

## SUPPORTING JUSTIFICATION POSITIVE TRAIN CONTROL

RIN 2130-AC27; OMB No. 2130-0553

### Summary

- This submission is a revision to the last approved submission pertaining to the PTC Final Rule. [**Note:** This collection is associated with the first of two proposed rules (NPRMs) that implement a settlement agreement with the Association of American Railroads (AAR) to end its lawsuit relating to the PTC Final Rule published on January 15, 2010. This first proposed rule eliminates two regulatory provisions that require railroads to either conduct further analyses or meet risk-based criteria in order to avoid PTC implementation on track segments that will not transport PIH or TIH hazardous materials after December 31, 2015. FRA believes that railroads will accrue substantial cost savings (an estimated \$300.5 million) from not installing PTC system wayside components along approximately 10,000 miles of track.]
- FRA is publishing this Notice of Proposed Rulemaking in the **Federal Register** on August 24, 2011. See 76 FR 52918.
- The total number of burden hours requested for this submission is **3,683,743 hours**.
- The total number of burden hours approved for the last submission is **3,203,520 hours**.
- The change in burden from the last approved submission amounts to an increase of **480,223 hours**.
- Total **program changes** decreased the burden by **12,095 hours**.
- Total **adjustments** increased the burden by **492,318 hours**. [**Note:** *The increase in burden is almost entirely due to the fact that FRA underestimated the number of railroads affected by or responding to Subpart I of the PTC final rule in the earlier submission. The new estimate is 46 railroads -- an increase of 16 from the previous estimate of 30 railroads.*]
- \*\*The answer to question **number 12** itemizes the hourly burden associated with each requirement of this rule (See pp. 22-119).
- \*\* The table in answer to question **number 15** itemizes all adjustments and program changes associated with Subpart I in terms of both responses and hours. There were

no changes in the number of burden responses and burden hours for Subpart H.

1. **Circumstances that make collection of the information necessary.**

As a consequence of the number and severity of certain very public accidents, coupled with a series of other less publicized accidents, Congress passed the Rail Safety Improvement Act (RSIA) of 2008, mandating implementation of Positive Train Control (PTC) systems by December 31, 2015. Under RSIA, such PTC implementation must be done by each Class I railroad carrier and each entity providing regularly scheduled intercity or commuter rail passenger transportation on:

(A) its main line over which intercity rail passenger transportation or commuter rail passenger transportation, as defined in section 24102, is regularly provided;

(B) its main line over which PIH or TIH hazardous materials, as defined in parts 171.8, 173.115, and 173.132 of title 49, Code of Federal Regulations, are transported; and

(C) such other tracks as the Secretary may prescribe by regulation or order.

49 U.S.C. § 20157(a)(1). The statute further defined “main line” to mean:

a segment or route of railroad tracks over which 5,000,000 or more gross tons of railroad traffic is transported annually, except that — (A) the Secretary may, through regulations under subsection (g), designate additional tracks as main line as appropriate for this section; and

(B) for intercity rail passenger transportation or commuter rail passenger transportation routes or segments over which limited or no freight railroad operations occur, the Secretary shall define the term “main line” by regulation. 49 U.S.C. § 20157(i)(2). To effectuate this goal, RSIA required the railroads to submit for FRA approval a PTC Implementation Plan (PTCIP) within 18 months (i.e., by April 16, 2010).

Consistent with this statutory mandate, FRA published a final rule with a request for further comments on January 15, 2010, which established new regulations codified primarily in subpart I to 49 CFR part 236 (the “PTC rule”). Subsequently, FRA received a number of petitions for reconsideration to the final rule and a number of comments responding to the request for further comments. In a letter dated July 8, 2010, FRA denied all of the petitions for reconsideration. On September 27, 2010, FRA issued a new final rule with clarifying amendments to the PTC rule.

Under the current regulations, each PTCIP must include the sequence and schedule in which track segments required to be equipped with PTC will be so equipped and the basis for those decisions. See 49 CFR § 236.1011. This list of track segments must include all track segments that fit the statutory criteria in calendar year 2008. See 49 CFR §§ 236.1005(b)(1) and (b)(2).

While the statutory PTC implementation deadline is December 31, 2015, FRA recognized a need for a starting point in time to determine where such implementation must occur. The final rule indicates that such a starting baseline should be based on the facts and data known in calendar year (CY) 2008 (the “2008 baseline”). FRA determined that using CY 2009 data would have been difficult given the proximity to the PTCIP

submission deadline and the notably atypical traffic levels caused by the recession. Although each railroad's initial PTCIP includes a future PTC implementation route map reflecting 2008 data, FRA recognized that PIH traffic levels and routings could change in the period between the end of 2008 and the start of 2016. Accordingly, in the event of changed circumstances, the PTC rule provides railroads with the option to file a request for amendment (RFA) of its PTCIP to not equip a track segment that the railroad was initially, but may no longer be, required to implement a PTC system. For instance, if a particular track segment included in a PTCIP no longer includes PIH traffic, and its PTC system implementation is scheduled, but not yet effectuated, then the host railroad might avoid actual PTC system implementation by filing a supported RFA for FRA approval. Each such RFA must be supported with the data defined under §§ 236.1005(b)(2) and (b)(4)(i), and satisfy two qualifying tests or analyses that were promulgated under FRA's statutory authority to require PTC to be installed on lines in addition to those required to be equipped by RSIA. If a track segment fails either of these analyses, FRA would deny the request, thus requiring PTC system implementation on the line segment. The first analysis, or test, proverbially known as the "alternative route analysis," was initially codified at § 236.1005(b)(4)(i)(A) and subsequently moved to a new § 236.1020.

Under this analysis, the railroad must establish that current or prospective rerouting of PIH materials traffic to one or more alternative track segments is justified. If a railroad seeks to reroute all PIH materials off of a track segment requiring PTC system implementation under the 2008 baseline, and onto a new line, such rerouting may be justified. If this occurs, PTC system implementation on the initial line may not be required if the new line would have substantially the same overall safety and security risk as the initial line, assuming PTC implementation on both lines. If the initial track segment is determined to pose less overall safety and security risks under this analysis, then a PTC system must still be installed. PTC system implementation may also be required on the new line if it meets the five (5) million gross ton of annual traffic threshold and does not qualify under the de minimis exception of the rule.

The second test or analysis that the railroad must satisfy in order to avoid having to install a PTC system on a track segment requiring implementation under the 2008 baseline is the so-called "residual risk test." Under this test, the railroad must show that, without a PTC system, the remaining risk on the track segment—pertaining to events that can be prevented or mitigated in severity by a PTC system—is less than the national average equivalent risk per route mile on track segments required to be equipped with PTC systems due to statutory reasons other than passenger traffic presence. When FRA issued its PTC rule amendments on September 27, 2010, FRA indicated that it was delaying the effective date of 49 CFR § 236.1005(b)(4)(i)(A)(2)(iii), as revised under § 236.1020, pending the completion of a separate rulemaking to establish how residual risk is to be determined.

After FRA issued its PTC final rule on January 15, 2010, and denied reconsideration on July 8, 2010, the Association of American Railroads (AAR) filed a petition for review of the rule with the U.S. Court of Appeals for the District of Columbia Circuit. Once FRA issued its PTC final rule amendments, AAR filed a petition for review of those amendments on October 5, 2010. The court consolidated those two petitions on October 22, 2010.

In its brief, AAR challenged FRA's determination to use 2008 as the baseline year, arguing that it rests on a fundamental legal error and was arbitrary and capricious. After the parties fully briefed the issues, President Barack Obama issued Executive Order 13563 on January 18, 2011 (76 Fed. Reg. 3821 (Jan. 21, 2011)), which outlined a plan to improve regulations and regulatory review. According to the Order, it is intended to reaffirm and build upon governing principles of contemporary regulatory review, including Executive Order 13563, by requiring federal agencies when issuing safety regulations to design the regulations so that they are cost-effective, evidence-based and compatible with economic growth, job creation, and competitiveness. The President's plan recognizes that these principles apply to both new and existing regulations. To that end, Executive Order 13563 requires agencies to review existing significant regulations to determine if they are outmoded, ineffective, insufficient, or excessively burdensome. FRA recognizes that the costs associated with PTC rule compliance outweigh the safety benefits by 20-to-1 and, therefore, it is appropriate to reexamine whether FRA should be requiring the installation of PTC on lines that will not be carrying PIH traffic or regularly schedule passenger service as of December 31, 2015.

FRA believes that ending the litigation in a mutually beneficial manner best suited the interests of the Administration and the litigants. Accordingly, FRA and AAR entered into a settlement agreement on March 2, 2011. The terms and conditions of the settlement agreement included the joint filing of a motion to hold the Petition for Review in abeyance pending the completion of the instant rulemaking. That motion was filed on March 2, 2011, and was granted by the court on March 3, 2011.

The settlement agreement provides that FRA will issue two notices of proposed rulemaking (NPRMs). The first NPRM is to address whether the PTC rule should be amended by eliminating the two aforementioned tests that would potentially require PTC to be installed on track segments not specifically required to be equipped by Congress. The instant NPRM meets this requirement. The settlement agreement provides that, upon the completion of the instant rulemaking proceeding, the parties will determine whether to file a joint motion to dismiss the lawsuit in its entirety. The settlement agreement also states that FRA is to issue a separate NPRM that will address the issues of how to handle en-route failures of PTC equipped trains, circumstances under which a signal system may be removed after PTC installation, and whether yard movements and certain other train movements should qualify for a de minimis exception to the PTC rule. This second NPRM will also address any other issues that might be raised by interested parties in a

properly filed petition for rulemaking under 49 CFR part 211. These issues are not part of this instant NPRM, and FRA is not seeking comment on these issues at this time. The settlement agreement notes that FRA will consider all comments submitted during the rulemaking comment periods on both NPRMs in determining whether to issue amendments to the PTC rule and, if so, the contents of those amendments.

2. **How, by whom, and for what purpose the information is to be used.**

As noted above in the summary section, this information collection submission is a revision to the currently approved information collection associated with the Positive Train Control (PTC) Final Rule that was published on January 15, 2010. This is the first of two information collection submissions associated with proposed rules (NPRMs) that FRA plans to publish to fulfill the settlement agreement reached between FRA and the Association of American Railroads to end AAR's lawsuit. [**Note:** *The main purpose of this new NPRM and Final Rule when published is to reduce implementation costs for railroads. FRA expects the second NPRM and Final Rule will reduce implementation costs even more than the first.*]

The final rule added new Subpart I and accompanying information collection requirements to 49 CFR 236. The revised rule implemented a requirement of the Rail Safety Improvement Act of 2008 (RSIA08) that certain passenger and freight railroads install positive train control (PTC) systems. The final rule included required functionalities of the technology and the means by which it would be certified. The final rule also described the contents of PTC implementation plans required by the statute and contained the proposed process for the submission of those plans for review and approval by FRA.

As noted in its earlier final rule submission, FRA uses the information collected under Subpart H and the new information collected under Subpart I for compliance purposes. FRA uses the information collected to ensure that new or novel signal and train control technologies, essentially electronic or processor-based systems, meet the proposed "performance standard" and work as intended in the U.S. rail environment. These new signal and train control technologies are known as "Positive Train Control" (PTC). The rule "performance standard" provides that any new signal and train control system would meet or exceed the safety performance of the existing system. In other words, new "PTC" products must not degrade railroad safety. Before introduction into revenue service, these new systems – as well as subsystems and components thereof – will be carefully evaluated by FRA to verify that they meet the proposed performance standard. FRA aims to use the information collected to facilitate safety improvements through accelerated introduction of new technology. FRA also plans to carefully review the information collected to ensure that new Positive Train Control (PTC) systems are compatible nationwide.

Railroads are required to furnish FRA with a variety of information regarding “Positive Train Control” technology. Under Subpart A of Part 236, railroads are required to adopt a software management control plan to assure that software used in processor-based signal and train control equipment placed in service is the version intended by the railroad to be in service at each location. FRA uses this information as an audit trail to determine if the correct software is installed at the correct locations for all processor-based signal and train control systems on a railroad. FRA believes that these plans will enhance safety and provide other benefits to the railroad as well.

Under Subpart H, railroads are also required to develop a Railroad Safety Program Plan (RSPP) that serves as the railroad’s principal safety document for all safety-critical products. The RSPP must establish the minimum Product Safety Plan (PSP) requirements that will govern the development and implementation of all products subject to this Subpart. FRA requires railroads to submit their initial RSPPs for FRA review and approval prior to implementation of safety-critical products. FRA intends the RSPP to serve as a guide, as well as to be a formal step-by-step process, which covers the following: identification of all safety requirements that govern operation of a system; evaluation of the total system to identify known or potential safety hazards that may arise over the life cycle of the system; identification of all safety issues during the design phase of the process; elimination or reduction of risk posed by the hazards identified; resolution of safety issues presented; development of a process to track progress; and development of a program of testing and analysis to demonstrate that safety requirements are met. FRA reviews RSPPs and RSPP amendments, which can be made at any time and which involve the same approval procedures that apply with the initial approval of the RSPP, to ensure that all the necessary information is provided and that the proposed new or modified PTC system meets or exceeds the overall safety provided by the old system.

Also, under Subpart H, railroads must submit a Product Safety Plan (PSP). Each PSP must include a complete description of the product and must include system specifications that describe the overall product and identify each component and its physical relationship in the system. FRA examines each PSP to fully understand how various parts relate to one another within a system. In particular, FRA reviews safety-critical functions to determine whether they are designed on the fail-safe principle. Each PSP must also include a description of the operation where the product will be used. FRA uses this information to determine the type of operation on which the product will be used, and the suitability of the product for that type of operation.

Additionally, each PSP must include a concepts operations document containing a description of the product’s functional characteristics and how various components within the system are controlled. FRA uses this information to review the product for completeness of design for safety by comparing the functionalities with those contained in standards for existing signal and train control systems. Furthermore, each PSP must include a safety requirements document that identifies and describes each safety-critical

function of the product. FRA uses this information to determine that appropriate safety concepts have been incorporated into the proposed product. Each PSP must also include a hazard log. This log consists of a comprehensive description of all hazards to be addressed during the life cycle of the product, including the maximum threshold for each hazard. The hazard log addresses safety-relevant hazards, or incidents/failures which affect the safety and risk assumptions of the product. FRA uses this information to ensure that all possible safety-relevant hazards which would have a negative effect on the safety of the product are identified and that mitigating measures are taken to offset the negative effects of these hazards.

Each PSP must also address safety verification and validation procedures, and must include the results of the safety assessment process. FRA believes verification and validation for safety are vital parts of the development of products. The PSP needs to identify the test planning at each stage of development and the levels of rigor applied during the testing process. FRA uses this information to assure the adequacy and coverage of the tests are appropriate. FRA expects the safety assessment process to be clearly stated. FRA examines the safety assessment information for thoroughness, according to the complexity of the product. Furthermore, each railroad in its PSP must include a training, qualification, and designation program for workers who perform inspection, testing, and maintenance tasks involving the product. Overall, FRA uses the information provided in the PSP and PSP amendments to assure that the product is safe; is properly installed, maintained, and tested by qualified personnel; and is functioning throughout the life cycle of the product as intended.

Railroads are also required to retain records. Railroads need to maintain documentation to demonstrate that the product PSP meets the safety requirements of the railroad's RSPP and applicable standards described in this Subpart, including the risk assessment. The risk assessment must contain all initial assumptions for the system that are listed in paragraph (i) of Appendix B, Risk Assessment Criteria. Railroads are required to develop and keep for the life cycle of the product an Operations Maintenance Manual (as specified in § 236.923). Railroads are also required to maintain records which designate persons who are qualified under the railroad's training program to perform safety-related inspection, testing, maintenance, repairing, dispatching, or operating tasks regarding the safety-critical product. After the product is placed in service, railroads are required to maintain a database of safety-relevant hazards on the product which arise or are discovered. All documents and records must be made available for FRA inspection and copying during normal business hours. FRA uses the information provided by these records to fully ensure that processor-based signal and train control systems are safe, and are properly installed, maintained, inspected, and tested by qualified personnel who have complete and current information concerning the product.

Section 236.1005 of **Subpart I** provides flexibility to railroads by permitting requests for temporary rerouting. FRA will review temporary rerouting requests of trains equipped

with a PTC system (as required by this Part) onto a track not equipped with a PTC system and a train not equipped with a PTC system onto a track with a PTC system – whether due to emergencies (for periods of more than 14 days) or planned maintenance (requests must be made 10 days in advance) – to understand the context and details of the rerouting and to determine whether the requested rerouting is necessary and in the interest of public safety. For emergency requests, FRA will review the information collected to ensure that a higher level of safety is maintained during the period of the rerouting. For rerouting due to planned maintenance, FRA will review requests to determine whether a railroad should reroute at all. Whether the request is for emergency or planned maintenance purposes, FRA will review the information collected to ensure that the track segments upon which the train will be rerouted have an absolute block established in advance of each rerouted train movement and that each rerouted train movement does not exceed 59 miles per hour for passenger and 49 miles per hour for freight trains in order to protect both railroad workers and the public at large.

Section 236.1006 details the requirements for equipping locomotives operating in PTC territory. It also provides that movements in excess of 20 miles are authorized until December 31, 2020, subject to restrictions, including that the Class II or Class III railroad must report to FRA progress in equipping the necessary number of locomotives with PTC. FRA reviews these reports by Class II/Class III railroads to monitor their progress in complying with mandatory statutory deadlines for equipping their locomotives with Positive Train Control.

Section 236.1007 requires a PTC railroad that conducts freight or passenger operations at more than 125 miles per hour to have an approved PTC Safety Plan (PTCSP) accompanied by an “HSR-125” document. This speed is the maximum speed for Class 7 track under § 236.307. At these higher speeds, the consequences of a derailment or collision are significantly greater than at lower speeds due to the involved vehicle’s kinetic energy. FRA reviews “HSR-125” documents to ensure the additional safety analysis contained in this document provides suitable evidence to the agency that the PTC system can support a level of safety equivalent to, or better than, the best level of safety of comparable rail service in the United States or a foreign country (where railroads request to use foreign service data in their “HSR-125” document) over the five year period preceding the submission of the PTCSP. FRA also reviews and evaluates the “HSR-125” document to determine that it includes a method to ensure that these high speed lines have the capability to detect incursions, including such hazards as large motor vehicles falling on the track structure from highway bridges, from outside the right of way, as well as the capability of providing warning to trains. For a PTC railroad that conducts freight or passenger operations at more than 150 miles per hour, FRA will review the “HSR-125” document to confirm that it is part of an overall system safety plan approved by the Administrator and that a Rule of Part Applicability governs such extremely high speed operations.



Section 236.1009 spells out PTC procedural requirements and mandates each Class I carrier and each entity providing regularly scheduled intercity or commuter rail passenger transportation to develop and submit by April 16, 2010, a plan for implementing a PTC system by December 31, 2015. PTCIP content requirements are fully delineated in § 236.1011. FRA reviews these PTC Implementation Plans (PTCIPs) to see that the specified contents are included in each PTCIP and to ensure the implementation includes design, testing, potential Verification and Validation, installation, and operation over the PTC system's life cycle. PTCIPs are integral part of the FRA PTC System Certification process, along with a Type Approval number and PTC Safety Plan (PTCSP). FRA examines each PTCIP to confirm that it fully describes the technology that will be employed, how the PTC railroad intends to comply with § 236.1009, how the PTC system provides for interoperability of the system between host and all tenant railroads on the lines required to be equipped with PTC systems under this subpart, and how all the other requirements stipulated in § 236.1011 are met.

Section 236.1013 establishes that, for a PTC system to obtain a Type Approval from FRA, a PTC Development Plan (PTCDP) must be filed in accordance with § 236.1009. FRA reviews the PTCIP and PTCDP contemporaneously in order predetermine and share with the railroad an appropriate course of action to adequately address the various issues specific to the railroad and related to drafting a successful PTC Safety Plan (PTCSP). The PTCDP is the core document that provides the FRA Associate Administrator for Safety sufficient information to determine whether the PTC system proposed for installation by the railroad could meet the statutory requirements for PTC systems prescribed in the RSIA of 2008 and the regulatory requirements under new subpart I.

FRA reviews each PTCDP to ascertain that all requirements stipulated in section 236.1013 are included. Among them are the following: (1) a complete description of the PTC system, including a list of all PTC system components and their physical relationships in the subsystem or system; (2) a description of the railroad operation or categories of operations on which the PTC system is designed to be used, including train movement density (passenger, freight), operating speeds, track characteristics, and railroad operating rules; (3) an operational concepts document, including a list with complete descriptions of all functions which the PTC system will perform to enhance or preserve safety; (4) a document describing the manner in which the PTC architecture satisfies safety requirements; (5) a description of the safety assurance concepts that are to be used for system development, including an explanation of the design principles and assumptions; (6) a preliminary human factors analysis, including a complete description of all human-machine interfaces and the impact of interoperability requirements on the same; (7) an analysis of the applicability to the PTC system of the requirements of subparts A-G of this Part that may no longer apply or are satisfied by the PTC system using an alternative method, and a complete explanation of the manner in which those requirements are otherwise fulfilled; (8) a description of the necessary security measures for the system; (9) a description of target safety levels (e.g., Mean Time To Hazardous

Event (MTTHE) for major subsystems as defined in subpart H), including requirements for system availability and a description of all backup methods of operation and any critical assumptions associated with the target levels; (10) a complete description of how the PTC system will enforce authorities and signal indications; (11) a description of the deviation required under § 236.1029(c), if applicable; and (12) a complete description of how the PTC system will appropriately and timely enforce all integrated hazard detectors in accordance with § 236.1005(c)(3), if applicable.

Section 236.1015 sets forth PTC Safety Plan (PTCSP) content requirements and what each railroad must do to receive a PTC System Certification. FRA carefully scrutinizes each PTCSP to assure that the as-built PTC system fulfills the required statutory PTC functions and is in compliance with the requirements of this Subpart. Each PTCSP must address railroad-specific implementation issues associated with the PTC system identified by the submitted Type Approval. Each PTCSP must include a risk assessment. FRA uses this information as a basis to confirm compliance with the appropriate performance standard. Also, FRA reviews the risk assessment to see that it provides evidence that risks associated with the product have been carefully considered and that steps have been taken to eliminate or mitigate them. Additionally, each PTCSP must address safety Verification and Validation procedures as defined under this Part. FRA believes that Verification and Validation for safety are vital parts of the PTC development process. FRA uses this information to ensure the adequacy and coverage of the tests are appropriate. FRA will only issue a PTC System Certification if the PTCSP receives agency approval. Receipt of a PTC System Certification affirms that the PTC system has been reviewed and approved by FRA in accordance with this Part and meets all of its requirements.

Section 236.1017 requires that each PTCSP must be supported by an independent third party assessment when the Associate Administrator (for Safety) concludes that it is necessary based upon criteria spelled out in § 236.913(g)(2)(vii). If an independent assessment is required, the assessment may apply to the entire system or a designated portion of the system. FRA reviews any third party audits to verify that the minimum requirements outlined in Appendix F to this Part are met.

Section 236.1019 pertains exclusively to exceptions from the rule that trackage over which scheduled intercity and commuter passenger service is provided is considered main line track requiring installation of a PTC system. FRA proposes to consider requests for designation of track over which operations are conducted as “other than main line track” for passenger and commuter railroads, or freight railroads operating jointly with passenger or commuter railroads. Main line track addendums (MTEAs) may be filed as part of the railroad’s PTCIP. FRA reviews MTEAs to ascertain that each one clearly identifies and defines physical boundaries, use, and characterization of the trackage for which exclusion is requested and that a compelling justification, in

accordance with paragraphs (b) or (c) of this section, is provided for each particular segment of track identified.

Section 236.1021 references discontinuances, material modifications, and amendments. In this section, FRA requires agency approval prior to certain PTC system changes. Amendments can add, remove, or update parts of the railroad's PTCIP, PTCDP, or PTCSP. FRA reviews these requests for amendment (RFAs) to ensure that all necessary information is provided to the agency to determine whether agency approval should be granted, including the following: (i) the information listed in § 235.10 of this chapter and any additional information to evaluate the application; (ii) the proposed modifications; (iii) the reasons for each modification; (iv) the changes to the PTCIP, PTCDP, or PTCSP, as applicable; (v) each modification's effect on PTC system safety; (vi) an approximate timetable for filing of the PTCDP, PTCSP, or both, if the amendment pertains to a PTCIP; and (vii) an explanation of whether each change to the PTCSP is planned or unplanned. In making an approval determination, FRA will consider all impacts on public safety prior to approval or disapproval of any request for discontinuance, modification, or amendment.

Section 236.1023 requires PTC product vendors and railroads to notify FRA when any PTC system, subsystem, component, product, or process fails, malfunctions, or otherwise experiences a defect that decreases or eliminates any safety functionality. FRA reviews these notifications to make certain that the cause of such failures, malfunctions, or defects are identified and that corrective actions are taken without undue delay. Until repairs are made, railroads and vendors will be required to take appropriate measures to assure the safety of train movements, roadway workers, and on-track equipment.

Section 236.1029 requires communication of a report to a designated railroad officer when a PTC on-board device on a lead locomotive that is operating in or is to be operated within a PTC system fails or is otherwise cut-out. These reports are used by railroads to ensure necessary safety measures are taken, in particular that the necessary alternative protection of absolute block is established. FRA monitors these reports to verify that appropriate records are kept relating to the occurrence of en route failures.

Section 236.1035 stipulates required information that railroads must provide to FRA before any field testing of an uncertified PTC system, or a product of an uncertified PTC system, or any regression testing of a certified PTC system is conducted. FRA reviews these documents/plans to make informed decisions regarding the safety of testing operations. FRA carefully scrutinizes the data submitted and, based on the results of its review, may impose special conditions on the execution of the testing up to and including the appointment of an FRA test monitor to provide additional oversight to assure the safety of rail operations.

Section 236.1037 specifies records retention requirements. Each railroad with a PTC system required to be installed under this Subpart must maintain at a designated office on the railroad: (1) a current copy of each FRA approved Type Approval, if any, PTCDP, and PTCSP that it holds; (2) adequate documentation to demonstrate that the PTCSP and PTCDP meet the safety requirements of this Subpart, including the risk assessment; (3) an Operations and Maintenance Manual, pursuant to § 236.1039; and (4) training and testing records pursuant to § 236.1043(b). FRA reviews these records for compliance with a performance standard and with the requirements of this new Subpart.

Section 236.1039 requires railroads to catalog and maintain all documents as specified in the PTCDP and PTCSP for the installation, maintenance, repair, modification, inspection, and testing of the PTC system and have them in one Operations and Maintenance Manual. This manual serves as a central reference source and will be used by railroad personnel to safely and smoothly run, maintain, repair, modify, test, and inspect their railroad's PTC system. It will also be used for purposes of inspection by FRA and FRA-certified State inspectors.

Section 236.1041 requires railroads and contractors to establish and implement training and qualifications programs for PTC systems subject to this Subpart. These programs must meet the minimum requirements spelled out in the PTCDP and PCTSP in §§ 236.1039-236.1045, as appropriate, for the following personnel: (1) Persons whose duties include installing, maintaining, repairing, modifying, inspecting, and testing safety-critical elements of the railroad's PTC systems, including central office, wayside, or onboard subsystems; (2) Persons who dispatch train operations (issue or communicate any mandatory directive that is executed or enforced, or is intended to be executed or enforced, by a train control system subject to this subpart); (3) Persons who operate trains or serve as a train or engine crew member subject to instruction and testing under Part 217 of this Chapter, on a train operating in territory where a train control system subject to this subpart is in use; (4) Roadway workers whose duties require them to know and understand how a train control system affects their safety and how to avoid interfering with its proper functioning; and (5) The direct supervisors of persons listed in paragraphs (a)(1) through (a)(4) of this section. FRA inspectors monitor these programs to ensure that all railroad PTC railroad personnel are properly trained to keep their PTC system running safely and smoothly. FRA seeks to prevent under-trained and unqualified people from performing safety critical functions related to a PTC system. The railroad industry's workforce generally does not have thorough knowledge of the operation of PTC equipment and appropriate practices for its operation and maintenance. FRA believes employee training and qualifications on how to properly and safely perform assigned duties are crucial to maintaining safe railroad equipment and a safe rail work environment.

Section 236.1043 requires regular and periodic evaluations of railroads/contractors PTC training programs and retention of training records. Railroads/contractors use this

information as an audit to determine if their PTC training program materials and curriculum are effective and are imparting the specific knowledge, skills, and abilities to accomplish the stated goals of the training program. Railroads/contractors also use this information to determine if the stated goals of the training program reflect the correct and current products and operations. FRA reviews training records to verify that required personnel are properly trained and that new designations of qualified personnel are recorded, as appropriate.

Finally, section 236.1045, section 236.1047, and section 236.1049 set forth the training requirements for office personnel, locomotive engineers and other operating personnel, and roadway workers, respectively. Again, FRA seeks to prevent under-trained and unqualified people from performing safety critical functions related to a PTC system and to ensure that all railroad PTC railroad personnel are properly trained to safely perform assigned duties that are crucial to maintaining safe PTC systems and a safe rail work environment.

In sum, FRA uses the information collected under Subpart H and the information collected under Subpart I to ensure that new or novel Positive Train Control technologies are, at a minimum, as safe as the systems they would replace. This collection of information is a vital means that enables FRA to accomplish its main mission of promoting, enforcing, and enhancing safe rail transportation in this country.

### **3. Extent of automated information collection.**

In keeping with past agency practice and the requirements of the Government Paperwork Elimination Act (GPEA), FRA highly encourages and strongly supports the use of advanced information technology, wherever possible, to reduce burden. In Subpart H of this rule, FRA provides for electronic recordkeeping, or automated tracking systems. Specifically, the results of tests made in compliance with §§ 236.102-236.109; 236.376-236.387; 236.576-236.577; 236.586-236.589; and the records required to be retained under § 236.917(a) may be kept electronically, subject to approval by FRA. Also, the training records required under § 236.923-236.929 may be kept electronically. Furthermore, the hazard log or database of all safety-relevant hazards affecting positive train control/processor-based signal and train control systems may be kept electronically. FRA believes that electronic records are not only convenient but also help to reduce the time and cost burdens experienced by railroads in gathering necessary information.

Also, because railroads have expressed concern that 15 days is not enough time to report an inconsistency of safety-relevant hazards – exceeding the threshold set forth in the Product Safety Plan – to FRA, especially when traditional postal service is used to deliver the report, FRA has decided to allow railroads to fax or e-mail the report required under §236.917(b).

Electronic recordkeeping is also permitted under **Subpart I** under the same terms as in Subpart H. Under § 236.1011, railroads are permitted to submit much of the PTCIP information electronically. FRA expects each PTCIP to include various highly specific and descriptive elements relating to each railroad's infrastructure and operations. FRA recognizes manual assembly of each piece of data into a PTCIP may be exceptionally onerous and time consuming and may make the PTCIP prone to errors. In light of the foregoing, and due to the statutory requirement that Congress be apprised on the progress of the railroad carriers in implementing their PTC systems, FRA believes that electronic submission of much of this information may be warranted and preferred. To facilitate collection of this data, FRA is accepting the submission of this data in electronic format.

In particular, FRA believes that the preferred, least costly, and least error-prone method to comply with § 236.1011 is for railroads to submit an electronic geographic digital system map containing the segment attribute information in shapefile format, which is a data format structure compatible with most Geographic Information System (GIS) software packages. Using a GIS format provides an efficient means for organizing basic transportation-related geographic data to facilitate the input, analysis, and display of transport networks. Railways around the world rely on GIS to manage key information for rail operations, maintenance, asset management, and decision support systems. FRA believes that the railroads may have already identified track segments, and their physical and operational characteristics, in shape file format.

Additionally, the report required under § 236.1029(b)(1) may be made electronically and the records required to be retained under § 236.1037(a) and § 236.1037(c), which pertain to the results of inspections and tests specified in each railroad's PTCSP and PTCDP, may be kept electronically, subject to approval by FRA. Finally, the training records required under § 236.1043-236.1049 may be kept electronically.

To date, FRA's PTC expert estimates that approximately 90 percent of required Subpart I documents have been submitted electronically to the agency. Overall then, approximately 90 percent of the estimated responses are submitted/kept electronically under this rule.

**4. Efforts to identify duplication.**

The information collection requirements concern the introduction of the latest signal and train control systems in this country and facilitate agency fulfillment of a congressional mandate. To our knowledge, these information collection requirements are not duplicated anywhere else.

Similar data are not available from any other source.

**5. Efforts to minimize the burden on small businesses.**

“Small entity” is defined in 5 U.S.C. § 601. Section 601(3) defines a “small entity” as having the same meaning as “small business concern” under § 3 of the Small Business Act. This includes any small business concern that is independently owned and operated, and is not dominant in its field of operation. Section 601(4) includes not-for-profit enterprises that are independently owned and operated, and are not dominant in their field of operations within the definition of “small entities.” Additionally, § 601(5) defines as “small entities” governments of cities, counties, towns, townships, villages, school districts, or special districts with populations less than 50,000.

The U.S. Small Business Administration (SBA) stipulates “size standards” for small entities. It provides that the largest a for-profit railroad business firm may be (and still classify as a “small entity”) is 1,500 employees for “Line-Haul Operating” railroads, and 500 employees for “Short-Line Operating” railroads. See “Table of Size Standards,” U.S. Small Business Administration, January 31, 1996, 13 CFR Part 121; see also NAICS Codes 482111 and 482112.

SBA size standards may be altered by Federal agencies in consultation with SBA, and in conjunction with public comment. Pursuant to the authority provided to it by SBA, FRA has published a final policy, which formally establishes small entities as railroads that meet the line haulage revenue requirements of a Class III railroad. See 68 FR 24891 (May 9, 2003). Currently, the revenue requirements are \$20 million or less in annual operating revenue, adjusted annually for inflation. The \$20 million limit (adjusted annually for inflation) is based on the Surface Transportation Board’s threshold of a Class III railroad carrier, which is adjusted by applying the railroad revenue deflator adjustment. See also 49 CFR Part 1201. The same dollar limit on revenues is established to determine whether a railroad shipper or contractor is a small entity. FRA uses this definition for this rulemaking.

The Initial Regulatory Flexibility Assessment’s (IRFA’s) “universe” of considered entities generally includes only those small entities that can reasonably be expected to be directly regulated by the proposed action. One type of small entity is potentially affected by this proposed rule: railroads.

The level of impact on small railroads will vary from railroad to railroad. Class III railroads will be impacted for one or more of the following reasons: (1) they operate on Class I railroad lines that carry PIH materials and are required to have PTC, in which case they would need to equip the portion of their locomotive fleet that operates on such lines; (2) they operate on Amtrak or commuter rail lines, including freight railroad lines that host such service; (3) they host regularly scheduled intercity or commuter rail transportation; or (4) they have at-grade railroad crossings over lines required by RSIA08 to have PTC. Generally, to the extent that Class III railroads incur costs associated with implementation of PTC, it will be limited to equipping locomotives, and not the wayside.

The proposed rule will apply to small railroads' tracks over which a passenger railroad conducts intercity or commuter operations and locomotives operating on main lines of Class I freight railroads required to have PTC and on railroads conducting intercity passenger or commuter operations. The impact on Class III railroads that operate on Class I railroad lines required to be equipped with PTC will depend on the nature of such operations. Class III railroads often make short moves on Class I railroad lines for interchange purposes. To the extent that their moves do not exceed four per day or 20 miles in length of haul (one way), Class III railroads will be exempt from the requirement to equip the locomotives. However, some Class III railroads operate much more extensively on Class I railroad lines that will be required to have PTC and will have to equip some of their locomotives. It is likely that Class III railroads will dedicate certain locomotives to such service, if they have not done so already. FRA estimates that approximately 55 small railroads will have to equip locomotives with PTC system components because they have trackage rights on Class I freight railroad PIH lines that will be required to have PTC and will not be able to qualify for any of the operational exceptions discussed.

FRA further estimates that 10 small railroads have trackage rights on intercity passenger or commuter railroads or other freight railroads hosting such operations, and will need to equip some locomotives with PTC systems. Half of these will need to equip locomotives anyway, because they also have trackage rights on Class I railroads that haul PIH and would otherwise be required to have PTC. Thus, a total of 60 railroads will need to equip locomotives. FRA estimates that the average small railroad will need to equip four locomotives, at a per railroad cost of \$55,000 each, totaling \$220,000, and that the total cost for all 60 small railroads which will need to equip locomotives would be \$13,200,000. The annual maintenance cost would be 15% of that total, equaling \$33,000 per railroad or \$1,980,000 total for all small railroads. FRA requests comments regarding this cost estimate.

At rail-to-rail crossings where at least one of the intersecting tracks allows operating speeds in excess of 40 miles per hour, the approaching non-PTC line must have a permanent maximum speed limit of 20 miles per hour and either have some type of positive stop enforcement or a split-point derail incorporated into the signal system on the non-PTC route.. FRA believes that the cost of the derail would be borne by the PTC-equipped railroad, and that slowing to 20 miles per hour reflects current practice at most diamond crossings. FRA estimates that ten crossings exist, on five small railroads with two crossings each, where the newly burdened small railroad will be slowing to 20 miles per hour from a higher track speed. FRA estimates that the average traffic on the newly burdened route is two trains per day, and that the cost to slow from a higher track speed is \$30 per train, for a total cost of \$60 per crossing per day, a per railroad cost of \$120 per day, and a total national cost for all ten small railroads of \$600 per day and an annual cost of \$43,800 per railroad and a total for all small railroads of \$219,000 per year. FRA



estimates that only five railroads will be affected by this provision, and that they will be railroads not affected by the requirement to equip locomotives, because railroads with equipped locomotives could simply use the PTC system and avoid the requirement to slow down. This analysis yields a total of 65 affected small entities that may be impacted by implementation of the proposed rule. FRA requests comments regarding this estimate of small entities potentially impacted.

RSIA08 requires that a Positive Train Control (PTC) system be installed on certain main lines of each railroad required to file a PTC Implementation Plan. According to the statute, a main line is – with certain exceptions – a Class I railroad track over which 5,000,000 or more gross tons of railroad traffic is transported annually. By referencing Class I railroads and not referencing any other type of railroad, FRA believes that Congress did not intend, as a general matter, to have smaller freight railroads incur the tremendous costs involved in PTC system implementation and operation unless they own track over which is provided regularly scheduled intercity or commuter rail passenger transportation.

Class III railroads that host intercity or commuter rail service will need to file implementation plans, whether or not they directly procure or manage installation of the PTC system. FRA believes that, although the implementation plan must be jointly filed by the small host railroad and passenger tenant railroad, the cost of these plans will be borne by the passenger railroads. FRA believes that only one (1) small entity is likely to have PTC installed on its lines. The implementation plan is likely to be an extension of the passenger railroad's plan, and the marginal cost will be the cost of tailoring the plan to the host railroad, which will be borne by the passenger railroad, and maintaining copies of the plan at the host railroad, which FRA estimates to be approximately \$1,000 per year.

FRA is unaware of any significant alternatives that would meet the intent of RSIA08 and that would minimize the economic impact on small entities. FRA is exercising its discretion to provide the greatest flexibility for small entities available under RSIA08 by proposing to allow operations of unequipped trains operated by small entities on the main lines of Class I railroads, and by defining main track on passenger railroads to avoid imposing undue burdens on small entities. The definition of passenger main track was adopted based on PTC Working Group recommendations that were backed strongly by representatives of small railroads. The provisions permitting operations of unequipped trains of Class I railroads exceeded the maximum flexibility for which the PTC Working Group could reach a consensus. FRA requests comments on this finding of no significant alternative related to small entities.

The process by which this proposed rule was developed provided outreach to small entities. As noted in the answer to question number eight (8) below, this notice was developed in consultation with industry representatives via the Railroad Safety Advisory

Committee (RSAC), which includes small railroad representatives. From January to April 2009, FRA met with the entire PTC Working Group five times over the course of twelve days. This PTC Working Group established a task force to focus on issues specific to short line and regional railroads. The discussions yielded many insights, and this proposed rule takes into account the concerns expressed by small railroads during the deliberations.

FRA believes that this proposed rule's new Subpart I requirements and accompanying burden will primarily affect seven (7) Class I railroads and 23 passenger/commuter railroads, only one of which is considered a small entity. FRA has taken steps to reduce burden, where possible. For example, under the procedural requirements of § 236.1009, the proposed Type Approval process provides certain benefits to respondents. If a railroad submits a PTC Development Plan (PTCDP) describing a PTC system, and the PTC system receives a Type Approval, then other railroads intending to use the same PTC system without variances may, in accordance with paragraph (b)(1), simply rely on the Type Approval number without having to file a separate PTCDP. While the railroad filing the PTCDP must expend resources to develop and submit the PTCDP, all other railroads using the same PTC system would not. This will not only provide significant cost and time savings for a number of railroads, but also will remove a significant level of redundancy from the approval process that is currently inherent in subpart H.

In sum, FRA believes that the information collection requirements and corresponding burden associated with this proposed rule will not have a significant impact on a substantial number of small entities.

## **6. Impact of less frequent collection of information.**

If the information required under Subpart H and Subpart I were not collected, or collected less frequently, FRA believes its ability to maintain rail safety in the United States might be seriously jeopardized. New, more cost-effective (processor-based) signal and train control systems, which can increase current safety levels, are now emerging. These new systems can also improve train travel times and make rail transportation more attractive for greater numbers of people, as well as reduce the time required to ship goods. In order to fulfill its primary mission as well as the statutory mandate under the Railroad Safety Improvement Act of 2008 (RSIA08), FRA needs to be able to make accurate and informed determinations that proposed "Positive Train Control (PTC)" systems meet a crucial high-level performance standard before carriers design and deploy these systems. It is essential, therefore, that FRA obtain extensive documentation of the safety of "PTC" systems, as well as subsystems and components thereof, before any "PTC" system is actually placed in revenue service in order to confirm that rail carriers meet this high-level performance standard. FRA demands that such systems provide for positive train separation and be compatible nationwide. The required information, particularly the risk assessment data, can be used by FRA as a basis to measure and identify the likelihood of

a hazardous event and the potential for the system to function as intended, as well as to confirm compliance with the performance standard.

If FRA were unable to collect the required information or to collect it less frequently than stipulated, it would not meet the RSIA08 mandate and there might be more incidents of train-to-train collisions like the ones in Graniteville, South Carolina, and Chatsworth, California, with multiple accompanying injuries and fatalities. In the case of a high speed accident between two trains, the results could be catastrophic. Scores of people, including train crews, passengers, and bystanders, could be killed or injured. In the case of a train(s) carrying hazardous materials, there could also be severe damage to the environment and substantial harm to surrounding communities. Moreover, if FRA were unable to collect the required information and carefully review it, "PTC" systems might be put into place or installed at unauthorized/improper locations. This could result in other accidents/incidents, including train derailments, with corresponding casualties that could have been prevented.

Without the required information, FRA could not be assured that railroads establish and implement a PTC training program. Also, if FRA were unable to collect this information, FRA would have no way to know that essential personnel responsible for installing, operating, maintaining, modifying, inspecting, repairing, and testing safety-critical elements of systems were properly trained to carry out their assigned duties regarding vital PTC systems. Without the ability to oversee the adoption and implementation of each railroad's required PTC training program and the proper training of its personnel, there would most likely be increased numbers of accidents/incidents, such as those mentioned above, with even greater numbers of injuries and fatalities to train crews, roadway and other rail (signal) workers, and members of the traveling public. The core part of FRA's safety program is to reduce, to the greatest extent possible, the annual number of rail collisions and derailments that cause loss of life and serious injuries, severe damage to rail equipment, and damage to the natural environment and to surrounding communities whenever a rail accident/incident occurs.

In sum, the collection of information serves to meet the RSIA08 congressional mandate and advances the goal of enhancing rail safety nationwide. In this, it assists both DOT and FRA in fulfilling the top Departmental/agency goal.

7. **Special circumstances.**

Under § 236.917(b), railroads may have to report information to FRA more often than quarterly if the frequency of the safety-relevant hazards exceeds the threshold set forth in the Product Safety Plan (PSP). Once the product is placed in service, railroads must report the inconsistency to the FRA Director, Office of Safety Assurance and Compliance, at agency headquarters within 15 days of discovery. Railroads are also

required to provide a final report to the FRA Director, Office of Safety Assurance and Compliance, on the results of the analysis and countermeasures taken to reduce the frequency of the safety-relevant hazard(s) below the threshold set forth in the PSP when the problem is resolved.

Additionally, under § 236.917(a), railroads must retain at a designated office, for the life cycle of the product (about 25 years), the following: (i) Adequate documentation to demonstrate that the PSP meets the safety requirements of the Railroad's Safety Program Plan (RSPP) and applicable standards in this subpart, including the risk assessment; (ii) An Operations and Maintenance Manual, pursuant to § 236.919; and (iii) training records pursuant to § 236.923(b).

Furthermore, under § 236.1005(g)(1)(i) of new Subpart I, written or telephonic notification to the applicable FRA Regional Administrator of temporary emergency rerouting of trains equipped with a PTC system onto a track not equipped with a PTC system and of trains not equipped with a PTC system onto a track equipped with a PTC system must be made within one business day of the beginning of the rerouting. Also, under § 236.1005(g)(2)(ii), rerouting requests of trains equipped with a PTC system onto a track not equipped with a PTC system and of trains not equipped with a PTC system onto a track equipped with a PTC system due to planned maintenance must be filed with the applicable FRA Regional Administrator no less than 10 days prior to the planned rerouting. Both requirements are to ensure rail safety and prevent avoidable collisions and derailments.

Moreover, under § 236.1037(d), if the frequency of safety-relevant hazards exceeds the threshold set forth in either the PTCDP or PTCSP, reports of the inconsistency must be made in writing by mail, facsimile, e-mail, or hand delivery to the FRA Director of Safety Assurance and Compliance within 15 days of discovery. Again, this is to ensure rail safety.

Finally, under § 236.1043(b), employers must retain training records of those employees who are qualified under this section until new designations are recorded, or for at least one year after such persons leave applicable service. These records are necessary so that FRA inspectors can verify that employees are properly trained and qualified to perform their duties related to the installation, repair, modification, inspection, and testing of PTC systems and safety-critical elements of the railroad's PTC system. These records are also essential for FRA/NTSB investigators in the event of a rail accident/incident.

All other reporting and recordkeeping requirements are in compliance with this section.

## **8. Compliance with 5 CFR 1320.8.**

In keeping with the terms of the settlement agreement reached by FRA and the Association of American Railroads on March 2, 2011, FRA is issuing this Notice of

Proposed Rulemaking in the Federal Register on August 24, 2011, (see 76 FR XXXXX), and is requesting public comment as required by the Paperwork Reduction Act of 1995.

FRA will respond to comments received about this NPRM and associated collection of information in the final rule and its associated information collection.

**9. Payments or gifts to respondents.**

No payment or gifts will be made to respondents.

**10. Assurance of confidentiality.**

While FRA continues to believe that there is no need at this time to substantially revise [§ 209.11](#), FRA has proposed in Subpart I to require an additional document to assist FRA in efficiently and correctly reviewing confidential information. Under § 209.11, a redacted and an un-redacted copy of the same document must be submitted. When FRA review is required to determine whether confidentiality should be afforded, FRA personnel must painstakingly compare side-by-side the two versions to determine what information has been redacted. This process may result in information for which exemption from disclosure is being requested to be misidentified. To reduce this burden and to ensure that the intellectual property of the railroad and their suppliers is appropriately guarded, FRA requires that any material submitted for confidential treatment under Subpart I and § 209.11 include a third version that would indicate, without fully obscuring, the redacted portions for which protection is requested. For instance, to indicate without obscuring the plan's redacted portions, the railroad may use the highlighting, underlining, or strikethrough functions of its word processing program. This document will also be treated as confidential under § 209.11. FRA could amend § 209.11 to include this requirement. However, FRA does not believe it to be necessary at this time.

FRA is allowing the submission of an adequate GIS shapefile to fulfill some of the PTCIP content requirements under § 236.1011. However, with respect to requesting confidential treatment of specific information contained in a GIS shapefile, which includes primarily map data, FRA recognizes that visually blocking out the information would defeat the purpose. For instance, a black dot over a particular map location, or a black line over a particular route, would actually reveal the location. Thus, FRA expects that a railroad seeking confidential treatment for portions of a GIS shapefile will submit three versions of the shapefile to comply with paragraph (e). Alternatively, a single shapefile can include three separate layers each representing the three levels of confidentiality, with specific instructions indicating which elements are being displayed and how to handle the file for confidentiality purposes. FRA also expects that the version for public consumption would not include the information for which the railroad is seeking confidential treatment.

As noted in the previous final rule information collection submission, NICTD strongly urged FRA to only accept PTCIPs that provided full public disclosure of all the information needed to obtain components from multiple suppliers, including message interface standards, functional allocation for each subsystem, and safety allocation for each subsystem (e.g. identifying which hazards and safety-critical assumptions are made for each subsystem). NICTD asserted that it was not requesting proprietary information for any subsystems, but merely the ability to utilize alternative sources to fulfill the subsystem requirements within the overall PTC system. According to NICTD, this would substantially improve the likelihood of commuter railroads being able to obtain components from the multiple suppliers that are currently more than willing to develop components that will safely operate with other systems. Moreover, NICTD stated that this would facilitate compliance with interoperability requirements, as the knowledge gained would simplify development of interoperable systems and reduce procurement delays. Amtrak agrees on the need for full public disclosure and asserts that it should be able to review and comment on the PTCIPs of the Class I railroads.

FRA understands these positions, and plans to address them in the near future.

**11. Justification for any questions of a sensitive nature.**

This information collection does not contain any questions of a personal or sensitive nature.

**12. Estimate of burden hours for information collected.**

*Note: Burden estimates were obtained by consulting the FRA Positive Train Control Technical Expert (Chief Electrical Engineer) who is most knowledgeable of and intimately involved in both the Part 236 requirements under Subpart H and the new requirements under Subpart I. According to him, 16 more railroads than originally estimated met the criteria under the PTC regulation under Subpart I and responded to the rule's requirements. FRA has correspondingly increased the respondent universe from 30 railroads to 46 railroads in Subpart I.*

*According to the latest available agency data, there are currently approximately 728 railroads operating in the United States.*

**§ 229.135 – Event Recorders**

(b) *Equipment requirements.* Event recorders must monitor and record data elements required under this paragraph with at least the accuracy required of the indicators displaying any of the required elements to the engineer.

(3) A lead locomotive, a lead manned helper locomotive, and a controlling remotely distributed power locomotive, other than a DMU or MU locomotive, originally ordered on or after October 1, 2006 or placed in service on or after October 1, 2009, shall be equipped with an event recorder with a certified crashworthy event recorder memory module that meets the requirements of Appendix D of this part. The certified event recorder memory module shall be mounted for its maximum protection. (Although other mounting standards may meet this standard, an event recorder memory module mounted behind and below the top of the collision posts and above the platform level is deemed to be mounted "for its maximum protection.") The event recorder shall record, and the certified crashworthy event recorder memory module shall retain, the following data elements: \* \* \*

(xxv) Safety-critical control data routed to the locomotive engineer's display with which the engineer is required to comply, specifically including text messages conveying mandatory directives, and maximum authorized speed. The format, content, and proposed duration for retention of such data must be specified in the Product Safety Plan or PTC Safety Plan (PTCSP) submitted for the train control system under subparts H or I, respectively, of Part 236 of this chapter, subject to FRA approval under this paragraph. If it can be calibrated against other data required by this Part, such control data may, at the election of the railroad, be retained in a separate certified crashworthy memory module.

(4) A DMU locomotive and an MU locomotive originally ordered on or after October 1, 2006 or placed in service on or after October 1, 2009, shall be equipped with an event recorder with a certified crashworthy event recorder memory module that meets the requirements of Appendix D of this part. The certified event recorder memory module shall be mounted for its maximum protection. (Although other mounting standards may meet this standard, an event recorder memory module mounted behind the collision posts and above the platform level is deemed to be mounted "for its maximum protection.") The event recorder shall record, and the certified crashworthy event recorder memory module shall retain, the following data elements: \* \* \*

(xxi) Safety-critical train control data routed to the locomotive engineer's display with which the engineer is required to comply, specifically including text messages conveying mandatory directives, and maximum authorized speed. The format, content, and proposed duration for retention of such data shall be specified in the product safety plan or PTC Safety Plan submitted for the train control system under subparts H or I, respectively, of part 236 of this chapter, subject to FRA approval under this paragraph. If it can be calibrated against other data required by this part, such train control data may, at the election of the railroad, be retained in a separate certified crashworthy memory module.

*The burden for these provisions are included under that of § 236.907 relating to the Product Safety Plan (PSP) and under § 236.1015 relating to the PTC Safety Plan. Consequently, there is no additional burden associated with these requirements.*

§ 234.275 - Processor-based systems

The Product Safety Plan in accordance with 49 CFR § 236.907—or a PTC Development Plan and PTC Safety Plan required to be filed in accordance with 49 CFR §§ 236.1013 and 236.1015—must explain how the performance objective sought to be addressed by each of the particular requirements of this subpart is met by the product, why the objective is not relevant to the product’s design, or how the safety requirements are satisfied using alternative means. Deviation from those particular requirements is authorized if an adequate explanation is provided, making reference to relevant elements of the applicable plan, and if the product satisfies the performance standard set forth in §236.909 of this chapter.

*The burden for the first part of this requirement regarding the Product Safety Plan (PSP) is included under that of § 236.907. The burden for PTCDPs and PTCSPs are included under that of § 236.1013 and § 236.1015, respectively. Consequently, there is no additional burden associated with it.*

Regarding the second part of the above requirement, FRA estimates that approximately 25 letters explaining deviations of a product from the requirements of this subpart will be received by the agency. It is estimated that it will take approximately four (4) hours to compose each letter, making reference to the relevant elements of the PSP. Total annual burden for this requirement is 100 hours.

Respondent Universe:

20  
railroads

Burden time per response:

4 hours

Frequency of Response:

On occasion

Annual number of Responses: 25 letters

Annual Burden: 100 hours



**Calculation:** 25 letters x 4 hrs. = 100 hours

Deviation from the requirement of § 234.203 (Control circuits) that circuits be designed on a fail-safe principle must be separately justified at the component, subsystem, and system level using the criteria of § 236.909 of this chapter.

*The burden for this requirement is included under § 236.907. Consequently, there is no additional burden associated with it.*

Any processor-based system, subsystem, or component subject to this part, which is not subject to the requirements of part 236, subpart H or I, of this chapter but which provides safety-critical data to a signal or train control system must be included in the software management control plan requirements as specified in § 236.18 of this chapter.

*The burden for this requirement is included under § 236.18. Consequently, there is no additional burden associated with it.*

§ 236.0 - Applicability, minimum requirements, and penalties.

(c)(2) On and after [insert date 24 months from publication of the final rule in the **Federal Register**], where a passenger train is permitted to operate at a speed of 60 or more miles per hour, or a freight train is permitted to operate at a speed of 50 or more miles per hour, a block signal system complying with the provisions of this part shall be installed, unless an FRA approved PTC system meeting the requirements of this part for the subject speed and other operating conditions is installed.

*The burden for this requirement is included under that of § 236.1009. Consequently, there is no additional burden associated with this requirement.*

(d)(1) Prior to December 31, 2015, where any train is permitted to operate at a speed of 80 or more miles per hour, an automatic cab signal, automatic train stop, or automatic train control system complying with the provisions of this part shall be installed, unless an FRA approved PTC system meeting the requirements of this part for the subject speed and other operating conditions is installed.

*The burden for this requirement is included under that of § 236.1009. Consequently, there is no additional burden associated with this requirement.*

(e) Nothing in this section authorizes the discontinuance of a block signal system, interlocking, traffic control system, automatic cab signal, automatic train stop or automatic train control system, cab signal system, or PTC system, without approval by the FRA under part 235 of this title. However, a railroad may apply for approval of discontinuance or material modification of a signal or train control system in connection

with a request for approval of a Positive Train Control Development Plan (PTCDP) or Positive Train Control Safety Plan (PTCSP) as provided in subpart I of this part.

*The burden for this requirement is included under that of § 236.1009. Consequently, there is no additional burden associated with this requirement.*

§ 236.18 - Software management control plan

Within six (6) months of June 6, 2005, each railroad must develop and adopt a software management control plan for its signal and train control systems. A railroad commencing operations after June 6, 2005, must adopt a software management control plan for its signal and train control systems prior to commencing operations. Within 30 months of the completion of the software management control plan, each railroad must have fully implemented such plan.

For purposes of this section, “software management control plan” means a plan designed to ensure that the proper and intended software version for each specific site and location is documented (mapped) and maintained through the life cycle of the system. The plan must further describe how the proper software configuration is to be identified and confirmed in the event of replacement, modification, or disarrangement of any part of the system.

FRA estimates that no Class I railroads, 50 percent of Class II railroads, and 25 percent of Class III railroads will be affected by the above requirement. Consequently, there are approximately 184 railroads that will be affected and that will need to prepare and adopt software management control plans. It is estimated that it will take each railroad approximately 6,440 hours to develop and complete its software management control plan. This includes the time to prepare the plan (approximately 40 hours for each railroad), develop procedures (approximately 160 hours for each railroad), and conduct the necessary site inventory (a total of 2,080 sites that will take approximately three (3) hours each). However, since this is a one-time burden and since OMB approvals are normally for three years, the average burden time of 6,440 hours per plan must be divided by three to calculate the annual burden of 2,150 hours per plan (2,146 hours rounded off). Total annual burden then for this requirement is 395,600 hours.

Respondent Universe:

184  
railroads

Burden time per response:

2,150

hours

Frequency of Response: One-time  
Annual number of Responses: 184 plans  
Annual Burden: 395,600 hours

**Calculation:** 184 plans x 2,150 hours = 395,600 hours

### **Subsequent Years**

Whenever necessary, railroads will update their software management control plans. Approximately half of the original 184 railroads or approximately 90 railroads will fall into this category. Of these 90, approximately 20 railroads will revise their software management control plans each year and submit them to FRA. It is estimated that these revisions will not be major and that each updated software management control plan will take approximately 1.50 hours to complete and send to FRA. Total annual burden then for this requirement is 30 hours.

Respondent Universe: 90 railroads

Burden time per response: 1.50 hours

Frequency of Response: Annually  
Annual number of Responses: 20 updated plans  
Annual Burden: 30 hours

**Calculation:** 20 updated plans x 1.50 hours = 30 hours

Total annual burden then for this entire requirement is 398,630 hours (395,600 + 30).

### **§ 236.110 - Results of tests**

Results of tests made in compliance with §§ 236.102 to 236.109, inclusive; 236.376 to 236.387, inclusive; 236.576; 236.577; 236.586 to 236.589, inclusive; and 236.917(a) must be recorded on pre-printed forms provided by the railroad or by electronic means, subject to approval by the FRA Associate Administrator for Safety. These records must show the name of the railroad, place, and date, equipment tested, results of tests, repairs, replacements, adjustments made, and condition in which the apparatus was left. Each record must be: (1) signed by the employee making the test, or electronically coded or identified by the number of the automated test equipment (where applicable); (2) unless otherwise noted, filed in the office of a supervisory official having jurisdiction; and (3) available for inspection and replication by FRA and FRA certified-State inspectors.

Results of tests made in compliance with § 236.587 must be retained for 92 days. Results of tests made in compliance with § 236.917(a) must be retained as follows: (1) Results of tests that pertain to installation or modification must be retained for the life cycle of the equipment tested and may be kept in any office designated by the railroad; and (2) Results of periodic tests required for maintenance or repair of the equipment tested must be retained until the next record is filed but in no case less than one year. Results of all other tests listed in this section must be retained until the next record is filed but in no case less than one year.

Electronic or automated tracking systems used to meet the requirements contained in paragraph (a) of this section must be capable of being reviewed and monitored by FRA at any time to ensure the integrity of the system. FRA's Associate Administrator for Safety may prohibit or revoke a railroad's authority to utilize an electronic or automated tracking system in lieu of pre-printed forms if FRA finds that the electronic or automated tracking system is not properly secured; is inaccessible to FRA, FRA certified-State inspectors or railroad employees requiring access to discharge their assigned duties; or fails to adequately track and monitor the equipment. The Associate Administrator for Safety will provide the affected railroad with a written statement of the basis for his or her decision prohibiting or revoking the railroad from utilizing an electronic or automated tracking system.

*The burden for this requirement is covered under OMB No. 2130-0006. Consequently, there is no additional burden associated with this requirement.*

**Subpart H -  
Safety of  
Processor-  
Based Signal  
and Control**

## Systems

### § 236.901 - Purpose and scope

This subpart does not exempt a railroad from compliance with the requirements of subparts A through G of this part, except to the extent a Product Safety Plan (PSP) explains to the FRA Associate Administrator for Safety's satisfaction the following: (i) How the objectives of any such requirements are met by the product; (ii) Why the objectives of any such requirements are not relevant to the product; or (iii) How the requirement is satisfied using alternative means.

*The burden for this requirement is included under § 236.907. Consequently, there is no additional burden associated with this requirement.*

### § 236.905 - Railroad Safety Program Plan (RSPP)

- A. A railroad subject to this subpart shall develop a Railroad Safety Program Plan (RSPP), subject to FRA approval, that serves as its principal safety document for all safety-critical products. The RSPP must establish the minimum Product Safety Plan (PSP) requirements that will govern the development and implementation of all products subject to this subpart, consistent with the provisions contained in § 236.907.

The railroad's RSPP must address, at a minimum, the following subject areas:

(1) *Requirements and concepts.* The RSPP must require a description of the preliminary hazard analysis, including: (i) A complete description of methods used to evaluate a system's behavioral characteristics; (ii) A complete description of risk assessment procedures; (iii) The system safety precedence followed; and (iv) The identification of the safety assessment process.

(2) *Design for verification and validation.* The RSPP must require the identification of validation and verification methods for the preliminary safety analysis, initial development process, and future incremental changes, including standards to be used in the validation and verification process, consistent with Appendix C to this part. The RSPP must require that references to any non-published standards be included in the PSP.

(3) *Design for human factors.* The RSPP must require a description of the process used during product development to identify human factors issues and develop design requirements which address those issues.

(4) *Configuration management control plan.* The RSPP must specify requirements for configuration management for all products to which this subpart applies.

Each railroad must submit a petition for approval of a RSPP in triplicate to the Associate Administrator for Safety, FRA, 1200 New Jersey Avenue, S.E., Mail Stop 25, Washington, D.C. 20590. The petition must contain a copy of the proposed RSPP and the name, title, address, and telephone number of the railroad's primary contact person for review of the petition.

This is a one-time requirement. FRA estimates that only six (6) Class II and Class III railroads will be affected by the above requirement. It is estimated that each RSPP will be approximately 50 pages long. It is estimated that it will take approximately 400 hours (8 hours per page) to meet all the above requirements and for the assigned railroad person to write the petition, and complete the RSPP. However, since this is a one-time burden and since OMB approvals are normally for three years, the average burden time of 400 hours per RSPP must be divided by three to calculate the annual burden of 135 hours per plan (133 hours rounded off). Total annual burden for this requirement is 810 hours.

Respondent Universe:

78  
railroads

Burden time per response:

135  
hours

Frequency of Response:

One-time

Annual number of Responses:

6 plans/RSPPs

Annual Burden:

810 hours

**Calculation:** 6 plans/RSPPs x 135 hours = 810 hours

(i) Normally within 180 days of receipt of a petition for approval of an RSPP, FRA:  
(i) Grants the petition, if FRA finds that the petition complies with applicable requirements of this subpart, attaching any special conditions to the approval of the petition as necessary to carry out the requirements of this subpart; (ii) Denies the petition, setting forth the reasons for denial; or (iii) Requests additional information.

FRA estimates that additional information will be requested by the agency in approximately one (1) case per year. It is estimated that the required document will be approximately 50 pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the document. Thus, it is estimated that it will take each railroad approximately 400 hours to complete the required document and send it to FRA. Total annual burden for this requirement is 400 hours.

Respondent Universe:

78  
railroads

Burden time per response:

400  
hours

Frequency of Response:

On occasion

Annual number of Responses: 1 document

Annual Burden: 400 hours

**Calculation:** 1 document x 400 hours = 400 hours

- B. Railroads must obtain FRA approval for any modification to their RSPP which affects a safety-critical requirement of a PSP. Other modifications do not require FRA approval.

Petitions for FRA approval of RSPP modifications are subject to the same procedures as petitions for initial RSPP approval, as specified in paragraph (c) of this section (§ 236.905). In addition, such petitions must identify the proposed modifications to be made, the reason for the modification(s), and the effect of the modification(s) on safety.

FRA estimates that approximately one (1) request for modification to a Railroad Safety Program Plan (RSPP) will be made by railroads each year under the above requirement.

Again, it is estimated that the RSPP modified document will be approximately 50 pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each RSPP modification request/amendment. Thus, it is estimated that it will take each railroad approximately 400 hours to complete each RSPP amendment and send it to FRA. Total annual burden for this requirement is 400 hours.

Respondent Universe:

78  
railroads

Burden time per response:

400  
hours

Frequency of Response:

On occasion

Annual number of Responses:

1 RSPP modification request/amendment

Annual Burden:

400 hours

**Calculation:**

1 RSPP modification request/amendment x  
400 hours = 400 hours

The total burden for this entire requirement is 1,610 hours (810 + 400 + 400).

**§ 236.907 - Product Safety Plan (PSP)**

The Product Safety Plan must include the following: (1) A complete description of the product, including a list of all product components and their physical relationship in the subsystem or system; (2) A description of the railroad operation or categories of operations on which the product is designed to be used, including train movement density, gross tonnage, passenger train movement density, hazardous materials volume, railroad operating rules, and operating speeds; (3) An operational concepts document, including a complete description of the product functionality and information flows; (4) A safety requirements document, including a list with complete descriptions of all functions which the product performs to enhance or preserve safety; (5) A document describing the manner in which product architecture satisfies safety requirements; (6) A hazard log consisting of a comprehensive description of all safety-relevant hazards to be addressed during the life cycle of the product, including maximum threshold limits for each hazard (for unidentified hazards, the threshold shall be exceeded at one occurrence); (7) A risk assessment, as prescribed in § 236.909 and Appendix B to this part; (8) A hazard mitigation analysis,



including a complete and comprehensive description of all hazards to be addressed in the system design and development, mitigation techniques used, and system safety precedence followed, as prescribed by the applicable RSPP; (9) A complete description of the safety assessment and validation and verification processes applied to the product and the results of these processes, describing how subject areas covered in Appendix C to this part are either: addressed directly, addressed using other safety criteria, or are not applicable; (10) A complete description of the safety assurance concepts used in the product design, including an explanation of the design principles and assumptions; (11) A human factors analysis, including a complete description of all human-machine interfaces, a complete description of all functions performed by humans in connection with the product to enhance or preserve safety, and an analysis in accordance with Appendix E to this part or in accordance with other criteria if demonstrated to the satisfaction of the Associate Administrator for Safety to be equally suitable; (12) A complete description of the specific training of railroad and contractor employees and supervisors necessary to ensure the safe and proper installation, implementation, operation, maintenance, repair, inspection, testing, and modification of the product; (13) A complete description of the specific procedures and test equipment necessary to ensure the safe and proper installation, implementation, operation, maintenance, repair, inspection, testing, and modification of the product. These procedures, including calibration requirements, must be consistent with or explain deviations from the equipment manufacturer's recommendations; (14) An analysis of the applicability of the requirements of subparts A-G of this part to the product that may no longer apply or are satisfied by the product using an alternative method, and a complete explanation of the manner in which those requirements are otherwise fulfilled (see § 234.275 of this chapter, and § 236.901(c)); (15) A complete description of the necessary security measures for the product over its life-cycle; (16) A complete description of each warning to be placed in the Operations and Maintenance Manual identified in § 236.919 and of all warning labels required to be placed on equipment as necessary to ensure safety; (17) A complete description of all initial implementation testing procedures necessary to establish that safety-functional requirements are met and safety-critical hazards are appropriately mitigated; (18) A complete description of: (i) All post-implementation testing (validation) and monitoring procedures, including the intervals necessary to establish that safety-functional requirements, safety-critical hazard mitigation processes, and safety-critical tolerances are not compromised over time, through use, or after maintenance (repair, replacement, adjustment) is performed; and (ii) Each record necessary to ensure the safety of the system that is associated with periodic maintenance, inspections, tests, repairs, replacements, adjustments, and the system's resulting conditions, including records of component failures resulting in safety-relevant hazards (see § 236.917(e)(3)); (19) A complete description of any safety-critical assumptions regarding availability of the product, and a complete description of all backup methods of operation; and (20) A complete description of all incremental and pre-defined changes (see paragraphs (b) and (c) of this section).

Predefined changes are not considered design modifications requiring an entirely new

safety verification process, a revised PSP, and informational filing or petition for approval in accordance with § 236.915. However, the risk assessment for the product must demonstrate that operation of the product, as modified by any predefined change, satisfies the minimum performance standard.

The PSP must identify configuration/revision control measures designed to ensure that safety-functional requirements and safety-critical hazard mitigation processes are not compromised as a result of any such change.

Incremental changes are planned product version changes described in the initial PSP where slightly different specifications are used to allow the gradual enhancement of the product's capabilities. Incremental changes shall require verification and validation to the extent the changes involve safety-critical functions. Changes classified as maintenance require validation.

The PSP must specify all contractual arrangements with hardware and software suppliers for immediate notification of any and all safety critical software upgrades, patches, or revisions for their processor-based system, sub-system, or component, and the reasons for such changes from the suppliers, whether or not the railroad has experienced a failure of that safety critical system, sub-system, or component.

The PSP must specify the railroad's procedures for action upon notification of a safety critical upgrade, patch, or revision for this processor-based system, sub-system, or component, and until the upgrade, patch, or revision has been installed; and such action shall be consistent with the criterion set forth in §236.915(d) as if the failure had occurred on that railroad.

The PSP must identify configuration/revision control measures designed to ensure that safety-functional requirements and safety-critical hazard mitigation processes are not compromised as a result of any such change, and that such change can be audited.

Product suppliers entering into contractual arrangements for product support described in a PSP must promptly report any safety-relevant failures and previously unidentified hazards to each railroad using the product.

FRA estimates that approximately five (5) Product Safety Plans (PSPs) will be developed by railroads/suppliers to meet the above requirement. FRA estimates that each PSP will amount to approximately 1,200 pages. On average, FRA estimates that it will take approximately 19,200 hours (16 hours per page) to develop each PSP and take appropriate action in notifying FRA. However, since this is a one-time burden and since OMB approvals are normally for three years, the average burden time of 19,200 hours per PSP must be divided by three to calculate the annual burden of 6,400 hours per plan. Total annual burden for this requirement is 32,000 hours.

Respondent Universe:

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Burden time per response:

6,400  
hours

Frequency of Response:

Annual number of Responses:

5 plans (PSPs)

One-time

Annual Burden:

32,000 hours

**Calculation:** 5 plans x 6,400 hours = 32,000 hours

§ 236.909 - Minimum Performance Standard

(a) The safety analysis included in the railroad’s PSP must establish with a high degree of confidence that introduction of the product will not result in risk that exceeds the previous condition. The railroad shall determine, prior to filing its petition for approval or informational filing, that this standard has been met and shall make available the necessary analyses and documentation as provided in this subpart.

*The burden for this requirement is included under § 236.907 above.*

(b) With respect to any FRA review of a PSP, the Associate Administrator for Safety independently determines whether the railroad’s safety case establishes with a high degree of confidence that introduction of the product will not result in risk that exceeds the previous condition. In evaluating the sufficiency of the railroad’s case for the product, the Associate Administrator for Safety considers, as applicable, the factors pertinent to evaluation of risk assessments, listed in § 236.913(g)(2).

FRA estimates that approximately two (2) petitions for review and approval of product safety plans (PSPs) will be submitted by the railroads to the agency under the above requirement. It is estimated that it will take approximately 19,200 hours to prepare each petition/PSP and mail them to FRA. Again, each document will be approximately 1,200 pages and will take approximately 16 hours per page to complete. Total annual burden for this requirement is 38,400 hours.

Respondent Universe:

5  
railroads

Burden time per response:

19,200  
hours

Frequency of Response:

On occasion

Annual number of Responses:

2 petitions/PSPs

Annual Burden:

38,400 hours

**Calculation:** 2 petitions/PSPs x 19,200 hrs. = 38,400 hours

(c) A full risk assessment performed under this subpart must address the safety risks affected by the introduction, modification, replacement, or enhancement of a product. This includes risks associated with the previous condition which are no longer present as a result of the change, new risks not present in the previous condition, and risks neither newly created nor eliminated whose nature (probability of occurrence or severity) is nonetheless affected by the change.

*The burden for this requirement is included under § 236.907 and that of § 236.909(b) above. Consequently, there is no additional burden associated with this requirement.*

(d) An abbreviated risk assessment may be used in lieu of a full risk assessment to show compliance with the performance standard if: (i) No new hazards are introduced as a result of the change; (ii) Severity of each hazard associated with the previous condition does not increase from the previous condition; and (iii) Exposure to such hazards does not change from the previous condition.

An abbreviated risk assessment supports the finding required by paragraph (a) of this section if it establishes that the resulting Mean Time To Hazardous Event (MTTHE) for the proposed product is greater than or equal to the MTTHE for the system, component or method performing the same function in the previous condition. This determination must be supported by credible safety analysis sufficient to persuade the Associate Administrator for Safety that the likelihood of the new product's MTTHE being less than the MTTHE for the system, component, or method performing the same function in the previous condition is very small.

Alternatively, an abbreviated risk assessment supports the finding required by paragraph (a) of this section if: (i) The probability of failure for each hazard of the product is equal to or less than the corresponding recommended Specific Quantitative Hazard Probability Ratings classified as more favorable than "undesirable" by AREMA Manual Part 17.3.5 (Recommended Procedure for Hazard Identification and Management of Vital Electronic/Software-Based Equipment Used in Signal and Train Control Applications) or, in the case of a hazard classified as undesirable, the Associate Administrator for Safety concurs that mitigation of the hazard within the framework of the electronic system is not practical and the railroad proposes reasonable steps to undertake other mitigation. The Director of the Federal Register approves the incorporation by reference of the entire AREMA Communications and Signal Manual, Volume 4, Section 17, Quality Principles (2005) in this section in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.; (ii) The product is developed in accordance with: (A) AREMA Manual Part 17.3.1 (Communications and Signal Manual of Recommended Practices, Recommended Safety Assurance Program for Electronic/Software Based Products Used in Vital Signal Applications); (B) AREMA Manual Part 17.3.3 (Communications and Signal Manual of

Recommended Practices, Recommended Practice for Hardware Analysis for Vital Electronic/Software-Based Equipment Used in Signal and Train Control Applications); (C) AREMA Manual Part 17.3.5 (Communications and Signal Manual of Recommended Practices, Recommended Practice for Hazard Identification and Management of Vital Electronic/Software-Based Equipment Used in Signal and Train Control Applications); (D) Appendix C of this subpart; and (iii) Analysis supporting the PSP suggests no credible reason for believing that the product will be less safe than the previous condition.

*The burden for this requirement is included under § 236.907 and that of § 236.909(b) above. Consequently, there is no additional burden associated with this requirement.*

(e) Risk assessment techniques, including both qualitative and quantitative methods, are recognized as providing credible and useful results for purposes of this section if they apply to the following:

(1) The total risk assessment must have a supporting sensitivity analysis. The analysis must confirm that the risk metrics of the system are not negatively affected by sensitivity analysis input parameters including, for example, component failure rates, human factor error rates, and variations in train traffic affecting exposure. In this context, “negatively affected” means that the final residual risk metric does not exceed that of the base case or that which has been otherwise established through MTTHE target. The sensitivity analysis must document the sensitivity to worst case failure scenarios.

FRA estimates that approximately five (5) sensitivity analyses will be completed under the above requirement. FRA estimates that each sensitivity analysis will amount to approximately 20 pages and that it will take approximately eight (8) hours to gather the necessary information and complete each page. Thus, it is estimated that each sensitivity analysis will take approximately 160 hours to complete. Total annual burden for this requirement is 800 hours.

Respondent Universe:

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Burden time per response:

160  
hours

Frequency of Response:

On occasion

Annual number of Responses: 5 sensitivity analyses

Annual Burden: 800 hours

**Calculation:** 5 sensitivity analyses x 160 hours = 800 hours

(e)(2) For the previous condition and for the life-cycle of the product, risk levels must be expressed in units of consequences per unit of exposure. (i) In all cases exposure must be expressed as total train miles traveled per year over the relevant railroad infrastructure. Consequences must identify the total cost, including fatalities, injuries, property damage, and other incidental costs, such as potential consequences of hazardous materials involvement, resulting from preventable accidents associated with the function(s) performed by the system. (ii) In those cases where there is passenger traffic, a second risk metric must be calculated, using passenger-miles traveled per year as the exposure, and total societal costs of passenger injuries and fatalities, resulting from preventable accidents associated with the function(s) performed by the system, as the consequences. *The burden for this requirement is incorporated in the risk assessment in each PSP and thus included in the burden for § 236.907 and that of § 236.909(b) above. Consequently, there is no additional burden associated with this requirement.*

(e)(3) If the description of railroad operations for the product required by § 236.907(a)(2) involves changes to the physical or operating conditions on the railroad prior to or within the expected life cycle of the product subject to review under this subpart, the previous condition must be adjusted to reflect the lower risk associated with systems needed to maintain safety and performance at higher speeds or traffic volumes. In particular, the previous condition must be adjusted for assumed implementation of systems necessary to support higher train speeds as specified in §236.0, as well as other changes required to support projected increases in train operations. The following specific requirements apply:

(i) If the current method of operation would not be adequate under §236.0 for the proposed operations, then the adjusted previous condition must include a system as

required under §236.0, applied as follows:

(A) The minimum system where a passenger train is operated at a speed of 60 or more miles per hour, or a freight train is operated at a speed of 50 or more miles per hour, shall be a traffic control system; (B) The minimum system where a train is operated at a speed of 80 or more miles per hour, but not more than 110 miles per hour, shall be an automatic cab signal system with automatic train control; and (C) The minimum system where a train is operated at a speed of more than 110 miles per hour shall be a system determined by the Associate Administrator for Safety to provide an equivalent level of safety to systems required or authorized by FRA for comparable operations.

(ii) If the current method of operation would be adequate under §236.0 for the proposed operations, but the current system is not at least as safe as a traffic control system, then the adjusted previous condition must include a traffic control system in the event of any change that results in: (A) An annual average daily train density of more than twelve trains per day; or (B) An increase in the annual average daily density of passenger trains of more than four trains per day.

(iii) Paragraph (e)(3)(ii)(A) above shall apply in all situations where train volume will exceed more than 20 trains per day but shall not apply to situations where train volume will exceed 12 trains per day but not exceed 20 trains per day, if in its Product Safety Plan (PSP) the railroad makes a showing sufficient to establish, in the judgment of the Associate Administrator for Safety, that the current method of operation is adequate for a specified volume of traffic in excess of twelve trains per day, but not more than 20 trains per day, without material delay in the movement of trains over the territory and without unreasonable expenditures to expedite those movements when compared with the expense of installing and maintaining a traffic control system.

(e)(4) In the case review of a PSP that has been consolidated with a proceeding pursuant to part 235 of this subchapter (*see* section 236.911(b) of this part), the base case shall be determined as follows:

(i) If FRA determines that discontinuance or modification of the system should be granted without regard to whether the product is installed on the territory, then the base case shall be the conditions that would obtain on the territory following the discontinuance or modification. (NOTE: This is an instance in which the base case is posited as greater risk than the actual (unadjusted) previous condition because the railroad would have obtained relief from the requirement to maintain the existing signal or train control system even if no new product had been proffered.)

(ii) If FRA determines that discontinuance or modification of the system should be



denied without regard to whether the product is installed on the territory, then the base case shall remain the previous condition (unadjusted).

(iii) If, after consideration of the application and review of the PSP, FRA determines that neither paragraph (e)(4)(i) nor paragraph (e)(4)(ii) should apply, FRA will establish a base case that is consistent with safety and in the public interest.

*The burden for this requirement is included in § 236.907 and § 236.909(b) above. Consequently, there is no additional burden associated with this requirement.*

The burden for this entire requirement is 39,200 hours (38,400 + 800).

#### § 236.911 - Exclusions

(a) Products designed in accordance with subparts A through G of this part which are not in service but are developed or are in the developmental stage prior to March 7, 2005, may be excluded upon notification to FRA by June 6, 2005, if placed in service by March 7, 2008. Railroads may continue to implement and use these products and components from these existing products.

*Since it has been more than three years since the final rule related to Subpart H was published in the **Federal Register**, railroads can no longer submit exclusion notifications to FRA. Consequently, there is no burden associated with this requirement.*

A railroad may at any time elect to have products that are excluded made subject to this subpart by submitting a PSP as prescribed in § 236.913 and otherwise complying with this subpart.

The requirements of this subpart do not apply to existing office systems and future deployments of existing office system technology. However, a subsystem or component of an office system must comply with the requirements of this subpart if it performs safety-critical functions within, or affects the safety performance of, a new or next-generation train control system. For purposes of this section, “office system” means a centralized computer-aided train-dispatching system or centralized traffic control board.

Changes or modifications to products otherwise excluded from the requirements of this subpart by this section are not excluded from the requirements of this subpart if they result in a degradation of safety or a material increase in safety-critical functionality. Products excluded by this section from the requirements of this subpart remain subject to subparts A through G of this part as applicable.

*Since the above requirement is voluntary and railroads are loath to impose burdens on*

themselves, FRA estimates that it will receive zero (0) PSPs under the above provision. Consequently, there is no additional burden associated with this requirement.

§ 236.913 - Filing and Approval of PSPs.

(a) A PSP must be prepared for each product covered by this subpart. A joint PSP must be prepared when: (1) The territory on which a product covered by this subpart is normally subject to joint operations, or is operated upon by more than one railroad; and (2) The PSP involves a change in method of operation.

Out of the total number of PSPs submitted to the agency, FRA estimates that it will receive approximately one (1) Joint PSP with the accompanying notification. It is estimated that each Joint PSP will be approximately 1,600 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page. Thus, it is estimated that it will take approximately 25,600 hours to complete each joint PSP and accompanying notification. Total annual burden for this requirement is 25,600 hours.

Respondent Universe:

6  
railroads

Burden time per response:	25,600 hours
Frequency of Response:	On occasion
Annual number of Responses:	1 Joint PSP/notification
Annual Burden:	25,600 hours

**Calculation:** 1 Joint PSP/notification x 25,600 hrs. =  
25,600 hours

(b) Depending on the nature of the proposed product or change, the railroad must submit either an informational filing or a petition for approval. Submission of a petition for approval is required for PSPs or PSP amendments concerning installation of new or next-generation train control systems.

All other actions that result in the creation of a PSP or PSP amendment require an informational filing and are handled according to the procedures outlined in paragraph (c) of this section. Applications for discontinuance and material modification of signal and train control systems remain governed by parts 235 and 211 of this chapter; and petitions subject to this section may be consolidated with any relevant application for administrative handling.

FRA estimates that it will receive approximately six (6) informational filings/petitions for approval under the above requirement. It is estimated that it will take approximately eight (8) hours to complete each cover letter and that each modification to the PSP will be approximately 240 pages long and take approximately eight (8) hours per page to gather the required information and complete. Thus, it is estimated that it will take approximately 1,928 hours to complete each informational filing/approval petition and mail it to FRA. Total annual burden for this requirement is 11,568 hours.

Respondent Universe:	6 railroads
Burden time per response:	1,928 hours

Frequency of Response:	On occasion
Annual number of Responses:	6 filings/approval petitions
Annual Burden:	11,568 hours

**Calculation:** 6 filings/approval petitions x 1,928 hrs. = 11,568 hours

(c) The following procedures apply to PSPs and PSP amendments which do not require submission of a petition for approval, but rather require an informational filing: (1) Not less than 180 days prior to planned use of the product in revenue service as described in the PSP or PSP amendment, the railroad must submit an informational filing to the Associate Administrator for Safety, FRA, 1200 New Jersey Avenue, S.E., Mail Stop 25, Washington, D.C. 20590. The informational filing must provide a summary description of the PSP or PSP amendment, including the intended use of the product, and specify the location where the documentation as described in § 236.917(e)(1) is maintained.

*The burden for this requirement is included under § 236.913(b) above.*

(2) Within 60 days of receipt of the informational filing, FRA: (i) Acknowledges receipt of the filing; (ii) Acknowledges receipt of the informational filing and requests further information; or (iii) Acknowledges receipt of the filing and notifies the railroad, for good cause, that the filing will be considered as a petition for approval as set forth in paragraph (d) of this section, and requests such further information as may be required to initiate action on the petition. Examples of good cause, any one of which is sufficient, include: the PSP describes a product with unique architectural concepts; the PSP describes a product that uses design or safety assurance concepts considered outside existing accepted

practices (see Appendix C); and the PSP describes a locomotive-borne product that commingles safety-critical train control processing functions with locomotive operational functions. In addition, good cause would include any instance where the PSP or PSP amendment does not appear to support its safety claim of satisfaction of the performance standard, after FRA has requested further information as provided in (c)(2)(ii) of this section.

FRA estimates that it will request further information in approximately two (2) instances under the above requirement. It is estimated that each additional document will be approximately 100 pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page. Thus, it is estimated that it will take approximately 800 hours to complete the additional document and send it to FRA. Total annual burden for this requirement is 1,600 hours.

Respondent Universe:

6  
railroads

Burden time per response:

800  
hours

Frequency of Response:

On occasion

Annual number of Responses:

2 data calls/additional documents

Annual Burden:

1,600 hours

**Calculation:** 2 data calls x 800 hrs. = 1,600 hours

(d) The following procedures apply to PSPs and PSP amendments which require submission of a petition for approval: (1) *Petitions for approval involving prior FRA consultation.* (i) The railroad may file a Notice of Product Development with the Associate Administrator for Safety not less than 30 days prior to the end of the system design review phase of product development and 180 days prior to planned implementation, inviting FRA to participate in the design review process and receive periodic briefings and updates as needed to follow the course of product development. At a minimum, the Notice of Product Development must contain a summary description of the product to be developed and a brief description of goals for improved safety.

*The burden for this requirement is included under § 236.913(b) above. Consequently, there is no additional burden associated with it.*

(ii) Within 15 days of receipt of the Notice of Product Development, the Associate Administrator for Safety either acknowledges receipt, or acknowledges and requests more information.

FRA estimates that it will request more information in approximately six (6) cases under the above requirement. It is estimated that each additional document will be approximately two (2) pages long and that it will take approximately eight (8) hours to gather all the necessary information and complete each page. Thus, it will take approximately 16 hours to complete the additional documents and sent them to FRA. Total annual burden for this requirement is 96 hours.

Respondent Universe:

6  
railroads

Burden time per response:

16  
hours

Frequency of Response:

On occasion

Annual number of Responses:

6 data calls/additional documents

Annual Burden:

96 hours

**Calculation:** 6 data calls x 16 hrs. = 96 hours

(iii) If FRA concludes the Notice of Product Development contains sufficient information, the Associate Administrator for Safety determines the extent and nature of the assessment and review necessary for final product approval. FRA may convene a technical consultation as necessary to discuss issues related to the design and planned development of the product.

FRA estimates that it will convene approximately six (6) technical consultations under this requirement where information will be communicated verbally by railroad representatives. FRA will most likely meet with railroad signal supervisors and product consultants. It is estimated each consultation will take approximately 120 hours. Total annual burden for this requirement is 600 hours.

Respondent Universe:

6

railroads

Burden time per response:

120  
hours

Frequency of Response:	On occasion
Annual number of Responses:	6 consultations
Annual Burden:	720 hours

**Calculation:** 6 consultations x 120 hrs. = 720 hours

(iv) Not less than 60 days prior to use of the product in revenue service, the railroad must file with the Associate Administrator for Safety a petition for final approval. FRA estimates that it will receive approximately six (6) petitions for final approval under this requirement. It is estimated that each final approval petition will be approximately two (2) pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page. Thus, it will take approximately 16 hours to complete each petition for final approval and send it to FRA. Total annual burden for this requirement is 96 hours.

Respondent Universe:

6  
railroads

Burden time per response:

16  
hours

Frequency of Response:	On occasion
Annual number of Responses:	6 final approval petitions
Annual Burden:	96 hours

**Calculation:** 6 final approval petitions x 16 hrs. = 96 hours

(v) Within 30 days of receipt of the petition for final approval, the Associate Administrator for Safety either acknowledges receipt or acknowledges receipt and requests more information.

*The burden for this requirement is included under that of § 236.913(d)(ii) above. Consequently, there is no additional burden associated with this requirement.*

(vi) Whenever possible, FRA acts on the petition for final approval within 60 days of its filing by either granting it or denying it. If FRA neither grants nor denies the petition for approval within 60 days, FRA advises the petitioner of the projected time for decision and conducts any further consultations or inquiries necessary to decide the matter.

*The burden for this requirement is included under that of § 236.913(d)(iii) above. Consequently, there is no additional burden associated with this requirement.*

(2) *Other petitions for approval.* The following procedures apply to petitions for approval of PSPs which do not involve prior FRA consultation as described in paragraph (d)(1) of this section: (i) Not less than 180 days prior to use of a product in revenue service, the railroad must file with the Associate Administrator for Safety a petition for approval.

*FRA estimates that it will receive zero (0) petitions for special approval under the above requirement. Consequently, there is no additional burden associated with this requirement.*

(ii) Within 60 days of receipt of the petition for approval, FRA either acknowledges receipt, or acknowledges receipt and requests more information.

*Since FRA estimates that it will receive zero (0) petitions for special approval under the above requirement, there will be no need for the agency to request any additional information. Consequently, there is no additional burden associated with this requirement.*

(e) Interested parties may submit to FRA information and views pertinent to FRA's consideration of an informational filing or petition for approval. FRA considers comments to the extent practicable within the periods set forth in this section. In a proceeding consolidated with a proceeding under part 235 of this title, FRA considers all comments received.

FRA estimates that it will receive approximately seven (7) comments pertaining to informational filings and petitions for approval. The comments will most likely be written and take the form of a letter and document. It is estimated that each comment will be approximately 30 pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page. Thus, it is estimated that it will take approximately 240 hours to complete each comment and send it to FRA. Total annual burden for this requirement is 1,680 hours.

Respondent Universe:

Public/  
railroad  
commu  
nity

Burden time per response:

240  
hours

Frequency of Response:	On occasion
Annual number of Responses:	7 comments/letters
Annual Burden:	1,680 hours

**Calculation:** 7 comments/letters x 240 hrs. = 1,680 hours

(f) A railroad may file a petition for approval prior to completion of field testing of the product. The petition for approval should additionally include information sufficient for FRA to arrange monitoring of the tests. The Associate Administrator for Safety may approve a petition for approval contingent upon successful completion of the test program contained in the PSP or hold the petition for approval pending completion of the tests.

*The burden for this requirement is included in §236.913(b) above. Consequently, there is no additional burden associated with it.*

(h) The PSP must be supported by an independent third party assessment of the product when FRA concludes it is necessary based on consideration of the following factors:

(i) Those factors listed in subparagraphs (g)(2)(i) through (g)(2)(vii) of this section;

(ii) The sufficiency of the assessment or audit previously conducted at the election of a supplier or railroad; and (iii) Whether applicable requirements of subparts A through G of this Part are satisfied.

As used in this section, “independent third party” means a technically competent entity responsible to and compensated by the railroad (or an association on behalf of one or more railroads) that is independent of the supplier of the product. An entity that is owned or controlled by the supplier, that is under common ownership or control with the supplier, or that is otherwise involved in the development of the product is not considered



“independent” within the meaning of this section. FRA may maintain a roster of recognized technically competent entities as a service to railroads selecting reviewers under this section; however, a railroad is not limited to entities currently listed on any such roster.

The third party assessment must, at a minimum, consist of the activities and result in the production of documentation meeting the requirements of Appendix D to this part. However, when requiring an assessment pursuant to this section, FRA specifies any requirements in Appendix D to this part which the agency has determined are not relevant to its concerns and, therefore, need not be included in the assessment. The railroad must make the final assessment report available to FRA upon request.

FRA estimates that approximately one (1) third party assessment will be completed under this requirement. It is estimated that each third party assessment will be approximately 100 pages long and that it will take a five (5) person team approximately 1,040 hours (208 hours each x 5 persons ) to complete each page of the assessment. Thus, it is estimated that it will take approximately 104,000 hours to complete the assessment and produce the necessary report. Total annual burden for this requirement is 104,000 hours.

Respondent Universe:

6  
railroads

Burden time per response:

104,000  
hours

Frequency of Response:

One-time

Annual number of Responses:

1 third party final assessment report

Annual Burden:

104,000 hours

**Calculation:** 1 third party assessment report x 104,000 hrs. = 104,000 hours

(i) A railroad may submit an amendment to a PSP at any time in the same manner as the initial PSP. Notwithstanding the otherwise applicable requirements found in this section and § 236.915, changes affecting the safety-critical functionality of a product may be made prior to the submission and approval of the PSP amendment as necessary in order to mitigate risk.

FRA estimates that approximately 15 amendments will be submitted under the above

requirement. It is estimated that each amendment will be approximately 20 pages long and that it will take approximately eight (8) hours per page to gather the necessary information, complete the amendment, and submit it to FRA. Total annual burden for this requirement is 2,400 hours.

Respondent Universe:

6  
railroads

Burden time per response:

160  
hours

Frequency of Response:

On occasion

Annual number of Responses:

15 amendments

Annual Burden:

2,400 hours

**Calculation:** 15 amendments x 160 hrs. = 2,400 hours

(j) Field testing of a product may be conducted prior to approval of a PSP by the submission of an informational filing by a railroad. The FRA will arrange to monitor the tests based on the information provided in the filing, which must include: (i) A complete description of the product; (ii) An operational concepts document; (iii) A complete description of the specific test procedures, including the measures that will be taken to protect trains and on-track equipment; (iv) An analysis of the applicability of the requirements of subparts A-G of this part to the product that will not apply during testing; (v) The date testing will begin; (vi) The location of the testing; and (vii) A description of any effect the testing will have on the current method of operation. FRA may impose such additional conditions on this testing as may be necessary for the safety of train operations. Exemptions from regulations other than those contained in this part must be requested through waiver procedures in part 211 of this chapter.

FRA estimates that approximately six (6) field testing documents/informational filings will be submitted under the above requirement. It is estimated that each field testing/information filing document will be approximately 400 pages long and that it will take approximately eight (8) hours per page to gather the necessary information and complete the field testing document. Thus, it will take approximately 3,200 hours to complete each field testing document, and submit it to FRA. Total annual burden for this requirement is 19,200 hours.

Respondent Universe:

6  
railroads

Burden time per response:

3,200  
hours

Frequency of Response:	On occasion
Annual number of Responses:	6 field testing/informational filing docs.
Annual Burden:	19,200 hours

**Calculation:** 6 field testing/informational filing docs. x 3,200 hrs. = 19,200 hours

The burden for this entire requirement is 166,960 hours (25,600 + 11,568 + 1,600 + 96 + 720 + 96 + 1,680 + 104,000 + 2,400 + 19,200).

§ 236.917 - Retention of records.

(a) The railroad must maintain at a designated office on the railroad: (i) For the life cycle of the product, adequate documentation to demonstrate that the PSP meets the safety requirements of the railroad's RSPP and applicable standards in this subpart, including the risk assessment; (ii) An Operations and Maintenance Manual, pursuant to § 236.919; and (iii) Training records pursuant to § 236.923(b). Results of inspections and tests specified in the PSP must be recorded as prescribed in § 236.110. Contractors of the railroad must maintain at a designated office training records pursuant to §236.923(b).

*The burden for the first part of this requirement is included under that of § 236.905 and that of § 236.907. Consequently, there is no additional burden associated with this part of the above requirement.*

*The burden for the second part of this requirement is included under that of § 236.919. Consequently, there is no additional burden associated with this part of the above requirement.*

Regarding the results of inspections and test specified in the PSP and that must be recorded as prescribed in § 236.110, FRA estimates that three documents or records will be kept by railroads/contractors under this part of the above requirement. The first document/record will involve testing approximately 5,000 locomotives four times a year, which will then take eight (8) hours to complete. Thus, the first document will take approximately 160,000 hours to complete (5,000 locomotives x 4 times p/yr. x 8 hours). The second document will involve testing approximately 5,000 locomotives two times a

year, which will take approximately 16 hours to complete. Thus, the second document will also take approximately 160,000 hours to complete (5,000 locomotives x 2 times p/yr. x 16 hours). The third document will involve 500 miles of track and 10 way devices that will take eight (8) hours to test/record. Thus, the third document will take approximately 40,000 hours to complete (500 track miles x 10 way devices x 8 hours). Total annual burden for this requirement is 360,000 hours.

Respondent  
Universe:

6  
railroads

Burden time per response:

160,000  
hours/1  
60,000  
hours/4  
0,000  
hours

Frequency of Response: On occasion  
Annual number of Responses: 3 documents/records  
Annual Burden: 360,000 hours

**Calculation:** 1 document/record x 160,000 hrs. + 1 document/record x 160,000 hrs. + 1 document/record x 40,000 hrs. = 360,000 hours

(b) After the product is placed in service, the railroad must maintain a database of all safety-relevant hazards as set forth in the PSP and those that had not been previously identified in the PSP. If the frequency of the safety-relevant hazards exceeds the threshold set forth in the PSP (see § 236.907(a)(6)), then the railroad must: (1) Report the inconsistency in writing (by mail, facsimile, e-mail, or hand delivery to the Director, Office of Safety Assurance and Compliance, Federal Railroad Administration, 1200 New Jersey Ave., S.E., Mail Stop 25, Washington, D.C. 20590), within 15 days of discovery. Documents that are hand-delivered must not be enclosed in an envelope; (2) Take prompt countermeasures to reduce the frequency of the safety-relevant hazard(s) below the threshold set forth in the PSP; and (3) Provide a final report to the FRA Director, Office of Safety Assurance and Compliance, on the results of the analysis and countermeasures taken to reduce the frequency of the safety-relevant hazard(s) below the threshold set forth in the PSP when the problem is resolved.

FRA estimates that it will receive approximately one (1) report under the above requirement. It is estimated that it will take approximately eight (8) hours to prepare the initial report, another eight (8) hours to take prompt mitigating countermeasures, another 80 hours to fix the problems/eliminate the safety-relevant hazards, and eight (8) more hours to prepare the final report. Total annual burden for this requirement is 104 hours.

Respondent Universe:

6  
railroads

Burden time per response:

104  
hours

Frequency of Response:

On occasion

Annual number of Responses: 1 report

Annual Burden:

104 hours

**Calculation:** 1 report x 104 hrs. = 104 hours

The burden for this entire requirement is 360,104 hours (360,000 + 104).

§ 236.919 - Operations and Maintenance Manual

(a) The railroad must catalog and maintain all documents as specified in the PSP for the installation, maintenance, repair, modification, inspection, and testing of the product and have them in one Operations and Maintenance Manual, readily available to persons required to perform such tasks and for inspection by FRA and FRA certified state inspectors.

The required Operations and Maintenance Manual (OMM) will initially be included in the PSP. However, FRA estimates that six (6) OMM updates will be completed each year and that it will take approximately 40 hours to gather the necessary information and complete each update. Total annual burden for this part of the requirement is 240 hours.

Respondent  
Universe:

6  
railroads

Burden time per response:

40  
hours

Frequency of Response: On occasion  
Annual number of Responses: 6 OMM updates  
Annual Burden: 240 hours

**Calculation:** 6 OMM updates x 40 hrs. = 240 hours

(b) Plans required for proper maintenance, repair, inspection, and testing of safety-critical products must be adequate in detail and must be made available for inspection by FRA and FRA certified state inspectors where such products are deployed or maintained. They must identify all software versions, revisions, and revision dates. Plans must be legible and correct.

This is a one-time requirement that involves another set of tests. FRA estimates that approximately six (6) plans for proper maintenance, repair, inspection, and testing of safety-critical products will be completed under the above requirement. Each plan will involve testing 5,000 locomotives four times a year, which will take approximately eight (8) hours to complete each test. Thus, it will take approximately 160,000 hours to gather the necessary information and complete each plan (5,000 locomotives x 4 times p/yr. x 8 hours). However, since this is a one-time requirement and since OMB approvals are usually for three years, the burden of 160,000 hours must be divided by three to be an accurate annual burden. Thus, it is estimated that it will take railroads approximately 53,335 hours (rounded off) complete each plan. Total annual burden for this requirement is 320,010 hours.

Respondent Universe:

6  
railroads

Burden time per response:

53,335  
hours

Frequency of Response:		On occasion
Annual number of Responses:	6 plans	
Annual Burden:		320,010 hours

**Calculation:** 6 plans x 53,335 hrs. = 320,010 hours

(c) Hardware, software, and firmware revisions must be documented in the Operations and Maintenance Manual according to the railroad’s configuration management control plan and any additional configuration/revision control measures specified in the PSP.

FRA estimates that approximately six (6) hardware, software, and firmware revisions/modifications will be documented in the Operation and Maintenance Manual under the above requirement. It is estimated that it will take each railroad approximately 6,440 hours to prepare and document each hardware, software, and firmware revision. Total annual burden for this requirement is 38,640 hours.

Respondent Universe:		6
		railroads

Burden time per response:		6,440
		hours

Frequency of Response:		On occasion
Annual number of Responses:	6 revisions (hardware/software/firmware)	
Annual Burden:		38,640 hours

**Calculation:** 6 revisions x 6,440 hrs. = 38,640 hours

(d) Safety-critical components, including spare equipment, must be positively identified, handled, replaced, and repaired in accordance with the procedures specified in the PSP.

*The burden for this requirement is included under that of § 236.919(c) above. Consequently, there is no additional burden associated with this requirement.*

The burden for this entire requirement is 358,890 hours (240 + 320,010 + 38,640).

## **TRAINING**

### § 236.921-Training and qualification program, general

(a) Employers must establish and implement training and qualification programs for products subject to this subpart. These programs must meet the minimum requirements set forth in the PSP and in §§ 236.923 through 236.929 as appropriate, for the following personnel: (1) Persons whose duties include installing, maintaining, repairing, modifying, inspecting, and testing safety-critical elements of the railroad's products, including central office, wayside, or onboard subsystems; (2) Persons who dispatch train operations (issue or communicate any mandatory directive that is executed or enforced, or is intended to be executed or enforced, by a train control system subject to this subpart); (3) Persons who operate trains or serve as a train or engine crew member subject to instruction and testing under part 217 of this chapter, on a train operating in territory where a train control system subject to this subpart is in use; (4) Roadway workers whose duties require them to know and understand how a train control system affects their safety and how to avoid interfering with its proper functioning; and (5) The direct supervisors of persons listed in paragraphs (a)(1) through (a)(4) of this section.

FRA estimates that approximately six (6) railroads will establish and implement training and qualifications programs for products subject to this part. It is estimated that it will take approximately 400 hours to establish and implement training programs under this provision. Total annual burden for this requirement is 2,000 hours.

Respondent Universe:

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Burden time per response:

400  
hours

Frequency of Response:		On occasion
Annual number of Responses:	6 training programs	
Annual Burden:		2,400 hours

**Calculation:** 6 training programs x 400 hrs. = 2,400 hours

(b) The employer's program must provide training for persons who perform the functions described in paragraph (a) of this section to ensure that they have the necessary knowledge and skills to effectively complete their duties related to processor-based signal and train control equipment.

*The burden for roadway workers training program is included in OMB No. 2130-0539. Consequently, there is no additional burden associated with this part of the requirement.* Railroad signalmen and dispatchers will also have to be trained. FRA estimates that there are approximately 300 signalmen and 20 dispatchers who will be trained under this requirement. It is estimated that these employees will be trained in groups or classes and that there will be approximately 20 railroad employees in each training session/class. Consequently, there will be approximately 15 training sessions/classes for signalmen and one (1) training session/class for dispatchers. Each class will be conducted or lead by a consultant. FRA further estimates that each training session/class for signalmen will last approximately 40 hours and that each training session/class for dispatchers will last approximately 20 hours. Total annual burden for this requirement is 12,400 hours.

Respondent Universe:

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Burden time per response:

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r  
s

Frequency of Response:	On occasion
Annual number of Responses:	300 trained signalmen + 20 trained dispatchers
Annual Burden:	12,400 hours

**Calculation:** 300 trained signalmen x 40 hrs. + 20 trained dispatchers x 20 hrs. = 12,400 hours

The burden for this entire requirement is 14,800 hours (2,400 + 12,400).

§ 236.923 - Task Analysis and basic requirements

- (a) As part of the program required by § 236.921, the railroad must, at a minimum:
- (1) Identify the specific goals of the training program with regard to the target population (craft, experience level, scope of work, etc.), task(s) and desired success rate;
  - (2) Based on a formal task analysis, identify the installation, maintenance, repair, modification,

inspection, testing, and operating tasks that must be performed on the railroad's products. This includes the development of failure scenarios and the actions expected under such scenarios; (3) Develop written procedures for the performance of the tasks identified; (4) Identify the additional knowledge, skills, and abilities above those required for basic job performance necessary to perform each task; (5) Develop a training curriculum that includes classroom, simulator, computer-based, hands-on, or other formally structured training designed to impart the knowledge, skills, and abilities identified as necessary to perform each task; (6) Prior to assignment of related tasks, require all persons mentioned in § 236.921(a) to successfully complete a training curriculum and pass an examination that covers the product and appropriate rules and tasks for which they are responsible (however, such persons may perform such tasks under the direct on-site supervision of a qualified person prior to completing such training and passing the examination); (7) Require periodic refresher training at intervals specified in the PSP that includes classroom, simulator, computer-based, hands-on, or other formally structured training and testing, except with respect to basic skills for which proficiency is known to remain high as a result of frequent repetition of the task; and (8) Conduct regular and periodic evaluations of the effectiveness of the training program specified in § 236.923(a)(1) verifying the adequacy of the training material and its validity with respect to current railroads products and operations.

FRA estimates that approximately six (6) documents will be completed that meet all the above requirements. It is estimated that each document will take approximately 720 hours to complete. Total annual burden for this requirement is 4,320 hours.

Respondent Universe:

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Burden time per response:

Frequency of Response:		On occasion
Annual number of Responses:	6 documents	
Annual Burden:		4,320 hours

**Calculation:** 6 documents x 720 hrs. = 4,320 hours

(b) Employer's must retain records which designate persons who are qualified under this section until new designations are recorded or for at least one year after such persons leave applicable service. These records must be kept in a designated location and available for inspection and replication by FRA and FRA-certified State inspectors.

*The burden for this requirement regarding roadway workers is also included in OMB No. 2130-0539. Consequently, there is no additional burden associated with this part of the requirement.*

FRA estimates that approximately 350 records designating other qualified persons (30 managers + 300 signalmen + 20 dispatchers) will be kept under this requirement. It is estimated that it will take approximately 10 minutes to prepare each record. Total annual burden for this requirement is 58 hours.

Respondent Universe:

Burden time per response:

10  
minutes

Frequency of Response:		On occasion
Annual number of Responses:	350 records	
Annual Burden:		58 hours

**Calculation:** 350 records x 10 min. = 58 hours

The burden for this entire requirement is 4,378 hours (4,320 + 58).

§ 236.925 - Training specific to control office personnel

Any person responsible for issuing or communicating mandatory directives in territory where products are or will be in use must be trained in the following areas, as applicable: (a) Instructions concerning the interface between the computer-aided dispatching system and the train control system, with respect to the safe movement of trains and other on-track equipment; (b) Railroad operating rules applicable to the train control system, including provision for movement and protection of roadway workers, unequipped trains, trains with failed or cut out train control onboard systems, and other on-track equipment; and (c) Instructions concerning control of trains and other on-track equipment in case the train control system fails, including periodic practical exercises or simulations and operational testing under part 217 of this chapter to ensure the continued capability of the personnel to provide for safe operations under the alternative method of operation.

*The burden for this requirement, which refers to dispatchers, is included under § 236.921(b) above. Consequently, there is no additional burden associated with this requirement.*

§ 236.927- Training specific to locomotive engineers and other operating personnel

Training provided under this subpart for any locomotive engineer or other person who participates in the operation of a train in train control territory must be defined in the PSP and the following elements must be addressed: (1) Familiarization with train control equipment onboard the locomotive and the functioning of that equipment as part of the system and in relation to other onboard systems under that person's control; (2) Any actions required of the onboard personnel to enable, or enter data to, the system, such as consist data, and the role of that function in the safe operation of the train; (3) Sequencing of interventions by the system, including pre-enforcement notification, enforcement notification, penalty application initiation, and post-penalty application procedures; (4) Railroad operating rules applicable to the train control system, including provisions for movement and protection of any unequipped trains, or trains with failed or cut out train control onboard systems and other on-track equipment; (5) Means to detect deviations from proper functioning of onboard train control equipment and instructions regarding the actions to be taken with respect to control of the train and notification of designated railroad personnel; and (6) Information needed to prevent unintentional interference with the proper functioning of onboard train control equipment.

*The burden for this requirement is included under OMB No. 2130-0533, Qualifications for Locomotive Engineers. Consequently, there is no additional burden associated with this requirement.*

(b) Training required under this subpart for a locomotive engineer, together with required records, must be integrated into the program of training required by part 240 of this chapter.

*The burden for this requirement is included under OMB No. 2130-0533. Consequently, there is no additional burden associated with this requirement.*

(c) The following special requirements apply in the event a train control system is used to effect full automatic operation of the train: (1) The PSP must identify all safety hazards to be mitigated by the locomotive engineer. (2) The PSP must address and describe the training required with provisions for the maintenance of skills proficiency. As a minimum, the training program must: (i) As described in § 236.923(a)(2), develop failure scenarios which incorporate the safety hazards identified in the PSP, including the return of train operations to a fully manual mode; (ii) Provide training, consistent with § 236.923(a), for safe train operations under all failure scenarios and identified safety hazards that affect train operations; (iii) Provide training, consistent with § 236.923(a), for safe train operations under manual control; and (iv) Consistent with § 236.923(a), ensure maintenance of manual train operating skills by requiring manual starting and stopping of the train for an appropriate number of trips and by one or more of the following methods: (A) Manual operation of a train for a 4-hour work period; (B) Simulated manual operation of a train for a minimum of four (4) hours in a Type I simulator as required; or (C) Other

means as determined following consultation between the railroad and designated representatives of the affected employees and approved by the FRA. The PSP must designate the appropriate frequency when manual operation, starting, and stopping must be conducted, and the appropriate frequency of simulated manual operation.

*The burden for this requirement is included under § 236.907 above. Consequently, there is no additional burden associated with this requirement.*

#### § 236.929 - Training specific to roadway workers

(a) Training required under this subpart for a roadway worker must be integrated into the program of instruction required under part 214, Subpart C of this chapter (“Roadway Worker Protection”), consistent with the task analysis requirements of § 236.923. This training must provide instruction for roadway workers who provide protection for themselves or roadway work groups.

(b)(1) Instruction for roadway workers must ensure an understanding of the role of processor-based signal and train control equipment in establishing protection for roadway workers and their equipment; (2) Instruction for roadway workers must ensure recognition of processor-based signal and train control equipment on the wayside and an understanding of how to avoid interference with its proper functioning; (3) Instructions concerning the recognition of system failures and the provision of alternative methods of on-track safety in the case the train control system fails, including periodic practical exercises or simulations and operational testing under part 217 of this chapter to ensure the continued capability of roadway workers to be free from the danger of being struck by a moving train or other on-track equipment.

*The burden for this requirement is included under OMB No. 2130-0539, Roadway Worker Protection. Consequently, there is no additional burden associated with this requirement.*

The total burden for Part 234 and for Subparts A and H of Part 236 is 1,373,672 hours.

### **Subpart I – Positive Train Control Systems**

#### § 236.1001 - Purpose and scope.

(a) This subpart prescribes minimum, performance-based safety standards for PTC systems required by 49 U.S.C. § 20157, this subpart, or an FRA order, including requirements to ensure that the development, functionality, architecture, installation, implementation, inspection, testing, operation, maintenance, repair, and modification of those PTC systems will achieve and maintain an acceptable level of safety. This subpart also prescribes standards to ensure that personnel working with, and affected by, safety-critical PTC system related products receive appropriate training and testing.

(b) Each railroad may prescribe additional or more stringent rules, and other special instructions, that are not inconsistent with this subpart.

FRA estimates that approximately three (3) railroads will develop additional or more stringent rules under the above requirement. It is estimated that it will take each railroad approximately 80 hours to develop and complete the additional or more stringent rules document. Total annual burden for this requirement is 240 hours.

Respondent Universe:

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Burden time per response:

80  
hours

Frequency of Response: On occasion  
Annual number of Responses: 3 rules  
Annual Burden: 240 hours

**Calculation:** 3 additional or more stringent rules x 80 hrs. = 240 hours

(c) This subpart does not exempt a railroad from compliance with any requirement of subpart A through H of this part or parts 233, 234, and 235 of this chapter, unless:



(1) it is otherwise explicitly excepted by this subpart; or (2) the applicable PTCSP, as defined under § 236.1003 and approved by FRA under § 236.1015, provides for such an exception per § 236.1013.

*The burden for exceptions under the PTCSP is included under that § 236.1015. Consequently, there is no additional burden associated with this requirement.*

Total burden for this entire requirement is 240 hours.

### § 236.1005 – Requirements for Positive Train Control Systems

(a) PTC system requirements. Each PTC system required to be installed under this subpart shall:

(1) Reliably and functionally prevent: (i) train-to-train collisions—including collisions between trains operating over rail-to-rail at-grade crossings in accordance with the risk-based table specified in this section (§ 236.1005 (a)(1)(i)) or alternative arrangements providing an equivalent level of safety as specified in an FRA approved PTCSP; (ii) Overspeed derailments, including derailments related to railroad civil engineering speed restrictions, slow orders, and excessive speeds over switches and through turnouts; (iii) Incursions into established work zone limits without first receiving appropriate authority and verification from the dispatcher or roadway worker in charge, as applicable and in accordance with part 214 of this chapter; and (iv) The movement of a train through a main line switch in the improper position as further described in paragraph (e) of this section.

(2) Include safety-critical integration of all authorities and indications of a wayside or cab signal system, or other similar appliance, method, device, or system of equivalent safety, in a manner by which the PTC system shall provide associated warning and enforcement to the extent, and except as, described and justified in the FRA approved PTCDP or PTCSP, as applicable;

(3) As applicable, perform the additional functions specified in this subpart;

(4) Provide an appropriate warning or enforcement when: (i) A derail or switch protecting access to the main line required by § 236.1007, or otherwise provided for in the applicable PTCSP, is not in its derailing or protecting position, respectively; (ii) A mandatory directive is issued associated with a highway-rail grade crossing warning system malfunction as required by §§ 234.105, 234.106, or 234.107; (iii) An after-arrival

mandatory directive has been issued and the train or trains to be waited on has not yet passed the location of the receiving train; (iv) Any movable bridge within the route ahead is not in a position to allow permissive indication for a train movement pursuant to § 236.312; and (v) A hazard detector integrated into the PTC system that is required by paragraph (c) of this section, or otherwise provided for in the applicable PTCSP, detects an unsafe condition or transmits an alarm; and

(5) Limit the speed of passenger and freight trains to 59 miles per hour and 49 miles per hour, respectively, in areas without broken rail detection or equivalent safeguards.

*The burden associated with the PTCDP and the PTCSP is included under that of § 236.1013 and that of § 236.1015, respectively. Consequently, there is no additional burden associated with this requirement.*

(b) PTC system installation. (1) Lines required to be equipped. Except as otherwise provided in this subpart, each Class I railroad and each railroad providing or hosting intercity or commuter passenger service shall progressively equip its lines as provided in its approved PTCIP such that, on and after December 31, 2015, a PTC system certified under § 236.1015 is installed and operated by the host railroad on each:

(i) Main line over which is transported any quantity of material poisonous by inhalation (PIH), including anhydrous ammonia, as defined in §§ 171.8, 173.115 and 173.132 of this title;

(ii) Main line used for regularly provided intercity or commuter passenger service, except as provided in § 236.1019; and

(iii) Additional line of railroad as required by the applicable FRA approved PTCIP, this subpart, or an FRA order requiring installation of a PTC system by that date.

(2) Initial baseline identification of lines. For the purposes of paragraph (b)(1)(i) of this section, the baseline information necessary to determine whether a Class I railroad's track segment shall be equipped with a PTC system shall be determined and reported as follows:

(i) The traffic density threshold of five (5) million gross tons shall be based upon calendar year 2008 gross tonnage, except to the extent that traffic may fall below five (5) million gross tons for two consecutive calendar years and a PTCIP or an RFA reflecting this change is filed and approved under paragraph (b)(4) of this section and, if applicable, § 236.1021.

(ii) The presence or absence of any quantity of Poisonous-by-Inhalation (PIH) hazardous materials shall be determined by whether one or more cars containing such product(s) was

transported over the track segment in calendar year 2008 or prior to the filing of the PTCIP, except to the extent that the PTCIP or RFA justifies, under paragraph (b)(4) of this section, removal of the subject track segment from the PTCIP listing of lines to be equipped.

*The burden associated with the PTCIP is included under that of § 236.1009. The burden associated with RFAs is included under that of § 236.1021. Consequently, there is no additional burden associated with these requirements.*

(3) Addition of track segments. To the extent increases in freight rail traffic occur subsequent to calendar year 2008 that might affect the requirement to install a PTC system on any line not yet equipped, the railroad shall seek to amend its PTCIP by promptly filing a Request For Amendment (RFA) in accordance with § 236.1021. The following criteria apply:

(i) If rail traffic exceeds five (5) million gross tons in any year after 2008, the tonnage shall be calculated for the preceding two calendar years and if the total tonnage for those two calendar years exceeds 10 million gross tons, a PTCIP or its amendment is required.

(ii) If PIH traffic is carried on a track segment as a result of a request for rail service or rerouting warranted under part 172 of this title, and if the line carries in excess of five (5) million gross tons of rail traffic as determined under this paragraph, a PTCIP or its amendment is required. This does not apply when temporary rerouting is authorized in accordance with paragraph (g) of this section.

(iii) Once a railroad is notified by FRA that its RFA filed in accordance with this paragraph has been approved, the railroad shall equip the line with the applicable PTC system by December 31, 2015, or within 24 months, whichever is later.

*The burden associated with amendments to the PTCIP is included under that of § 236.1021. Consequently, there is no additional burden associated with this requirement.*

(4) Exclusion or removal of track segments from PTC baseline. (i) Routing changes. In a PTCIP or RFA, a railroad may request review of the requirement to install PTC on a track segment where a PTC system is otherwise required by this section, but has not yet been installed, based upon changes in rail traffic such as reductions in total traffic volume below five (5) million gross tons annually or cessation of passenger service or PIH materials traffic. Any such request shall be accompanied by estimated traffic projections for the next five (5) years (e.g., as a result of planned rerouting, coordinations, or location of new business on the line). **(Amended by NPRM)**

(ii) FRA will approve the exclusion requested pursuant to paragraph (b)(4)(i) if the railroad establishes the following: (A) The cessation of passenger service on the involved track segment prior to January 16, 2016; (B) A decline in gross tonnage below five (5) million gross tons annually as computed over a 2-year period on the involved track segment; or (C) The cessation or expected cessation of PIH traffic over the involved track segment prior to January 1, 2016. **(New/added under this NPRM)**

(iii) Lines with de minimis PIH risk. (A) In a PTCIP or RFA, a railroad may request review of the requirement to install PTC on a low density track segment where a PTC system is otherwise required by this section, but has not yet been installed, based upon the presence of a minimal quantity of PIH hazardous materials (less than 100 cars per year loaded and residue). Any such request shall be accompanied by estimated traffic projections for the next five (5) years (e.g., as a result of planned rerouting, coordinations, or location of new business on the line). Where the request involves prior or planned rerouting of PIH traffic, the railroad must provide the information and analysis identified in paragraph (b)(4)(i) of this section. The submission must also include a full description of potential safety hazards on the segment of track and fully describe train operations over the line. This provision is not applicable to line segments used by intercity or commuter passenger service. (B) Absent special circumstances related to specific hazards presented by operations on the line segment, FRA will approve a request for relief under this paragraph for a rail line segment: (1) Consisting exclusively of Class 1 or 2 track as described in part 213 of this title; (2) That carries less than 15 million gross tons annually; (3) Has a ruling grade of less than one (1) percent; and (4) On which any train transporting a car containing PIH materials (including a residue car) is operated under conditions of temporal separation from other trains using the line segment as documented by a temporal separation plan accompanying the request. As used in this paragraph, “temporal separation” has the same meaning given by § 236.1019(e), except that the separation addressed is the separation of a train carrying any number of cars containing PIH materials from other freight trains. (C) FRA will also consider, and may approve, requests for relief under this paragraph for additional line segments where each such segment carries less than 15 million gross tons annually and where it is established to the satisfaction of the Associate Administrator that risk mitigation will be applied that will ensure that risk of a release of PIH materials is negligible. (D) Failure to submit sufficient information will result in the denial of any request under this paragraph (b)(4)(ii). If the request is granted, on and after the date the line would have otherwise been required to be equipped under the schedule contained in the PTCIP and approved by FRA, operations on the line shall be conducted in accordance with any conditions attached to the grant, including implementation of proposed mitigations as applicable. **(Paragraph re-designated from (b)(4)(ii) under new NPRM)**

*The burden associated with the PTCIP is included under that of § 236.1009, the burden associated with temporal separation plans/procedures is included under that of § 236.1019(e) and the burden for Requests for Amendments (RFAs) is included under that*

§ 236.1021. *Consequently, there is no additional burden associated with this requirement.*

(5) Line sales. FRA does not approve removal of a line from the PTCIP exclusively based upon a representation that a track segment will be abandoned or sold to another railroad. In the event a track segment is approved for abandonment or transfer by the Surface Transportation Board, FRA will review at the request of the transferring and acquiring railroads whether the requirement to install PTC on the line should be removed given all of the circumstances, including expected traffic and hazardous materials levels, reservation of trackage or haulage rights by the transferring railroad, routing analysis under part 172 of this chapter, commercial and real property arrangements affecting the transferring and acquiring railroads post-transfer, and such other factors as may be relevant to continue safe operations on the line. If FRA denies the request, the acquiring railroad shall install the PTC system on the schedule provided in the transferring railroad's PTCIP, without regard to whether it is a Class I railroad.

*The burden associated with the PTCIP is included under that of § 236.1009, and the burden for Requests for Amendments (RFAs) is included under that § 236.1021. Consequently, there is no additional burden associated with this requirement.*

(6) New passenger rail service. No new intercity or commuter rail passenger service shall commence after December 31, 2015, until a PTC system certified under this subpart has been installed and made operative.

(c) Hazard detectors. (1) All hazard detectors integrated into a signal or train control system on or after October 16, 2008, must be integrated into PTC systems required by this subpart; and their warnings shall be appropriately and timely enforced as described in the applicable PTCSP.

(2) The applicable PTCSP must provide for receipt and presentation to the locomotive engineer and other train crew of warnings from any additional hazard detectors using the PTC data network, onboard displays, and audible alerts. If the PTCSP so provides, the action to be taken by the system and by the crew members shall be specified.

(3) The PTCDP (as applicable) and PTCSP for any new service described in § 236.1007 to be conducted above 90 miles per hour shall include a hazard analysis describing the hazards relevant to the specific route(s) in question (e.g., potential for track obstruction due to events such as falling rock or undermining of the track structure due to high water or displacement of a bridge over navigable waters), the basis for decisions concerning hazard detectors provided, and the manner in which such additional hazard detectors will be interfaced with the PTC system.

*The burden associated with the PTCDP is included under that of § 236.1013, and the burden associated with the PTCSP is included under that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

(d) Event Recorders. (1) Each lead or controlling locomotive, as defined in part 229, of a train equipped and operating with a PTC system required by this subpart must be equipped with an operative event recorder, which shall:

(i) Record safety-critical train control data routed to the locomotive engineer's display that the engineer is required to comply with;

(ii) Specifically include text messages conveying mandatory directives and maximum authorized speeds, PTC system brake warnings, PTC system brake enforcements, and the state of the PTC system (e.g., cut in, cut out, active, or failed); and

(iii) Include examples of how the captured data will be displayed during playback along with the format, content, and data retention duration requirements specified in the PTC Safety Plan (PTCSP) submitted and approved pursuant to this paragraph. If such train control data can be calibrated against other data required by this part, it may, at the election of the railroad, be retained in a separate memory module.

*The burden associated with the PTCSP is included under that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

(e) Switch Position. The following requirements apply with respect to determining proper switch position under this section. When a main line switch position is unknown or improperly aligned for a train's route in advance of the train's movement, the PTC system will provide warning of the condition associated with the following enforcement:

(1) A PTC system must enforce restricted speed over any switch: (i) Where train movements are made with the benefit of the indications of a wayside or cab signal system or other similar appliance, method, device, or system of equivalent safety proposed to FRA and approved by the Associate Administrator in accordance with this part; and (ii) Where wayside or cab signal system or other similar appliance, method, device, or system of equivalent safety requires the train to be operated at restricted speed.

(2) A PTC system must enforce a positive stop short of any main line switch, and any switch on a siding where the allowable speed is in excess of 20 miles per hour, if movement of the train over the switch: (i) is made without the benefit of the indications of a wayside or cab signal system or other similar appliance, method, device, or system of equivalent safety proposed to FRA and approved by the Associate Administrator in accordance with this part; or (ii) would create an unacceptable risk. Unacceptable risk includes conditions when traversing the switch, even at low speeds, could result in direct conflict with the movement of another train (including hand-operated crossover between

main tracks and an adjoining siding or auxiliary track, or a hand-operated switch providing access to another subdivision or branch line, etc.)

(3) A PTC system required by this subpart shall be designed, installed, and maintained to perform the switch position detection and enforcement described in paragraphs (e)(1) and (e)(2) of this section, except as provided for and justified in the applicable, FRA approved PTCDP or PTCSP.

(4) The control circuit or electronic equivalent for all movement authorities over any switches, movable-point frogs, or derails shall be selected through circuit controller or functionally equivalent device operated directly by switch points, derail, or by switch locking mechanism, or through relay or electronic device controlled by such circuit controller or functionally equivalent device, for each switch, movable-point frog, or derail in the route governed. Circuits or electronic equivalent shall be arranged so that any movement authorities less restrictive than those prescribed in paragraphs (e)(1) and (e)(2) of this section can only be provided when each switch, movable-point frog, or derail in the route governed is in proper position, and shall be in accordance with subparts A through G of this part, unless it is otherwise provided in a PTCSP approved under this subpart. *The burden associated with wayside or cab signal systems or other similar appliances, methods, devices, or systems of equivalent safety proposed to FRA and approved by FRA is included under OMB No. 2130-0006. The burden associated with the PTCSP is included below under that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

(g) Temporary rerouting. A train equipped with a PTC system as required by this subpart may be temporarily rerouted onto a track not equipped with a PTC system and a train not equipped with a PTC system may be temporarily rerouted onto a track equipped with a PTC system as required by this subpart in the following circumstances:

(1) Emergencies. In the event of an emergency—including conditions such as derailment, flood, fire, tornado, hurricane, or other similar circumstance outside of the railroad's control—that would prevent usage of the regularly used track if: (i) the rerouting is applicable only until the emergency condition ceases to exist and for no more than 14 consecutive calendar days, unless otherwise extended by approval of the Associate Administrator.

FRA estimates that there will be approximately 1,000 reroutes a year and that approximately five (5) percent or 50 of these reroutes will fall into the circumstance listed above. Thus, FRA estimates that it will receive approximately 50 requests to extend temporarily rerouted trains equipped with PTC systems on to a track not equipped with a PTC system or train not equipped with a PTC system temporarily rerouted onto a track equipped with a PTC system for more than 14 consecutive calendar days. It is estimated that it will take approximately eight (8) hours to gather the necessary information and

complete the extension request and send it to FRA. Total annual burden for this requirement is 400 hours.

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Burden time per response:

8 hours

Frequency of Response:	On occasion
Annual number of Responses:	50 extension requests
Annual Burden:	400 hours

**Calculation:** 50 extension requests x 8hrs. = 400 hours

(ii) the railroad provides written or telephonic notification to the applicable Regional Administrator of the information listed in paragraph (i) within one business day of the beginning of the rerouting made in accordance with this paragraph; and (iii) the conditions under paragraph (j) of this section are followed.

FRA estimates that approximately 50 written or telephonic notifications to the applicable Regional Administrator of the information listed in paragraph (i) will be made under the above requirement. It is estimated that it will take approximately two (2) hours to complete each written or telephonic notification. Total annual burden for this requirement is 100 hours.



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Burden time per response:

2 hours

Frequency of Response:	On occasion
Annual number of Responses:	50 written or telephonic notifications
Annual Burden:	100 hours

**Calculation:** 50 written or telephonic notifications x 2 hrs. = 100 hours

(2) Planned Maintenance. In the event planned maintenance that would prevent usage of the regularly used track if: (i) the maintenance period does not to exceed 30 days; (ii) a request is filed with the applicable Regional Administrator in accordance with paragraph (i) of this section no less than 10 days prior to the planned rerouting; and (iii) the conditions contained in paragraph (j) of this section are followed.

FRA estimates that approximately 95 temporary rerouting requests will be filed with each of the eight applicable Regional Administrators in accordance with paragraph (i) of this section. These will generally be in the form of written notifications. Thus, a total of 760 requests (8 regions x 95 requests) will be filed. It is estimated that it will take approximately eight (8) hours to gather the necessary information and complete each rerouting request. Total annual burden for this requirement is 6,080 hours.

Respondent Universe:

Burden time per response:

8 hours

Frequency of Response:	On occasion
Annual number of Responses:	760 rerouting requests
Annual Burden:	6,080 hours

**Calculation:** 760 rerouting requests x 8 hrs. = 6,080 hours

(h) Rerouting requests. (1) For the purposes of paragraph (g)(2) of this section, the rerouting request shall be self-executing unless the applicable Regional Administrator responds with a notice disapproving of the rerouting or providing instructions to allow rerouting. Such instructions may include providing additional information to the Regional Administrator or Associate Administrator prior to the commencement of rerouting. Once the Regional Administrator responds with a notice under this paragraph, no rerouting may occur until the Regional Administrator or Associate Administrator provides his or her approval.

*The burden for this requirement is included in that of § 236.1005(g)(1) above. Consequently, there is no additional burden associated with this requirement.*

(2) In the event the temporary rerouting described in paragraph (g)(2) of this section is to exceed 30 consecutive calendar days: (i) The railroad shall provide a request in accordance with paragraphs (i) and (j) of this section with the Associate Administrator no

less than 10 business days prior to the planned rerouting; and (ii) The rerouting shall not commence until receipt of approval from the Associate Administrator.

FRA estimates that approximately 380 rerouting requests will be filed with the Associate Administrator no less than 10 business days prior to the planned rerouting. It is estimated that it will take approximately eight (8) hours to gather the necessary information and complete each rerouting request. Total annual burden for this requirement is 3,040 hours.

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Burden time per response:

8 hours

Frequency of Response:

On occasion

Annual number of Responses:

380 rerouting requests

Annual Burden:

3,040 hours

**Calculation:**

380 rerouting requests x 8 hrs. = 3,040 hours

(i) Content of rerouting request. Each notice or request referenced in paragraphs (g) and (h) of this section must indicate: (1) the dates that such temporary rerouting will occur; (2) the number and types of trains that will be rerouted; (3) the location of the affected tracks; and (4) a description of the necessity for the temporary rerouting.

(j) Rerouting conditions. Rerouting of operations under paragraph (g) of this section may occur under the following conditions: (1) Where a train not equipped with a PTC system is rerouted on track equipped with a PTC system, or a train not equipped with a PTC system that is compatible and functionally responsive to the PTC system utilized on the line to which the train is being routed, the train shall be operated in accordance with § 236.1029;

or (2) Where any train is rerouted onto a track not equipped with a PTC system, the train shall be operated in accordance with the operating rules applicable to the line on which the train is routed.

*The burden for this requirement is included under that of 236.1005(g) above. Consequently, there is no additional burden associated with this requirement.*

The total burden for this entire requirement is 9,620 hours (400 + 100 + 6,080 + 3,040).

#### § 236.1006 – Equipping Locomotives Operating in PTC Territory

(a) Except as provided in paragraph (b) of this section, each train operating on any track segment equipped with a PTC system shall be controlled by a locomotive equipped with onboard PTC apparatus that is fully operative and functioning in accordance with the applicable PTCSP approved under this Subpart.

*The burden associated with the PTCSP is included below under that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

(b) Exceptions. (1) Prior to December 31, 2015, each railroad required to install PTC must include in its PTCIP specific goals for progressive implementation of onboard systems and deployment of PTC-equipped locomotives such that the safety benefits of PTC are achieved through incremental growth in the percentage of controlling locomotives operating on PTC lines that are equipped with operative PTC onboard equipment. The PTCIP shall include a brief but sufficient explanation of how those goals will be achieved, including assignment of responsibilities within the organization. The goals shall be expressed as the percentage of trains operating on PTC-equipped lines that are equipped with operative on-board PTC apparatus responsive to the wayside, expressed as an annualized (calendar year) percentage for the railroad as a whole.

*The burden associated with the PTCIP is included below under that of § 236.1009. Consequently, there is no additional burden associated with this requirement.*

(2) Each railroad shall adhere to its PTCIP and shall report, on April 16, of 2011, 2012, 2013 and 2014, its progress toward achieving the goals set under paragraph (b)(1) of this section. In the event any annual goal is not achieved, the railroad shall further report the actions it is taking to ensure achievement of subsequent annual goals.

Over the next three years, FRA estimates that it will receive approximately 90 reports each year under the above requirement. It is estimated that 45 or half of these reports will involve little work and take approximately eight (8) hours to complete and that the other half or 45 of these reports will involve much more work and take approximately 170 hours to complete. Total annual burden for this requirement is 8,010 hours.

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Burden time per response:

8 hours  
+ 170  
hours

Frequency of Response:		On occasion
Annual number of Responses:	90 reports	
Annual Burden:		8,010 hours

**Calculation:** 45 reports x 8 hrs. + 45 reports x 170 hrs. = 8,010 hours

(3) On or after December 31, 2015, a train controlled by a locomotive with an onboard PTC apparatus that has failed en route is permitted to operate in accordance with § 236.1029.

(4) A train operated by a Class II or Class III railroad, including a tourist or excursion railroad, and controlled by a locomotive not equipped with an onboard PTC apparatus is permitted to operate on a PTC operated track segment: (i) That either: (A) Has no regularly scheduled intercity or commuter passenger rail traffic; or (B) Has regularly scheduled intercity or commuter passenger rail traffic and the applicable PTCIP permits the operation of a train operated by a Class II or III railroad and controlled by a locomotive not equipped with an onboard PTC apparatus;

*The burden associated with the PTCIP is included below under that of § 236.1009. Consequently, there is no additional burden associated with this requirement.*

(ii) Where operations are restricted to less than four such unequipped trains per day, whereas a train conducting a “turn” operation (e.g., moving to a point of interchange to drop off or pick up cars and returning to the track owned by a Class II or III railroad) is considered two trains for this purpose; and

(iii) Where each movement shall either: (A) Not exceed 20 miles in length; or (B) To the extent any movement exceeds 20 miles in length, such movement is not permitted without the controlling locomotive being equipped with an onboard PTC system after December 31, 2020, and each applicable Class II or III railroad shall report to FRA its progress in equipping each necessary locomotive with an onboard PTC apparatus to facilitate continuation of the movement. The progress reports shall be filed not later than December 31, 2017 and, if all necessary locomotives are not yet equipped, on December 31, 2019.

Over the next three years, FRA estimates that it will receive approximately 35 reports each year under the above requirement. It is estimated that it will take approximately 16 hours to gather the necessary information and to complete each report. Total annual burden for this requirement is 560 hours.

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Burden time per response:

16  
hours

Frequency of Response:

On occasion

Annual number of Responses:

35 reports

Annual Burden:

560 hours

**Calculation:**

35 reports x 16 hrs. = 560 hours

(c) When a train movement is conducted under the exceptions described in paragraph (b) (4) of this section, that movement shall be made in accordance with § 236.1029.

*Any burden associated with the above is included below under that of § 236.1029. Consequently, there is no additional burden associated with this requirement.*

§ 236.1007 – Additional Requirements for High-Speed Service

(a) A PTC railroad that conducts a passenger operation at or greater than 60 miles per hour or freight operations at or greater than 50 miles per hour shall have installed a PTC system including or working in concert with technology that includes all of the safety-critical functional attributes of a block signal system meeting the requirements of this part, including appropriate fouling circuits and broken rail detection (or equivalent safeguards).

(b) In addition to the requirements of paragraph (a) of this section, a host railroad that conducts a freight or passenger operation at more than 90 miles per hour shall: (1) have an approved PTCSP establishing that the system was designed and will be operated to meet the failsafe operation criteria described in Appendix C to this part; and (2) prevent unauthorized or unintended entry onto the main line from any track not equipped with a PTC system compliant with this subpart by placement of split-point derails or equivalent means integrated into the PTC system; and (3) comply with § 236.1029(c).

*The burden associated with the PTCSP is included below under that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

(c) In addition to the requirements of paragraphs (a) and (b) of this section, a host railroad that conducts a freight or passenger operation at more than 125 miles per hour shall have an approved PTCSP accompanied by a document (“HSR-125”) establishing that the system: (1) will be operated at a level of safety comparable to that achieved over the five (5) year period prior to the submission of the PTCSP by other train control systems that perform PTC functions required by this subpart, and which have been utilized on high-speed rail systems with similar technical and operational characteristics in the United States or in foreign service, provided that the use of foreign service data must be approved by the Associate Administrator before submittal of the PTCSP; and (2) has been designed to detect incursions into the right-of-way, including incidents involving motor vehicles diverting from adjacent roads and bridges, where conditions warrant.

FRA estimates that approximately three (3) approved PTCSPs will be accompanied by “HSR-125” documents under the above requirement. It is estimated that each document

will be approximately 200 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page. Thus, it is estimated that it will take approximately 3,200 hours to complete each “HSR-125” document. Total annual burden for this requirement is 9,600 hours.

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Burden time per response:

3,200  
hours

Frequency of Response:	On occasion
Annual number of Responses:	3 HSR-125 documents
Annual Burden:	9,600 hours

**Calculation:** 3 HSR-125 documents x 3,200 hrs. = 9,600 hours

Additionally, FRA estimates that approximately two (2) requests to use foreign service data before submittal of the PTCSP will be made under the above requirement. It is estimated that each document will be approximately 1,000 pages long, and that it will take approximately eight (8) hours to gather the necessary information and complete each page. Thus, it is estimated that it will take approximately 8,000 hours to gather the foreign service data and complete each request. Total annual burden for this requirement is 16,000 hours.



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Burden time per response:

8,000  
hours

Frequency of Response:

On occasion

Annual number of Responses:

2 data requests

Annual Burden:

16,000 hours

**Calculation:**

2 data requests x 8,000 hrs. = 16,000 hours

(d) In addition to the requirements of paragraphs (a) through (c) of this section, a host railroad that conducts a freight or passenger operation at more than 150 miles per hour, which is governed by a Rule of Particular Applicability, shall have an approved PTCSP accompanied by a HSR-125 developed as part of an overall system safety plan approved by the Associate Administrator.

FRA estimates that approximately three (3) PTCSPs be accompanied by “HSR-125” documents will be submitted under the above requirement. It is estimated that each document will be approximately 200 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the PTCSP and accompanying “HSR-125 document.” Thus, it is estimated that it will take approximately 3,200 hours to complete each PTCSP and accompanying “HSR-125 document.” Total annual burden for this requirement is 9,600 hours.

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Burden time per response:

3,200  
hours

Frequency of Response:	On occasion
Annual number of Responses:	3 PTCSPs w/HSR-125 documents
Annual Burden:	9,600 hours

**Calculation:** 3 PTCSPs w/HSR-125 documents x 3,200 hrs. = 9,600 hours

(e) A railroad providing existing high speed passenger service may request in its PTCSP that the Associate Administrator excuse compliance with one or requirements of this section upon a showing that the subject service has been conducted with a high level of service.

FRA estimates that it will receive approximately one (1) request each year under the above requirement. This request will most likely come from Amtrak. It is estimated that each request will be approximately 125 pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page. Thus, it will take approximately 1,000 hours to complete each request. Total annual burden for this requirement is 1,000 hours.

Respondent Universe:

Burden time per response:

1,000  
hours

Frequency of Response: On occasion  
 Annual number of Responses: 1 request  
 Annual Burden: 1,000 hours

**Calculation:** 1 request x 1,000 hrs. = 1,000 hours

Total annual burden for this entire requirement is 36,200 hours (9,600 + 16,000 + 9,600 + 1,000).

§ 236.1009 – Procedural Requirements

(a) PTC Implementation Plan (PTCIP). (1) By April 16, 2010, each host railroad that is required to implement and operate a PTC system in accordance with § 236.1005(b) shall develop and submit in accordance with § 236.1011(a) a PTCIP for implementing a PTC system required under § 236.1005. Filing of the PTCIP shall not exempt the required filings of an NPI, PTCSP, PTCDP, or Type Approval.

*The deadline for this requirement has now expired and FRA has now received all the PTCIPs of affected railroads. Consequently, there is no additional burden associated this requirement.*

*The burden associated with the NPIs is included below under that of § 236.1009(c). The burden associated with PTCSP is included below under that of § 236.1015. The burden associated with the PTCDP and Type Approval is included under that of § 236.1013. Consequently, there is no additional burden associated with this requirement.*

(2) After April 16, 2010, a host railroad shall file: (i) a PTCIP if it becomes a host railroad of a main line track segment for which it required to implement and operate a PTC system in accordance with § 236.1005(b); or (ii) a request for amendment (“RFA”) of its current and approved PTCIP in accordance with § 236.1021 if it intends to: (A) initiate a new category of service (i.e., passenger or freight); or (B) add, subtract, or otherwise materially modify one or more lines of railroad for which installation of a PTC system is required.

FRA estimates that there will be approximately one (1) new rail start each year that will require a PTCIP and that approximately 20 requests for amendments (RFAs) will be submitted under the above requirement. It is estimated that the PTCIP will be approximately 100 pages long and that it will take a total of approximately 16 hours to gather the necessary information and complete the PTCIP. It is also estimated that each RFA will be approximately 20 pages long and that it will take approximately 16 hours to gather the necessary information and complete each RFA page. Thus, it is estimated that it will take approximately 1,600 hours to complete the PTCIP and 320 hours to complete each RFA. However, again the PTCIP is a one-time requirement and since OMB approvals are normally for three years, the 1,600 hour estimate needs to be divided by three, to accurately calculate the annual burden (535 hours rounded off). Total annual burden for this requirement is 6,935 hours.

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Burden time per response:

535  
hours;  
320  
hours

Frequency of Response:

One-time; on occasion

Annual number of Responses: 1 PTCIP + 20 RFAs

Annual Burden: 6,935 hours

**Calculation:** 1 PTCIP x 535 hrs. + 20 RFAs x 320 hrs. = 6,935 hours

(3) The host and tenant railroad(s) shall jointly file PTCIP that addresses shared track: (i) if the host railroad is required to install and operate a PTC system on a segment of its track; and (ii) if the tenant railroad that shares the same track segment would have been required to install a PTC system if the host railroad had not otherwise been required to do so.

FRA estimates that approximately five (5) joint PTCIPs will be submitted under the above requirement. It is estimated that each joint PTCIP will be approximately 100 pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the PTCIP. Thus, it is estimated that it will take approximately 800 hours to complete each PTCIP. However, since this is a one-time requirement and since OMB approvals are for three years, this number needs to be divided by three to accurately calculate the annual burden (800 hours divided by three = 267 hours). Total annual burden for this requirement is 1,335 hours.

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Burden time per response:

267  
hours

Frequency of Response: One-time  
Annual number of Responses: 5 Joint PTCIPs  
Annual Burden: 1,335 hours

**Calculation:** 5 Joint PTCIPs x 267 hrs. = 1,335 hours

(4) If railroads required to file a joint PTCIP are unable to jointly file a PTCIP in accordance with paragraphs (a)(1) and (a)(3) of this section, then each railroad must:

(i) Separately file a PTCIP in accordance with paragraph (a)(1).

*Since jointly filing a PTCIP will not be a problem, FRA estimates that there will be zero (0) PTCIPs filed under the above requirement. Consequently, there is no additional burden associated with this requirement.*

(ii) Notify the Associate Administrator that the subject railroads were unable to agree on a PTCIP to be jointly filed.

FRA estimates that approximately one (1) notification to the Associate Administrator will be sent under the above requirement. It is estimated that each notification will be approximately two (2) pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the notification. Thus, it is estimated that it will take approximately 32 hours to complete each notification. Total annual burden for this requirement is 32 hours.

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Burden time per response:

32  
hours

Frequency of Response:		On occasion
Annual number of Responses:	1 notification	
Annual Burden:		32 hours

**Calculation:** 1 notification x 32 hrs. = 32 hours

(iii) Provide the Associate Administrator with a comprehensive list of all issues not in agreement between the railroads that would prevent the subject railroads from jointly filing the PTCIP.

FRA estimates that approximately one (1) comprehensive list of issues will be provided to the Associate Administrator under the above requirement. It is estimated that each list will be approximately five (5) pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the list. Thus, it is estimated that it will take approximately 80 hours to complete each list. Total annual burden for this requirement is 80 hours.

Respondent Universe:

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Burden time per response:

80  
hours

Frequency of Response:

On occasion

Annual number of Responses:

1 comprehensive list

Annual Burden:

80 hours

**Calculation:**

1 comprehensive list x 80 hrs. = 80 hours

(iv) Confer with the Associate Administrator to develop and submit a PTCIP mutually acceptable to all subject railroads.

FRA estimates that approximately one (1) conference call with the Associate Administrator will be take place under the above requirement. It is estimated that each conference call will involve a group of 10 railroads and that each call will take approximately 30 minutes to complete. Total annual burden for this requirement is one (1) hour.

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Burden time per response:

60



Frequency of Response:		On occasion	minutes
Annual number of Responses:	1 conference call		
Annual Burden:		1 hour	

**Calculation:** 1 conference call x 60 min. = 1 hour

(b) Type Approval. Each host railroad, individually or jointly with others such as a tenant railroad or system supplier, shall file prior to or simultaneously with the filing made in accordance with paragraph (a) of this section:

(1) An unmodified Type Approval previously issued by the Associate Administrator in accordance with § 236.1013 or § 236.1031(b) with its associated docket number.

FRA estimates that approximately two (2) railroads will be affected and thus two (2) unmodified previously issued Type Approvals will be filed with FRA under the above requirement. It is estimated that each Type Approval will be approximately one (1) page long and that it will take approximately eight (8) hours to gather the necessary information and complete the document. Total annual burden for this requirement is 16 hours.

Respondent Universe:	46 railroads	
Burden time per response:	8 hours	
Frequency of Response:		On occasion
Annual number of Responses:	2 Type Approval documents	
Annual Burden:		16 hours

**Calculation:** 2 Type Approval documents x 8 hrs. = 16 hours

(2) A PTCDP requesting a Type Approval for: (i) a PTC system that does not have a Type Approval; or (ii) a PTC system with a previously issued Type Approval that requires one or more variances.

FRA estimates that approximately 20 cover letters accompanying 20 modified Type Approvals and two (2) PTCDPs will be completed under the above requirement. It is estimated that each cover letter will be approximately one (1) page long and take approximately eight (8) hours to complete each page; that each modified Type Approval will be approximately 100 pages long and take approximately 16 hours to complete each page; and that each PTCDP will be approximately 400 pages long and that it will take approximately 16 hours to complete each page. Thus, it is estimated that it will take approximately eight (8) hours; 1,600 hours; and 6,400 hours, respectively, to complete each document. Total annual burden for this requirement is 44,960 hours.

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Burden time per response:

8 hours  
+ 1,600  
hours +  
6,400  
hours

Frequency of Response:	On occasion
Annual number of Responses:	20 cover letters + 20 modified Type Approvals + 2 PTCDPs
Annual Burden:	44,960 hours

**Calculation:** 20 cover letters x 8 hrs. + 20 modified Type Approvals x 1,600 hrs. + 2 PTCDPs x 6,400 hrs. = 44,960 hours

- (3) A PTCSP subject to the conditions set forth in paragraph (c) of this section, with or without a Type Approval; or
  - (4) A document attesting that a Type Approval is not necessary since the host railroad has no territory for which a PTC system is required under this subpart.
- (c) Notice of Product Intent (NPI). A railroad may, in lieu of submitting a PTCDP, or referencing an already issued Type Approval, submit an NPI describing the functions of the proposed PTC system. If a railroad elects to file an NPI in lieu of a PTCDP or referencing an existing Type Approval with the PTCIP, and the PTCIP is otherwise acceptable to the Associate Administrator, the Associate Administrator may grant provisional approval of the PTCIP.

FRA estimates that approximately three (3) NPIs and one (1) PTCIP will be submitted under the above requirement. It is estimated that each NPI will be approximately 200 pages long and take approximately 16 hours to gather the necessary information and complete the NPI. Thus, each NPI will take approximately 3,200 hours to complete. Further, it is estimated that each PTCIP will be approximately 100 pages long and take approximately 16 hours to gather the necessary information and complete each page of the document. Thus, each PTCIP will take approximately 1,600 hours to complete. However, since this is a one-time requirement and since OMB approvals are for three years, these two numbers need to be divided by three to accurately calculate the annual burden (3,200 hours divided by three = 1,070 hours (rounded off) and 1,600 hours divided by three = 535 hours (rounded off)). Total annual burden for this requirement is 3,745 hours.

Respondent Universe:

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Burden time per response:

1,070  
hours +  
535  
hours

Frequency of Response:		One-time
Annual number of Responses:	3 NPIs + 1 PTCIP	
Annual Burden:		3,745 hours

**Calculation:** 3 NPIs x 1,070 hrs. + 1 PTCIPs x 535 hrs. = 3,745 hours

Additionally, FRA estimates that approximately one (1) PTCIP will be submitted under

the above requirement. It is estimated that each PTCDP will be approximately 400 pages long and take approximately 16 hours to gather the necessary information and complete each page of the PTCDP. Thus, each PTCDP will take approximately 6,400 hours to complete. However, since this is a one-time requirement and since OMB approvals are for three years, this number needs to be divided by three to accurately calculate the annual burden (6,400 hours divided by three = 2,135 hours (rounded off). Total annual burden for this requirement is 2,135 hours.

Respondent Universe:

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Burden time per response:

2,135  
hours

Frequency of Response:		One-time
Annual number of Responses:	1 PTCDP	
Annual Burden:		2,135 hours

**Calculation:** 1 PTCDP x 2,135 hrs. = 2,135 hours

(1) A provisional approval of a PTCIP, unless otherwise extended by the Associate Administrator, is valid for a period of 270 days from the date of approval by the Associate Administrator.

(2) The railroad must submit an updated PTCIP with either a complete PTCDP as defined in § 236.1013(a), an updated PTCIP referencing an already approved Type Approval, or a full PTCSP within 270 days after the “Provisional Approval”.

FRA estimates that approximately one (1) updated PTCIP with a complete PTCDP will be submitted under the above requirement. It is estimated that each updated PTCIP will be approximately 100 pages long and take approximately 16 hours to gather the necessary information and complete each page of the document. Thus, each updated PTCIP will take approximately 1,600 hours to complete. Further, it is estimated that each PTCDP will be approximately 400 pages long and take approximately 16 hours to gather the necessary information and complete the PTCDP. Thus, each PTCDP will take approximately 6,400 hours to complete. However, since this is a one-time requirement and since OMB approvals are for three years, these two numbers need to be divided by three to accurately calculate the annual burden (1,600 hours divided by three = 535 hours (rounded off) and 6,400 hours divided by three = 2,135 hours (rounded off)). Total annual burden for this requirement is 2,670 hours.

Respondent Universe:

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Burden time per response:

535  
hours;  
2,135  
hours

Frequency of Response:	One-time
Annual number of Responses:	1 updated PTCIP + 1 PTCDP
Annual Burden:	2,670 hours

**Calculation:** 1 PTCIP x 535 hrs. + 1 PTCDPs x 2,135 hrs. = 2,670 hours

(i) Within 90 days of receipt of an updated PTCIP that was submitted with an NPI, the Associate Administrator will approve or disapprove of the updated PTCIP and notify in writing the affected railroad. If the updated PTCIP is not approved, the notification will include the plan's deficiencies. Within 30 days of receipt of that notification, the railroad or other entity that submitted the plan shall correct all deficiencies and resubmit the plan in accordance with this section and §236.1011, as applicable.

Of the one (1) updated PTCIP, FRA estimates that will require further changes. Thus, FRA estimates that one PTCIP with NPI will be corrected and resubmitted under the above requirement. It is estimated that the corrected PTCIP will be approximately 25 pages long and take approximately 16 hours to gather the necessary information and complete each page of the document. Thus, the corrected PTCIP will take approximately 400 hours to complete. Further, it is estimated that the corrected NPI will be approximately 50 pages long and take approximately 16 hours to gather the necessary information and complete each page of the document. Thus, the corrected NPI will take approximately 800 hours to complete. However, since this is a one-time requirement and since OMB approvals are for three years, these two numbers need to be divided by three to accurately calculate the annual burden (400 hours divided by three = 135 hours (rounded off) and 800 hours divided by three = 270 hours (rounded off)). Total annual burden for this requirement is 405 hours.

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Burden time per response:

135

Frequency of Response:		hours +
Annual number of Responses:	1 corrected PTCIP + 1 corrected NPI	270
Annual Burden:		hours
		One-time
		405 hours

**Calculation:** 1 PTCIP x 135 hrs. + 1 NPI x 270 hrs. = 405 hours

(ii) If an update to a “Provisionally Approved” PTCIP is not received by the Associate Administrator for Safety by the end of the period indicated in this paragraph, the “Provisional Approval” given to the PTCIP is automatically revoked. The revocation is retroactive to the date the original PTCIP and NPI were first submitted to the Associate Administrator.

Of the one (1) estimated updated PTCIP with PTCDP to the “Provisionally Approved” PTCIPs, it is estimated that it will not be received by the end of the ninth month and will need to be reworked/resubmitted under the above requirement. It is estimated that the reworked/resubmitted PTCIP will be approximately 25 pages long and take approximately 16 hours to gather the necessary information and complete each page of the document. Thus, each reworked PTCIP will take approximately 400 hours to complete. Further, it is estimated that the reworked PTCDP will be approximately 100 pages long and take approximately 16 hours to gather the necessary information and complete the PTCDP. Thus, each reworked PTCDP will take approximately 1,600 hours to complete. However, since this is a one-time requirement and since OMB approvals are for three years, these two numbers need to be divided by three to accurately calculate the annual burden (400 hours divided by three = 135 hours (rounded off) and 1,600 hours divided by three = 535 hours (rounded off)). Total annual burden for this requirement is 670 hours.

Respondent Universe:

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Burden time per response:

135  
hours +  
535  
hours

Frequency of Response:		One-time
Annual number of Responses:	1 PTCIPs + 1 PTCDPs	
Annual Burden:		670 hours

**Calculation:** 1 PTCIP x 135 hrs. + 1 PTCDP x 535 hrs. = 670 hours

Of the earlier one (1) PTCIP submitted with PTCDP under § 236.1009(c)(2)(i) above, FRA believes that it will need to be reworked or corrected under the above requirement. It is estimated that the reworked PTCIP will be about 25 pages long and that it will take approximately 16 hours to complete each page. Thus, each reworked PTCIP will take approximately 400 hours to complete. Further, it is estimated that the reworked PTCDP will be approximately 100 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the PTCDP. Thus, each reworked PTCDP will take approximately 1,600 hours to gather the necessary information and complete each page. However, since this is a one-time requirement and since OMB approvals are for three years, these two numbers need to be divided by three to accurately calculate the annual burden (400 hours divided by three = 135 hours (rounded off) and 1,600 hours divided by three = 535 hours (rounded off)). Total annual burden for this requirement is 670 hours.

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Burden time per response:

135  
hours +  
535  
hours

Frequency of Response:	One-time
Annual number of Responses:	1 resubmitted PTCIPs + 1 resubmitted PTCDPs
Annual Burden:	670 hours

**Calculation:** 1 resubmitted PTCIP x 135 hrs. + 1 resubmitted PTCDP x 535 hrs.  
= 670 hours

(d) PTCSP and PTC system certification. The following apply to PTCSP and PTC System Certification.

(1) A PTC System Certification for a PTC system may be obtained by submitting an acceptable PTCSP. If the PTC system is the subject of a Type Approval, the safety case elements contained in the PTCDP may be incorporated by reference into the PTCSP, subject to finalization of the human factors analysis contained in the PTCDP.

(2) Each PTCSP requirement under § 236.1015 shall be supported by information and analysis sufficient to establish that the requirements of this subpart have been satisfied.

*The burden associated with the PTCSP is included below under that of § 236.1015. The burden associated with the PTCDP and Type Approval is included under that of § 236.1013. Consequently, there is no additional burden associated with this requirement.*

(3) If the Associate Administrator finds that the PTCSP and supporting documentation support a finding that the system complies with this part, the Associate Administrator may approve the PTCSP. If the Associate Administrator approves the PTCSP, the railroad shall receive PTC System Certification for the subject PTC system and shall implement the PTC system according to the PTCSP.

(4) A required PTC system shall not: (i) be used in service until it receives from FRA a PTC System Certification; and (ii) receive a PTC System Certification unless FRA

receives and approves an applicable: (A) PTCSP; or (B) Request for Expedited Certification (REC) as defined by § 236.1031(a).

*The burden associated with the PTCSP is included below under that of § 236.1015. The burden associated with the Request for Expedited Certification (REC) is included under that of § 236.1031(a). Consequently, there is no additional burden associated with this requirement.*

(e) Plan contents. (1) No PTCIP shall receive approval unless it complies with § 236.1011. No railroad shall receive a Type Approval or PTC System Certification unless the applicable PTCDP or PTCSP, respectively, complies with §§ 236.1013 and 236.1015, respectively.

(2) All materials filed in accordance with this subpart must be in the English language, or have been translated into English and attested as true and correct.

FRA estimates that approximately one (1) document filed in accordance with this subpart will not be in English and will need to be translated into English and certified as true and correct. It is estimated that each translated document will be approximately 1,000 pages long (including cover letter) and that it will take approximately eight (8) hours to gather the necessary information/translate the document. Thus, it is estimated that it will take approximately 8,000 hours to complete the document. Total annual burden for this requirement is 8,000 hours.

Respondent Universe:	46 railroads	
Burden time per response:	8,000 hours	
Frequency of Response:		On occasion
Annual number of Responses:	1 document	
Annual Burden:		8,000 hours

**Calculation:** 1 document x 8,000 hrs. = 8,000 hours

(3) Each filing referenced in this section may include a request for full or partial confidentiality in accordance with § 209.11 of this chapter. If confidentiality is requested as to a portion of any applicable document, then in addition to the filing requirements under § 209.11 of this chapter, the person filing the document shall also file a copy of the original un-redacted document, marked to indicate which portions are redacted in the document's confidential version without obscuring the original document's contents.

FRA estimates that approximately 46 cover letters and 46 requests for confidentiality with a copy of the original un-redacted document properly marked will be made under the above requirement. It is estimated that each cover letter will be approximately one (1) page long and take approximately eight (8) hours to gather the necessary information and

complete; and that each request for confidentiality will be approximately 200 pages long and that it will take approximately four (4) to properly mark/redact each page to complete the document. Thus, it is estimated that it will take eight (8) hours and 800 hours, respectively, to complete the cover letter and confidentiality request. Total annual burden for this requirement is 37,168 hours.

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Burden time per response:

8 hours;  
800  
hours

Frequency of Response:	On occasion
Annual number of Responses:	46 cover letters + 46 requests for confidentiality
Annual Burden:	37,168 hours

**Calculation:** 46 cover letters x 8 hrs. + 46 confidentiality requests x 800 hrs. = 37,168 hours

(f) Supporting documentation and information.

(1) Issuance of a Type Approval or PTC System Certification is contingent upon FRA's confidence in the implementation and operation of the subject PTC system. This confidence may be based on FRA-monitored field testing or an independent assessment performed in accordance with § 236.1035 or § 236.1017, respectively.

*The burden associated with FRA-monitored field testing or independent assessments is included under that of § 236.1035 and that of § 236.1017, respectively. Consequently, there is no additional burden associated with this requirement.*

(2) Upon request by FRA, the railroad requesting a Type Approval or PTC System Certification must engage in field testing or independent assessment performed in accordance with § 236.1035 or § 236.1017, respectively, to support assertions made in any of the plans submitted under this subpart. These assertions include any of the plans' content requirements under this subpart.

This requirement is above and beyond the earlier requirement. As a result, FRA estimates that all 46 railroads will be affected. It is estimated that these 46 railroads will each conduct approximately five (5) sets of field tests (230 tests in all); that each field test document will be approximately 100 pages long; and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the field test. Thus, it is estimated that each field test will take approximately 800 hours to complete.

Further, FRA estimates that approximately two (2) independent assessments, in accordance with § 236.1035 or § 236.1017, will be conducted under the above requirement; that each independent assessment document will be approximately 100 pages long; and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the assessment. Thus, it is estimated that each independent assessment will also take approximately 800 hours to complete. Total annual burden for this requirement is 185,600 hours.

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Burden time per response:

800

Frequency of Response:		On occasion	hours
Annual number of Responses:	230 field tests + 2 independent assessments		
Annual Burden:		185,600 hours	

**Calculation:** 230 field tests x 800 hrs. + 2 independent assessments x 800 hrs. = 185,600 hours

(h) FRA access. The Associate Administrator, or that person’s designated representatives, shall be afforded reasonable access to monitor, test, and inspect processes, procedures, facilities, documents, records, design and testing materials, artifacts, training materials and programs, and any other information used in the design, development, manufacture, test, implementation, and operation of the system, as well as interview any personnel:

(1) associated with a PTC system for which a Type Approval or PTC System Certification has been requested or provided; and (2) to determine whether a railroad has been in compliance with this subpart.

FRA estimates that approximately 92 interviews of personnel associated with a PTC system for which a Type Approval or PTC System Certification has been requested/provided will be conducted by FRA representatives under the above requirement. It is estimated that each interview will take approximately 30 minutes to complete. Total annual burden for this requirement is 46 hours.

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Burden time per response:

30  
minutes

Frequency of Response: On occasion

Annual number of Responses: 92 interviews  
Annual Burden: 46 hours

**Calculation:** 92 interviews x 30 min. = 46 hours

(i) Foreign regulatory entity verification. Information that has been certified under the auspices of a foreign regulatory entity recognized by the Associate Administrator may, at the Associate Administrator's sole discretion, be accepted as independently Verified and Validated and used to support each railroad's development of the PTCSP.

*The burden for this requirement is included under that of § 236.10009(d)(2) above. Consequently, there is no additional burden associated with this requirement.*

(j) Processing times for PTCDP and PTCSP. (1) Within 30 days of receipt of a PTCDP or PTCSP, the Associate Administrator will either acknowledge receipt or acknowledge receipt and request more information. (2) To the extent practicable, considering the scope, complexity, and novelty of the product or change: (i) FRA will approve, approve with conditions, or deny the PTCDP within 60 days of the date on which the PTCDP was filed; (ii) FRA will approve, approve with conditions, or deny the PTCSP within 180 days of the date on which the PTCSP was filed.

FRA estimates that approximately eight (8) requests for further information concerning a PTCDP or PTCSP will be made by the Associate Administrator and thus eight (8) documents will be received in response under the above requirement. It is estimated that the required document will be approximately 50 pages long and that it will take approximately eight (8) hours per page for each railroad to gather the necessary information and submit the necessary document to FRA. Thus, it will take approximately 400 hours to complete each required document. Total annual burden for this requirement is 3,200 hours.

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Burden time per response:

400  
hours

Frequency of Response:	On occasion
Annual number of Responses:	8 documents with further information
Annual Burden:	3,200 hours

**Calculation:** 8 documents with further information x 400 hrs. = 3,200 hours

*The burden associated with PTCDPs and PTCSPs is included under that of § 236.1009 and § 236.1015, respectively. Consequently, there is no additional burden associated with the above requirement.*

(iii) If FRA has not approved, approved with conditions, or denied the PTCDP or PTCSP within the 60-day or 180-day window, as applicable, FRA will provide the submitting party with a statement of reasons as to why the submission has not yet been acted upon and a projected deadline by which an approval or denial will be issued and any further consultations or inquiries will be resolved.

*FRA estimates that zero (0) consultations or inquiries will be made under the above requirement. Consequently, there is no additional burden associated with this requirement.*

Total annual burden for this entire requirement is 297,668 hours (6,935 + 1,335 + 32 + 80 + 1 + 16 + 44,960 + 3,745 + 2,135 + 2,670 + 405 + 670 + 670 + 8,000 + 37,168 + 185,600 + 46 + 3,200).

**§ 236.1011 – PTC IP Content Requirements**

(a) Contents. A PTCIP filed pursuant to this subpart shall, at a minimum, describe: (1) the functional requirements that the proposed system must meet; (2) how the PTC railroad intends to comply with § 236.1009(c) and (d); (3) how the PTC system will provide for interoperability of the system between the host and all tenant railroads on the track segments required to be equipped with PTC systems under this subpart and: (i) include relevant provisions of any agreements, executed by all applicable railroads, in place to achieve interoperability; (ii) list all methods used to obtain interoperability; and (iii) identify any railroads with respect to which interoperability agreements have not been achieved as of the time the plan is filed, the practical obstacles that were encountered that

prevented resolution, and the further steps planned to overcome those obstacles; (4) how, to the extent practical, the PTC system will be implemented to address areas of greater risk to the public and railroad employees before areas of lesser risk; (5) the sequence and schedule in which track segments will be equipped and the basis for those decisions, and shall at a minimum address the following risk factors by track segment: (i) Segment traffic characteristics such as typical annual passenger and freight train volume and volume of poison- or toxic-by-inhalation (PIH or TIH) shipments (loads, residue); (ii) Segment operational characteristics such as current method of operation (including presence or absence of a block signal system), number of tracks, and maximum allowable train speeds, including planned modifications; and (iii) Route attributes bearing on risk, including ruling grades and extreme curvature; (6) the following information relating to rolling stock: (i) what rolling stock will be equipped with PTC technology; (ii) the schedule to equip that rolling stock by December 31, 2015; and (iii) all documents and information required by § 236.1006; and (iv) unless the tenant railroad is filing its own PTCIP, the host railroad's PTCIP shall: (A) attest that the host railroad has made a formal written request to each tenant railroad requesting identification of each item of rolling stock to be PTC system equipped and the date each item will be equipped; and (B) include each tenant railroad's response to the host railroad's written request made in accordance with paragraph (a)(6)(iii)(A) of this section; (7) the number of wayside devices required for each track segment and the installation schedule to complete wayside equipment installation by December 31, 2015; (8) identification of each track segment on the railroad as mainline or non-mainline track. If the PTCIP includes a Mainline Track Exclusion Addendum (MTEA), as defined by § 236.1019, the PTCIP should identify the tracks included in the MTEA as main line track with a reference to the MTEA; (9) to the extent the railroad determines that risk-based prioritization required by paragraph (a)(4) of this section is not practical, the basis for this determination; and (10) the dates the associated PTCDP and PTCSP, as applicable, will be submitted to FRA in accordance with § 236.1009.

(b) Additional Class I PTC Requirements. Each Class I railroad shall include: (1) In its PTCIP a strategy for full deployment of its PTC system, describing the criteria that it will apply in identifying additional rail lines on its own network, and rail lines of entities that it controls or engages in joint operations with, for which full or partial deployment of PTC technologies is appropriate, beyond those required to be equipped under this subpart. Such criteria shall include consideration of the policies established by 49 U.S.C. § 20156 (railroad safety risk reduction program), and regulations issued thereunder, as well as non-safety business benefits that may accrue.

(2) In the Technology Implementation Plan of its Risk Reduction Program, when first required to be filed in accordance with 49 U.S.C. § 20156 and any regulation promulgated thereunder, a specification of rail lines selected for full or partial deployment of PTC under the criteria identified in its PTCIP.



(3) Nothing in this paragraph shall be construed to create an expectation or requirement that additional rail lines beyond those required to be equipped by this subpart must be equipped or that such lines will be equipped during the period of primary implementation ending December 31, 2015.

(4) As used in this paragraph “partial implementation” of a PTC system refers to use, pursuant to subpart H of this part, of technology embedded in PTC systems that does not employ all of the functionalities required by this subpart.

(c) FRA review. Within 90 days of receipt of a PTCIP, the Associate Administrator will approve or disapprove of the plan and notify in writing the affected railroad or other entity. If the PTCIP is not approved, the notification will include the plan’s deficiencies. Within 30 days of receipt of that notification, the railroad or other entity that submitted the plan shall correct all deficiencies and resubmit the plan in accordance with § 236.1009 and paragraph (a) of this section, as applicable.

(d) Subpart H. A railroad that elects to install a PTC system when not required to do so may elect to proceed under this subpart or under subpart H of this part.

(e) Upon receipt of a PTCIP, NPI, PTCDP, or PTCSP, FRA posts on its public website notice of receipt and reference to the public docket in which a copy of the filing has been placed. FRA may consider any public comment on each document to the extent practicable within the time allowed by the law and without delaying implementation of PTC systems.

*The burden associated with PTCIPs is included under that of § 236.1009 above. The burden associated with MTEAs is included under that of § 236.1019. At this time, no rule has yet been developed concerning a Risk Reduction Program and filing of a Technology Implementation Plan (TIP). Consequently, there is no additional burden associated with the above requirements.*

Public Comment. Concerning item (e) above and public comments on PTCIPs, PTCDPs, and PTCSPs submitted to the agency, FRA estimates that there will be approximately one (1) review and that, because of complexity of the documents, it will take approximately 143 hours to complete. Further, FRA estimates that it will receive approximately 20 comments per reviewed document, or a total of approximately 40 comments on the PTCDPs and PTCSPs (since the deadline for PTCIPs has now expired) It is estimated that each comment will take approximately eight (8) hours to complete each comment. Total annual burden for this requirement is 463 hours.

Respondent Universe:

Burden time per response:

143  
hours; 8  
hours

Frequency of Response: On occasion  
Annual number of Responses: 1 review + 40 public comments  
Annual Burden: 463 hours

**Calculation:** 1 review x 143 hrs. + 40 public comments x 8 hrs. = 463 hours

(f) The PTCIP shall be maintained to reflect the railroad’s most recent PTC deployment plans until all PTC system deployments required under the RSIA08 are complete.

*The burden associated with PTCIPs is included under that of § 236.1009 above. Consequently, there is no additional burden associated with the above requirement.*

Total burden for this entire requirement is 463 hours.

§ 236.1013 – PTC Development Plan and Notice of Product Intent Content Requirements and Type Approval.

(a) For a PTC system to obtain a Type Approval from FRA, the PTCDP shall be filed in accordance with § 236.1009 and shall include: (1) A complete description of the PTC system, including a list of all PTC system components and their physical relationships in the subsystem or system; (2) A description of the railroad operation or categories of operations on which the PTC system is designed to be used, including train movement density (passenger, freight), operating speeds (including a thorough explanation of intended compliance with § 236.1007), track characteristics, and railroad operating rules; (3) An operational concepts document, including a list with complete descriptions of all functions which the PTC system will perform to enhance or preserve safety; (4) A document describing the manner in which the PTC architecture satisfies safety requirements; (5) A preliminary human factors analysis, including a complete description of all human-machine interfaces and the impact of interoperability requirements on the same; (6) An analysis of the applicability to the PTC system of the requirements of subparts A through G of this part that may no longer apply or are satisfied by the PTC system using an alternative method, and a complete explanation of the manner in which those requirements are otherwise fulfilled; (7) A prioritized service restoration and mitigation plan and a description of the necessary security measures for the system; (8) A description of target safety levels (e.g., MTTHE for major subsystems as defined in subpart H), including requirements for system availability and a description of all backup methods of operation and any critical assumptions associated with the target levels; (9) A complete description of how the PTC system will enforce authorities and signal indications; (10) A description of the deviation which may be proposed under § 236.1029(c), if applicable; and (11) A complete description of how the PTC system will appropriate and timely enforce all integrated hazard detectors in accordance with § 236.1005(c)(3), if applicable.

(b) If the Associate Administrator finds that the system described in the PTCDP would satisfy the requirements for PTC systems under this subpart and that the applicant has made a reasonable showing that a system built to the stated requirements would achieve the level of safety mandated for such a system under § 236.1015, the Associate Administrator may grant a numbered Type Approval for the system.

(c) Each Type Approval shall be valid for a period of five (5) years, subject to automatic and indefinite extension provided that at least one PTC System Certification using the subject PTC system has been issued within that period and not revoked.

(d) The Associate Administrator may prescribe special conditions, amendments, and restrictions to any Type Approval as necessary for safety.

*The burden for this requirement is included under that of § 236.1009 above and that of § 236.1023 below. Consequently, there is no additional burden associated with this requirement.*

(e) If submitted, a NPI must contain the following information: (1) A description of the railroad operation or categories of operations on which the proposed PTC system is designed to be used, including train movement density (passenger, freight), operating speeds (including a thorough explanation of intended compliance with § 236.1007), track characteristics, and railroad operating rules; (2) An operational concepts document, including a list with complete descriptions of all functions that the proposed PTC system will perform to enhance or preserve safety; (3) A description of target safety levels (e.g., MTTHE for major subsystems as defined in subpart H), including requirements for system availability and a description of all backup methods of operation and any critical assumptions associated with the target levels; (4) A complete description of how the proposed PTC system will enforce authorities and signal indications; and (5) A complete description of how the proposed PTC system will appropriately and timely enforce all integrated hazard detectors in accordance with § 236.1005(c)(3), if applicable.

*The burden for this requirement is included under that of § 236.1009(c) above. Consequently, there is no additional burden associated with this requirement.*

#### § 236.1015 – PTCSP Content Requirements and PTC System Certification

(a) Before placing a PTC system required under this part in service, the host railroad must submit to FRA a PTCSP and receive a PTC System Certification. If the Associate Administrator finds that the PTCSP and supporting documentation support a finding that the system complies with this part, the Associate Administrator approves the PTCSP and issues a PTC System Certification. Receipt of a PTC System Certification affirms that the PTC system has been reviewed and approved by FRA in accordance with, and meets the requirements of, this part.

(b) A PTCSP submitted under this subpart may reference and utilize, in accordance with this subpart, any Type Approval previously issued by the Associate Administrator to any railroad, provided that the railroad: (1) Maintains a continually updated PTCSPV pursuant to § 236.1023; and (2) Shows that the supplier from which they are procuring the PTC system has established and can maintain a quality control system for PTC system design and manufacturing acceptable to the Associate Administrator. The quality control system must include the process for the product supplier or vendor to promptly and thoroughly report any safety relevant failure and previously unidentified hazards to each railroad using the product; and (3) Provides the applicable licensing information.

(c) A PTCSP submitted in accordance with this subpart shall: (1) Include the FRA approved PTCSP or, if applicable, the FRA issued Type Approval; (2)(i) Specifically and rigorously document each variance between the PTC system and its applicable operating conditions as described in the PTCSP, and attest that there are no other such variances; or (ii) Attest that there are no variances between the PTC system and its applicable operating conditions as described in the applicable PTCSP from that as described in the PTCSP; and

(3) Attest that the system was otherwise built in accordance with the applicable PTCDP and PTCSP and achieves the level of safety represented therein.

(d) A PTCSP shall include the same information required for a PTCDP under § 236.1013(a). If a PTCDP has been filed and approved prior to filing of the PTCSP, the PTCSP may incorporate the PTCDP by reference, with the exception that a final human factors analysis shall be provided. The PTCSP shall contain the following additional elements: (1) A hazard log consisting of a comprehensive description of all safety-relevant hazards not previously addressed by the vendor or supplier to be addressed during the life cycle of the PTC system, including maximum threshold limits for each hazard (for unidentified hazards, the threshold shall be exceeded at one occurrence); (2) A description of the safety assurance concepts that are to be used for system development, including an explanation of the design principles and assumptions; (3) A risk assessment of the as-built PTC system described; (4) A hazard mitigation analysis, including a complete and comprehensive description of each hazard and the mitigation techniques used; (5) A complete description of the safety assessment and Verification and Validation processes applied to the PTC system, their results, and whether these processes address the safety principles described in Appendix C to this part directly, using other safety criteria, or not at all; (6) A complete description of the railroad's training plan for railroad and contractor employees and supervisors necessary to ensure safe and proper installation, implementation, operation, maintenance, repair, inspection, testing, and modification of the PTC system; (7) A complete description of the specific procedures and test equipment necessary to ensure the safe and proper installation, implementation, operation, maintenance, repair, inspection, testing, and modification of the PTC system on the railroad and establish safety-critical hazards are appropriately mitigated. These procedures, including calibration requirements, shall be consistent with or explain deviations from the equipment manufacturer's recommendations; (8) A complete description of any additional warning to be placed in the Operations and Maintenance Manual in the same manner specified in § 236.919 and all warning labels to be placed on equipment as necessary to ensure safety; (9) A complete description of the configuration or revision control measures designed to ensure that the railroad or its contractor does not adversely affect the safety-functional requirements and that safety-critical hazard mitigation processes are not compromised as a result of any such change; (10) A complete description of all initial implementation testing procedures necessary to establish that safety-functional requirements are met and safety-critical hazards are appropriately mitigated; (11) A complete description of all post-implementation testing (validation) and monitoring procedures, including the intervals necessary to establish that safety-functional requirements, safety-critical hazard mitigation processes, and safety-critical tolerances are not compromised over time, through use, or after maintenance (adjustment, repair, or replacement) is performed; (12) A complete description of each record necessary to ensure the safety of the system that is associated with periodic maintenance, inspections, tests, adjustments, repairs, or replacements, and the system's resulting conditions, including records of component failures resulting in safety-relevant hazards (see § 236.1037); (13) A

safety analysis to determine whether, when the system is in operation, any risk remains of an unintended incursion into a roadway work zone due to human error. If the analysis reveals any such risk, the PTCDP and PTCSP shall describe how that risk will be mitigated; (14) A more detailed description of any alternative arrangements as already provided under § 236.1015(a)(1)(i); (15) A complete description of how the PTC system will enforce authorities and signal indications, unless already completely provided for in the PTCDP; (16) A description of how the PTCSP complies with § 236.1019(f), if applicable; (17) A description of any in operational requirements for en route failures as specified under § 236.1029(c), if applicable and unless already completely provided for in the PTCDP; (18) A complete description of how the PTC system will appropriate and timely enforce all integrated hazard detectors in accordance with § 236.1005; (19) An emergency and planned maintenance temporary rerouting plan indicating how operations on the subject PTC system will take advantage of the benefits provided under §§ 236.1005(g) through (k); and (20) The documents and information required under § 236.1007 and § 236.1033.

*The burden for the above requirements is included under that of (d)(1), (2), and (3) below. Consequently, there is no additional burden associated with this requirement.*

(e) The following additional requirements apply to:

(1) Non-vital overlay. A PTC system proposed as an overlay on the existing method of operation and not built in accordance with the safety assurance principles set forth in Appendix C of this part must, to the satisfaction of the Associate Administrator, be shown to: (i) Reliably execute the functions set forth in § 236.1005; (ii) Obtain at least 80 percent reduction of the risk associated with accidents preventable by the functions set forth in § 236.1005, when all effects of the change associated with the PTC system are taken into account. The supporting risk assessment shall evaluate all intended changes in railroad operations coincident with the introduction of the new system; and (iii) Maintain a level of safety for each subsequent system modification that is equal to or greater than the level of safety for the previous PTC systems.

FRA estimates that it will receive approximately three (3) PTCSPs, which will include the required supporting risk assessments, under the above requirement. It is estimated that each PTCSP will be approximately 1,000 pages long and that it will take approximately 16 hours per page to gather the necessary information and complete each page of the document. Thus, it is estimated that it will take approximately 16,000 hours to complete each PTCSP. Total annual burden for this requirement is 48,000 hours.

Respondent Universe:

Burden time per response:

		16,000 hours
Frequency of Response:		On occasion
Annual number of Responses:	3 PTCSPs	
Annual Burden:		48,000 hours

**Calculation:** 3 PTCSPs x 16,000 hrs. = 48,000 hours

(2) Vital overlay. A PTC system proposed on a newly constructed track or as an overlay on the existing method of operation and is built in accordance with the safety assurance principles set forth in Appendix C of this part must, to the satisfaction of the Associate Administrator, be shown to: (i) Reliably execute the functions set forth in § 236.1005; and (ii) Have sufficient documentation to demonstrate that the PTC system, as built, fulfills the safety assurance principles set forth in Appendix C of this part. The supporting risk assessment may be abbreviated as that term is used in subpart H of this part.

FRA estimates that it will receive approximately 28 PTCSPs, which will include supporting risk assessments, under the above requirement. The system complexity is much greater here than with non-vital overlays above. As a result, it is estimated that each PTCSP will be approximately 1,400 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the document. Thus, it is estimated that it will take approximately 22,400 hours to complete each PTCSP. Total annual burden for this requirement is 627,200 hours.

Respondent Universe:

Burden time per response:

22,400  
hours

Frequency of Response: On occasion  
 Annual number of Responses: 28 PTCSPs  
 Annual Burden: 627,200 hours

**Calculation:** 28 PTCSPs x 22,400 hrs. = 627,200 hours

(3) Stand-alone. A PTC system proposed on a newly constructed track, an existing track for which no signal system exists, as a replacement for an existing signal or train control system, or to otherwise intend to replace or materially modify the existing method of operation, must: (i) Reliably execute the functions required by § 236.1005 and be demonstrated to do so to FRA’s satisfaction; and (ii) Have a PTCSP establishing, with a high degree of confidence, that the system will not introduce new hazards that have not been mitigated. The supporting risk assessment shall evaluate all intended changes in railroad operations in relation to the introduction of the new system and shall examine in detail the direct and indirect effects of all changes in the method of operations.

FRA estimates that it will receive approximately 14 PTCSPs, which will include the required supporting risk assessments, under the above requirement. It is estimated that each PTCSP will be approximately 2,000 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the document. Thus, it is estimated that it will take approximately 32,000 hours to complete each PTCSP. Total annual burden for this requirement is 448,000 hours.

Respondent Universe:



Burden time per response:

32,000  
hours

Frequency of Response:

On occasion

Annual number of Responses: 14 PTCSPs

Annual Burden: 448,000 hours

**Calculation:** 14 PTCSPs x 32,000 hrs. = 448,000 hours

(4) Mixed systems. If a PTC system combining overlay, stand-alone, vital, or non-vital characteristics is proposed, the railroad shall confer with the Associate Administrator regarding appropriate structuring of the safety case and analysis.

FRA estimates that approximately three (3) sit-down conferences with the Associate Administrator will be held under the above requirement. It is estimated that each conference will include two railroads (and FRA representatives) and be held over two eight hour days. Thus, it is estimated that each conference will take approximately 32 hours (2 RRs x 2 days x 8 hrs p/day) to complete. Total annual burden for this requirement is 96 hours.

Respondent Universe:

Burden time per response:

32  
hours

Frequency of Response:

On occasion

Annual number of Responses:

3 conferences

Annual Burden:

96 hours

**Calculation:**

3 conferences x 32 hrs. = 96 hours

Additionally, FRA estimates that it will receive approximately one (1) PTCSP that include the appropriate structure of the safety case and analysis resulting from the above conferences. It is estimated that each PTCSP will be approximately 1,800 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the PTCSP. Thus, it is estimated that each PTCSP will take approximately 28,800 hours to complete. Total annual burden for this requirement is 28,800 hours.

Respondent Universe:

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Burden time per response:

28,800  
hours

Frequency of Response:

On occasion

Annual number of Responses:

1 PTCSP

Annual Burden:

28,800 hours

**Calculation:**

1 PTCSP x 28,800 hrs. = 28,800 hours

(f) When determining whether the PTCSP fulfills the requirements under paragraph (d) of this section, the Associate Administrator may consider all available evidence concerning the reliability and availability of the proposed system and any and all safety consequences of the proposed changes. In any case where the PTCSP lacks adequate data regarding safety impacts of the proposed changes, the Associate Administrator may request the necessary data from the applicant. If the requested data are not provided, the Associate Administrator may find that potential hazards could or will arise.

In approximately 23 cases, FRA estimates that the Associate Administrator will request additional PTCSP data and it will be provided under the above requirement. It is estimated that each document will be approximately 200 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the requested document. Thus, it is estimated that it will take approximately 3,200 hours to complete each requested document. Total annual burden for this requirement is 73,600 hours.

Respondent Universe:

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Burden time per response:

3,200  
hours

Frequency of Response:

On occasion

Annual number of Responses:

23 additional requested documents

Annual Burden:

73,600 hours

**Calculation:**

23 additional requested documents x 3,200  
hrs. = 73,600 hours

(g) If a PTCSP applies to a system designed to replace an existing certified PTC system, the PTCSP will be approved provided that the PTCSP establishes with a high degree of confidence that the new system will provide a level of safety not less than the level of safety provided by the system to be replaced.

FRA estimates that it will receive approximately 23 PTCSPs under the above requirement. It is estimated that each PTCSP will be approximately 200 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the PTCSP. Thus, it is estimated that it will take approximately 3,200 hours to complete each PTCSP. Total annual burden for this requirement is 73,600 hours.

Respondent Universe:

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Burden time per response:

3,200  
hours

Frequency of Response:		On occasion
Annual number of Responses:	23 PTCSPs	
Annual Burden:		73,600 hours

**Calculation:** 23 PTCSPs x 3,200 hrs. = 73,600 hours

(h) When reviewing the issue of the potential data errors (for example, errors arising from data supplied from other business systems needed to execute the braking algorithm, survey data needed for location determination, or mandatory directives issued through the computer-aided dispatching system), the PTCSP must include a careful identification of each of the risks and a discussion of each applicable mitigation. In an appropriate case, such as a case in which the residual risk after mitigation is substantial or the underlying

method of operation will be significantly altered, the Associate Administrator may require submission of a quantitative risk assessment addressing these potential errors.

*The burden for this requirement is included under that § 236.1015(e) above. Consequently, there is no additional burden associated with this requirement.*

Additionally, FRA estimates that it will receive approximately 23 non-quantitative risk assessments with the necessary information under the above requirement. It is estimated that each non-quantitative risk assessment will be approximately 200 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the non-quantitative risk assessment. Thus, it is estimated that it will take approximately 3,200 hours to complete each non-quantitative risk assessment. Total annual burden for this requirement is 73,600 hours.

Respondent Universe:	46 railroads	
Burden time per response:		3,200 hours
Frequency of Response:		On occasion
Annual number of Responses:	23 non-quantitative risk assessments	
Annual Burden:		73,600 hours

**Calculation:** 23 non-quantitative risk assessments x 3,200 min. = 73,600 hours

Total annual burden for this entire requirement is 1,372,896 hours (48,000 + 627,200 + 448,000 + 96 + 28,800 + 73,600 + 73,600 + 73,600).

#### § 236.1017 – Independent Third Party Verification and Validation

(a) The PTCSP must be supported by an independent third-party assessment when the Associate Administrator concludes that it is necessary based upon the criteria set forth in § 236.913, with the exception that consideration of the methodology used in the risk assessment (§ 236.913(g)(2)(vii)) shall apply only to the extent that a comparative risk assessment was required. To the extent practicable, FRA makes this determination not later than review of the PTCIP and the accompanying PTCDP or PTCSP. If an independent assessment is required, the assessment may apply to the entire system or a designated portion of the system.

In approximately one (1) case, FRA estimates that the Associate Administrator will determine an independent third party assessment is necessary and that it will be provided to the agency. It is estimated that the third party assessment will be approximately 500 pages long and that it will take approximately 16 hours to gather the necessary

information and complete each page of the third party risk assessment. Thus, it is estimated that it will take approximately 8,000 hours to complete each third party assessment. Total annual burden for this requirement is 8,000 hours.

Respondent Universe:

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Burden time per response:

8,000  
hours

Frequency of Response:	On occasion
Annual number of Responses:	1 third party assessment
Annual Burden:	8,000 hours

**Calculation:** 1 third party assessment x 8,000 hrs. = 8000 hours

(b) If a PTC system is to undergo an independent assessment in accordance with this section, the host railroad may submit to the Associate Administrator a written request that FRA confirm whether a particular entity would be considered an independent third party pursuant to this section. The request should include supporting information in accordance with paragraph (c) of this section. FRA may request further information to make a determination or provide its determination in writing.

(c) As used in this section, “independent third party” means a technically competent entity responsible to and compensated by the railroad (or an association on behalf of one or more railroads) that is independent of the PTC system supplier and vendor. An entity that is owned or controlled by the supplier or vendor, that is under common ownership or control with the supplier or vendor, or that is otherwise involved in the development of the PTC system is not considered “independent” within the meaning of this section.

FRA estimates that it will receive approximately one (1) written request with supporting information regarding independent third parties under the above requirement. It is estimated that each written request will be approximately one (1) page long and that it will take approximately eight (8) hours to complete each page of the written request. Total annual burden for this requirement is eight (8) hours.

Respondent Universe:

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Burden time per response:

Frequency of Response:	On occasion	8 hours
Annual number of Responses:	1 written request	
Annual Burden:		8 hours

**Calculation:** 1 written request x 8 hrs. = 8 hours

Additionally, in one (1) case, FRA estimates that it will request further information to make a determination or provide its determination in writing under the above requirement. It is estimated that each additional information document will be approximately 10 pages long and that it will take approximately 16 hours to complete each page of the additional information document. Thus, it is estimated that it will take approximately 160 hours to complete each additional information document. Total annual burden for this requirement is 160 hours.

Respondent Universe:

4  
6

Burden time per response:

160  
hours

Frequency of Response: On occasion  
Annual number of Responses: 1 additional information document  
Annual Burden: 160 hours

**Calculation:** 1 additional information document x 160 hrs. = 160 hours

(d) The independent third party assessment must, at a minimum, consist of the activities and result in the production of documentation meeting the requirements of Appendix F to this part, unless excepted by this part or by FRA order or waiver.

FRA estimates that it will receive approximately one (1) waiver requests under the above requirement. It is estimated that each waiver request will be approximately 10 pages long and that it will take approximately 16 hours to complete each page of the additional information document. Thus, it is estimated that it will take approximately 160 hours to complete each waiver request. Total annual burden for this requirement is 160 hours.

Respondent Universe:



Burden time per response:

160  
hours

Frequency of Response:

On occasion

Annual number of Responses: 1 waiver request

Annual Burden: 160 hours

**Calculation:** 1 waiver requests x 160 hrs. =160 hours

(e) Information provided that has been certified under the auspices of a foreign railroad regulatory entity recognized by the Associate Administrator may, at the Associate Administrator’s discretion, be accepted as having been independently verified.

FRA estimates that it will receive approximately one (1) request to accept information certified under the auspices of a foreign railroad regulatory entity as having been independently verified under the above requirement. It is estimated that each request will be approximately two (2) pages long and that it will take approximately 16 hours to complete each page of the request. Thus, it is estimated that it will take approximately 32 hours to complete each request. Total annual burden for this requirement is 32 hours.

Respondent Universe:

Burden time per response:

32  
hours

Frequency of Response:	On occasion
Annual number of Responses:	1 request to accept certified information from a foreign RR regulatory entity
Annual Burden:	32 hours
<b><u>Calculation:</u></b>	1 request to accept foreign certified info. x 32 hrs. = 32 hours

Total annual burden for this entire requirement is 8,360 hours (8,000 + 8 + 160 + 160 + 32).

§ 236.1019 – Main Line Track Exceptions

(a) Scope and procedure. This section pertains exclusively to exceptions from the rule that trackage over which scheduled intercity and commuter passenger service is provided is considered main line track requiring installation of a PTC system. One or more intercity or commuter passenger railroads, or freight railroads conducting joint passenger and freight operation over the same segment of track may file a main line track exclusion addendum (“MTEA”) to its PTCIP requesting to designate track as not main line subject to the conditions set forth in paragraphs (b) or (c) of this section. No track shall be designated as yard or terminal unless it is identified in a MTEA that is part of an FRA approved PTCIP.

FRA estimates that approximately 46 MTEAs will be filed with the agency under the above requirement. It is estimated that each MTEA will be approximately 10 pages long and that it will take approximately 16 hours to complete each page of the MTEA. Thus, it is estimated that it will take approximately 160 hours to complete each MTEA. Total annual burden for this requirement is 7,360 hours.

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Burden time per response:

160  
hours

Frequency of Response: On occasion  
 Annual number of Responses: 46 MTEAs  
 Annual Burden: 7,360 hours

**Calculation:** 46 MTEAs x 160 hrs. = 7,360 hours

(b) Passenger terminal exception. FRA will consider an exception in the case of trackage used exclusively as yard or terminal tracks by or in support of regularly scheduled intercity or commuter passenger service where the MTEA describes in detail the physical boundaries of the trackage in question, its use and characteristics (including track and signal charts) and all of the following apply: (1) The maximum authorized speed for all movements is not greater than 20 miles per hour, and that maximum is enforced by any available onboard PTC equipment within the confines of the yard or terminal; (2) Interlocking rules are in effect prohibiting reverse movements other than on signal indications without dispatcher permission; and (3) Either of the following conditions exist: (i) No freight operations are permitted; or (ii) Freight operations are permitted but no passengers will be aboard passenger trains within the defined limits.

FRA estimates that will receive approximately 23 MTEAs under the above requirement. It is estimated that each MTEA will be approximately 10 pages long and that it will take approximately 16 hours to complete each page of the MTEA. Thus, it is estimated that it will take approximately 160 hours to complete each MTEA. Total annual burden for this requirement is 3,680 hours.

Respondent Universe: 46 railroads  
 Burden time per response:

160  
hours

Frequency of Response: On occasion  
 Annual number of Responses: 23 MTEAs  
 Annual Burden: 3,680 hours

**Calculation:** 23 MTEAs 160 hrs. = 3,680 hours

(c) Limited operations exception. FRA will consider an exception in the case of a track segment used for limited operations (at speeds not exceeding those permitted under 236.0 of this part) under one of the following sets of conditions: (1) The trackage is used for

limited operations by at least one passenger railroad subject to at least one of the following conditions: (i) All trains are limited to restricted speed; (ii) Temporal separation of passenger and other trains is maintained as provided in paragraph (e) of this section; or (iii) Passenger service is operated under a risk mitigation plan submitted by all railroads involved in the joint operation and approved by FRA. The risk mitigation plan must be supported by a risk assessment establishing that the proposed mitigations will achieve a level of safety not less than the level of safety that would obtain if the operations were conducted under paragraph (c)(1) or (c)(2) of this section. (2) Passenger service is operated on a segment of track of a freight railroad that is not a Class I railroad on which less than 15 million gross tons of freight traffic is transported annually and on which one of the following conditions applies: (i) If the segment is un-signaled and no more than four regularly scheduled passenger trains are operated during a calendar day, or (ii) If the segment is signaled (e.g., equipped with a traffic control system, automatic block signal system, or cab signal system) and no more than 12 regularly scheduled passenger trains are operated during a calendar day. (3) Not more than four passenger trains per day are operated on a segment of track of a Class I freight railroad on which less than 15 million gross tons of freight traffic is transported annually.

FRA estimates that will receive approximately 23 risk mitigation plans with supporting risk assessments under the above requirement. It is estimated that each risk mitigation plan will be approximately 10 pages long and that it will take approximately 16 hours to complete each page of the risk mitigation plan. Thus, it is estimated that it will take approximately 160 hours to complete each risk mitigation plan. Total annual burden for this requirement is 3,680 hours.

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Burden time per response:

160

Frequency of Response:		On occasion	hours
Annual number of Responses:	23 risk mitigation plans		
Annual Burden:		3,680 hours	

**Calculation:** 23 risk mitigation plans x 160 hrs. = 3,680 hours

(d) A limited operations exception under paragraph (c) is subject to FRA review and approval. FRA may require a collision hazard analysis to identify hazards and may require that specific mitigations be undertaken. Operations under any such exception shall be conducted subject to the terms and conditions of the approval. Any main line track exclusion is subject to periodic review.

FRA estimates that approximately 12 collision hazard analyses will be completed and submitted to FRA under the above requirement. It is estimated that each collision hazard analysis will be approximately 100 pages long and that it will take approximately 16 hours to complete each page of the collision hazard analysis. Thus, it will take approximately 1,600 hours to gather the necessary information and complete each collision hazard analysis. Total annual burden for this requirement is 19,200 hours.

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Burden time per response:

		1,600	hours
Frequency of Response:		On occasion	
Annual number of Responses:	12 collision hazard analyses		
Annual Burden:		19,200 hours	

**Calculation:** 12 collision hazard analyses x 1,600 hrs. = 19,200 hours

(e) Temporal separation. As used in this section, temporal separation means that limited passenger and freight operations do not operate on any segment of shared track during the same period and also refers to the processes or physical arrangements, or both, in place to ensure that temporal separation is established and maintained at all times. The use of exclusive authorities under mandatory directives is not, by itself, sufficient to establish that temporal separation is achieved. Procedures to ensure temporal separation shall include verification checks between passenger and freight operations and effective physical means to positively ensure segregation of passenger and freight operations in accordance with this paragraph.

FRA estimates that approximately 11 procedures to ensure temporal separation will be developed under the above requirement. It is estimated that each temporal separation procedure will be approximately 10 pages long and that it will take approximately 16 hours to complete each page of the temporal separation procedure. Thus, it is estimated that it will take approximately 160 hours to complete each temporal separation procedure. Total annual burden for this requirement is 1,760 hours.

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Burden time per response:

160  
hours

Frequency of Response: On occasion  
Annual number of Responses: 11 temporal separation procedures  
Annual Burden: 1,760 hours

**Calculation:**

11 temporal separation procedures x 160 hrs.  
= 1,760 hours

(f) PTCSP requirement. No PTCSP filed after the approval of a PTCIP with an MTEA shall be approved by FRA unless it attests that no changes, except for those included in an FRA approved RFA, have been made to the information in the PTCIP and MTEA required by paragraph (b) or (c) of this section.

*The burden associated for MTEAs is included above, and the burden for RFAs is included under that of § 236.1021 below. Consequently, there is no additional burden associated with this requirement.*

(g) Designation modifications. If subsequent to approval of its PTCIP or PTCSP the railroad seeks to modify which track or tracks should be designated as main line or not main line, it shall request modification of its PTCIP or PTCSP, as applicable, in accordance with § 236.1021.

*The burden associated with this requirement is included below under that of § 236.1021. Consequently, there is no additional burden associated with this requirement.*

Total annual burden for this requirement is 35,680 hours (7,360 + 3,680 + 3,680 + 19,200 + 1,760).

**§ 236.1021 – Discontinuances, Material Modifications, and Amendments**

(a) No changes, as defined by this section, to a PTC system, PTCIP, PTCDP, or PTCSP, shall be made unless: (1) The railroad files a request for amendment (“RFA”) to the applicable PTCIP, PTCDP, or PTCSP with the Associate Administrator; and (2) The Associate Administrator approves the RFA.

(b) After approval of an RFA in accordance with paragraph (a) of this section, the railroad shall immediately adopt and comply with the amendment.

(c) In lieu of a separate filing under part 235 of this chapter, a railroad may request approval of a discontinuance or material modification of a signal or train control system by filing a request for amendment (RFA) to its PTCIP, PTCDP, or PTCSP with the Associate Administrator.

(d) An RFA made in accordance with this section will not be approved by FRA unless the request includes:

(1) The information listed in § 235.10 of this chapter and the railroad provides to FRA, upon request, any additional information necessary to evaluate the RFA (see § 235.12), including:

- (2) The proposed modifications;
- (3) The reasons for each modification;
- (4) The changes to the PTCIP, PTCDP or PTCSP, as applicable;
- (5) Each modification's effect on PTC system safety;
- (6) An approximate timetable for filing of the PTCDP, PTCSP, or both, if the amendment pertains to a PTCIP; and
- (7) An explanation of whether each change to the PTCSP is planned or unplanned.
  - (i) Unplanned changes that affect the Type Approval's PTCDP require submission and approval in accordance with § 236.1013 of a new PTCDP, followed by submission and approval in accordance with § 236.1015 of a new PTCSP for the PTC system.
  - (ii) Unplanned changes that do not affect the Type Approval's PTCDP require submission and approval of a new PTCSP.
  - (iii) Unplanned changes are changes affecting system safety that have not been documented in the PTCSP. The impact of unplanned changes on PTC system safety has not yet been determined.
  - (iv) Planned changes may be implemented after they have undergone suitable regression testing to demonstrate, to the satisfaction of the Associate Administrator, they have been correctly implemented and their implementation does not degrade safety.
  - (v) Planned changes are changes affecting system safety in the PTCSP and have been included in all required analysis under § 236.1015. The impact of these changes on the PTC system's safety has been incorporated as an integral part of the approved PTCSP safety analysis.

FRA estimates that it will receive approximately 23 requests for amendment (RFAs) under the above requirements. It is estimated that each RFA will be approximately 10 pages long, and that it will take approximately 16 hours to gather the necessary information and complete each page of the RFA. Thus, it is estimated that it will take approximately 160 hours to complete each RFA and send it to FRA. Total annual burden for this requirement is 3,680 hours.

Respondent Universe:



Burden time per response:

160  
hours

Frequency of Response:		On occasion
Annual number of Responses:	23 RFAs	
Annual Burden:		3,680 hours

**Calculation:** 23 RFAs x 160 hrs. = 3,680 hours

(e) If the RFA includes a request for approval of a discontinuance or material modification of a signal or train control system, FRA will publish a notice in the **Federal Register** of the application and will invite public comment in accordance with part 211 of this chapter.

FRA estimates that it will receive approximately 20 RFA public comments under the above requirement. It is estimated that it will take approximately three (3) hours for each of the 7 interested groups to review the RFA or a total of 21 hours to review the RFAs. It is further estimated that seven interested groups will make a total of 20 RFA public comments and that each RFA public comment will be approximately two (2) pages and that will take approximately eight (8) hours per page to gather the necessary information and complete the comment. Thus, each RFA comment will take approximately 16 hours to complete and send it to FRA. Total annual burden for this requirement is 341 hours.

Respondent Universe:

Burden time per response:

3 hours;  
16  
hours

Frequency of Response:	On occasion
Annual number of Responses:	7 reviews + 20 RFA public comments
Annual Burden:	341 hours

**Calculation:** 7 reviews x 3 hrs. + 20 RFA comments x 16 hrs. = 341 hours

(f) When considering the RFA, FRA will review the issue of the discontinuance or material modification and determine whether granting the request is in the public interest and consistent with railroad safety, taking into consideration all changes in the method of operation and system functionalities, both within normal PTC system availability and in the case of a system failed state (unavailable), contemplated in conjunction with installation of the PTC system. The railroad submitting the RFA must, at FRA’s request, perform field testing in accordance with § 236.1035 or engage in Verification and Validation in accordance with § 236.1017.

*The burden associated with the above requirement is included below under that of § 236.1035 and that of § 236.1017, respectively. Consequently, there is no additional burden associated with this requirement.*

(g) FRA may issue at its discretion a new Type Approval number for a PTC system modified under this section.

(h) Changes requiring filing of an RFA. Except as provided by paragraph (i), an RFA shall be filed to request the following: (1) Discontinuance of a PTC system, or other similar appliance or device; (2) Decrease of the PTC system's limits (e.g., exclusion or removal of a PTC system on a track segment); (3) Modification of a safety critical element of a PTC system; or (4) Modification of a PTC system that affects the safety critical functionality of any other PTC system with which it interoperates.

*The burden associated with this requirement is included above. Consequently, there is no additional burden associated with this requirement.*

Total annual burden for this entire requirement is 4,021 hours (3,680 + 341).

§ 236.1023 – Errors and Malfunctions

(a) Each railroad implementing a PTC system on its property shall establish and continually update a PTC Product Vendor List (PTCPVL) that includes all vendors and suppliers of each PTC system, subsystem, component, and associated product, and process in use system-wide. The PTCPVL shall be made readily available to FRA upon request.

FRA estimates that approximately 46 PTC Product Vendor Lists (PTCPVLs) will be created, maintained, and continually updated under the above requirement. It is estimated that each list will be approximately one (1) page long and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the list. Thus, each list will take approximately eight (8) hours to complete and maintain. Total annual burden for this requirement is 368 hours.

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Burden time per response:

Frequency of Response:		On occasion	8 hours
Annual number of Responses:	46 lists		
Annual Burden:		368 hours	

**Calculation:** 46 lists x 8 hrs. = 368 hours

(b) The railroad shall specify within its PTCSP all contractual arrangements with hardware and software suppliers or vendors for immediate notification between the parties of any and all safety critical software failures, upgrades, patches, or revisions, as well as any hardware repairs, replacements, or modifications for their PTC system, subsystems, or components. A vendor or supplier, on receipt of a report of any safety-critical failure to their product, shall promptly notify all other railroads that are using that product, whether or not the other railroads have experienced the reported failure of that safety-critical system, subsystem, or component. The notification from a supplier to any railroad shall include explanation from the supplier of the reasons for such notification, the circumstances associated with the failure, and any recommended mitigation actions to be taken pending determination of the root cause and final corrective actions.

*The burden for this requirement is already included under that of § 236.1015. Consequently, there is no additional burden associated with this provision.*

(c) The railroad shall: (1) Specify the railroad’s process and procedures in its PTCSP for action upon their receipt of notification of safety-critical failure, as well as receipt of a safety-critical upgrade, patch, revision, repair, replacement, or modification. (2) Identify configuration/revision control measures in its PTCSP that are designed to ensure the safety-functional requirements and the safety-critical hazard mitigation processes are not compromised as a result of any change and that such a change can be audited.

*The burden for this requirement is already included under that of § 236.1015. Consequently, there is no additional burden associated with this provision.*

(d) The railroad shall provide to the applicable vendor or supplier the railroad’s procedures for action upon notification of a safety critical failure, upgrade, patch, or revision for the PTC system, subsystem, component, product, or process, and actions to be taken until the faulty system, subsystem, or component has been adjusted, repaired, or replaced.

FRA estimates that it will receive approximately 46 procedures for action under the above requirement. It is estimated that each procedure for action document will be approximately two (2) pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the document. Thus, it is

estimated that it will take approximately 16 hours to complete each procedures for action document and send it to FRA. Total annual burden for this requirement is 736 hours.

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Burden time per response:

16  
hours

Frequency of Response:	On occasion
Annual number of Responses:	46 procedures for action
Annual Burden:	736 hours

**Calculation:** 46 procedures for action x 16 hrs. = 736 hours

(e) After the product is placed in service, the railroad shall maintain a database of all safety-relevant hazards as set forth in the PTCSP and those that had not previously been identified in the PTCSP. If the frequency of the safety-relevant hazard exceeds the thresholds set forth in the PTCSP, or has not been previously identified in the appropriate risk analysis, the railroad must: (1) Notify the applicable vendor or supplier and FRA of the failure, malfunction, or defect that decreased or eliminated the safety functionality; and (2) Keep the applicable vendor or supplier and FRA apprised on a continual basis of the status of any and all subsequent failures; and (3) Take prompt counter measures to reduce or eliminate the frequency of the safety-relevant hazards below the threshold identified in the PTCSP.

FRA estimates that approximately 150 notifications will be made to the applicable vendor and FRA under the above requirement. It is estimated that each notification will be approximately two (2) pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the notification. Thus, it is

estimated that it will take approximately 16 hours to complete each notification and send it to FRA and the affected railroad. Total annual burden for this requirement is 2,400 hours.

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Burden time per response:

16  
hours

Frequency of Response: On occasion  
Annual number of Responses: 150 notifications  
Annual Burden: 2,400 hours

**Calculation:** 150 notifications x 16 hrs. = 2,400 hours

(2) Additionally, FRA estimates that 150 notification updates will be made to the applicable vendor and FRA under the above requirement. It is estimated that each notification update will be approximately two (2) pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the notification update. Thus, it is estimated that it will take approximately 16 hours to complete each notification update and send it to FRA and the affected railroad. Total annual burden for this requirement is 2,400 hours.

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Burden time per response:

16  
hours

Frequency of Response:	On occasion
Annual number of Responses:	150 notification updates
Annual Burden:	2,400 hours

**Calculation:** 150 notification updates x 16 hrs. = 2,400 hours

(f) Each notification required by this section must: (1) be made within 15 days after the vendor, supplier, or railroad discovers the failure, malfunction, or defective condition. However, a report that is due on a Saturday or a Sunday may be delivered on the following Monday and one that is due on a holiday may be delivered on the next business day; (2) be transmitted in a manner and form acceptable to the Associate Administrator and by the most expeditious method available; and (3) include as much available and applicable information as possible, including: (i) PTC system name and model; (ii) Identification of the part, component, or system involved, including the part number as applicable; (iii) Nature of the failure, malfunctions, or defective condition; (iv) Mitigation taken to ensure the safety of train operation, railroad employees, and the public; and (v) The estimated time to correct the failure.

*The burden associated with notifications is included § 236.1023(e) above and § 236.1023 (h) below. Consequently, there is no additional burden associated with this requirement.*

(4) In the event that all information required by § 236.1023(f)(3) of this section is not immediately available, the non-available information shall be forwarded to the Associate Administrator as soon as practicable in supplemental reports.

*The burden for this requirement is already included under that of § 236.1023(e)(2) above. Consequently, there is no additional burden associated with this provision.*

(g) Whenever any investigation of an accident or service difficulty report shows that a PTC system or product is unsafe because of a manufacturing or design defect, the railroad and its vendor shall, upon request of the Associate Administrator, report to the Associate

Administrator the results of its investigation and any action taken or proposed to correct that defect.

In approximately five (5) cases, FRA estimates that the Associate Administrator will request a report on the manufacturer's investigation of an accident or service difficulty and thus five (5) reports will be received by FRA from manufacturers indicating the results of their investigations and any actions taken or proposed by the manufacturer to correct that defect. It is estimated that each report will be approximately 25 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of report. Thus, it is estimated that each report will take approximately 400 hours to complete and send to FRA. Total annual burden for this requirement is 2,000 hours.

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Burden time per response:

400  
hours

Frequency of Response:

On occasion

Annual number of Responses: 5 reports

Annual Burden: 2,000 hours

**Calculation:** 5 reports x 400 hrs. = 2,000 hours



(h) PTC system and product suppliers and vendors shall: (1) Promptly report any safety relevant failures or defective conditions, previously unidentified hazards, and recommended mitigation actions in their PTC system, subsystem, or component to each railroad using the product.

FRA estimates that approximately 150 reports will be completed by suppliers under the above requirement. It is estimated that it will take approximately 16 hours to complete each report and that it will take approximately eight (8) hours to make copies of each of the 150 reports and send them to the affected railroads. Total annual burden for this requirement is 3,600 hours.

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Burden time per response:

16  
hours +  
8 hours

Frequency of Response:

On occasion

Annual number of Responses:

150 supplier reports + 150 report copies

Annual Burden:

3,600 hours

**Calculation:** 150 supplier reports x 16 hrs. + 150 report copies x 8 hrs. =  
3,600 hours

(2) Notify FRA of any safety-relevant failure, defective condition, or previously unidentified hazard discovered by the vendor or supplier and the identity of each affected and notified railroad.

*The burden for this requirement is included under that of § 236.1023(g)(1) above. Consequently, there is no additional burden associated with this provision.*

(i) The requirements of this section do not apply to failures, malfunctions, or defective conditions that: (1) Are caused by improper maintenance or improper usage; or (2) Have been previously identified to the FRA, vendor, and applicable railroads.

*The burden for this requirement is included under that of § 236.1023(g)(1) above. Consequently, there is no additional burden associated with this provision.*

(k) Any railroad experiencing a failure of a system resulting in a more favorable aspect than intended or other condition hazardous to movement of a train shall comply with the reporting requirements, including the making of a telephonic report of an accident or incident involving such failure, under part 233 of this chapter. Filing of one or more reports under part 233 of this chapter does not exempt a railroad or vendor from the reporting requirements contained in this section.

*The burden for this requirement is already included under that of § 236.1023(g) and (h) (1) above. Consequently, there is no additional burden associated with this requirement. Total annual burden for this entire requirement is 11,504 hours (368 + 736 + 2,400 + 2,400 + 2,000 + 3,600).*

#### § 236.1027 – PTC System Exclusions

Changes or modifications to PTC systems otherwise excluded from the requirements of this subpart by this section do not exclude those PTC systems from the requirements of this subpart if the changes or modifications result in a degradation of safety or a material decrease in safety-critical functionality.

*The burden associated with the above requirement is included that of § 236.1021. Consequently, there is no additional burden associated with this requirement.*

Primary train control systems cannot be integrated with locomotive electronic systems unless the complete integrated systems: (1) have been shown to be designed on fail safe principles; (2) have demonstrated to operate in a fail safe mode; (3) have a manual fail safe fallback and override to allow the locomotive to be brought to a safe stop in the event of any loss of electronic control; and (4) are included in the approved and applicable PTCDP and PTCSP.

*The burden associated with the above requirement is included that of § 236.1013 and that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

§ 236.1029 – PTC System Use and En Route Failures

(a) When any safety-critical PTC system component fails to perform its intended function, the cause must be determined and the faulty component adjusted, repaired, or replaced without undue delay. Until repair of such essential components is completed, a railroad shall take appropriate action as specified in its PTCS.

(b) Where a PTC onboard apparatus on a controlling locomotive that is operating in or is to be operated within a PTC system fails or is otherwise cut-out while en route (i.e, after the train has departed its initial terminal), the train may only continue in accordance with the following: (1) The train may proceed at restricted speed, or if a block signal system is in operation according to signal indication at medium speed, to the next available point where communication of a report can be made to a designated railroad officer of the host railroad.

FRA estimates that approximately 1,012 reports will be made under the above requirement. It is estimated that it will take approximately 96 hours to gather the necessary information and complete each report to the designated railroad officer. Total annual burden for this requirement is 97,152 hours.

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Burden time per response:

96  
hours

Frequency of Response:		On occasion
Annual number of Responses:	1,012 reports	
Annual Burden:		97,152 hours

**Calculation:** 1,012 reports x 96 hrs. = 97,152 hours

(c) In order for a train equipped with PTC traversing a track segment equipped with PTC to deviate from the operating limitations contained in paragraph (b) of this section, the deviation must be described and justified in the FRA approved PTCDP or PTCSPP, or the Order of Particular Applicability, as applicable.

*The burden associated with the above requirement is included that of § 236.1013 and that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

(d) Each railroad must comply with all provisions in the applicable PTCDP and PTCSPP for each PTC system it uses and shall operate within the scope of initial operational assumptions and predefined changes identified.

*The burden associated with the above requirement is included that of § 236.1009 and that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

Total annual burden for this entire requirement is 97,152 hours.

#### § 236.1031 – Previously Approved PTC Systems

(a) Any PTC system fully implemented and operational prior to [INSERT DATE 60 DAYS FROM DATE OF PUBLICATION], may receive PTC System Certification if the applicable PTC railroad, or one or more system suppliers and one or more PTC railroads, submits a Request for Expedited Certification (REC) letter to the Associate Administrator. The REC letter must do one of the following: (1) Reference a product safety plan (PSP) approved by FRA under subpart H of this part and include a document fulfilling the requirements under §§ 236.1011 and 236.1013 not already included in the PSP; (2) Attest that the PTC system has been approved by FRA and in operation for at least five (5) years and has already received an assessment of Verification and Validation from an independent third party under part 236 or a waiver supporting such operation; or (3) Attest that the PTC system is recognized under an Order prior to [INSERT DATE 60 DAYS FROM DATE OF PUBLICATION].

FRA estimates that it will receive approximately three (3) (grandfathering) REC letters under the above requirement. It is estimated that each letter will be approximately 10 pages long and that it will take approximately 16 hours to gather the necessary

information and complete each page of the REC letter and send it to FRA. Thus, it is estimated that it will take approximately 160 hours to complete each REC letter and send it to FRA. Total annual burden for this requirement is 480 hours.

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Burden time per response:

160  
hours

Frequency of Response: On occasion  
Annual number of Responses: 3 REC letters  
Annual Burden: 480 hours

**Calculation:** 3 REC letters x 160 hrs. = 480 hours

(b) If a REC letter conforms to paragraph (a)(1) of this section, the Associate Administrator, at his or her sole discretion, may also issue a new Type Approval for the PTC system.

(c) In order to receive a Type Approval or PTC System Certification under paragraph (a) or (b) of this section, the PTC system must be shown to reliably execute the functionalities required by §§ 236.1005 and 236.1007 and otherwise conform to this subpart.

(d) Previous approval or recognition of a train control system, together with an established service history, may, at the request of the PTC railroad, and consistent with available safety data, be credited toward satisfaction of the safety case requirements set forth in this part for the PTCSP with respect to all functionalities and implementations contemplated by the approval or recognition.

FRA estimates that it will receive approximately three (3) railroad (grandfathering) requests under the above requirement. It is estimated that each request will be approximately 100 pages long and that it will take approximately 16 hours to complete each page of the request. Thus, it is estimated that each request will take approximately 1,600 hours to complete and send to FRA. Total annual burden for this requirement is 4,800 hours.

Respondent Universe:

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Burden time per response:

1,600  
hours

Frequency of Response:		On occasion
Annual number of Responses:	3 requests	
Annual Burden:		4,800 hours

**Calculation:** 3 requests x 1,600 hrs. = 4,800 hours

(e) To the extent that the PTC system proposed for implementation under this subpart is different in significant detail from the system previously approved or recognized, the changes shall be fully analyzed in the PTCDP or PTCSPP as would be the case absent prior approval or recognition.

*The burden associated with the above requirement is included that of § 236.1013 and that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

Total annual burden for this entire requirement is 5,280 hours (480 + 4,800).

§ 236.1033 – Communications and Security Requirements

Each railroad, or its vendor or supplier, shall have a prioritized service restoration and mitigation plan for scheduled and unscheduled interruptions of service. This plan shall be included in the PTCDP or PTCSP as required by §§ 236.1013 or 236.1015, as applicable, and made available to FRA upon request, without undue delay, for restoration of communication services that support PTC system services.

*The burden associated with the above requirement is included that of § 236.1009 and that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

§ 236.1035 – Field Testing Requirements

(a) Before any field testing of an uncertified PTC system, or a product of an uncertified PTC system, or any regression testing of a certified PTC system is conducted on the general rail system, the railroad requesting the testing must provide: (1) a complete description of the PTC system; (2) an operational concepts document; (3) a complete description of the specific test procedures, including the measures that will be taken to protect trains and on-track equipment; (4) an analysis of the applicability of the requirements of subparts A through G of this part to the PTC system that will not apply during testing; (5) the date the proposed testing shall begin; (6) the test locations; and (7) the effect on the current method of operation the PTC system will or may have under test.

(b) FRA may impose additional testing conditions that it believes may be necessary for the safety of train operations.

FRA estimates that it will receive approximately 230 requests for field testing with the necessary accompanying documents under the above requirement. It is estimated that each request will be approximately 100 pages long and that it will take approximately eight (8) hours to complete each page of the request. Thus, it is estimated that it will take approximately 800 hours to complete each request with the necessary supporting documents and send them to FRA. Total annual burden for this requirement is 184,000 hours.

Respondent Universe:

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Burden time per response:

800  
hours

Frequency of Response:

On occasion

Annual number of Responses:

230 requests (with necessary documents)

Annual Burden:

184,000 hours

**Calculation:** 230 requests x 800 hrs. = 184,000 hours

(c) Relief from regulations other than from subparts A through G of this part that the railroad believes are necessary to support the field testing, must be requested in accordance with part 211 of this title.

FRA estimates that approximately 46 waiver petitions/requests will be received by the agency under above requirement. It is estimated that each waiver petition will be approximately 20 pages long and that it will take approximately 16 hours to gather the necessary information and complete each page of the waiver petition and send it to FRA. Total annual burden for this requirement is 14,720 hours.

Respondent Universe:

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Burden time per response:



Frequency of Response:	On occasion	320 hours
Annual number of Responses:	46 waiver petitions/requests	
Annual Burden:	14,720 hours	

**Calculation:** 46 waiver petitions x 320 hrs. = 14,720 hours

Total annual burden for this entire requirement is 1987,720 hours (184,000 + 14,720).

§ 236.1037 – Records Retention

(a) Each railroad with a PTC system required to be installed under this subpart shall maintain at a designated office on the railroad:

(1) A current copy of each FRA approved Type Approval, if any, PTCDP, and PTCSP that it holds;

(2) Adequate documentation to demonstrate that the PTCSP and PTCDP meet the safety requirements of this subpart, including the risk assessment;

*The burden associated with the above requirements is included that of § 236.1013 and that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

(3) An Operations and Maintenance Manual, pursuant to § 236.1039; and

(4) Training and testing records pursuant to § 236.1043(b).

*The burden associated with the above requirements is included that of § 236.1039 and that of § 236.1043(b). Consequently, there is no additional burden associated with this requirement.*

(b) Results of inspections and tests specified in the PTCSP and PTCDP must be recorded pursuant to § 236.110.

FRA estimates that approximately 1,012 records will be kept under the above requirement. It is estimated that it will take approximately four (4) hours to gather the necessary information and complete each record. Total annual burden for this requirement is 4,048 hours.

Respondent Universe:

Burden time per response:

Frequency of Response:		On occasion	4 hours
Annual number of Responses:	1,012 records		
Annual Burden:		4,048 hours	

**Calculation:** 1,012 paper records x 4 hrs. = 4,048 hours

(c) Each contractor providing services relating to the testing, maintenance, or operation of a PTC system required to be installed under this subpart shall maintain at a designated office training records required under §236.1039(b).

FRA estimates that there will be approximately eight (8) contractors for each of the 46 railroads and that there will be approximately 20 people for each contractor who will be trained (8 contr. x 46 RRs x 20 tr. people) and thus approximately 7,360 records will be kept under the above requirement. Further, it is estimated that records will be kept three (3) times a year and thus a total of 22,080 records will be kept. It is estimated that it will take approximately 30 minutes to gather the necessary information and complete each record. Total annual burden for this requirement is 11,040 hours.

Respondent Universe:

Burden time per response:

30  
minutes

Frequency of Response: On occasion  
 Annual number of Responses: 22,080 records  
 Annual Burden: 11,040 hours

**Calculation:** 22,080 records x 30 min. = 11,040 hours

(d) After the PTC system is placed in service, the railroad shall maintain a database of all safety-relevant hazards as set forth in the PTCSP and PTCDP and those that had not been previously identified in either document.

*The burden for this portion of the requirement is already included under that of § 236.1009 and § 236.1015 above. Consequently, there is no additional burden associated with this requirement.*

If the frequency of the safety-relevant hazards exceeds the threshold set forth in either of these documents, then the railroad shall: Report the inconsistency in writing by mail, facsimile, e-mail, or hand delivery to the Director, Office of Safety Assurance and Compliance, FRA, 1200 New Jersey Ave, SE, Mail Stop 25, Washington, DC 20590, within 15 days of discovery. Documents that are hand delivered must not be enclosed in an envelope; (2) Take prompt countermeasures to reduce the frequency of each safety-relevant hazard to below the threshold set forth in the PTCSP and PTCDP.

FRA estimates that approximately four (4) initial reports will be sent to FRA’s Office of Safety Assurance and Compliance under the above requirement. It is estimated that each report will be approximately one (1) page long and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the report. Thus, it is estimated that it will take eight (8) hours to complete each initial report. Total annual burden for this requirement is 32 hours.

Respondent Universe:

Burden time per response:

Frequency of Response:		On occasion	8 hours
Annual number of Responses:	4 reports		
Annual Burden:			32 hours

**Calculation:** 4 reports x 8 hrs. = 32 hours

(3) Provide a final report when the inconsistency is resolved to the FRA Director, Office of Safety Assurance and Compliance, on the results of the analysis and countermeasures taken to reduce the frequency of the safety-relevant hazard(s) below the threshold set forth in the PTCSP and PTCDP.

FRA estimates that approximately four (4) final reports will be sent to the Director of FRA's Office of Safety Assurance and Compliance under the above requirement. It is estimated that each final report will be approximately 20 pages long and that it will take approximately eight (8) hours to gather the necessary information and complete each page of the report. Thus, it is estimated that it will take 160 hours to complete each final report. Total annual burden for this requirement is 640 hours.

Respondent Universe:

Burden time per response:

160  
hours

Frequency of Response:

On occasion

Annual number of Responses: 4 final reports

Annual Burden: 640 hours

**Calculation:** 4 final reports x 160 hrs. = 640 hours

Total annual burden for this entire requirement is 15,760 hours (4,048 + 11,040 + 32+ 640).

§ 236.1039 – Operations and Maintenance Manual

(a) The railroad shall catalog and maintain all documents as specified in the PTCDP and PTCSP for the installation, maintenance, repair, modification, inspection, and testing of the PTC system and have them in one Operations and Maintenance Manual, readily available to persons required to perform such tasks and for inspection by FRA and FRA-certified State inspectors.

(b) Plans required for proper maintenance, repair, inspection, and testing of safety-critical PTC systems must be adequate in detail and must be made available for inspection by FRA and FRA-certified State inspectors where such PTC systems are deployed or maintained. They must identify all software versions, revisions, and revision dates. Plans must be legible and correct.

(c) Hardware, software, and firmware revisions must be documented in the Operations and Maintenance Manual according to the railroad's configuration management control plan and any additional configuration/revision control measures specified in the PTCDP and PTCSP.

FRA estimates that approximately 46 Operations and Maintenance Manuals (OMMs) will be developed under the above requirement. It is estimated that each OMM will be approximately 250 pages long and that it will take approximately one (1) hour to gather then necessary information and complete each page of the manual. Total annual burden for this requirement is 11,500 hours.

Respondent Universe:

Burden time per response:

250  
hours

Frequency of Response: On occasion  
Annual number of Responses: 46 OMMs  
Annual Burden: 11,500 hours

**Calculation:** 46 OMMs x 250 hrs. = 11,500 hours

(d) Safety-critical components, including spare equipment, must be positively identified, handled, replaced, and repaired in accordance with the procedures specified in the PTCDP and PTCSP.

FRA estimates that approximately 120,000 safety critical components will be positively identified under the above requirement. It is estimated that it will take approximately one (1) hour to gather the necessary information and positively identify each component. Total annual burden for this requirement is 120,000 hours.

Respondent Universe:

Burden time per response:

1 hour

Frequency of Response: On occasion  
 Annual number of Responses: 120,000 identified components  
 Annual Burden: 120,000 hours

**Calculation:** 120,000 identified components x 1 hr. = 120,000 hours

(e) Each railroad shall designate in its Operations and Maintenance Manual an appropriate railroad officer responsible for issues relating to scheduled interruptions of service contemplated by § 236.1029.

FRA estimates that approximately 92 railroad officers – two for each of the 46 affected railroads -- will be designated under the above requirement. It is estimated that it will take approximately two (2) hours to gather the necessary information and designate each officer. Total annual burden for this requirement is 184 hours.

Respondent Universe:

Burden time per response:

2 hours

Frequency of Response: On occasion  
 Annual number of Responses: 92 designated railroad officers  
 Annual Burden: 184 hours

**Calculation:** 92 designated railroad officers x 2 hrs. = 184 hours

Total annual burden for this entire requirement is 131,684 hours (11,500 + 120,000 + 184).

§ 236.1041 – Training and qualification program, general

(a) Training program for PTC personnel. Employers shall establish and implement training and qualification programs for PTC systems subject to this subpart. These programs must meet the minimum requirements set forth in the PTCDP and PTCSPP in §§ 236.1039 through 236.1045, as appropriate, for the following personnel:

- (1) Persons whose duties include installing, maintaining, repairing, modifying, inspecting, and testing safety-critical elements of the railroad's PTC systems, including central office, wayside, or onboard subsystems;
- (2) Persons who dispatch train operations (issue or communicate any mandatory directive that is executed or enforced, or is intended to be executed or enforced, by a train control system subject to this subpart);
- (3) Persons who operate trains or serve as a train or engine crew member subject to instruction and testing under part 217 of this chapter, on a train operating in territory where a train control system subject to this subpart is in use;
- (4) Roadway workers whose duties require them to know and understand how a train control system affects their safety and how to avoid interfering with its proper functioning; and
- (5) The direct supervisors of persons listed in paragraphs (a)(1) through (a)(4) of this section.

FRA estimates that approximately 46 PTC training programs will be established and implemented under the above requirement. It is estimated that it will take approximately 400 hours to establish each training program. Total annual burden for this requirement is 18,400 hours.

Respondent Universe:

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Burden time per response:

400  
hours

Frequency of Response:	On occasion
Annual number of Responses:	46 PTC training programs
Annual Burden:	18,400 hours

**Calculation:** 46 PTC training programs x 400 hrs. = 18,400 hours

(b) Competencies. The employer's program must provide training for persons who perform the functions described in paragraph (a) of this section to ensure that they have the necessary knowledge and skills to effectively complete their duties related to operation and maintenance of the PTC system.

*The burden associated with training employees specified in (a) above is included in that of §§ 236.1045, 236.1047, and 236.1049 below. Consequently, there is no additional burden associated with this requirement.*

Total annual burden for this entire requirement is 18,400 hours.

§ 236.1043 – Task Analysis and Basic Requirements

(a) Training structure and delivery. As part of the program required by § 236.1041, the employer shall, at a minimum:

- (1) Identify the specific goals of the training program with regard to the target population (craft, experience level, scope of work, etc.), task(s), and desired success rate;
- (2) Based on a formal task analysis, identify the installation, maintenance, repair, modification, inspection, testing, and operating tasks that must be performed on a railroad's PTC systems. This includes the development of failure scenarios and the actions expected under such scenarios;
- (3) Develop written procedures for the performance of the tasks identified;

(4) Identify the additional knowledge, skills, and abilities above those required for basic job performance necessary to perform each task;

(5) Develop a training and evaluation curriculum that includes classroom, simulator, computer-based, hands-on, or other formally structured training designed to impart the knowledge, skills, and abilities identified as necessary to perform each task;

(6) Prior to assignment of related tasks, require all persons mentioned in § 236.1041(a) to successfully complete a training curriculum and pass an examination that covers the PTC system and appropriate rules and tasks for which they are responsible (however, such persons may perform such tasks under the direct onsite supervision of a qualified person prior to completing such training and passing the examination);

(7) Require periodic refresher training and evaluation at intervals specified in the PTCDP and PTCSP that includes classroom, simulator, computer-based, hands-on, or other formally structured training and testing, except with respect to basic skills for which proficiency is known to remain high as a result of frequent repetition of the task; and

(8) Conduct regular and periodic evaluations of the effectiveness of the training program specified in § 236.1041(a)(1) verifying the adequacy of the training material and its validity with respect to current railroads PTC systems and operations.

*The burden associated with training employees specified in (a) above is included in that of §§ 236.1045, 236.1047, and 236.1049 below. Consequently, there is no additional burden associated with this requirement.*

FRA estimates that approximately 46 regular and periodic evaluations of the effectiveness of the training program will be conducted under the above requirement. It is estimated that it will take approximately 720 hours to conduct each evaluation. Total annual burden for this requirement is 33,120 hours.

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Burden time per response:

720  
hours

Frequency of Response:	On occasion
Annual number of Responses:	46 regular & periodic evaluations
Annual Burden:	33,120 hours

**Calculation:** 46 regular & periodic evaluations x 720 hrs. = 33,120 hours

(b) Training records. Employers must retain records which designate persons who are qualified under this section until new designations are recorded or for at least one year after such persons leave applicable service. These records shall be kept in a designated location and be available for inspection and replication by FRA and FRA-certified State inspectors.

FRA estimates that approximately 560 training records (480 signalmen + 30 dispatchers + 50 managers) will be created and retained under the above requirement. It is estimated that it will take approximately 10 minutes to complete each record. Total annual burden for this requirement is 93 hours.

Respondent Universe:

Burden time per response:

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Frequency of Response:		On occasion	minutes
Annual number of Responses:	560 PTC training records		
Annual Burden:		93 hours	

**Calculation:** 560 PTC training records x 10 min. = 93 hours

Total annual burden for this entire requirement is 33,213 hours (33,120 + 93).

§ 236.1045 – Training Specific to Office Control Personnel

(a) Any person responsible for issuing or communicating mandatory directives in territory where PTC systems are or will be in use must be trained in the following areas, as applicable:

- (1) Instructions concerning the interface between the computer-aided dispatching system and the train control system, with respect to the safe movement of trains and other on-track equipment;
  - (2) Railroad operating rules applicable to the train control system, including provision for movement and protection of roadway workers, unequipped trains, trains with failed or cut-out train control onboard systems, and other on-track equipment; and
  - (3) Instructions concerning control of trains and other on-track equipment in case the train control system fails, including periodic practical exercises or simulations, and operational testing under part 217 of this chapter to ensure the continued capability of the personnel to provide for safe operations under the alternative method of operation.
- FRA estimates that approximately 32 railroad employees specified in this section will receive training under the above requirement. It is estimated that it will take approximately 20 hours to train each employee. Total annual burden for this requirement is 640 hours.

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Burden time per response:

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hours

Frequency of Response:	On occasion
Annual number of Responses:	32 PTC trained employees
Annual Burden:	640 hours

**Calculation:** 32 PTC trained employees x 20 hrs. = 640 hours

§ 236.1047 – Training Specific to Locomotive Engineers and Other Operating Personnel

(a) Operating personnel. Training provided under this subpart for any locomotive engineer or other person who participates in the operation of a train in train control territory must be defined in the PTCDP as well as the PTCSP. The following elements must be addressed:

- (1) Familiarization with train control equipment onboard the locomotive and the functioning of that equipment as part of the system and in relation to other onboard systems under that person's control;
- (2) Any actions required of the onboard personnel to enable, or enter data to, the system, such as consist data, and the role of that function in the safe operation of the train;
- (3) Sequencing of interventions by the system, including pre-enforcement notification, enforcement notification, penalty application initiation and post-penalty application procedures;
- (4) Railroad operating rules and testing (part 217) applicable to the train control system, including provisions for movement and protection of any unequipped trains, or trains with failed or cut-out train control onboard systems and other on-track equipment;
- (5) Means to detect deviations from proper functioning of onboard train control equipment and instructions regarding the actions to be taken with respect to control of the train and notification of designated railroad personnel; and
- (6) Information needed to prevent unintentional interference with the proper functioning of onboard train control equipment.

*The burden associated with the above requirement is covered under that of § 236.1013, and that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

(b) Locomotive engineer training. Training required under this subpart for a locomotive engineer, together with required records, must be integrated into the program of training required by part 240 of this chapter.

*The burden associated with the above requirement is covered under OMB No. 2130-0533 and will be updated to include all new requirements at the next renewal of that information collection. Consequently, there is no additional burden associated with this requirement.*

(c) Full automatic operation. The following special requirements apply in the event a train control system is used to effect full automatic operation of the train:

(1) The PTCDP and PTCSP must identify all safety hazards to be mitigated by the locomotive engineer.

(2) The PTCDP and PTCSP must address and describe the training required with provisions for the maintenance of skills proficiency. As a minimum, the training program must:

(i) As described in § 236.1047(a)(2), develop failure scenarios which incorporate the safety hazards identified in the PTCDP and PTCSP including the return of train operations to a fully manual mode;

(ii) Provide training, consistent with § 236.1047(a), for safe train operations under all failure scenarios and identified safety hazards that affect train operations;

(iii) Provide training, consistent with § 236.1047(a), for safe train operations under manual control; and

(iv) Consistent with § 236.1047(a), ensure maintenance of manual train operating skills by requiring manual starting and stopping of the train for an appropriate number of trips and by one or more of the following methods:

(A) Manual operation of a train for a 4-hour work period;

(B) Simulated manual operation of a train for a minimum of four (4) hours in a Type I simulator as required; or

(C) Other means as determined following consultation between the railroad and designated representatives of the affected employees and approved by FRA. The PTCDP

and PTCSP must designate the appropriate frequency when manual operation, starting, and stopping must be conducted, and the appropriate frequency of simulated manual operation.

*The burden associated with the above requirement is covered under that of § 236.1013, and that of § 236.1015. Consequently, there is no additional burden associated with this requirement.*

(d) Conductor training. Training required under this subpart for a conductor, together with required records, must be integrated into the program of training required under this chapter.

FRA estimates that approximately 8,000 railroad conductors will receive training under the above requirement. It is estimated that it will take approximately three (3) hours to train each employee. Total annual burden for this requirement is 24,000 hours.

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Burden time per response:

Frequency of Response:	On occasion	3 hours
Annual number of Responses:	8,000 PTC trained conductors	
Annual Burden:	24,000 hours	

**Calculation:** 8,000 PTC trained conductors x 3 hrs. = 24,000 hours

Total annual burden for this requirement is 24,000 hours.

§ 236.1049 – Training Specific to Roadway Workers.

(a) Roadway worker training. Training required under this subpart for a roadway worker must be integrated into the program of instruction required under part 214, subpart C of this chapter (“Roadway Worker Protection”), consistent with task analysis requirements of §236.1039. This training must provide instruction for roadway workers who provide protection for themselves or roadway work groups.

(b) Training subject areas. (1) Instruction for roadway workers must ensure an understanding of the role of processor-based signal and train control equipment in establishing protection for roadway workers and their equipment.

(2) Instruction for all roadway workers working in territories where PTC is required under this subpart must ensure recognition of processor-based signal and train control equipment on the wayside and an understanding of how to avoid interference with its proper functioning.

(3) Instructions concerning the recognition of system failures and the provision of alternative methods of on-track safety in case the train control system fails, including periodic practical exercises or simulations and operational testing under part 217 of this chapter to ensure the continued capability of roadway workers to be free from the danger of being struck by a moving train or other on-track equipment.

*The burden associated with the above requirements is covered under OMB No. 2130-0539 and will be updated to include all new requirements at the next renewal of that information collection. Consequently, there is no additional burden associated with this requirement.*

The total burden for this entire information collection is 3,683,743 hours. [Note: All paperwork requirements in Appendices B, C, D, and F are included above.]

### **13. Estimate of total annual costs to respondents.**

*Note: Information technology costs associated with this final rule are included in section 5.3 (Central Office Costs) of this rule’s accompanying regulatory impact analysis (RIA). Consequently, they are not presented here again in order to avoid double counting costs.*

There are other costs as well. In keeping with Government Paperwork Elimination Act (GPEA), FRA is in the process of making electronic reporting more widely available to railroads. The pace of conversion from paper to the use of advanced information technology (electronic reporting/recordkeeping) is, for the most part, dictated by the railroads themselves. In the meantime, it is likely respondents will incur mailing costs regarding documentation that they must submit to FRA for both Subpart H and new Subpart I, as well as incurring the cost of purchasing envelopes.



## Summary of Costs

### Subpart H

\$ 33.00	-	Envelopes - 300 9" x 12" @ 11 cents per envelope.
\$ 1,500.00	-	Postage - @ approximately \$5 per complete envelope.
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\$1,533.00	-	Total Additional Costs

### Subpart I

\$ 227.15	-	Envelopes - 2,065 9" x 12" @ 11 cents per envelope.
\$10,325.00	-	Postage for 2,069 envelopes - @ approximately \$5 per complete envelope.
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\$10,552.15	-	Total Additional Costs
\$12,085.15	-	<b>Grand Total Additional Costs</b> (Subparts H and I)

## **14. Estimate of Cost to Federal Government.**

*Note: Cost estimates were obtained by consulting with the FRA Positive Train Control Technical Expert (Chief Electrical Engineer) who is most knowledgeable of and intimately involved in the development and implementation of the Positive Train Control Final Rule.*

Based on the 2010 GS Washington/Baltimore Pay Schedule, the annual cost to the Federal Government in connection with this final rule and its implementation are broken down as follows:

New PTC Division Chief – GS-15-5 (**2,080 hours**) = 1 x \$140,259 = **\$140,259**

3 Headquarters Engineers -- GS-15-5 (3 x 2080 hours = **6,240 hours**) = 3 x \$140,259 = **\$421,587**

1 Regional Engineer – GS-14-5 (1 x 2,080 hours = **2,080 hours**) = 1 x \$119,238 = **\$119,238**

8 Regional PTC Specialists – GS-13-5 (8 x 2,080 hours = **16,640 hours**) = 8 x \$100,904 = **\$807,232**

9 High Precision GPS Measuring Devices (1 for Headquarters + 8 for Regions) @ \$15,000 per device = **\$135,000**

The total estimated number of hours that FRA employees will spend working on implementing the PTC final rule and reviewing documents = **27,040 hours**.

**FEDERAL GOVERNMENT ANNUAL COST = \$1,623,316**

**15. Explanation of program changes and adjustments.**

Total burden for this information collection submission has increased by **480,223 hours** from the last approved submission. The change in burden is due to two **program changes** and numerous **adjustments** in Subpart I. Please see the tables below for details:

**TABLE FOR ADJUSTMENTS**

Part 236 Section	Responses & Avg. Time (Previous Submission)	Responses & Avg. Time (This Submission)	Burden Hours (Previous Submission)	Burden Hours (This Submission)	Difference (plus/minus)
236.1007(c) – Approved PTCSPs accompanied by HSR-125 documents	11 documents 3,200 hours	3 documents 3,200 hours	35,200 hours	9,600 hours	-- 25,600 hours -- 8 responses
(d) – Approved PTCSPs w/HSR-125 documents	4 documents 3,200 hours	3 documents 3,200 hours	12,800 hours	9,600 hours	-- 3,200 hours -- 1 response

236.1009 (a)(2) – Filing of PTCIP by Host/New RR along with RFAs	1 PTCIP + 15 RFAs 535 hours/320 hrs.	1 PTCIP + 20 RFAs 535 hours/320 hrs	5,335 hours	6,935 hours	+ 1,600 hours + 5 responses
(a)(4)(ii) – Notification to FRA on Agreement to File Joint PCTIP	25 notifications 32 hours	1 notification 32 hours	800 hours	32 hours	-- 768 hours -- 24 responses
(a)(4)(iii) – List of Issues Not Agreed on by RRs to FRA	25 lists 80 hours	1 list 80 hours	2,000 hours	80 hours	-- 1,920 hours -- 24 responses
(a)(4)(iv) – RRs Conference with FRA to develop a mutually acceptable PTCIP	3 conferences 1 hour	1 conference 1 hour	3 hours	1 hour	-- 2 hours -- 2 responses
(b)- Type Approval	10 Type Approval Documents 8 hours	2 Type Approval Documents 8 hours	80 hours	16 hours	-- 64 hours -- 8 responses
(b)(2) – Cover Letters with Modified Type Approvals and PTCDPs	20 letters + 20 modified Type Approvals + 10 PTCDPs 8 hrs. + 1,600 hrs. + 6,400 hours	20 letters + 20 modified Type Approvals + 2 PTCDPs 8 hrs. + 1,600 hrs. + zero (0) hours 3 NPIs + 1 PTCIP	96,160 hours	44,960 hours	-- 51,200 hours -- 8 responses
(c) – NPIs with PTCIPs - PTCDPs submitted with PTCIPs	24 NPIs + 24 PTCIPs 6 PTCDPs + 6 PTCIPs	1 PTCIP + 2,135 hours	38,520 hours	3,745 hours	-- 34,775 hours -- 44 responses
(c)(1) Updated PTCIPs with PTCDP	2,135 hrs.; 535 hrs 24 PTCIPs + 24 PTCDPs 535 hrs.; 2,135 hrs	1 PTCIP + 1 PTCDP 535 hrs; 2,135 hrs	16,020 hours	2,135 hours	-- 13,885 hours -- 11 responses
			64,080 hours	2,670 hours	-- 61,410 hours -- 46 responses

236.1009(c)(2)(i) – Resubmitted Updated PTCIP + NPI after FRA Disapproval	6 PTCIPs + 6 NPIs 135 hrs. + 270 hrs.	1 PTCIP + 1 NPI 135 hrs. + 270 hrs	2,430 hours	405 hours	-- 2,025 hours -- 10 responses
(c)(2)(ii) – Provisionally Approved PTCIPs and PTCDPs Resubmitted after FRA Late Arrival - Above PTCIPs with PTCDPs needing Resubmission	6 PTCIPs + 6PTCDPs 135 hrs. + 535 hrs.	1 PTCIP + 1 PTCDP 135 hrs. + 535 hrs	4,020 hours	670 hours	-- 3,350 hours -- 10 responses
(e)(3)- Cover Letters and Confidentiality Requests	2 PTCIPs + 2PTCDPs 135 hrs. + 535 hrs.	1 PTCIP + 1 PTCDP 135 hrs. + 535 hrs	1,340 hours	670 hours	-- 670 hours -- 2 responses
(f)- Field Tests + Independent Assessments	30 letters + 30 requests 8 hrs. + 800 hours	46 letters + 46 requests 8 hrs. + 800 hours	24,240 hours	37,168 hours	+ 12,928 hours + 32 responses
(h)-RR Interview with FRA on PTC System for which a Type Approval/ System Certification has been requested	150 field tests + 2 assessments 800 hours 60 interviews 30 minutes	230 field tests + 2 assessments 800 hours 92 interviews 30 minutes	121,600 hours 30 hours	185,600 hours 46 hours	+ 64,000 hours + 80 responses + 16 hours + 32 responses
(j) – Additional Information to FRA after Agency Request	5 documents 400 hours	8 documents 400 hours	2,000 hours	3,200 hours	+ 1,200 hours + 3 responses
236.1011(e) - Public Comments on NPIs, PTCDPs PTCSPs	21 reviews + 60 comments 143 hrs. + 8hrs.	1 review + 40 comments 143 hrs. + 8hrs.	3,483 hours	463 hours	-- 3,020 hours -- 40 responses
236.1015(e)(1) – Non-vital Overlay: PTCSPs	2 PTCSPs 16,000 hours	3 PTCSPs 16,000 hours	32,000 hours	48,000 hours	+ 16,000 hours + 1 response
(e)(2) – Vital Overlay: PTCSPs	16 PTCSPs 22,400 hours	28 PTCSPs 22,400 hours	358,400 hours	627,200 hours	+ 268,800 hours + 12 responses
(e)(3) – Stand Alone: PTCSPs	10 PTCSPs 32,000 hours	14 PTCSPs 32,000 hours	320,000 hours	448,000 hours	+ 128,000 hours + 4 responses
(e)(4) – Mixed Systems: PTCSPs from Conferences	2 PTCSPs 28,800 hours	1 PTCSPs 28,800 hours	57,600 hours	28,800 hours	-- 28,800 hours -- 1 response
(f) – Additional Requested Docs.	15 documents 3,200 hours	23 documents 3,200 hours	48,000 hours	73,600 hours	+ 25,600 hours + 8 responses

(g) – PTCSPs for Systems Replacing Certified PTC Sys.	15 PTCSPs 3,200 hours	23 PTCSPs 3,200 hours	48,000 hours	73,600 hours	+ 25,600 hours + 8 responses
236.1015(h) – Non Quantitative Risk Assessments	15 assessments 3,200 hours	23 assessments 3,200 hours	48,000 hours	73,600 hours	+ 25,600 hours + 8 responses
236.1019(a) – MTEAs	30 MTEAs 160 hours	46 MTEAs 160 hours	4,800 hours	7,360 hours	+ 2,560 hours + 16 responses
236.1023(a) – PTC Product Vendor Lists (d) – Railroad Procedures for Action to PTC Vendor/Supplier Upon Notification of Safety-Critical Failure	30 lists 8 hours  30 procedures 16 hours	46 lists 8 hours  46 procedures 16 hours	240 hours  480 hours	368 hours  736 hours	+ 128 hours + 16 responses  + 256 hours + 16 responses
236.1029(a)(b) – Report to Host RR on Failure of PTC Onboard Apparatus on Controlling Locomotive	960 reports 96 hours	1,012 reports 96 hours	92,160 hours	97,152 hours	+ 4,992 hours + 52 responses
236.1035(a) – RR PTC Field Testing Request to FRA (c) – RR Waiver Requests to Support PTC Field Testing	150 requests 800 hours  50 waiver requests 320 hours	230 requests 800 hours  46 waiver req. 320 hours	120,000 hours  16,000 hours	184,000 hours  14,720 hours	+ 64,000 hours + 80 responses  -- 1,280 hours -- 4 responses
236.1037(a) –(b) Inspection/Test Records (c) – Contractor PTC Training Records	960 records 4 hours  9,000 records 30 minutes	1,012 records 4 hours  22,080 records 30 minutes	3,840 hours  4,500 hours	4,048 hours  11,040 hours	+ 208 hours + 52 responses  + 6,540 hours + 13,080 resp.
236.1039(a) –(c) – Developed Operations & Maintenance Manuals (OMMs) (d) Identified Components (e) Designated RR	30 OMMs 250 hours  75,000 I.D.s 1 hour 60 designations	46 OMMs 250 hours  120,000 I.D.s 1 hour 92 designations	7,500 hours  75,000 hours 120 hours	11,500 hours  120,000 hours 184 hours	+ 4,000 hours + 16 responses  + 45,000 hours + 45,000 resp. + 64 hours

Officers in OMM	2 hours	2 hours			+ 32 responses
236.1041 – PTC Training Programs	30 programs 400 hours	46 programs 400 hours	12,000 hours	18,400 hours	+ 6,400 hours + 16 responses
236.1043(a) – Regular and Periodic Evaluations	30 evaluations 720 hours	46 evaluations 720 hours	21,600 hours	33,120 hours	+ 11,520 hours + 16 responses
(b) PTC Training Records	350 records 10 minutes	560 records 10 minutes	58 hours	93 hours	+ 35 hours + 210 responses
236.1045 – PTC Trained Employees	20 tr. employees 20 hours	32 tr. employees 20 hours	400 hours	640 hours	+ 240 hours + 12 responses
236.1047 – PTC Trained Conductors	5,000 conductors 3 hours	8,000 conductors 3 hours	15,000 hours	24,000 hours	+ 9,000 hours + 3,000 resp.

Adjustments above increased the burden amount by *492,318 hours*, and increased the number of responses by *61,564*.

#### **TABLE FOR PROGRAM CHANGES**

Part 236	Responses & Avg. Time (Previous Submission)	Responses & Avg. Time (This Submission)	Burden Hours (Previous Submission)	Burden Hours (This Submission)	Difference (plus/minus)
236.1009 – PTC Implementation – PTCIPs (Expired Deadline)	25 PTCIPs 535 hours	0 PTCIPs 0 hours	13,375 hours	0 hours	-- 13,375 hours -- 25 responses
236.1021(a) – (d) RFAs	15 RFAs 160 hours	23 RFAs 160 hours	2,400 hours	3,680 hours	+ 1,280 hours + 8 responses

Program changes above decreased the burden amount by *12,095 hours*, and decreased the number of responses by *17*.

Total responses above increased by **61,547** and total burden hours resulting from both **adjustments** and **program changes** increased by **480,223 hours**.

The correct current inventory exhibits a burden total of 3,203,520 hours, while the present submission reflects a burden total of 3,683,743 hours. Hence, there is a total burden increase of *480,223 hours*.

There is no change in cost to respondents from the previous submission.

#### **16. Publication of results of data collection.**

There are no plans for publication regarding these information collection requirements.

**17. Approval for not displaying the expiration date for OMB approval.**

Once OMB approval is received, FRA will publish the approval number for these information collection requirements in the Federal Register.

**18. Exception to certification statement.**

No exceptions are taken at this time.

### Meeting Department of Transportation (DOT) Strategic Goals

This information collection supports all five DOT strategic goals. First, it supports the Department's highest strategic goal, namely transportation safety. The "Positive Train Control" rule and corresponding information collection seeks to reduce the number and severity of railroad accidents/incidents, particularly train-to-train collisions, and ensuing casualties to train crews and passengers by ensuring that processor-based signal and train control ("PTC") systems are not put into revenue service until FRA has carefully reviewed all the required documentation, and is satisfied that such systems meet the proposed "high level" performance standard. The "performance standard" provides that any new signal and train control system meets or exceeds the safety performance of the existing system. FRA aims to use the information collected to facilitate safety improvement through accelerated introduction of new technology. FRA believes the information collected will additionally promote the public health and safety by reducing the number and extent of injuries to roadway and signal workers by ensuring that these employees are thoroughly trained regarding the role of a processor-based train control ("PTC") system in establishing protection for workers and their equipment, whether at a work zone or while moving between work locations.

The information collected also supports the second DOT strategic goal of mobility. As these new systems become more widely available and are approved by FRA and put into revenue service, they will provide important benefits. As mentioned earlier, one of the main benefits of "PTC" systems will be enhanced rail safety. A national rail system which has less accidents/incidents will be a more attractive option for domestic travelers, a safer workplace for railroad employees, and safer to the public in general. Another expected benefit of "PTC" systems will be improved train travel times. Such improvements will further increase the attractiveness of rail transport to larger numbers of people. This new technology will provide a system that is more integrated and will serve to make rail travel more viable and, therefore, more accessible. A more efficient rail system will, naturally, aid in providing flexibility of choices.

Additionally, the information collected supports the third DOT strategic goal of economic growth and trade. The use and expansion of "PTC" systems will create a more efficient and more cost-effective national rail transportation system (corridor-by-corridor). Producers, as a result of lower shipping costs, will be able to move a greater number of goods by rail. This, in turn, will help make U.S. products more competitive and will serve



to promote greater trade with Canada and Mexico. Increased domestic demand for products (resulting from lower prices) and increased trade with America's neighbors will facilitate growth of the domestic gross national product.

The collection of information supports the fourth DOT strategic goal of human and natural environment. By carefully reviewing and approving "PTC" systems that comply with the "high level" performance standard (meets or exceeds current levels of safety), FRA aims to reduce the number of accidents/incidents, especially train-to-train collisions. By reducing the number and severity of railroad accidents/incidents and resulting property damage, communities and the natural environment will be protected and preserved. It should be noted that a collision involving a train or trains carrying hazardous materials can cause great harm to the environment and surrounding communities. Fully approved and functioning "PTC" systems will help eliminate such occurrences, and thus will promote the sustainability and livability of communities throughout the country.

Finally, this information collection supports the DOT strategic goal of national security. A national rail system, which is more efficient because of approved "PTC" technology, will be able to quickly move both passenger and freight cars carrying men and materiel in the event of a national emergency. In a world filled with terrorism, instability, and sudden crises, the ability to transport men and materiel to specific destinations on schedule will no doubt greatly serve the national interest and indeed promote national security.

In this information collection as in all its information collection activities, FRA seeks to do its very best to fulfill DOT Strategic Goals and to be an integral part of One DOT.