where speeds are restricted to speeds less than Class 6. Such locations will not need to be designated as segments per 213.237(b). [add to 213.237(b) “unless track is part of a segment covered by 213.339(b).”]

(1) To change the designation of a rail inspection segment or to establish a new segment pursuant to this section, a track owner must submit a detailed request to the FRA Associate Administrator for Railroad Safety/Chief Safety Officer (Associate Administrator). Within 30 days of receipt of the submission, FRA will review the request. FRA will approve, disapprove, or conditionally approve the submitted request, and will provide written notice of its determination.

(2) The track owner’s existing designation shall remain in effect until the track owner’s new designation is approved or conditionally approved by FRA.

(3) The track owner shall, upon receipt of FRA’s approval or conditional approval, establish the designation’s effective date. The track owner shall advise in writing FRA and all affected railroad employees of the effective date.

(c) Internal rail inspections on Class 6 track shall be made of all track at least twice annually with not less than 120 days between inspections or every 30 million gross tons (mgt), whichever is shorter.

Internal rail inspections on Classes 7 through 8 track shall be made of all track at least twice annually with not less than 120 days between inspections, or at a frequency equal to the annual tonnage accumulated in the previous calendar year divided by 20 mgt and rounded upward to the nearest integer, whichever is more frequent.

Example:

Jan-Dec 2014: 39 MGT, minimum of 2 inspections in 2015

Jan-Dec 2015: 42 MGT, minimum of 3 inspections in 2016

- (1) Any rail used as a replacement plug rail in track that is required to be tested in accordance with this section must have been tested for internal rail flaws.
- (2) The track owner must verify that any plug rail installed after (Insert Date of Final Rule) has not accumulated more than a total of 30 mgt for Class 6 track and 20 mgt for track Classes 7 and 8 track in previous and new locations since its last internal rail flaw test.
- (3) If plug rail not in compliance with this paragraph (e2) is in use after (Insert Date of Final Rule), trains over that rail must not exceed Class 4 speeds until the rail is tested in accordance with this section.
- (d) If the service failure rate target identified in paragraph (a) of this section is not achieved, the track owner must inform FRA of this fact within 45 days of the end of the defined 12-month period in which the performance target is exceeded. In addition, the track owner may provide to FRA an explanation as to why the performance target was not achieved and provide a remedial action plan.
 - (1) If the performance target rate is not met for two consecutive years, then for the area where the greatest number of service failures is occurring the class of track must be reduced to Class 4 until the target service failure rate is achieved.
 - (2) In cases where a single service failure would cause the rate to exceed the applicable service failure rate as designated in paragraph (a) of this section, the service failure rate will be considered to comply with paragraph (a) of this section unless a second such failure occurs within a designated 12-month period. For the purposes of this paragraph (d)(2), a period begins no earlier than (Publication of Final Rule).
- (e) Each defective rail shall be marked with a highly visible marking on both sides of the web and base except that, where a side or sides of the web and base are inaccessible because of permanent features, the highly visible marking may be placed on or next to the head of the rail. [213.341(e) needs consistent language with 213.339(e)]
- (f) Inspection equipment shall be capable of detecting defects between joint bars, in the area enclosed by joint bars.

- (g) If the person assigned to operate the rail defect detection equipment (i.e., the qualified operator) determines that a valid search for internal defects could not be made over a particular length of track, that particular length of track may not be considered as internally inspected under paragraphs (a) and (c) of this section.
- (h) If a valid search for internal defects could not be conducted, the track owner shall, before expiration of the time limits in paragraph (a) or (c) of this section—
 - (1) Conduct a valid search for internal defects;
 - (2) Reduce operating speed to a maximum of 25 m.p.h. until such time as a valid search can be made; or
 - (3) Replace the rail that had not been inspected.
- (i) The person assigned to operate the rail defect detection equipment must be a qualified operator as defined in § 213.340* and have demonstrated proficiency in the rail flaw detection process for each type of equipment the operator is assigned.
- (j) As used in this section—
 - (1) Plug rail means a length of rail that has been removed from one track location and stored for future use as a replacement rail at another location.
 - (2) Service failure means a broken rail occurrence, the cause of which is determined to be a compound fissure, transverse fissure, detail fracture, or vertical split head.
 - (3) Valid search means a continuous inspection for internal rail defects where the equipment performs as intended and equipment responses are interpreted by a qualified operator as defined in § 213.340*.

***Note: Section number to be determined by FRA Office of Chief Counsel**



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FRA Proposal

§ 213.340* Qualified operator. (New to Subpart G)

(a) Each provider of rail flaw detection shall have a documented training program in place and shall identify the types of rail flaw detection equipment for which each equipment operator it employs has received training and is qualified. A provider of rail flaw detection may be the track owner. A track owner shall not utilize a provider of rail flaw detection that fails to comply with the requirements of this paragraph.

(b) A qualified operator shall be trained and have written authorization from his or her employer to:

- (1) Conduct a valid search for internal rail defects utilizing the specific type(s) of equipment for which he or she is authorized and qualified to operate;
- (2) Determine that such equipment is performing as intended;
- (3) Interpret equipment responses and institute appropriate action in accordance with the employer's procedures and instructions; and
- (4) Determine that each valid search for an internal rail defect is continuous throughout the area inspected and has not been compromised due to environmental contamination, rail conditions, or equipment malfunction.

(c) To be qualified, the operator must have received training in accordance with the documented training program and a minimum of 160 hours of rail flaw detection experience under direct supervision of a qualified operator or rail flaw detection equipment manufacturer's

representative, or some combination of both. The operator must demonstrate proficiency in the rail defect detection process, including the equipment to be utilized, prior to initial qualification and authorization by the employer for each type of equipment.

(d) Each employer shall reevaluate the qualifications of, and administer any necessary recurrent training for, the operator as determined by and in accordance with the employer's documented program. The reevaluation process shall require that the employee successfully complete a recorded examination and demonstrate proficiency to the employer on the specific equipment type(s) to be operated. Proficiency may be determined by a periodic review of test data submitted by the operator.

(e) Each employer of a qualified operator shall maintain written or electronic records of each qualification in effect. Each record shall include the name of the employee, the equipment to which the qualification applies, date of qualification, and date of the most recent reevaluation, if any.

(f) Any employee who has demonstrated proficiency in the operation of rail flaw detection equipment prior to **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, is deemed a qualified operator, regardless of the previous training program under which the employee was qualified. Such an operator shall be subject to paragraph (d) of this section.

(g) Records concerning the qualification of operators, including copies of equipment-specific training programs and materials, recorded examinations, demonstrated proficiency records, and authorization records, shall be kept at a location designated by the employer and available for inspection and copying by FRA during regular business hours.

***Note: Section number to be determined by FRA Office of Chief Counsel**