

## SUPPORTING JUSTIFICATION

49 CFR Parts 227 and 229

OMB No. 2130-0571

### Occupational Noise Exposure for Railroad Operating Employees

#### Summary

- This submission is an extension with change to the last approved submission pertaining to Part 227 that was approved by OMB on March 15, 2012, and which expires March 31, 2015.
- FRA published the required 60-day **Federal Register** Notice on October 17, 2014. See 79 FR 62513. FRA received no comments in response to this Notice.
- The total number of burden **hours requested** for this submission is **30,331 hours**. Total number of responses requested for this submission is **164,277**.
- The total number of burden hours **previously approved** for the last submission is **33,298 hours**. Total number of responses previously approved for the last submission is **145,682**.
- The change in burden from the last approved submission amounts to a decrease of **2,967 hours**. The change in responses amounts to a increase of **18,595**.
- Total **adjustments decreased** the burden by **2,967 hours**, and increased the number of responses by **18,595**. There were no program changes.
- \*\*The answer to question **number 12** itemizes the hourly burden associated with each requirement of this rule (See pp. 18-39).
- \*\* The table in answer to question **number 15** itemizes all adjustments (See pp. 39-40)

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

##### Background

Noise is one of the most pervasive hazardous agents in the American workplace. In the 1980's, the National Institute for Occupational Safety and Health (NIOSH) identified noise-induced hearing loss (NIHL) as one of the ten leading work-related diseases and injuries. In the 1990's, NIOSH listed noise-induced hearing loss as one of the eight most critical occupational diseases and injuries requiring research and development activities

within the framework of the National Occupational Research Agenda. Noise is also one of the most intrusive aspects of locomotive operations.

There are many noise sources in a locomotive cab. The primary noise sources are engine noise, locomotive horns, and brake noise. The nature and level of noise generated by each source varies greatly. Diesel engine noise is continuous, but it varies according to the engine load and engine speed. The noise from locomotive horns – and other audible warning devices – is sporadic but can be very loud if the window is open and can be very frequent if there are many highway-rail grade crossings.

Brake noise results from the air exhaust that comes from the brake valves when the brakes are released. Air brake exhaust is a high frequency sound and can be very intense. In the past, air brake exhaust vented directly into the locomotive cab. By 1980, locomotive manufacturers, maintenance facilities, and railroads had begun venting the exhaust below the cab floor. FRA noted that change in its 1980 locomotive cab noise rule. *See* 45 FR 21092; March 31, 1980. FRA recognized the effectiveness of this redesign, noting that it reduced the cab occupant's noise dose by an estimated 15 to 20 percent while still providing an audible indication of brake performance. Manufacturers continued to redesign locomotives accordingly, and today the vast majority of locomotives have their air brake exhaust vented below the floor and away from the crew. However, there are some older locomotives, such as the ones used by some short line railroads, which still use the older equipment that vents air brake exhaust into the cab.

Another noise source comes from vibrations which loosen cab components -- such as loose cab sheet metal, loose cab side windows, and miscellaneous loose and/or poorly fitted cab equipment -- and cause them to resonate. Other potential noise sources include fans on dynamic brake systems; alerters; wheel/rail contact at cruising speed; rooftop or retrofitted air conditioning/cooling units; bells that are sounded to indicate that the train is about to move; and radios that are used for crew communication. Noise can also result from the cab structure, depending on the particular design of the locomotive as it pertains to noise or vibration isolation. Maintenance, or the lack thereof, can also impact noise. Engines in less than ideal condition will run rougher and noisier. Mountings can wear and loosen, which can create new vibrations or decrease vibration damping. Also, worn engine components (e.g., bearings) can create noise.

The locomotive is also subject to several external noise sources. Since the locomotive cab is a mobile workplace, the level of noise exposure varies greatly by the route traveled. Noise results from the sound that is reflected into the cab (especially if through open windows) from reflective surfaces such as tunnels, bridges, sheds, and close embankments. Other conditions that can also impact noise include the topography and grade of the work assignment, and the use of locomotive horns to provide notice of highway-rail grade crossings.

The Federal Railroad Administration (FRA) has broad statutory authority to regulate railroad safety. The Locomotive Inspection Act (formerly 45 U.S.C. 22-34, now 49

U.S.C. 20701-20703) was enacted in 1911. It prohibits the use of unsafe locomotives and authorizes FRA to issue standards for locomotive maintenance and testing. In order to further FRA's ability to respond effectively to contemporary problems and hazards as they arise in the railroad industry, Congress enacted the Federal Railroad Safety Act of 1970 ("Safety Act")(formerly 45 U.S.C. 421, 432 et seq., now found primarily in chapter 201 of Title 49 of the U.S. Code). The Safety Act grants the Secretary of Transportation rulemaking authority over all areas of railroad safety (49 U.S.C. 20103(a)) and confers all powers necessary to detect and penalize violations of any rail safety law. This authority was subsequently delegated to the FRA Administrator (49 CFR 1.49). (Until July 5, 1994, the Federal railroad safety statutes existed as separate acts found primarily in Title 45 of the United States Code. On that date, all of the acts were repealed, and their provisions were re-codified into Title 49).

Pursuant to its statutory authority, FRA promulgates and enforces a comprehensive regulatory program to address railroad track, signal systems, railroad communications, rolling stock, rear-end marking devices, safety glazing, railroad accident/incident reporting, locational requirements for dispatching of U.S. rail operations, safety integration plans governing railroad consolidations, merger and acquisitions of control, operating practices, passenger train emergency preparedness, alcohol and drug testing, locomotive engineer certification, and workplace safety. In the area of workplace safety, the agency has issued a variety of standards designed to protect the health and safety of railroad employees. For instance, FRA requires ladders and handholds to be installed on railroad equipment in order to prevent employee falls (Part 231). FRA requires locomotive cabs floors and passageways to remain clear of debris and oil in order to prevent slips, trips, and falls (§ 229.119). FRA requires blue signal protection in order to safeguard employees working on railroad equipment from injuries due to the unexpected movement of the equipment (Part 218). FRA has rules that provide for the protection of railroad employees working on or near railroad tracks in order to decrease the risk of employees falling from railroad bridges and of being struck by moving trains (Part 214).

FRA and the U.S. Occupational Safety and Health Administration (OSHA) have a complementary relationship with respect to occupational safety and health issues in the railroad industry. OSHA regulates conditions and hazards affecting the health and safety of employees in the workplace. OSHA's jurisdiction extends to all types of employment, except where another Federal agency exercises statutory authority to prescribe or enforce standards or regulations covering the working conditions pursuant to § 4(b)(1) of the Occupational Safety and Health Act of 1970. See 29 U.S.C. § 653(b)(1). Section (4)(b)(1) pre-empts OSHA's jurisdiction where another federal agency issues its own regulations or standards or articulates a formal position that a particular working conditions should go unregulated.

In 1978, FRA issued a Statement of Policy setting out the respective areas of jurisdiction between FRA and OSHA in the railroad industry. See 43 FR 10583; March 14, 1978. In that Policy Statement, FRA drew the jurisdictional line between "occupational safety and health" issues in the railroad industry and work related to "railroad operations," with

FRA exercising authority over railroad operations and OSHA exercising authority over occupational safety and health issues. Further, the Policy Statement pointed to FRA's "proper role" as concentrating its "limited resources in addressing hazardous working conditions in those traditional areas of railroad operations" (i.e., movement of equipment over the rails") in which FRA has special competence and expertise. *See* 43 FR 10585. Often, railroad working conditions are so unique that a regulatory body other than FRA would not possess the requisite expertise to determine appropriate safety standards.

As a general rule, FRA exercises its statutory jurisdiction over railroad employee working conditions where employees are engaged in duties that are intrinsic to "railroad operations," where the identical conditions generally do not occur in typical industrial settings, and where the hazard falls within the scope of FRA's expertise. Historically, the concept of "railroad safety" has included the health and safety of employees when they are engaged in railroad operations. In its 1978 Statement concerning employee workplace safety, FRA stated:

The term 'safety' includes health-related aspects of railroad safety to the extent such considerations are integrally related to operational safety hazards or measures taken to abate such hazards. *See* 43 FR 10585.

Hazards that impact the health of railroad employees engaged in railroad operations may also result in adverse impacts on railroad safety, and so there is often a clear nexus between railroad safety and employee health. An example of this jurisdiction is seen in FRA's issuance of locomotive sanitation standards. *See* 67 FR 16032; April 4, 2002. There, FRA promulgated regulations that address toilet and washing facilities for employees who work in locomotive cabs *See* 49 §§ 229.137 through 139.

FRA has also exercised this jurisdiction with occupational noise in the locomotive cab. FRA issued its current standard for locomotive cab noise in 1980. While OSHA, in general, regulates occupational noise in the workplace, FRA is the more appropriate entity to regulate noise in the locomotive cab, because the locomotive cab is so much a part of "railroad operations." With respect to noise in the locomotive cab, FRA wrote, in its Policy Statement, that:

FRA views the question of occupational noise exposure of employees engaged in railroad operations, during their involvement in such operations, as a matter comprehended by the regulatory fields over which FRA has exercised its statutory jurisdiction. FRA is, therefore, responsible for determining what exposure levels are permissible, what further regulatory steps may be necessary in this area, if any, and what remedial measures are feasible when evaluated in light of overall safety considerations. 43 FR 10588.

OSHA's occupational noise standard was promulgated under the Walsh-Healey Public Contracts Act of 1969 -- *See* 41 U.S.C. 35, et seq. -- for the purpose of protecting employees from workplace exposure to damaging noise levels. The Walsh-Healey Act contained very limited provisions. Its noise standard allowed for a permissible exposure level of 90 dB(A) threshold, a 5 dB exchange rate, and a 90 dB(A) threshold. OSHA

adopted the Walsh-Healey standard as an OSHA standard pursuant to section 6(a) of the Occupational Safety and Health Act. In January 1981, OSHA promulgated a Hearing Conservation Amendment to its occupational noise exposure standard. *See* 46 FR 4078; January 16, 1981. The amendment consisted of requirements for noise measurements, audiometric testing, the use and care of hearing protectors, employee training, employee education, and recordkeeping. Portions of the amendment were subsequently stayed for consideration and clarification. *See* 46 FR 42622; August 21, 1981. In 1983, OSHA finalized the provisions of its Hearing Conservation Amendment by revoking various stayed provisions, lifting the stay on other provisions, and making other technical corrections. *See* 48 FR 9738; March 8, 1983. OSHA's revised regulation included a detailed hearing conservation program. OSHA's occupational noise standard applies, for the most part, to all industry engaged in interstate commerce. The standard FRA is adopting in this rule is quite similar to OSHA's standard.

While OSHA is the primary regulator of noise in the workplace, other Federal agencies, in addition to FRA, regulate specific occupational settings. FRA regulates noise in the locomotive cab. The U.S. Air Force regulates the noise environment of Air Force personnel. The Mine Safety and Health Administration (MSHA) regulates the occupational noise exposure of miners. In 1999, MSHA issued a comprehensive rule that establishes uniform requirements for all miners. *See* 64 FR 49548. In that rule, MSHA adopted a permissible exposure level of 90 dB(A) as an 8-hour time-weighted average (TWA). MSHA also requires employers to use all feasible engineering and administrative controls in order to reduce a miner's noise exposure to the permissible exposure level. Where a mine operator is unable to reduce the noise exposure to the permissible level, the mine operator must provide the miner with hearing protectors (HP) and is required to ensure that the miner uses them. Additionally, where a miner is exposed at or above a TWA of 85 dB(A), the employer must place the miner in a hearing conservation program. The program must include exposure monitoring, the use of hearing protectors, audiometric testing, training, and recordkeeping. *See* 64 FR 49548, 49550 (1999).

In Part 229, FRA establishes minimum Federal safety standards for locomotives. These regulations prescribe inspection and testing requirements for locomotive components and systems. They also prescribe minimum locomotive cab safety requirements. In 1980, FRA issued standards for acceptable noise levels aboard a locomotive (§ 229.121). Section 229.121 was promulgated to protect the hearing and health of cab employees and to facilitate crew communication. It provided that noise level exposure in the cab may not exceed specific prescribed levels. The provision limited employee noise exposure to an eight-hour TWA of 90 dB(A) with a doubling rate of 5dB(A). It also provided for an absolute upper noise limit of 115 dB(A). In addition, it established procedures for noise testing.

The then-existing § 229.121 did not address hearing conservation for locomotive cab employees, including the use of personal protective equipment, ongoing hearing testing, employee training on the cause and prevention of hearing loss, and periodic noise

monitoring in the workplace. These are standard components of an occupational hearing conservation program, and OSHA requires them of other general industry workplaces within its jurisdiction.

In 1992, Congress enacted Section 10 of The Rail Safety Enforcement and Review Act (RSERA) (Pub. Law 102-365; September 3, 1992, codified at 49 U.S.C. 20103) in response to concerns raised by employee organizations, Congressional members, and recommendations of the National Transportation Safety Board (NTSB) concerning crashworthiness of and working conditions in locomotive cabs. Section 10 of RSERA, entitled *Locomotive Crashworthiness and Working Conditions*, required FRA “to consider prescribing regulations to improve the safety and working conditions of locomotive cabs” throughout the railroad industry. In order to determine whether regulations would be necessary, Congress asked FRA to assess “the extent to which environmental, sanitary, and other working conditions in locomotive cabs affect productivity, health, and the safe operation of locomotives.”

In response to the Congressional mandate set forth in Section 10 of RSERA, FRA undertook steps to determine the health and safety effects of locomotive cab working conditions. FRA studied a variety of working conditions in locomotive cabs, including sanitation, noise, temperature, air quality, ergonomics, and vibration. FRA prepared the *Locomotive Crashworthiness and Cab Working Conditions Report to Congress* (“Report”), dated September 1996, which outlines the results of these studies. With respect to noise, FRA conducted a comprehensive survey, reviewed historical data on noise-related incidents and investigations, and gathered information on hearing protection programs.

In this rulemaking, FRA is amending its occupational noise standards for railroad employees whose predominant noise exposure occurs in the locomotive cab. FRA’s previous standard, issued in 1980, limited cab noise exposure to certain levels based on the duration of exposure. FRA is requiring railroads to conduct noise monitoring and to implement a hearing conservation program for railroad operating employees whose noise exposure equals or exceeds an 8-hour TWA of 85 decibels. FRA is also establishing design, build, and maintenance standards for new locomotives and maintenance requirements for existing locomotives. FRA expects that implementation of this rule will reduce the likelihood of noise-induced hearing loss for railroad operating employees.

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

The information collected is used by FRA to ensure that railroads covered by this rule establish and implement noise monitoring, hearing conservation, and audiometric testing programs to protect their employees against the harmful effects of excessive noise in the workplace.

FRA reviews waiver petitions from railroads to determine whether it is appropriate and in the public interest to grant exceptions to any of the requirements of this rule. FRA

reviews Noise Monitoring Programs to ensure that railroads establish effective noise monitoring of employees – using sound sampling strategy – to determine if there is a need to implement a hearing conservation program (HCP). FRA’s noise monitoring requirements cover noise in locomotive cabs and noise in exterior environments in which employees operate during their work shifts. FRA’s regulation then involves the monitoring of some employees whose daily functions are entirely inside the cab and some employees whose daily functions are both inside and outside the locomotive cab. These noise monitoring programs are intended to determine whether an employee’s exposure to noise may equal or exceed safe/action levels (i.e., an eight hour time-weighted average (TWA) of 85 decibels (dB) using the A scale (A)). Also, FRA examines Noise Monitoring Programs to see if railroads have devised appropriate strategies for an effective hearing conservation program.

Noise monitoring information is also used by railroad employees. For example, § 227.103(g) requires that railroads post noise monitoring results. The information is used by both the monitored crew and other crews to understand, interpret, and assess the meaning of the results in the context of the operations monitored. FRA inspectors check that the required lists are posted to ensure that monitoring results are available to locomotive cab crews. Railroads are required to post the monitoring results at the appropriate origination point for a minimum of 30 days.

For all employees exposed to noise at or above the action level, railroads are required to establish a hearing conservation programs (HCP). FRA reviews HCPs to ensure that railroads are taking necessary measures to protect their employees. Thus, FRA examines these program documents to verify that railroads establish and maintain audiometric testing programs for affected employees. Audiometric tests must be provided at no cost to these employees. Railroads are required to establish a valid baseline audiogram within six months of any new employee’s first tour of duty for operating employees included in the HCP. Within two years of the effective date of the rule, railroads must establish a valid baseline audiogram for existing employees who have not had a baseline audiogram as of the effective date of this rule. Smaller railroads must do so within three years of the effective date of this rule. At least annually after obtaining the baseline audiogram, railroads must perform periodic audiograms, i.e., they must offer an audiometric test to each employee included in the HCP. At least triennially, each employee included in the HCP is required to take an audiometric test. FRA reviews audiometric test records to ensure that railroads’ operating employees are actually tested and to ensure that railroads keep complete and accurate documents of all employee exposure measurements.

As part of their HCPs, railroads must institute an occupational noise and hearing conservation training program for all employees included in the HCP. Railroads must offer the training program annually, and each employee is required to complete the program at least triennially. FRA reviews training program documents and materials to ensure that railroads include all required components in their programs and provide, at a minimum, information to employees on all of the following: (1) The effect of noise on hearing; (2) The purpose of hearing protectors; (3) The advantages, disadvantages, and

attenuation of various types of hearing protectors; (4) Instructions on selection, fitting, use, and care of hearing protectors; (5) The purpose of audiometric testing, and an explanation of the test procedures; (6) An explanation of noise operational controls, where used; (7) General information concerning the expected range of workplace noise exposure levels associated with major categories of railroad equipment and operations (e.g., switching and road assignments, hump yards proximate to retarders, etc.) and appropriate reference to requirements of the railroad concerning use of hearing protectors; (8) The purpose of noise monitoring and a general description of monitoring procedures; (9) The availability of a copy of this Part, an explanation of the requirements of this Part as they affect the responsibilities of employees, and their rights to access under this Part. FRA inspectors review HCP records to verify that railroads maintain a record of all positions and/or persons designated by the railroad to be included in its HCP. FRA inspectors also review HCP records to verify that designated employees have received the required training.

FRA examines Locomotive Cab certifications by equipment manufacturers to ensure that new locomotives have been tested according to the protocols set forth in Appendix H and meet the requirements stipulated under § 229.121. FRA inspectors review locomotive equipment maintenance records to confirm that locomotives receiving excessive noise reports are inspected and repaired (i.e., the item identified as substantially contributing to the noise replaced) on or before the next periodic inspection, or at the time of the next major equipment repairs commonly used for the particular type of maintenance needed, if the railroad determined that the repair or replacement of the item required significant shop/material resources that were not readily available.

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

FRA highly encourages and strongly endorses the use of advanced information technology, wherever possible, to reduce burden. In keeping with the provisions of the Paperwork Reduction Act (PRA) and the Government Paperwork Elimination Act (GPEA), FRA has provided respondents with an electronic option for this rule's paperwork requirements. Specifically, under § 227.121, all records required by this Part may be kept in electronic form by railroads. Under the rule, railroads are permitted to design their own electronic recordkeeping systems as long as the system meets the specified criteria in §§ 227.121(a)(2)(i) through (v), which are intended to safeguard the integrity and authenticity of each record. Thus, records required under §§ 227.103, 227.107, 227.109, and 227.119 may all be kept electronically.

Moreover, under § 229.121 (Locomotive Cab Noise), equipment maintenance records, including inspection, test, maintenance, replacement, or repair records, may be kept in electronic form. Here again, if a railroad elects to maintain these records electronically, it must satisfy the criteria stipulated §§ 227.121(a)(2)(i) through (v). Lastly, under Appendix H (Static Noise Test Protocols: In-Cab Static Measurement Procedure), entities conducting the required locomotive static noise test may keep the required records electronically. Currently, FRA has no hard data on electronic records under this rule.



In all, FRA estimates approximately that approximately 90 percent of responses are currently submitted/maintained electronically due to advanced information technology (i.e., electronic maintenance of required records by railroads).

**4. Efforts to identify duplication.**

The information collection requirements to our knowledge are not duplicated anywhere. Further, FRA is the sole Federal agency requiring noise emission certification for new locomotives.

Similar data are not available for any other source.

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

The requirements of this Part do not apply to the following: (1) Railroads which operate only on track inside an installation that is not part of the general railroad system of transportation; (2) Rapid transit operations in an urban area that are not connected to the general system of transportation; (3) Rapid (light rail) operations in an urban area that are connected to the general system and operate under a shared use waiver; and (4) Railroads that operate tourist, scenic, historic, or excursion operations, whether they are on or off the general system of transportation. Because of these exemptions, approximately 220 very small railroad operations – of the potentially affected 410 small railroads – incur no burden from this rulemaking.

Additionally, this rule does not apply to contractors working for a freight railroad who operate historic equipment in occasional service, as long as those contractors have been provided with hearing protection and are required to use the hearing protection while operating the historic equipment.

Further, it should be noted that FRA staggered the dates by which railroads must develop and implement a noise monitoring program to minimize the cost burden on railroads. The date varied based on the size of the railroad. Class I, passenger, and commuter railroad had 12 months from the effective date of this rule to establish a noise monitoring program. Railroads with 400,000 or more employee hours, which are not Class I, passenger, or commuter railroads, had 18 months to comply. Railroads with fewer than 400,000 employee hours (small railroads) had 30 months to comply. Also, it should be noted that, in general, because small railroads do less monitoring both in absolute terms and proportionally than larger railroads, they have fewer records to maintain.

Additionally, FRA provided phased-in implementation dates regarding two other provisions of this rule, specifically audiometric testing (§ 227.109(e)(2)) and the occupational noise/hearing conservation training program covering all employees included in the hearing conservation program (§ 227.119(b)(2)). Concerning audiometric testing, railroads with 400,000 or fewer employee hours had three years from the effective date of the rule to establish a baseline audiogram for existing employees.

Concerning hearing conservation training, railroads with 400,000 or fewer employee hours had three years from the effective date of the rule to provide training. [*Note: Railroads with more than 400,000 employee hours are predominantly Class I railroads and some larger Class II railroads.*]

FRA adjusted the implementation dates for smaller operations because of their unique situation. FRA understands that they lack the resources, manpower, and money of larger operations, and thus FRA provided them with more time to comply with the requirements of this Part in order to minimize the burden on them. Finally, regarding the Hearing Conservation training Program (HCP) required of railroads under § 227.119, FRA anticipated that the short line railroad association would step up and develop a generic program for its members to utilize.

Finally, it bears mentioning that the burden associated with this information collection is fairly minimal on all the railroads. Moreover, as previously noted, the Regulatory Flexibility Assessment associated with this final rule concluded that the rule would not have a significant economic impact on a substantial number of small entities.

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

If this information is not collected or collected less frequently, both railroad safety and railroad worker health would be adversely impacted throughout the United States. Specifically, without this collection of information, there might be a greater number of rail accidents/incidents and corresponding increases in railroad worker and passenger injuries and fatalities, resulting from decreased functionality of locomotive cab crew members and railroad workers, caused by excessively loud noise which engendered both noise induced hearing loss and poor communication on the part of key rail personnel. Without this collection of information, FRA would have no way of knowing whether railroads are taking necessary measures, including developing and implementing noise monitoring, hearing conservation and audiometric testing programs, to protect their employees against the harmful effects of excessively loud noise.

Without this collection of information, railroad workers would have no way of knowing the noise levels that they are exposed to on a daily basis, since there would be no lists posted notifying each employee of noise monitoring results. Employees, along with railroads, would be unable to take appropriate countermeasures to mitigate excessively loud noise in their workday environments. Without this collection of information, in particular the various audiometric tests required under § 227.109, railroads and medical personnel (audiologists, otolaryngologists, physicians) would have no way to assess and compare locomotive cab crew members and other railroad workers hearing acuity levels over extended periods of time, and would be unable to determine whether or not a given individual had experienced a standard threshold shift. Hearing impairment, hearing loss, and medical pathologies of the ear would then go undetected. Such hearing loss and hearing impairment, along with an accompanying inability to communicate locomotive cab crew messages clearly and effectively, could not only cause increased numbers of

accidents/incidents, but could also contribute to the precipitation of a catastrophic train accident where large numbers of injuries and fatalities resulted.

Without this collection of information, FRA would have no way to confirm that railroad employees received hearing conservation training. Without this training, employees would be uninformed how various noise hazards affect their hearing, and would be unable to understand when and where they are exposed to hazardous noise levels. With education and proper training, railroad employees are able to understand the importance of wearing effective hearing protectors, and are more likely to use ear plugs and other auditory protection devices on the job, as well as take them home to wear when woodworking, engaging in target practice, and many other noisy off-job activities.

Without this collection of information, particularly the records required under § 227.121, FRA would have no means to ensure railroads are actually complying with the rule's requirements, and would have no ability to enforce compliance with this rule. Finally, without this collection of information, particularly new locomotive performance certifications and locomotive equipment maintenance records, FRA would have no means to determine whether new locomotives are being built to quieter noise standards and would have no way to confirm that locomotives reported to be operating at excessively loud noise levels were actually repaired, and are being properly maintained.

In sum, this collection of information is an important part of FRA's safety program to minimize – to the greatest practicable extent – rail-related accidents/incidents and accompanying injuries/fatalities and to foster a safe rail transportation environment for both the public-at-large and railroad workers. As such, it assists FRA in fulfilling its primary mission of promoting, maintaining and enhancing national rail safety.

## 7. **Special circumstances.**

Section 227.121(b) of the rule requires railroads to maintain records of employee exposure measurements required by § 227.103 for the duration of the employee's employment plus 30 years. FRA's requirement follows that of the OSHA's access to records standards, which requires employers to retain *employee* exposure records for at least 30 years. FRA notes that the RSAC Working Group members indicated that most major railroads are already retaining these documents for this time period, so this requirement is consistent with current practice.

Section 227.121(c) of the rule requires railroads to maintain records of employee audiometric test records required under § 227.109 for the duration of the employee's employment plus 30 years. Audiometric recordkeeping enables reviewers to verify that the tests were carried out under the right conditions and that the audiograms reflect employees' true hearing levels. The extended time frame for the maintenance of both the records of employee exposure measurements and audiometric test records enable FRA and the railroads to retro-reflectively examine their Hearing Conservation Programs

(HCPs) to determine if they are working or need modification. Because hearing loss occurs over a period of time, these records provide an invaluable source of data.

Section 227.121(f) requires railroads to maintain a record – with specific information – for all employees who have been found to have experienced a standard threshold shift (STS) within the prior calendar year for five (5) years. A standard threshold shift is indicative of baseline shift signifying a permanent decline in hearing acuity. The STS five-year record requirement allows railroads and railroad employees to ascertain whether hearing loss is continuing over time and provides an important marker with which to compare future employee audiometric tests. These records also serve as another barometer to measure the effectiveness of the railroads' HCPs.

In sum, FRA requires this information because it can help assess the effectiveness of a given railroad's Hearing Conservation Program (HCP) over time. These records all pertain to the health and proper functioning of railroad employees in an admittedly dangerous work environment, and are designed to ensure that railroads develop, implement, and maintain effective HCPs so that railway workers can perform their jobs in a safe and efficacious manner. Noise induced hearing loss (NIHL) is a serious and continuing problem among railroad workers that demands effective monitoring and remedies. In short, these long-time records provide the means by which railroads can monitor and evaluate employees' ability to effectively and safely perform their jobs on an ongoing basis.

All other requirements are in compliance with this section.

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

In accordance with the Paperwork Reduction Act of 1995, Public Law No.104-13, § 2, 109 Stat. 163 (1995) (codified as revised at 44 U.S.C. §§ 3501-3520), and its implementing regulations, 5 C.F.R. Part 1320, FRA published a notice in the Federal Register on October 17, 2014 (See 79 FR 62513) soliciting public comments on these information collection requirements. FRA received no comments in response to this notice.

### Background

On June 23, 2004, FRA published a Notice of Proposed Rulemaking (NPRM) in the Federal Register, (See 69 FR 35146), to solicit public and rail industry comment on the proposed regulation and the information collection requirements associated with it. The NPRM provided for a 90-day comment period. The comment period closed on September 21, 2004. FRA received comments from approximately 50 interested parties and, overwhelmingly, commenters applauded FRA for amending its noise standard.

There were no specific comments on burden hour estimates. However, there were comments on some of the rule's requirements and associated costs. In particular, there

were comments on the training program required under § 227.119. FRA's training requirements are based heavily on OSHA's training requirements found at 29 CFR 1910.95(k). Section 227.119(a) sets forth the basic requirement that railroads must institute an occupational noise and hearing conservation training program for all employees included in the hearing conservation program (HCP). The Long Island Railroad (LIRR) submitted comments about the training requirement generally. They noted that they already have a four-day process to re-certify/re-qualify train crews (on rules, air brakes, and Parts 238 and 239). To add hearings would extend the process to five days, which LIRR asserted would be at a significant cost and with added administrative burdens.

As noted below, this rulemaking evolved out of the RSAC process, of which several railroad representatives were members. Those members felt that this rule would not be overly burdensome on railroads, especially considering that most railroads have HCPs in place. Furthermore, the RSAC Working Group and FRA, as well as the majority of other commenters, felt that hearing conservation is an important enough issue to warrant this rulemaking and associated training. In fact, one commenter, a consultant who has consulted on over 200 hearing loss claims, wrote that, based on his observations, he believes that one of the two main reasons for cab employees' hearing loss is lack of adequate training. He asserted that railroad HCPs have "not been comprehensive or thorough enough with respect to educating on both the need for and how to properly use appropriate hearing protection devices."

On the other side of the spectrum were representatives of the American Speech-Language-Hearing Association (ASHA), the American Industrial Hygiene Association (AIHA), the American Academy of Audiology (AAA), the National Hearing Conservation Association (NHCA), the Council for Accreditation in Occupational Hearing Conservation (CAOHC), the National Institute for Occupational Safety and Health (NIOSH), Aearo Company, and Michael Fairchild and Associates, all of whom advocated for FRA to require annual, not triennial, training. They all noted that training is very important, explaining that motivation and education of employees is a key element to hearing conservation success and is one of the most effective and critical components of an HCP. Michael Fairchild and Associates doubted that employees would retain information if not reinforced annually. Similarly, NIOSH asserted that training would be more effective if presented annually, based on the acquisition, retention, and application of new knowledge and skills.

The RSAC Working Group discussed this matter at length. The American Association of Railroads (AAR), an active member of the RSAC Working Group present during the proposed rule discussions, asserted that railroads would have great difficulty in complying with a 12-month period. Faced with factors, such as a highly mobile workforce and a lack of clinics in certain rural communities, railroads would be unable to offer training once every 12 months. In the spirit of compromise, the RSAC Working Group decided on the provision that is now in the final rule. Each railroad shall offer training to each employee at least once each calendar year. The railroad shall require

each employee to complete the training at least once every 1,095 days. FRA believes this requirement now serves the interests of all affected parties.

On April 3, 1997, FRA hosted a roundtable discussion on noise. There were 32 participants, including representatives from FRA, other Federal agencies, railroads, labor organizations, locomotive manufacturers, and trade associations. The meeting provided an opportunity to discuss the effects of occupational noise exposure on railroad workers and on the industry as a whole. FRA also explained that the roundtable was an opportunity to understand best practices, to exchange information about railroad industry conservation programs, and to learn about educational hearing initiatives. Several individuals made presentations to the group. A physician provided some historical background on hearing loss. He explained that hearing loss had been “substantially neglected” for years. Then, in the late 1970's, government policy makers realized that the emphasis should be placed on prevention, rather than treatment and care, and that the industry was in a position to educate its workforce and implement preventative measures that produce a healthier workforce. As a result of that sentiment, OSHA wrote and issued its noise regulation.

A union representative provided some input from the employee's perspective. He explained that conditions on a locomotive can be extremely noisy and that those noisy conditions can lead to pain, discomfort, and bad decisions. He acknowledged that some technological progress has been made on locomotives but that a difficult situation remained ahead. Additionally, a carrier representative spoke about the carrier's perspective and about some of the initiatives that his particular railroad had undertaken. He discussed the elements of a hearing conservation program. He also spoke about his railroad's comprehensive mobile medical service that traveled throughout the country and about his railroad's extensive training program that covers hazard communication in addition to the traditional audiometric testing training. In addition, he mentioned that his railroad uses communication tools, such as newsletters, pamphlets, and daily job briefings, to increase employee awareness about noise issues. Finally, he briefly addressed control measures that his railroad uses, including hearing protection, equipment specifications, and alterations to track equipment.

The roundtable participants subsequently discussed a wide range of topics, including the following: the available scientific data related to occupational noise exposure and hearing loss in the railroad industry; the identification of the appropriate noise exposure threshold at which noise adversely affects railroad workers' health and job performance; a review of voluntary noise reduction and conservation programs that industry participants had already implemented; and an assessment of what remained to be done in addressing the noise issue. Participants generally agreed that exposure to high levels of noise adversely affects workers and the industry; however, participants did not agree on the threshold level of noise exposure at which these effects occur. One individual asked what the proper damage risk criteria should be and what is safe noise versus unsafe noise. Another individual noted that there is controversy between scientists and regulators as to what level of protection is necessary to protect individuals from hearing loss.

The potential damaging effects of noise on railroad workers arose on several occasions during these discussions. Besides noting the obvious damaging affects of noise on railroad workers' hearing abilities, many participants pointed out that there were several other potential damaging effects of noise exposure. One participant observed that it is more than just one's ears that respond to noise; bodies also respond to noise too in the form of hypertension, anxiety, nausea, or other medical illnesses. Another participant remarked that there had been little discussion about the impact of noise on fatigue. Several participants also commented that they lacked full understanding of the effects of noise on railroad worker job performance. Participants concluded by identifying the need for more research and data on noise in the rail industry.

In March 1996, FRA established the Railroad Safety Advisory Committee (RSAC), which provides a forum for developing consensus recommendations on rulemaking and other safety program issues. The Committee includes representation from all of the agency's major customer groups, including railroad carriers, labor organizations, suppliers, manufacturers, and other interested parties. A list of member groups includes the following:

- American Association of Private Railroad Car Owners (AARPCO)
- American Association of State Highway & Transportation Officials (AASHTO)
- American Public Transportation Association (APTA)
- American Short Line and Regional Railroad Association (ASLRRA)
- American Train Dispatchers Department (ATDD)
- Association of American Railroad (AAR)
- Association of Railway Museums (ARM)
- Association of State Rail Safety Managers (ASRSM)
- Brotherhood of Locomotive Engineers and Trainmen (BLET)
- Brotherhood of Maintenance of Way Employees Division (BMWED)
- Brotherhood of Railroad Signalmen (BRS)
- Federal Transit Administration (FTA)\*
- High Speed Ground Association
- International Association of Machinists and Aerospace Workers
- International Brotherhood of Electrical Workers (IBEW)
- Labor Council for Latin American Advancement (LCLAA)\*
- League of Railway Industry Women\*
- National Association of Rail Passengers (NARP)
- National Association of Railway Business Women\*
- National Conference of Firemen and Oilers
- National Railroad Construction and Maintenance Association
- National Railroad Passenger Corporation (AMTRAK)
- National Transportation Safety Board (NTSB)\*
- Railway Supply Institute (RSI)
- Safe Travel America
- Secretaria de Comunicaciones y Transporte (Mexico)\*
- Sheet Metal Workers International Association (SMWIA)

Tourist Railway Association, Inc.  
Transport Canada  
Transport Workers Union of America (TWUA)  
Transportation Communications International Union/BRC (TCIU/BRC)  
United Transportation Union (UTU)

- Indicates associate membership

When appropriate, FRA assigns a task to RSAC, and after consideration and debate, RSAC may accept or reject the task. If RSAC accepts the task, the RSAC establishes a working group that possesses the appropriate expertise and representation of interests to develop recommendations to FRA for action on the task. The working group develops the recommendations by consensus. The working group may establish one or more task forces to develop the facts and options on a particular aspect of a given task. The task force reports to the working group. If a working group reaches unanimous consensus on recommendations for action, the working group presents the package to the RSAC for a vote. If a simple majority of the RSAC accepts the proposal, the RSAC formally recommends the proposal to FRA. If the working group is unable to reach full consensus on recommendations or if the RSAC does not approve the working group's recommendations, FRA resolves the issue through traditional rulemaking proceedings.

On June 24, 1997, FRA presented the subject of locomotive cab working conditions to RSAC. The purpose of this task was defined as follows: "To safeguard the health of locomotive crews and to promote the safe operation of trains." The RSAC accepted this task (No. 97-2) and formed a Locomotive Cab Working Conditions Working Group ("Working Group"). Task 97-2 addressed several issues, one of which was noise exposure. With respect to noise exposure, RSAC asked the Working Group to complete two items: (1) Revise existing cab noise limits to take into account current requirements of the OSHA standard, specifically as it relates to hearing conservation programs, and (2) Continue efforts to evaluate engineering controls and other measures used to minimize noise exposure in locomotive cabs.

In addition to FRA representatives, the Working Group established by RSAC consisted of representatives of the following organizations:

American Association of State Highway & Transportation Officials (AASHTO)  
American Public Transportation Association (APTA)  
American Short Line and Regional Railroad Association (ASLRRA)  
Association of American Railroads (AAR)  
Brotherhood of Locomotive Engineers and Trainmen (BLET)  
Brotherhood of Maintenance of Way Employees Division (BMWED)\*  
International Brotherhood of Electrical Workers (IBEW)  
(National Railroad Passenger Corporation (Amtrak)  
RSI (formerly Railway Progress Institute)  
Sheet Metal Workers International Association (SMWIA)  
Transport Workers Union of America (TWUA)



United Transportation Union (UTU)

\*Indicates associate membership

The Working Group's goal was to produce recommendations for locomotive cab noise exposure standards warranted by an assessment of available information on hearing loss, hearing conservation programs, existing federal standards, and occupational injury data. The Working Group decided that specific expertise would be needed to analyze pertinent information and so it formed the Noise Task Force.

The Noise Task Force, which was established in September 1977, was made up of industrial hygiene, safety, engineering, and medical staff from the carriers, labor organizations, and FRA. The Noise Task Force met regularly over a period of several years to discuss several topics, including hearing loss and noise exposure among locomotive cab employees; existing railroad hearing loss prevention programs; OSHA's occupational noise standards; equipment changes and procedures that improve noise levels in the cab; hearing testing and training programs; and noise monitoring. The Noise Task Force concluded that OSHA's standard for noise was an appropriate framework and starting point for an update and revision to FRA's existing noise regulation. The Noise Task Force also identified several areas where OSHA's regulation might be modified to create a FRA regulation that could better address the occupational noise exposure of the rail industry. The Noise Task Force forwarded these findings to the Working Group.

The Working Group conducted a number of meetings and discussed each of the matters proposed in the NPRM. The Working Group, using the preliminary findings of the Task Force, developed recommendations for reducing the likelihood of hearing loss for cab employees. In June 2003, the Working Group reached consensus on recommendations for the proposed rule and forwarded these recommendations to the RSAC. On June 27, 2003, the RSAC accepted these recommendations, which had been reviewed and accepted by FRA. On June 23, 2004, FRA published an NPRM containing the recommendations of the Working Group and the full RSAC. See 69 FR 35146. The NPRM provided for a 90-day comment period and provided interested parties the opportunity to request a public hearing.

FRA reconvened the Task Force on March 1, 2005, and the Working Group on March 2-3, 2005, to discuss the comments that FRA received about the NPRM. The Task Force and the Working Group considered all the comments and again reached consensus on recommendations for a final standard. These recommendations were presented to the RSAC and on May 18, 2005, the RSAC accepted these recommendations. The RSAC voted to forward these recommendations to FRA as the basis for a final occupational noise standard. FRA has reviewed the RSAC's recommendations, and has adopted the recommendations in the final rule.

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

There are no monetary payments or gifts made to respondents associated with the information collection requirements contained in this regulation.

**10. Assurance of confidentiality.**

Information collected is not of a confidential nature, and FRA pledges no confidentiality.

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

These requirements have nothing to do with sensitive matters such as sexual behavior and attitudes, religious beliefs, and other matters commonly considered private.

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

*\*\*\* Note: The following inputs apply to the estimates for paperwork requirements associated with this regulation:*

<i>Total Number of Railroads</i>	<i>717</i>
<i>Class I Railroads(Freight)</i>	<i>7</i>
<i>Class II Railroads</i>	<i>38</i>
<i>Class III Railroads</i>	<i>452</i>
<i>Number of Railroads Exempted</i>	<i>220 (tourist, steam, historic, and excursion RRs – all small railroads)</i>
<i>Total Number of Railroad Employees</i>	<i>78,000 (75,000 locomotive engineers, conductors, brakemen, and firemen plus 3,000 supervisors/other RR employees)</i>
<i>Total Number of Locomotives</i>	<i>23,500 (20,000 Class I; 2,500 regional/short line; and 1,000 Amtrak/commuter railroad locomotives)</i>

*Note: Total respondent universe (of 717 railroad)s and the total number of railroad employees and total number of locomotives are derived from the latest available complete reporting data in FRA’s database (2013) and numbers previously provided to the FRA economist working on this regulation by railroads, respectively.*

**Occupational Noise Exposure**

**§ 227.9 Penalties**

Any person who knowingly and willfully falsifies a record or report required by this part may be subject to criminal penalties under 49 U.S.C. 21311.

*FRA estimates that there will be zero (0) falsified records/reports under the above requirement. Consequently, there is no burden associated with this requirement.*

§ 227.13 – Waivers.

(a) A person subject to a requirement of this part may petition the Administrator for a waiver of compliance with such requirement. The filing of such a petition does not affect that person's responsibility for compliance with that requirement while the petition is being considered.

(b) Each petition for waiver under this section must be filed in the manner and contain the information required by part 211 of this chapter.

FRA estimates that it will receive approximately two (2) waiver petitions annually under the above requirement. It is estimated that it will take approximately one (1) hour for each respondent to complete the petition letter and forward it to FRA. Total annual burden for this requirement is two (2) hours.

Respondent Universe:	497 railroads
Burden time per response:	1 hour
Frequency of Response:	On occasion
Annual number of Responses:	2 petition letters
Annual Burden Hours:	2 hours

**Calculation:** 2 petition letters x 1 hr. = 2 hours

§ 227.103 - Noise Monitoring Program.

- A. A railroad must develop and implement a noise monitoring program to determine whether any employee covered by the scope of this subpart may be exposed to noise that may equal or exceed an 8-hour TWA of 85 db(A), in accordance with the following schedule: (1) Class I, passenger, and commuter railroads no later than February 26, 2008; (2) Railroads with 400,000 or more annual employee hours that are not Class I, passenger, or commuter railroads no later than August 26, 2008; and (3) Railroads with fewer than 400,000 annual employee hours no later than August 26, 2009.

In its monitoring program, the railroad must use a sampling strategy that is designed to identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protection.

Where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area monitoring generally inappropriate, the railroad must use representative personal sampling to comply with the monitoring requirements of this section, unless the railroad can show that area sampling produces equivalent results.

Noise monitoring is performed for one or more of the following reasons: to determine whether hearing hazards exist; to ascertain whether noise presents a safety hazard by interfering with verbal communication; to ascertain whether noise presents a safety hazard by impairing recognition of audible warning signals; to identify which employees need to be included in a hearing conservation program; to define and establish the amount of hearing protection that is necessary; to evaluate specific noise sources for noise control purposes; and to evaluate the success of noise control efforts. Thus, noise monitoring is not only to determine if there is a need to implement a hearing conservation program but also to determine appropriate strategies for an effective hearing program.

FRA's regulation then requires railroads to develop and implement a noise monitoring program by a specific date, depending on the size of the railroad. These noise monitoring programs are intended to determine whether an employee's exposure to noise may equal or exceed an eight (8) hour time-weighted average (TWA) of 85 decibels (dB) using the A scale (A). Factors which suggest that noise exposure in the locomotive cab may meet or exceed a TWA of 85 dB(A) include the following: employee complaints about loudness of noise, indications that train employees are experiencing hearing loss, noisy conditions that make communication/conversation difficult, and route-specific or locomotive-specific factors that suggest the possibility of an excessive noise dose.

FRA's proposed noise monitoring requirements cover noise in locomotive cabs and noise in exterior environments in which employees work during their job shifts. FRA's rule would involve the monitoring of some employees whose daily functions are entirely outside the cab and some employees whose daily functions are both inside and outside of the locomotive cab.

The railroad shall repeat the noise monitoring, consistent with the requirements of this section, whenever a change in operations, process, equipment, or controls increases noise exposures to the extent that: (1) additional employees may be exposed at or above the action level; (2) the attenuation provided by hearing protectors being used by employees may be inadequate to meet the requirements of § 227.103.

In administering the monitoring program, the railroad shall take into consideration the identification of work environments where the use of hearing protectors may be omitted.

The railroad must provide affected employees or their representatives with an opportunity to observe any noise dose measurements conducted pursuant to this section.

FRA believes that its regulation will create a need for additional noise monitoring. In its previous submission, FRA estimates that railroads would spend the following amount of hours implementing their noise monitoring programs: small railroads (430 Class IIIs) will spend approximately three (3) hours each year performing noise monitoring (*1,290 hours*); medium-large sized railroads (25 Class IIs) will spend approximately 30 hours each year performing noise monitoring (*750 hours*); and very large railroads (5 Class Is)

will spend approximately 600 hours each year performing noise monitoring (3,000 hours).

These numbers are now being revised since the total number of railroads has increased by 37 (to 497 railroads). Thus, FRA estimates approximately 22 small railroads (Class IIIs) will spend approximately three (3) hours each year performing noise monitoring (66 hours); 13 medium-large sized railroads (Class IIs) will spend approximately 30 hours each year performing noise monitoring (390 hours); and two (2) very large railroads (Class Is) will spend approximately 600 hours each year performing noise monitoring (1,200 hours). The total annual burden for implementation of the noise monitoring comes to 1,656 hours.

Respondent Universe:	497 railroads
Burden time per response:	See above
Frequency of Response:	One-time
Annual number of Responses:	37 programs
Annual Burden Hours:	1,656 hours

**Calculation:** 37 programs x hrs. listed above = 1,656 hours

- B. The railroad must notify each monitored employee of the results of the monitoring. The railroad must post the monitoring results at the appropriate crew origination point for a minimum of 30 days. The posting should include sufficient information to permit other crews to interpret the meaning of the results in the context of the operations monitored. FRA estimates that railroads will post the following number of lists: each of the two (2) Class I railroads cited above will post approximately 75 lists annually (a total of 150 lists); each of the 13 Class II railroads cited above will post approximately four (4) lists annually (a total of 52 lists); and each of the 22 Class III railroads cited above will post approximately one (1) list annually (a total of 22 lists) under the above requirement. Thus, a grand total of 224 lists will be posted. It is estimated that it will take approximately 30 minutes to complete and post the necessary list. Total annual burden for this requirement is 112 hours.

Respondent Universe:	497 railroads
Burden time per response:	30 minutes
Frequency of Response:	On occasion
Annual number of Responses:	224 lists
Annual Burden Hours:	112 hours

**Calculation:** 224 lists x 30 min. = 112 hours

Total annual burden for this entire requirement is 1,768 hours (1,656 + 112).

### § 227.105 - Protection of Employees

(a) A railroad must provide appropriate protection for its employees who are exposed to noise, as measured according to § 227.103, that exceeds the limits specified in Appendix A of this Part.

(b) In assessing whether exposures exceed 115 dB(A), as set forth in paragraph (a) of this section and Appendix A to this part, the apparent source of the noise exposures must be observed and documented and measurement artifacts may be removed.

*The burden for this requirement is included under that of the Noise Monitoring Program (§ 227.103) above. Consequently, there is no additional burden associated with this requirement.*

### § 227.107 - Hearing Conservation Program

Consistent with the requirements of the noise monitoring program required by § 227.103, the railroad must administer a continuing, effective hearing conservation program, as set forth in §§ 227.109 through 227.121, for all employees exposed to noise at or above the action level. For purposes of the hearing conservation program, employee noise exposure shall be computed in accordance with the table in Appendix A of this part, and without regard to any attenuation provided by the use of hearing protectors.

Section 227.107 sets out the requirement that railroads establish a Hearing Conservation Program (HCP) for all employees exposed to noise at or above the action level. Section 227.107 is identical to the comparable provision in OSHA's occupational noise regulation. FRA recognizes that most Class I railroads, as well as some regional and commuter railroads (Class IIs and Class IIIs), already have an HCP and that those HCPs meet the requirements of OSHA's noise standard. Although not required, railroads have included locomotive cab employees in those programs. Consequently, several railroads are already complying with the requirements of this rulemaking.

Most railroads should already have Hearing Conservation Programs (HCPs) that were established for OSHA purposes or on a voluntary basis. The primary burden for this requirement will fall on the larger Class II (medium) and small Class III railroads. Based on its revised total number of railroads (497) and based on its previous accounting of 460 HCPs and corresponding hourly burden, FRA estimates that there are approximately 15 HCPs that will be developed by larger Class II railroads and approximately 22 HCPs that will be developed by Class III railroads. It is estimated that it will take the larger Class II railroads approximately 31 hours each to develop their HCPs and that it will take the small Class III railroads approximately 7.5 hours each to modify the already developed generic HCP. Total annual burden for this requirement is 630 hours.

Respondent Universe:	497 railroads
Burden time per response:	31 hours + 7.5 hours
Frequency of Response:	One-time
Annual number of Responses:	37 HCPs
Annual Burden Hours:	630 hours

**Calculation:** 15 HCPs. x 31hrs. + 22 HCPs. x 7.5 hrs. = 630 hours

Further, FRA estimates that five (5) railroads annually will spend approximately an average of 1.74 hours revising or making changes to their hearing conservation programs (HCPs). Total annual burden for this requirement is nine (9) hours.

Respondent Universe:	497 railroads
Burden time per response:	1.74 hours
Frequency of Response:	On occasion
Annual number of Responses:	5 revised HCPs
Annual Burden Hours:	9 hours

**Calculation:** 5 revised HCPs. x 1.74 hrs. = 9 hours

Total burden for this entire requirement then is 639 hours (630 + 9).

§ 227.109 - Audiometric Testing Program

- A. Each railroad must establish and maintain an audiometric testing program as set forth in this section and include employees who are required to be included in a hearing conservation program pursuant to § 227.107. The audiometric tests must be provided at no cost to employees. Audiometric tests must be performed by: (1) an audiologist, otolaryngologist, or other physician who has experience and expertise in hearing and hearing loss; or (2) by a qualified technician.

*The burden for this requirement is already included above under that of the Hearing Conservation Program (§ 227.107). Consequently, there is no additional burden associated with this requirement.*

- B. *Baseline Audiogram and New Employees.* This paragraph (e) applies to employees who are required by § 227.107 to be included in a hearing conservation program. Except as provided in paragraph (e)(1)(ii) of this section (§ 227.109), for employees hired after February 26, 2007, the railroad shall establish a valid baseline audiogram within six (6) months of the new employee's first tour of duty. Where mobile test vans are used to meet the requirement in paragraph (e)(1)(i), the railroad shall establish a valid baseline audiogram within one (1) year of the new employee's first tour of duty.

*The burden for this requirement is included below under that of existing employees for employees who have not had a baseline audiogram. Consequently, there is no additional burden associated with this requirement.*

- C. *Existing Employees.* For all employees without a baseline audiogram as of February 26, 2007, Class 1, passenger, and commuter railroads, and railroads with 400,000 or more annual employee hours must establish a valid baseline audiogram by February 26, 2009; and railroads with less than 400,000 annual employee hours must establish a valid baseline audiogram by February 26, 2010.

If an employee has had a baseline audiogram as of February 26, 2007, and it was obtained under conditions that satisfy the requirements found in 29 CFR 1910.95(h), the railroad must use that baseline audiogram. If the employee has had a baseline audiogram as of February 26, 2007, and it was obtained under conditions that satisfy the requirements in 29 CFR 1910.95(h)(1), but not the requirements found in 29 CFR 1910.95(h)(2) through 1910.95(h)(5), the railroad may elect to use that baseline audiogram provided that the Professional Supervisor of the Audiometric Monitoring Program makes a reasonable determination that the baseline audiogram is valid and is clinically consistent with other materials in the employee's medical file.

Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to occupational noise in excess of the action level. Hearing protectors may be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to occupational noise. The railroad shall notify its employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.

*The burden for performing baseline audiograms was accounted for in the previous submission and has now been fulfilled for existing train and engine employees. Consequently, there is no additional burden associated with this requirement.*

Additionally, based on an attrition rate of approximately nine (9) percent requiring new hire replacement employees, FRA estimates that approximately 7,100 employees, who do not have valid baseline audiograms or who have not had baseline audiograms performed as of the effective date of this rule, will have a valid audiogram performed. It is estimated that it will take approximately 25 minutes to perform each audiogram, and record the results. Total annual burden for this requirement is 2,958 hours.



Respondent Universe:	85,600 Railroad employees
Burden time per response:	25 minutes
Frequency of Response:	One-time
Annual number of Responses:	7,100 baseline audiograms
Annual Burden Hours:	2,958 hours

**Calculation:** 7,100 baseline audiograms x 25 min. = 2,958 hours

- D. *Periodic Audiogram.* The railroad must offer an audiometric test to each employee included in the hearing conservation program at least once each calendar year. The interval between the date offered to any employee for a test in a calendar year and the date offered in the subsequent calendar year shall be no more than 450 days and no less than 280 days. The railroad shall require each employee included in the hearing conservation program to take an audiometric test at least once every 1,095 days.

As part of a three-year program testing cycle, approximately one-third of the estimated 85,600 railroad employees will be obliged to take an audiometric test each year. Thus, approximately 28,530 employees per year will have an audiogram (periodic) performed. It is estimated that it will take approximately 10 minutes to perform each audiogram. Total annual burden for this requirement is 4,755 hours.

Respondent Universe:	85,600 Railroad Employees
Burden time per response:	10 minutes
Frequency of Response:	Annually
Annual number of Responses:	28,530 periodic audiograms
Annual Burden Hours:	4,755 hours

**Calculation:** 28,530 periodic audiograms x 10 min. = 4,755 hours

- E. *Evaluation of Audiogram.* (1) Each employee's periodic audiogram must be compared to that employee's baseline audiogram to determine if the audiogram is valid and to determine if a standard threshold shift has occurred. This comparison may be done by a qualified technician. (2) If the periodic audiogram demonstrates a standard threshold shift, a railroad may obtain a retest within 90 days. The railroad may consider the results of the retest as the periodic audiogram.

FRA estimates that approximately 2,330 audiogram evaluations will be performed each year. It is estimated that each audiogram evaluation will take approximately six (6) minutes to perform (4 minutes to evaluate and 2 minutes to locate and file), or a total of 233 hours. Additionally, it is estimated that approximately 93 employees will be referred each year for re-testing because a standard threshold shift was indicated. It is

estimated that it will take approximately 2.5 hours to perform each retest, or a total of 233 hours. Total annual burden for this requirement is 280 hours (233 + 47).

Respondent Universe:	85,600 Railroad Employees
Burden time per response:	6 minutes/.5 hour
Frequency of Response:	Annually
Annual number of Responses:	2,330 audiogram evaluations + 93 retests
Annual Burden Hours:	280 hours

**Calculation:** 2,330 evaluations x 6 min. + 93 retests x .5 hr. = 280 hours

(3) The audiologist, otolaryngologist, or physician shall review problem audiograms and shall determine whether there is a need for further evaluation. A railroad shall provide all of the following information to the person performing this review: (i) The baseline audiogram of the employee to be evaluated; (ii) The most recent audiogram of the employee to be evaluated; (iii) Measurements of background sound pressure levels in the audiometric test room as required in Appendix D of this part: *Audiometric Test Rooms*; and (iv) Records of audiometer calibrations required by § 227.111.

FRA estimates that approximately 15 problem audiograms will be found, and that the baseline and most recent audiograms and testing room measurements (a total of 3 documents per problem audiogram) will be provided to the appropriate medical professional under the above requirement (a total then of 45 documents). It is estimated that it will take approximately 10 minutes for each railroad to gather the necessary documents and send them to the medical professional. Total annual burden for this requirement is eight (8) hours.

Respondent Universe:	8,000 Railroad Employees
Burden time per response:	10 minutes
Frequency of Response:	On occasion
Annual number of Responses:	45 documents
Annual Burden Hours:	8 hours

**Calculation:** 45 documents x 10 min. = 8 hours

*The burden for records of audiometer calibrations is included under that of § 227.111. Consequently, there is no additional burden associated with this requirement.*

- F. *Follow-up Procedures.* (1) If a comparison of the periodic audiogram to the baseline audiogram indicates that a standard threshold shift has occurred, the railroad must inform the employee in writing within 30 days of the determination.

FRA estimates that approximately 93 standard threshold shifts will occur each year, and thus 93 employees will be notified in writing under the above requirement. It is estimated that it will take approximately five (5) minutes to complete each notification and send it to the affected employee. Total annual burden for this requirement is eight (8) hours.

Respondent Universe:	8,000 Railroad Employees
Burden time per response:	5 minutes
Frequency of Response:	Annually
Annual number of Responses:	93 notifications
Annual Burden Hours:	8 hours

**Calculation:** 93 notifications x 5 min. = 8 hours

(2) Unless a physician or audiologist determines that the standard threshold shift is not work-related or aggravated by occupational noise exposure, the railroad shall ensure that the following steps are taken: (i) Employees not using hearing protectors shall be fitted with hearing protectors, shall be trained in their use and care, and shall be required to use them; (ii) Employees already provided with hearing protectors shall be refitted, shall be retrained in the use of hearing protectors offering greater attenuation, if necessary, and shall be required to use them.

FRA estimates that approximately 240 employees per year will be fitted with hearing protectors, trained/retrained in their use and care, and required to use them under the above requirement. It is estimated that it will take approximately two (2) minutes to perform the fitting and training of each employee. Total annual burden for this requirement is eight (8) hours.

Respondent Universe:	240 Railroad Employees
Burden time per response:	2 minutes
Frequency of Response:	On occasion
Annual number of Responses:	240 employee training sessions
Annual Burden Hours:	8 hours

**Calculation:** 240 employee training sessions x 2 min. = 8 hours

(iii) If subsequent audiometric testing is necessary or if the railroad suspects that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors, the railroad must refer the employee for a clinical audiological evaluation or an otological examination.

FRA estimates that approximately 20 employees will be referred for a clinical audiological evaluation or an otological examination under the above requirement. It is estimated that it will take approximately two (2) hours to refer the employee and complete the evaluation/examination. Total annual burden for this requirement is 40 hours.

Respondent Universe:	240 Railroad Employees
Burden time per response:	2 hours
Frequency of Response:	On occasion
Annual number of Responses:	20 referrals/exam results
Annual Burden Hours:	40 hours

**Calculation:** 20 referrals/exam results x 2 hrs. = 40 hours

(iv) If the railroad suspects that a medical pathology of the ear unrelated to the use of hearing protectors is present, the railroad must inform the employee of the need for an otological examination.

FRA estimates that approximately 20 employees will be informed/notified of the need for an otological examination by their railroad under the above requirement. It is estimated that it will take approximately five (5) minutes for the railroad to notify its employee. Total annual burden for this requirement is two (2) hours.

Respondent Universe:	240 Railroad Employees
Burden time per response:	5 minutes
Frequency of Response:	On occasion
Annual number of Responses:	20 notifications
Annual Burden Hours:	2 hours

**Calculation:** 20 notifications x 5 min. = 2 hours

(3) If subsequent audiometric testing of an employee, whose exposure to noise is less than an 8-hour TWA of 90dB, indicates that a standard threshold shift is not persistent, the railroad must inform the employee of the new audiometric interpretation and may discontinue the required use of hearing protectors for that employee.

FRA estimates that approximately 20 employees will be informed of the new audiometric interpretation under the above requirement. It is estimated that it will take approximately five (5) minutes for the railroad to notify its employee. Total annual burden for this requirement is two (2) hours.

Respondent Universe:	240 Railroad Employees
----------------------	------------------------

Burden time per response:	5 minutes
Frequency of Response:	On occasion
Annual number of Responses:	20 notifications
Annual Burden Hours:	2 hours

**Calculation:** 20 notifications x 5 min. = 2 hours

Total annual burden for this entire requirement is 8,061 hours (2,958 + 4,755 + 280 + 8 + 8 + 8 + 40 + 2 + 2).

§ 227.111 - Audiometric Test Requirements

Audiometer calibration must be checked acoustically at least annually in accordance with ANSI S3.6-2004. Frequencies below 500 Hz and above 8000 Hz may be omitted from this check. The audiometer must meet the sound pressure accuracy requirements of section 7.2 of ANSI S3.62004 of 3 dB at any test frequency between 500 and 5000 Hz and 5 dB at any test frequency 6000 Hz and higher for the specific type of transducer used. For air-conduction supra-aural earphones, the specifications in Table 6 of ANSI S3.6-2004 shall apply. For air-conduction insert earphones, the specifications in Table 7 of ANSI S3.6-2004 shall apply. Audiometers that do not meet these requirements must undergo an exhaustive calibration.

An exhaustive calibration must be performed in accordance with ANSI S3.6-2004, according to the following schedule: (i) At least once every two years on audiometers not used in mobile test vans. Test frequencies below 500 Hz and above 6000 Hz may be omitted from this calibration; (ii) At least annually on audiometers used in mobile test vans.

FRA estimates that there are approximately 1,000 mobile vans operated by railroad contractors that will need to have exhaustive audiometer calibrations under the above requirement. It is estimated that it will take approximately 30 minutes to conduct the test and another 15 minutes to mail the results. Total annual burden for this requirement is 750 hours.

Respondent Universe:	1,000 Mobile vans
Burden time per response:	45 minutes
Frequency of Response:	On occasion
Annual number of Responses:	1,000 audiometer tests/results
Annual Burden Hours:	750 hours

**Calculation:** 1,000 test results x 45 min. = 750 hours

§ 227.115 - Hearing Protectors

The railroad must provide training in the use and care of all hearing protectors provided to employees. The railroad must ensure proper initial fitting and supervise the correct use of all hearing protectors.

*The burden associated with training is covered under that of § 227.119 below. Consequently, there is no additional burden associated with this requirement.*

§ 227.117 - Hearing Protector Attenuation

(A.) A railroad shall evaluate hearing protector attenuation for the specific noise environments in which the protector will be used. The railroad shall use one of the evaluation methods described in Appendix B of this part: *Methods for Estimating the Adequacy of Hearing Protection Attenuation*. Hearing protectors shall attenuate employee exposure to an 8-hour TWA of 90 decibels or lower, as required by § 227.115. For employees who have experienced a standard threshold shift, hearing protectors must attenuate employee exposure to an 8-hour time-weighted average (TWA) of 85 decibels or lower.

FRA estimates that approximately 50 railroads will conduct hearing protection attenuation evaluations for specific noise environments (using the methods prescribed) under the above requirement. It is estimated that it will take each railroad approximately 30 minutes to perform its evaluation. Total annual burden for this requirement is 25 hours.

Respondent Universe:	497 railroads
Burden time per response:	30 minutes
Frequency of Response:	On occasion
Annual number of Responses:	50 evaluations
Annual Burden Hours:	25 hours

**Calculation:** 50 evaluations x 30 min. = 25 hours

(B.) The adequacy of hearing protection attenuation must be re-evaluated whenever employee noise exposures increase to the extent that the hearing protectors provided may no longer provide adequate attenuation. A railroad must provide more effective hearing protectors where necessary.

FRA estimates that approximately 10 railroads will conduct hearing protection attenuation re-evaluations under the above requirement. It is estimated that it will take each railroad approximately 30 minutes to perform its re-evaluation. Total annual burden for this requirement is five (5) hours.

Respondent Universe:	497 railroads
Burden time per response:	30 minutes
Frequency of Response:	On occasion
Annual number of Responses:	10 re-evaluations
Annual Burden Hours:	5 hours

**Calculation:** 10 re-evaluations x 30 min. = 5 hours

Total annual burden for this entire requirement is 30 hours (25 + 5).

§ 227.119 - Training Program

(a) The railroad must institute an occupational noise and hearing conservation training program for all employees included in the hearing conservation program. The railroad must offer the training program to each employee included in the hearing conservation program at least once each calendar year. The interval between the date offered to any employee for the training in a calendar year and the date offered in the subsequent calendar year shall be no more than 450 days and no less than 280 days. The railroad shall require each employee included in the hearing conservation program to complete the training at least once every 1,095 days.

The training program must include and the training materials must reflect, at a minimum, information on all of the following: (1) The effects of noise on hearing; (2) The purpose of hearing protectors; (3) The advantages, disadvantages, and attenuation of various types of hearing protectors; (4) Instructions on selection, fitting, use, and care of hearing protectors; (5) The purpose of audiometric testing, and an explanation of the test procedures; (6) An explanation of noise operational controls, where used; (7) General information concerning the expected range of workplace noise exposure levels associated with major categories of railroad equipment and operations (e.g., switching and road assignments, hump yards near retarders, etc.) and appropriate reference to requirements of the railroad concerning use of hearing protectors; (8) The purpose of noise monitoring and a general description of monitoring procedures; (9) The availability of a copy of this part, an explanation of the requirements of this part as they affect the responsibilities of employees, and employees' rights to access records under this part; (10) How to determine what can trigger an excessive noise report, pursuant to § 229.121(b); and (11) How to file an excessive noise report, pursuant to § 229.121(b).

Based on the revised number of railroad and based on the previously accounted burden in the last submission, FRA estimates that approximately 13 railroads with OSHA hearing conservation training programs will modify them and will take approximately one (1) hour each to modify their programs. Further, FRA estimates that approximately 24 small railroads will each modify the previously developed generic hearing conservation training program to suit their operations. It is estimated that it will take each small railroad approximately 30 minutes to make the necessary modifications. Total annual burden for this requirement is 25 hours.

Respondent Universe:	497 railroads
Burden time per response:	1 hour + 30 minutes
Frequency of Response:	On occasion
Annual number of Responses:	37 training programs

Annual Burden Hours: 25 hours

**Calculation:** 13 programs x 1 hr. + 24 programs x 30 min. = 25 hours

(b) The railroad must provide the training required by paragraph (a) of this section in accordance with the following: (1) For employees hired after February 26, 2007, within six months after the employee's first tour of duty in a position identified within the scope of this part; (2) For employees hired on or before February 26, 2007, by Class 1, passenger, and commuter railroads, and railroads with 400,000 or more annual employee hours, by no later than February 26, 2009; (3) For employees hired on or before February 26, 2007, by railroads with fewer than 400,000 annual employee hours, by no later than February 26, 2010.

FRA estimates that approximately 26,000 employees will be trained annually under provisions (a) and (b) of this section. It is estimated that each training session will take approximately 30 minutes to conduct the training and keep the necessary record. Total annual burden for this requirement is 13,000 hours.

Respondent Universe:	497 railroads
Burden time per response:	30 minutes
Frequency of Response:	Annually
Annual number of Responses:	26,000 trained employees/records
Annual Burden Hours:	13,000 hours

**Calculation:** 26,000 trained employees x 30 min. = 13,000 hours

Further, based on a train and employee attrition rate of approximately nine (9) percent requiring replacement hires, FRA estimates that an additional 7,100 employees will be trained each year who are not receiving hearing conservation training currently. It is estimated that each training session will take approximately 30 minutes to conduct. Total annual burden for this requirement is 3,550 hours.

Respondent Universe:	497 railroads
Burden time per response:	30 minutes
Frequency of Response:	Annually
Annual number of Responses:	7,100 trained employees
Annual Burden Hours:	3,550 hours

**Calculation:** 7,100 trained employees x 30 min. = 3,550 hours

Total annual burden for this entire requirement is 16,575 hours (25 + 13,000 + 3,550).

§ 227.121 - Recordkeeping



(a)(i) Each railroad required to maintain and retain records under this part must: (i) Make all records available for inspection and copying/photocopying to representatives of FRA, upon request; (ii) Make an employee's records available for inspection and copying/photocopying to that employee, former employee, or such person's representative upon written authorization by such employee; (iii) Make exposure measurement records for a given run or yard available for inspection and copying/photocopying to all employees who were present in the locomotive cab during the given run and/or who work in the same yard.

FRA estimates that there will be approximately 30 requests/written authorizations from the FRA Administrator, employees, former employees, or their representatives for records under the above requirement. It is estimated that it will take approximately 10 minutes to make the request/provide written authorization and approximately 15 minutes for the railroad to furnish the record to the FRA, employee or employee's representative. Total annual burden for this requirement is 13 hours.

Respondent Universe:	497 railroads
Burden time per response:	10 minutes + 15 minutes
Frequency of Response:	On occasion
Annual number of Responses:	30 requests + 30 responses
Annual Burden Hours:	13 hours

**Calculation:** 30 requests x 10 min. + 30 responses x 15 min. = 13 hours

(iv) Each railroad required to maintain and retain records under this part must make exposure measurement records for specific locations available to regional or national labor representatives, upon request. These reports must not contain identifying information of an employee unless an employee authorizes the release of such information in writing.

FRA estimates that approximately 150 requests will be made each year under the above requirement. It is estimated that it will take approximately 21 minutes to compose the requesting letter and send it to the railroad. Additionally, it is estimated that railroads will make 150 responses to these request, and that it will take approximately 45 minutes to complete and mail each response. Total annual burden for this requirement is 166 hours (53 + 113).

Respondent Universe:	497 railroads
Burden time per response:	21 minutes + 45 minutes
Frequency of Response:	On occasion
Annual number of Responses:	150 requests + 150 responses
Annual Burden Hours:	166 hours (53 + 113)

**Calculation:** 150 requests x 21 min. + 150 responses x 45 min. = 166 hrs.

(2) All records required by this part may be kept in electronic form by the railroad. A railroad may maintain and transfer records through electronic transmission, storage, and retrieval provided that: (i) The electronic system be designed so that the integrity of each record is maintained through appropriate levels of security such as recognition of an electronic signature, or other means, which uniquely identify the initiating person as the author of that record. No two persons shall have the same electronic identity; (ii) The electronic system shall ensure that each record cannot be modified in any way, or replaced, once the record is transmitted and stored; (iii) Any amendment to a record shall be electronically stored apart from the record which it amends. Each amendment to a record shall be uniquely identified as to the person making the amendment; (iv) The electronic system shall provide for the maintenance of records as originally submitted without corruption or loss of data; (v) Paper copies of electronic records and amendments to those records that may be necessary to document compliance with this part must be made available for inspection and copying/photocopying by representatives of the Federal Railroad Administration. (3) If a railroad ceases to do business, it must transfer to the successor employer all records required to be maintained under this subpart, and the successor employer must retain them for the remainder of the period prescribed in this part.

FRA estimates that approximately two (2) railroads will cease to do business each year, and that a total of 10 records required by this section will be transferred to the successor employers. It is estimated that it will take approximately 24 minutes per record for each railroad to transfer the required records to its successor railroad. Total annual burden for this requirement is four (4) hours.

Respondent Universe:	497 railroads
Burden time per response:	24 minutes
Frequency of Response:	On occasion
Annual number of Responses:	10 records
Annual Burden Hours:	4 hours

**Calculation:** 10 records x 24 min. = 4 hours

(b) *Exposure Measurement Records.* The railroad must do the following: (1) Maintain an accurate record of all employee exposure measurements required by § 227.103; and (2) Retain these records for the duration of the covered employee’s employment plus thirty years.

*The burden for this requirement is already covered under that of § 227.103. Consequently, there is no additional burden associated with this requirement.*

(c.) *Audiometric Test Records.* The railroad must do the following: (1) Maintain employee audiometric test records required by § 227.109, including: (i) The name and job classification of the employee; (ii) The date of the audiogram; (iii) The examiner’s name; (iv) The date of the last acoustic or exhaustive calibration of the audiometer;

(v) Accurate records of the measurements of the background sound pressure levels in audiometric test rooms; (vi) The model and serial number of the audiometer used for testing; and (2) Retain the records required by § 227.107 for the duration of the covered employee's employment plus thirty years.

FRA estimates that approximately 26,000 audiometric records containing the required information will be maintained annually under the above requirement. It is estimated that it will take approximately two (2) minutes to create and store each record. Total annual burden for this requirement is 867 hours.

Respondent Universe:	497 railroads
Burden time per response:	2 minutes
Frequency of Response:	On occasion
Annual number of Responses:	26,000 audiometric records
Annual Burden Hours:	867 hours

**Calculation:** 26,000 audiometric records x 2 min. = 867 hours

(d) *Positions and Persons Designated Records.* The railroad shall: (1) Maintain a record of all positions or persons or both designated by the railroad to be placed in a Hearing Conservation Program (HCP) pursuant to §227.107; and (2) Retain these records for the duration of the designation.

FRA estimates that approximately 54,000 records of persons designated by the railroad to be placed in a HCP will be kept under the above requirement. It is estimated that it will approximately 45 seconds to create, and maintain each employee's record. Total annual burden for this requirement is 675 hours.

Respondent Universe:	497 railroads
Burden time per response:	45 seconds
Frequency of Response:	On occasion
Annual number of Responses:	54,000 HCP records
Annual Burden Hours:	675 hours

**Calculation:** 54,000 records x 45 sec. = 675 hours

(e) *Training Program Materials Records.* The railroad shall: (1) Maintain copies of all training program materials used to comply with § 227.119(c) and a record of employees trained; and (2) Retain these copies and records for three years.

*The burden for this requirement is already covered under that of § 227.119 (a) and § 227.119 (b) above. Consequently, there is no additional burden associated with this requirement.*

(f) *Standard Threshold Shift Records.* The railroad shall: (1) Maintain a record of all employees who have been found to have experienced a standard threshold shift within the prior calendar year and include all of the following information for each employee on the record: (i) Date of the employee's baseline audiogram; (ii) Date of the employee's most recent audiogram; (iii) Date of the establishment of a standard threshold shift; (iv) The employee's job code; and (v) An indication of how many standard threshold shifts the employee has experienced in the past, if any, and (2) Retain these records for five years.

*The burden for this requirement is already covered under that of § 227.119 (a) and § 227.121 (c) above. Consequently, there is no additional burden associated with this requirement.*

Total annual burden for this entire requirement is 1,725 hours (13 + 166 + 4 + 867 + 675)

## **Railroad Locomotive Safety Standards**

### § 229.121 - Locomotive Cab Noise

- A. *Performance Standards for Locomotives.* When tested for static noise in accordance with paragraph (a)(3) of this section, all locomotives of each design or model that are manufactured after October 29, 2007, shall average less than or equal to 85 dB(A), with an upper 99% confidence limit of 87 dB(A). The railroad may rely on certification from the equipment manufacturer for a production run that this standard is met. The manufacturer may determine the average by testing a representative sample of locomotives or an initial series of locomotives, provided that there are suitable manufacturing quality controls and verification procedures in place to ensure product consistency.

In the maintenance of locomotives that are manufactured in accordance with (a)(1) of this section, a railroad shall not make any alterations that cause the average sound level for that locomotive design or model to exceed: (i) 82 dB(A) if the average sound level for a locomotive design or model is less than 82 dB(A); and (ii) 85 dB(A) if the average sound level for a locomotive design or model is 82 dB(A) to 85 dB(A), inclusive.

The railroad or manufacturer shall follow the static test protocols set forth in Appendix H of this part to determine compliance with paragraph (a)(1) of this section; and, to the extent reasonably necessary to evaluate the effect of alterations during maintenance, to determine compliance with paragraph (a)(2) of this section.

FRA estimates that approximately 700 locomotives will be manufactured per year after January 1, 2006, and be certified according to the requirements specified above. FRA estimates that sample testing will be done on approximately 90 of these locomotives, and that it will take approximately 40 minutes to conduct the static test, and certify/create a record for each locomotive (35 minutes to conduct the test + 5 minutes to create the record). Because of the sample testing, the remaining 610 locomotives will not need to be tested but will be certified. It is estimated that it will take approximately five (5)

minutes to certify each of these locomotives. Total annual burden for this requirement is 111 hours.

Respondent Universe:	3 Locomotive Equipment Manufacturers
Burden time per response:	40 minutes + 5 minutes
Frequency of Response:	On occasion
Annual number of Responses:	700 certifications/records
Annual Burden Hours:	111 hours

**Calculation:** 90 certifications x 40 min. + 610 rec. x 5 min. = 111 hours

- B. *Maintenance of Locomotives.* If a railroad receives an excessive noise report, and if the condition giving rise to the noise is not required to be immediately corrected under part 229, the railroad shall maintain a record of the report, and repair or replace the item identified as substantially contributing to the noise: (i) on or before the next periodic inspection required by § 229.23; or (ii) if the railroad determines that the repair or replacement of the item requires significant shop or material resources that are not readily available, at the time of the next major equipment repair commonly used for the particular type of maintenance needed.

Conditions that may lead a locomotive cab occupant to file an excessive noise report include, but are not limited to: defective cab windows seals; defective cab door seals; broken or inoperative windows; deteriorated insulation or insulation that has been removed for other reasons; broken or inoperative doors; and air brakes that vent inside the cab.

A railroad has an obligation to respond to an excessive noise report that a locomotive cab occupant files. The railroad meets its obligation to respond to an excessive noise report, as set forth in paragraph (b)(1) of this section, if the railroad makes a good faith effort to identify the cause of the reported noise and, where the railroad is successful in determining the cause, if the railroad repairs or replaces the items that cause the noise.

FRA estimates that approximately 3,000 excessive noise reports will be received by railroads and thus 3,000 records of these reports will be made under the above requirement. It is estimated that it will take approximately one (1) minute to complete each noise report and one (1) minute to create each record of a noise report. Total annual burden for this requirement is 100 hours.

Respondent Universe:	460 railroads
Burden time per response:	1 minute + 1 minute
Frequency of Response:	On occasion
Annual number of Responses:	3,000 reports + 3,000 records
Annual Burden Hours:	100 hours

**Calculation:** 3,000 rep. x 1 min. + 3,000 rec. x 1 min. = 100 hours

B. *Recordkeeping.* A railroad must maintain a written or electronic record of any excessive noise report, inspection, test, maintenance, replacement, or repair completed pursuant to § 229.121(b) and the date on which that inspection, test, maintenance, replacement, or repair occurred. If a railroad elects to maintain an electronic record, the railroad must satisfy the conditions listed in § 227.121(a)(2)(i) through (v). The railroad must maintain these records for 92 days if they are made pursuant to § 229.21, or for one year if they are made pursuant to § 229.23. The railroad must establish an internal, auditable, monitorable system that contains these records.

FRA estimates that approximately 25 percent more locomotives will be reported than will actually need maintenance under the above requirement. Thus, FRA estimates that approximately 3,750 records pursuant to paragraph (b) of this section will be made by railroads annually. It is estimated that it will take approximately one (1) minute to complete and file record. Total annual burden for this requirement is 63 hours.

Respondent Universe:	460 Railroads
Burden time per response:	1 minute
Frequency of Response:	On occasion
Annual number of Responses:	3,750 records
Annual Burden Hours:	63 hours

**Calculation:** 3,750 records x 1 min. = 63 hours

Additionally, in order to develop/establish an internal/auditable/monitorable system, FRA estimates that it will take each of the 430 small railroads approximately 36 minutes (30 minutes of a supervisor's time and six (6) minutes of a clerk's/secretary's time), or 324 hours. For the largest 30 railroads, FRA estimates that it will take approximately 8.25 hours (8 hours of supervisor's time and .25 of a clerk's/secretary's time), or 248 hours. Total annual burden for this requirement is 506 hours.

Respondent Universe:	460 Railroads
Burden time per response:	36 minutes/8.25 hours
Frequency of Response:	On occasion
Annual number of Responses:	460 auditable monitoring systems
Annual Burden Hours:	506 hours

**Calculation:** 430 mon. sys x 36 min. + 30 sys. x 8.25 hrs. = 506 hours

Total annual burden for this entire requirement is 780 hours (111 + 100 + 63 + 506).

#### **Appendix H (Part 229) - Static Noise Test Protocols - In Cab Static**

*Recordkeeping.* To demonstrate compliance, the entity conducting the test must maintain records of the following data. The records created under this procedure must be retained and made readily accessible for review for a minimum of three (3) years. All records may be retained in either written or electronic form.

1. Name(s) of persons conducting the test, and the date of the test.
2. Description of the locomotive being tested, including make, model, type, serial number, and date of manufacture.
3. Description of sound level meter and calibrator, including make, model, type, serial number, and manufacturer's calibration date.
4. The recorded measurement during calibration and for each microphone location during operating conditions.
5. Other information as appropriate to describe the testing conditions and procedure, including whether or not the locomotive was tested under self-loading conditions, or not.
6. Where a locomotive fails a test and is re-tested under the provisions of § III (9) of this appendix, the suspected reason(s) for the failure.

*The burden for this requirement is already included that of § 229.121A above. Consequently, there is no additional burden associated with this requirement.*

Additionally, FRA estimates that approximately two (2) locomotive static retests will be conducted annually. It is estimated that it will take approximately 10 minutes to perform each retest, and approximately five (5) minutes complete the re-test record, and then file it. Total annual burden for this requirement is one (1) hour.

Respondent Universe:	700 Locomotives
Burden time per response:	10 minutes + 5 minutes
Frequency of Response:	On occasion
Annual number of Responses:	2 retests + 2 retest records
Annual Burden Hours:	1 hour

**Calculation:** 2 retests x 10 min. + 2 retest records x 5 min. = 1 hour

Total annual burden for this entire requirement is one (1) hour.

Total annual burden for this entire information collection is 30,331 hours. [Note: The dollar equivalent of the requested 30,331 total burden hours would amount to \$2,032,177, which is based on average hourly wage of \$67 for professional/administrative that includes 75 percent overhead costs, Railroad Facts (2014 Edition).]

**13. Estimate of total annual costs to respondents.**

FRA estimates that there are no additional costs to respondents besides the burden hours listed in the answer to question number 12.

**14. Estimate of Cost to Federal Government.**

The cost to the Federal government mainly results from audits that will be conducted by FRA staff (Staff Director and four (4) industrial hygienists) to enforce the regulation. The Staff Director will spend an average of approximately 32 hours per year working on these audits and each of the four staff members will spend approximately 25 hours per year on audits. Audit activities include the following: (i) Planning and setting up travel, including preparing draft letters; (ii) Time spent reviewing requested data prior to site visit; (iii) Time in travel to and from site, including local travel accommodations; (iv) time at site doing actual audit, employee and management interviews, out brief; and (v) Time spent doing follow-up activities, such as visiting other carrier sites to look for notices/postings and interviewing employees.

1 Staff Director – GS-15/5 – 32 hours x \$118 p/hr. = \$3,776

4 industrial hygienists staff x 25 hours = 100 hours x 71 p/hr. = \$7,100

**TOTAL COST = \$10,876**

\*Note: Above hourly labor rates include 75 percent overhead costs.

**15. Explanation of program changes and adjustments.**

The total burden for this information collection renewal has decreased by a total 2,967 hours from the previous submission. The decrease in burden results solely from **adjustments**. They are listed the table below:

**TABLE FOR ADJUSTMENTS**

CFR Section	Responses & Avg. Time (Previous Submission)	Responses & Avg. Time (This Submission)	Burden Hours (Previous Submission)	FRA Burden Hours (This Submission)	Difference (plus/minus)
227.13 – Waivers	5 waiver letters 1 hour	5 waiver letters 1 hour	5 hours	2 hours	-- 3 hours -- 3 responses
227.103 – Noise Monitoring Program	460 programs 3 hours/30 hours/600 hrs.	37 programs 600 hours/24 hours /8 hours	5,128 hours	1,656 hours	-- 3,472 hours -- 423 resp.
- RR Lists of results of employee monitoring	905 lists 30 minutes	224 lists 30 minutes	453 hours	112 hours	-- 3,41 hours -- 681 resp



227.107 – Hearing Conservation Program	461 HCPs 2 hours/150 hours/31 hours/7.5 hours	37 HCPs 31 hours/7.5 hours	2,875 hours	630 hours	-- 2,245 hours -- 424 resp.
227.109 – Audiometric Testing Program -- Periodic Audiogram	8,000 periodic audiograms 10 minutes	28,530 periodic audiograms 10 minutes	1,333 hours	4,755 hours	+ 3,422 hours + 20,530 resp.
227.119 – Training Program	441 programs 30 min./1 hour/ 58 hours	37 programs 30 minutes/1 hour	353 hours	25 hours	--328 hours --404 resp. .

\*\*\***Adjustments** above decreased the burden by 2,967 hours, and increased the number of responses by 18,595 from the last approved submission.

The current inventory for this submission shows a total of 33,298 hours, while the present submission exhibits a total of 30,331 hours. Hence, there is a burden decrease of 2,967 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 of this submission.

**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.

### Department of Transportation (DOT) Strategic Goals

This information collection supports the main DOT strategic goal, namely transportation safety. Rail safety is likely to be made appreciably safer through this rulemaking and associated information collection. Specifically, the collection of information serves to reduce the likelihood of rail accidents/incidents being caused by poor communication and decreased functionality of locomotive cab crews and railroad workers, engendered by noise induced hearing loss and other hearing impairments and pathologies, by ensuring that railroads take necessary measures, including developing and implementing noise monitoring, hearing conservation, and audiometric testing programs, to protect their employees against the harmful effects of excessively loud noise in the everyday rail operating environment.

This collection of information serves to ensure that locomotive cab crews and railroad workers are informed of the noise levels that they are exposed to on a daily basis. Through the posting of the required noise monitoring lists, employees – along with their employers – can devise/implement countermeasures to mitigate the harmful effects caused by excessively loud noise in the workplace. Also, the collection of information, in particular the various audiometric test requirements, provides a means that railroads and medical personnel can use to assess and compare employees' hearing acuity over extended periods of time, and allows them to determine when a standard threshold shift

has taken place. As a result, hearing impairments, hearing loss, and other medical pathologies, which affect an employee's ability to perform his/her job safely and effectively, are more likely to be detected in a timely fashion. Such hearing loss and hearing impairment, along with an accompanying inability to communicate locomotive cab crew messages clearly and effectively, could not only cause increased numbers of accidents/incidents but could also precipitate a catastrophic train accident where large numbers of injuries and fatalities resulted.

The collection of information, specifically the hearing conservation training programs, provides new and existing locomotive cab crews and railroad workers with the wherewithal to discern when and where they are exposed to hazardous noise levels, and serves to facilitate their understanding of the effects of noise on hearing, the purpose of audiometric testing and noise monitoring, and the purpose and proper use of hearing protectors, ear plugs, and other auditory protection devices both on-the-job and off-the-job when they are likely to be engaging in hobbies such as target practice, woodworking, and other noisy activities that can damage hearing

The collection of information, most notably the maintenance of various mandatory records, permits FRA to monitor railroads required noise monitoring, audiometric, and hearing conservation programs on a continuous basis, and enables FRA to enforce the requirements of this Part such that rail safety is enhanced through an effective hearing protection program for locomotive cab crews and railroad workers.

The collection of information furthers DOT's goal of reducing the number of injuries, fatalities, and property damage that results from transportation related accidents/incidents by providing another useful instrument that FRA can use to promote and indeed increase national rail safety.

In sum, this collection of information aids both FRA's mission and DOT's number one Strategic Goal, namely the safe transportation of people and goods throughout the United States and the reduction of the number of injuries and fatalities, and associated property damage, which ensues from transportation-related accidents/incidents.

In this information collection, as in all its information collection activities, FRA seeks to do its utmost to fulfill DOT Strategic Goals and to be an integral part of One DOT.