



**FRA**

Report ST2024020  
March 27, 2024

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## FRA Lacks Written Procedures and Formal Planning for Oversight of Railroad Hours of Service Compliance and the Passenger Railroad Fatigue Management Requirements



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*Self-initiated*

Federal Railroad Administration | ST2024020 | March 27, 2024

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### What We Looked At

The Federal Railroad Administration's (FRA) recent data show that human factors, which include fatigue, remain the leading cause of reportable non-grade crossing train accidents. In particular, the rate of human factor-caused train accidents reached a 14-year high of 1.43 per million train miles in 2022. According to FRA, overseeing railroad fatigue management and compliance with Federal Hours of Service (HOS) requirements is part of the Agency's ongoing efforts to address the adverse impacts and underlying causes of fatigue in the railroad industry. Given these factors, we assessed FRA's (1) oversight of HOS compliance, (2) pursuit of civil penalties for HOS violations, and (3) oversight of passenger railroad compliance with fatigue management requirements.

### What We Found

Three FRA staff in two divisions—the HOS subject matter expert (SME) and two fatigue SMEs—oversee HOS compliance and fatigue management for the entire railroad industry. However, the oversight processes and analyses are not fully documented and there is no evidence of risk-based planning. Specifically, there are no detailed procedures documenting how FRA's staff plan or perform oversight of HOS compliance or required analyses of passenger railroad work schedules and fatigue mitigation plans. FRA also lacks guidance for many HOS violation penalty amounts as well as procedures for producing accurate Annual Enforcement Reports. As a result, FRA does not have the procedures and accurate data necessary to effectively target its limited resources to the highest risk areas or adequately oversee different railroad types.

### Our Recommendations

FRA concurred with all 19 of our recommendations to improve its oversight of HOS and fatigue management and provided appropriate actions and completion dates. We consider these recommendations resolved but open, pending completion of planned actions.

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## Memorandum

Date: March 27, 2024

Subject: ACTION: FRA Lacks Written Procedures and Formal Planning for Oversight of Railroad Hours of Service Compliance and Passenger Railroad Fatigue Management Requirements | Report No. ST2024020

From: David Pouliott   
Assistant Inspector General for Surface Transportation Audits

To: Federal Railroad Administrator

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The Federal Railroad Administration's (FRA) mission includes, in part, enabling the safe movement of people and goods. Since 2008, the rate of human factor-caused train accidents per million train miles fluctuated from a low of 0.91 in 2012 to a high of 1.43 in 2022. This recent peak is the highest accident rate over the 14-year period. FRA's recent data show that human factors, which include fatigue, remain the leading cause of reportable non-grade crossing train accidents. For example, FRA determined there was a strong likelihood that excessive fatigue contributed to a February 2022 collision in Spencer, MA that resulted in two serious injuries, one minor injury, and over \$1 million in damages. Additionally, railroad staff reductions resulting from industry changes such as the implementation of precision-scheduled railroading may also be contributing to fatigue in the industry.

According to FRA, overseeing railroad compliance with Federal Hours of Service (HOS) requirements and their fatigue management is part of FRA's ongoing efforts to address the adverse impacts and underlying causes of fatigue in the railroad industry. With these factors in mind, we initiated this audit to evaluate FRA's oversight of railroad HOS and fatigue management. Specifically, we assessed FRA's (1) oversight of HOS compliance, (2) pursuit of civil penalties for HOS violations, and (3) oversight of passenger railroad compliance with fatigue management requirements.

We conducted this audit in accordance with generally accepted Government auditing standards. Exhibit A details our scope and methodology. Exhibit B lists the organizations we visited or contacted, and exhibit C lists the acronyms used in this report. We appreciate the courtesies and cooperation of Department of

Transportation representatives during this audit. If you have any questions concerning this report, please contact me or Wendy Harris, Program Director.

cc: The Secretary  
DOT Audit Liaison, OST/M1  
FRA Audit Liaison, RCFO-50

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## Results in Brief

Three FRA staff in two divisions—the HOS subject matter expert (SME) and two fatigue SMEs—oversee HOS compliance and fatigue management for the entire railroad industry. However, the oversight processes and analyses are not fully documented and there is no evidence of risk-based planning. Specifically, there are no detailed procedures documenting how FRA’s staff plan or perform oversight of HOS compliance or required analyses of passenger railroad work schedules and fatigue mitigation plans. FRA also lacks guidance for many HOS violation penalty amounts and procedures for producing accurate Annual Enforcement Reports. As a result, FRA does not have the procedures and accurate data necessary to effectively target its limited resources to the highest risk areas as well as provide adequate oversight of different railroad types.

### **FRA’s HOS oversight and planning procedures are not fully documented.**

FRA’s HOS SME reviews complaints and railroads’ reports of excess service, directs audits and inspections, and provides technical advice, but written guidance for performing these activities is limited. Moreover, the HOS SME did not document any trends he observed from the complaint or excess service report data. This is because FRA did not institutionalize practices with written procedures when it consolidated HOS oversight during its reorganization of the Office of Railroad Safety in 2020. The lack of documented procedures for this specialized oversight area limits FRA’s ability to ensure continuity with staffing changes, effective risk-based planning, or adequate evaluation of HOS compliance.

### **FRA lacks guidance for many HOS civil penalty amounts and procedures for producing accurate Annual Enforcement Reports.**

FRA’s Office of the Chief Counsel (RCC) lacks guidance for many penalties for HOS violations and often settles with railroads for less than the violation base of \$1,000. According to FRA officials, these settlements are above the minimum rail safety penalty, and they adhere to the published Civil Penalties Schedules. However, without clarifying the penalty schedule and appropriate base penalty for HOS items, FRA cannot be sure its enforcement actions in this area are effective. FRA also has reported incorrect violation counts in its fiscal years 2020, 2021, and 2022 Annual Enforcement Reports. We found that 52 percent of closed HOS cases listed in these reports miscount how many violations were in the case. Other information in FRA’s Annual Enforcement Reports is outdated. This is because FRA lacks procedures to produce Annual Enforcement Reports with

accurate, relevant, and timely data. As a result, FRA is presenting an inaccurate description of its HOS enforcement to the public.

**FRA has not consistently ensured passenger railroads' compliance with fatigue management requirements.**

FRA has not consistently ensured passenger railroads comply with requirements to manage employee fatigue. Specifically, since the Agency initially approved passenger railroad work schedules submitted in 2012, FRA has not met requirements to ensure that passenger railroads analyze their employees' work schedules for fatigue risks and mitigate those risks. FRA also has not performed required audits of those work schedules every 2 years. As a result, FRA cannot know whether these railroads are mitigating the risk of employee fatigue.

We made 19 recommendations to document HOS oversight and planning processes, improve the reliability of HOS-related data stored in FRA systems, clarify HOS penalty guidelines, correct the accuracy of public reporting on FRA's enforcement actions, and improve oversight of compliance with passenger railroad fatigue mitigation requirements.

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## Background

### HOS History and Current Railroad Practices

HOS laws and regulations cover tens of thousands of railroad employees with different types of jobs. For example, the Surface Transportation Board reported that the Class I railroads and Amtrak alone employed 55,566 conductors and locomotive engineers in October 2023. Additionally, in 2023, FRA estimated that there were 10,701 signal employees and 2,733 dispatchers working across the United States.

HOS laws and regulations are intended to promote safe railroad operations by limiting the HOS of certain railroad employees to ensure that they receive adequate opportunities for rest while performing their duties. Federal laws have governed railroad employees' HOS since the Hours of Service Act of 1907.<sup>1</sup> HOS laws were most recently amended by the Rail Safety Improvement Act of 2008 (RSIA),<sup>2</sup> which also gave FRA the authority to issue regulations for passenger railroad train employee HOS, which include requirements that passenger railroads evaluate their work schedules to determine the risk for fatigue by employees working the schedules, and take action to mitigate fatigue risk that

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<sup>1</sup> Public Law No. (Pub. L. No.) 59-271 (1907) (codified at 49 U.S. Code (U.S.C.) § 21101 *et seq.*).

<sup>2</sup> Pub. L. No. 110-432 (2008).

exceeds an established threshold. FRA defines fatigue as a complex state characterized by a lack of alertness and reduced mental and physical performance, often accompanied by drowsiness.

According to a 2011 Government Accountability Office (GAO) report,<sup>3</sup> changes to HOS laws in 2008 resulted in freight railroads hiring more employees and reducing the time employees at Class I railroads spent working at a high risk of fatigue by about 29 percent.<sup>4</sup> However, six of the seven Class I freight railroads<sup>5</sup> have adopted new railroading practices collectively termed precision-scheduled railroading. These strategies and operational changes include running fewer, longer trains to reduce the number of crews and locomotives. According to a December 2022 GAO report, there has been a nearly 27 percent reduction in train and engine staff at Class I railroads with the implementation of precision-scheduled railroading practices from 2011 to 2021. Precision-scheduled railroading has also raised concerns in Congress of increased employee fatigue risk and impacts on railroad safety.<sup>6</sup>

## HOS Laws and Regulations

**Substantive HOS Statutes and Regulations.** 49 U.S.C. Chapter 211 – Hours of Service codifies HOS laws for freight railroad employees and some passenger railroad employees. The statute covers three types of employees:

1. train employees<sup>7</sup> (T&E): individuals engaged in or connected with the movement of a train (49 U.S.C. § 21103);
2. signal employees: individuals engaged in installing, repairing, or maintaining signal systems (49 U.S.C. § 21104); and
3. dispatching service employees: operators, train dispatchers, or other train employees who dispatch, report, transmit, receive, or deliver orders related to or affecting train movements (49 U.S.C. § 21105).

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<sup>3</sup> GAO, *Freight Railroad Safety: Hours of Service Changes Have Increased Rest Time, but More Can Be Done to Address Fatigue Risks* (GAO-11-853), September 2011.

<sup>4</sup> *Id.* The GAO study used FRA-validated models, such as the Fatigue Audit InterDyne (FAID) biomathematical fatigue model, to review work schedules for Class I and Class II railroad employees for the risk of fatigue.

<sup>5</sup> Two Class I freight railroads merged in 2023, so as of April 2023 there are six Class I freight railroads and Amtrak for a total of seven Class I railroads.

<sup>6</sup> U.S. House of Representatives Committee on Transportation and Infrastructure, *Letter to FRA Administrator Amit Bose*, April 6, 2022.

<sup>7</sup> Also referred to as “train and engine” or “T&E” employees. Employees who perform this type of service include locomotive engineers and conductors.



Additionally, Title 49 of the Code of Federal Regulations (C.F.R.) § 228.405 outlines HOS regulations for train employees engaged in commuter or intercity rail passenger transportation.<sup>8</sup>

HOS laws and regulations limit employees' time on duty and prescribe minimum rest times. As one example, freight train employees are limited to 12 consecutive hours of time on duty.<sup>9</sup>

**HOS recordkeeping.** 49 C.F.R Part 228 also outlines manual and electronic HOS recordkeeping requirements for freight and passenger railroads. These regulations also require railroads to report noncompliance to FRA when employees exceed HOS limits, in excess service reports (Form FRA F6180.3).

### Fatigue Management Regulations

**Passenger railroad work schedule analysis.** 49 C.F.R. § 228.407 requires passenger railroads to analyze work schedules of their train employees using a fatigue model, to develop fatigue mitigation plans (FMPs) to mitigate any fatigue for work schedules associated with a high risk of fatigue, and to submit these work schedules and FMPs to FRA for review and approval. FRA is required to audit these work schedules and FMPs every 2 years for compliance.

**Fatigue Risk Management Programs.** In June 2022, FRA issued regulations<sup>10</sup> requiring certain freight and passenger railroads to develop and implement Fatigue Risk Management Programs (FRMPs) as one component of freight and passenger railroads' larger railroad Risk Reduction or System Safety programs. These FRMPs must consider worker scheduling as a risk factor for fatigue. Railroads were required to submit FRMP plans by July 13, 2023, for FRA review.<sup>11</sup>

### FRA's Oversight of HOS and Fatigue Management

HOS compliance oversight is generally conducted separately from fatigue management-related activities because these two areas require different expertise and have distinct oversight activities, but there has been coordination on discrete tasks. FRA reorganized its Office of Railroad Safety in 2020. As a result, HOS oversight was centralized in the HOS SME position in the Operating Practices (OP) Division. Our 2017 through 2022 audit scope captures this change and its impacts on HOS and fatigue management oversight. According to FRA officials, the intent of this centralization was to provide consistent interpretations of HOS requirements, which are often complex and situation dependent, to

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<sup>8</sup> Throughout this report, we refer to "commuter or intercity rail passenger transportation" as "passenger railroads."

<sup>9</sup> 49 U.S.C. § 21103(a).

<sup>10</sup> 49 C.F.R. Parts 270 and 271.

<sup>11</sup> A railroad must submit its FRMP plan for FRA review by July 13, 2023, or when it submits its Risk Reduction or System Safety Program plan, whichever is later. The System Safety or Risk Reduction Program plans were due in 2021.

railroads and railroad employees. The HOS SME also responds to questions and requests for HOS-related information from FRA inspectors and other staff as well as external parties such as railroad officials and labor union representatives.

The OP Division in FRA's Office of Railroad Safety conducts most HOS oversight. FRA's HOS SME and OP staff oversee HOS by:

- Reviewing complaints and assigning complaint investigations to an inspector, if necessary;
- Reviewing monthly railroad reporting of employee HOS noncompliance in excess service reports (Form FRA F6180.3);
- Conducting audits of railroad compliance with HOS laws and regulations, and HOS recordkeeping requirements;
- Conducting HOS inspections, often to investigate a complaint; and
- Recommending violations for HOS noncompliance identified during inspections or audits to RCC. RCC attorneys manage the enforcement cases that may result in civil penalties.

The Signal, Train Control, and Crossings (S&TC) Division in FRA's Office of Railroad Safety oversees HOS for signal employees. They do this by investigating complaints, conducting signal assessments of human caused failures, inspecting HOS records, and reviewing HOS records during dispatch center reviews.

Subject matter experts in the Audit Management Division (AMD) in FRA's Office of Railroad Safety oversee compliance with passenger railroad fatigue management regulations. Prior to 2023, oversight of passenger railroad work schedule analysis requirements under 49 C.F.R. § 228.407 was a shared responsibility between OP and AMD. Work schedule analyses were performed by AMD's two fatigue SMEs and OP coordinated and formally approved the FMPs. As of 2023, the fatigue SMEs plan to coordinate, review, and approve work schedule analyses and FMPs themselves. Additionally, the fatigue SMEs are responsible for conducting the required 2-year audits of these work schedules analyses and FMPs.

AMD's two fatigue SMEs also review and approve freight and passenger railroads' Risk Reduction and System Safety Programs as required by 49 C.F.R. Parts 270 and 271. FRMPs are a required component of these Risk Reduction and System Safety Programs that FRA must also review and approve. FRA may audit a railroad's Risk Reduction or System Safety Program, including the railroad's compliance with its approved FRMP. AMD staff stated that they also generate ad hoc fatigue trend analyses if they receive a request from FRA senior management, Congress, or labor groups.

Officials from OP, S&TC, and AMD also participate in railroad accident investigations in coordination with FRA's Accident Reporting and Analysis Division. FRA inspectors investigating accidents collect HOS records for railroad employees involved in the accident and, if there is a fatigue analysis, they will collect 10-day work histories as well. In 2020 and 2021, FRA initiated 106 accident investigations. A subject matter expert in AMD conducted 77 fatigue analyses for the subset of the 106 accident investigations that met certain criteria. Officials in OP, S&TC, and AMD also consider petitions for waivers of compliance with HOS laws and regulations in coordination with RCC. As of January 2023, there were 15 active or pending HOS waivers covering 245 railroads. Both accident investigations and waiver reviews are established, well-documented processes and are not discussed further in this report.

Officials in FRA's Human Factors Research Division conduct fatigue research, which can inform FRA's oversight efforts. They also provide ad hoc trend analyses as part of their participation on railroad working groups such as the Switching Operations Fatalities Analysis working group.

The Office of Research, Development and Technology has conducted multiple studies relating to fatigue or HOS. For example:

- In 2013, FRA released a report titled *Fatigue Status of the US Railroad Industry*.<sup>12</sup> This study, conducted before RSIA changed HOS requirements, collected work schedule and sleep data from different groups of railroad workers. The study found, among other things, that dispatchers and T&E employees had the highest exposure to fatigue and that the risk of a human-factor accident was elevated 11 to 65 percent above chance by exposure to fatigue. While it notes information in this report can serve as a baseline for assessing the changes that occurred following RSIA, FRA officials stated they have not conducted a follow-on study to assess the effects of changes to HOS requirements nor do they have plans to do so.
- In June 2023, FRA published *The Impact of Commute Times on the Fatigue and Safety of Locomotive Engineer and Conductors*.<sup>13</sup> This online survey of over 9,000 engineers and conductors found that just under 40 percent of engineers and conductors fit the classification of being highly fatigued. Those highly fatigued employees also reported being twice as likely to experience any type of fatigue-related safety event while operating a locomotive compared to those who were not highly fatigued.

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<sup>12</sup> FRA, *Fatigue Status of the US Railroad Industry* (DOT/FRA/ORD-13/06), February 2013.

<sup>13</sup> FRA, *The Impact of Commute Times on the Fatigue and Safety of Locomotive Engineers and Conductors* (DOT/FRA/ORD-23/17), June 2023.

Finally, according to FRA officials, different components of FRA may periodically be involved in ad-hoc oversight efforts related to HOS and fatigue management. For example, following the February 3, 2023, Norfolk Southern Railway (Norfolk Southern) train derailment in East Palestine, OH, FRA announced a 60-day supplemental safety assessment of Norfolk Southern. On June 1, 2023, FRA announced similar supplemental safety assessments of all Class I railroads to be completed over the next year. FRA issued its Norfolk Southern safety assessment on August 9, 2023. FRA's assessment reviewed 11 operational elements including: 1) compliance with HOS and 2) measures implemented to prevent employee fatigue, including FRMPs. Additionally, FRA evaluated Norfolk Southern's responses to prior FRA safety recommendations and AMD conducted a safety culture assessment. The fatigue SMEs in AMD stated their involvement with the supplemental safety assessment was limited to the assessment of safety culture but expected that the findings from other areas of the assessment would inform their planned review of Norfolk Southern's FRMP. The assessment reported that FRA's S&TC Division found incomplete and missing HOS information and found 74 HOS defects, but did not mention any HOS issues from OP.

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## FRA's HOS Oversight and Planning Procedures Are Not Fully Documented

According to FRA officials, HOS-related oversight was centralized under the existing HOS SME position to provide a consistent interpretation of the law and regulations as part of the Office of Railroad Safety's reorganization in 2020. As a result, the HOS SME performs or leads all HOS-related oversight activities with very limited staff assistance and regularly provides guidance to internal and external parties in this area. He is also the single source of observations on compliance trends and HOS issue areas because he is the only FRA official reviewing all HOS-related reports and data. While the HOS SME effectively performs numerous expertise-based oversight activities, FRA has no detailed procedures documenting how current HOS oversight processes are or should be executed other than a draft job aid for one of the major components of an HOS audit—the electronic recordkeeping checklist. Additionally, planning for HOS oversight activities is informal and not included in OP Division planning processes. This lack of written procedures is concerning because according to the current SME, the HOS SME position was vacant for roughly 5 years before 2020. In our opinion, a vacancy in this key position coupled with the absence of written procedures would limit FRA's ability to oversee HOS compliance.

FRA's limited documentation of oversight procedures is contrary to GAO's Internal Control Standards which state that Federal managers clearly document internal controls that may appear in management directives, administrative

policies, or operating manuals. FRA has compliance manuals, such as its OP Compliance Manual to direct the work of inspectors, including conducting operating practices inspections and documenting inspection activities and findings in reports. However, the OP Compliance Manual does not include HOS oversight procedures. There are also two FRA HOS Compliance Manuals: one for freight and one for passenger operations. These 2013 and 2014 HOS Compliance Manuals focus on interpretations of HOS law and regulations for railroads. They do not contain any oversight guidance or process descriptions for inspectors. FRA does have a draft standard operating procedure for complaint reviews, but it is incomplete.

Part of the HOS SME's duties is to review complaints and direct a few OP staff engaging in different types of oversight activities, such as conducting HOS inspections and audits. This work requires detailed knowledge of the laws and regulations, familiarity with the impact of different types of railroad operations on HOS, and the skills to evaluate HOS recordkeeping systems, but there is almost no written guidance on how to perform this oversight and no inspectors are assigned to do this work full time. Instead, according to the HOS SME, a few OP inspectors learn how to evaluate HOS compliance on the job when assigned to audits as a collateral duty. As a result, the quality of information generated by this oversight depends on the HOS SME's close review and direction. With only a small group of inspectors and staff knowledgeable about HOS, the HOS SME has been able to look closely at most Class I freight railroads since 2020. Based on the list of HOS audits FRA provided and inspection reports we reviewed, the agency performed in-depth HOS recordkeeping system audits of only a limited number of other types of railroads each year. The lack of written procedures and routine data analysis puts at risk FRA's organizational knowledge of HOS oversight practices and effective monitoring of railroads' compliance with requirements intended to promote safe railroad operations.

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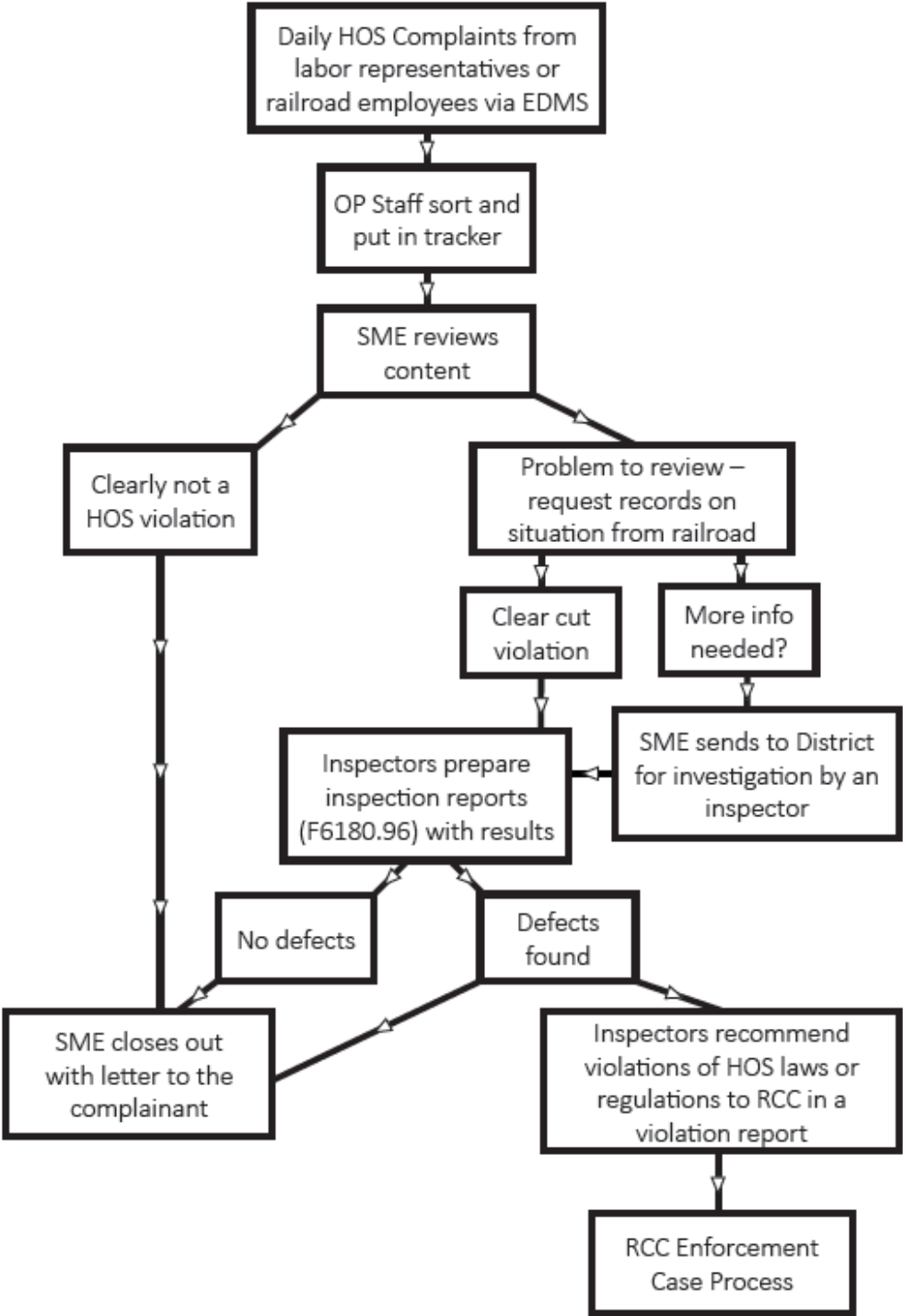
## **FRA Lacks Written HOS Complaint Evaluation Criteria and Processes To Identify Trends**

The HOS SME reviews and assesses all HOS complaints for OP. From March 2020 to February 2023, FRA received 1,122 HOS-related complaints which comprised 74 percent of all OP complaints received during that period. According to the HOS SME, nearly all the HOS complaints are from employees of Class I freight railroads and are often submitted by labor representatives. The HOS SME stated he routinely engages with labor representatives on HOS law and regulation interpretations, and he developed a phone application (HOS App) based on the two HOS Compliance Manuals to make it easier for rail employees, labor

representatives, and FRA inspectors to access HOS information in the field. We confirmed this engagement in interviews with representatives from two of the largest rail labor unions.

FRA stores all complaints, including HOS complaints, in its Electronic Document Management System (EDMS) and the OP Division has a draft standard operating procedure (SOP) that describes the HOS complaint review process. However, this description is not complete. The HOS SME determines when to examine a complaint further by requesting and reviewing related records from the railroad. After reviewing the records, the HOS SME determines whether a complaint warrants investigation by OP inspectors in the geographic area. According to the HOS SME, about 15 percent of the complaints with record reviews warrant investigation and estimated that 92 to 93 percent of the HOS complaints OP investigated resulted in violations. The draft SOP notes a review by the HOS SME but does not describe the substance of this review. An OP staff member also manually tracks all OP HOS complaints during the review process, but some of the methods he uses are not included in the SOP. See figure 1 for a description of FRA's complaint review process we compiled from FRA's documentation and interviews with officials.

Figure 1. FRA Hours of Service Complaint Review Process



Source: OIG analysis

We also found that HOS complaints are not analyzed to identify trends; OP staff assess them on a case-by-case basis. According to the HOS SME, he may discuss specific HOS issues during regular calls with OP specialists. The HOS SME also has written information papers describing FRA's position on the application of HOS to specific railroading scenarios that he may share with FRA inspectors. FRA officials stated the current complaint-driven process ensures adequate coverage of HOS issues across the industry; however, by focusing on complaints individually, the Agency misses an opportunity to identify and communicate to enforcement staff potential HOS problems at other types of railroads or HOS violation trends in specific types of operations or geographic areas for their awareness.

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## **FRA Has Not Documented Its Process for Reviewing Railroads' Excess Service Reports, and the Reports' PDF Format Prevents Larger-Scale Analysis**

Railroads are required to self-report each instance of excess service by covered employees on Form FRA F6180.3. Railroads submit their excess service reports to a dedicated FRA email address in a PDF file. In its Internal Control Standards, GAO states Federal managers should use quality information to achieve the organization's objectives and to process data into accurate and accessible information for use by decision makers in an iterative process. However, FRA is not effectively utilizing this significant source of data on noncompliance by collecting and analyzing it to identify trends or problem areas the HOS SME or enforcement staff could use to focus their oversight.

According to the HOS SME, the Agency receives about 375 excess service reports from Class I railroads each month and he reviews all the monthly report submissions, leading him to look more closely at certain areas and employees. He indicated he uses his professional judgement to review the reports quickly each month. Although the HOS SME may identify areas of concern, FRA provided no documentation of these observations. An OP staff member said that he separately reviews the excess service reports for things such as an increase in submissions from a particular railroad, location, or type of violation; however, he does not document these trend observations.

To evaluate what types and volume of information railroads provide in F6180.3s, we reviewed all excess service reports FRA received during the 2 months we selected with a systematic sample, June and December 2022. FRA received



26 reports from 17 railroads<sup>14</sup> containing 772 instances of excess service in June and December 2022. About 43 percent of these instances were from one Class I freight railroad and roughly 78 percent of these instances were for T&E employees. We identified characteristics among these reports that prevent easy upload to a database FRA officials can use to identify trends and focus oversight. For example, the reporting railroads group their PDF file submissions differently. Some railroads list one instance of excess service per form, while other railroads list several. The forms we reviewed were also mostly typewritten, but 126 instances contained handwriting which made data extraction even more laborious. According to FRA's current OP Compliance Manual, FRA was in the process of developing an electronic database for F6180.3s for inspectors in 2012, but when we asked about it in 2023 an FRA official stated FRA never developed the database. Without ready access to this data, FRA officials other than the HOS SME do not have information that could contribute to effective monitoring of railroad compliance with HOS requirements and deciding where additional oversight should be directed.

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## **HOS SME and OP Inspectors Conduct HOS Audits and Inspections With Limited Written Guidance**

FRA's in-depth HOS oversight is mostly carried out by a few OP inspectors through audits of compliance with recordkeeping requirements and HOS-related inspections as a collateral duty under the HOS SME's direction. According to the HOS SME, the SME determines which railroads to audit based on the complaints FRA receives. OP inspectors conduct HOS inspections when the SME instructs them to do so in response to a complaint or for an audit. The work OP inspectors do as part of a complaint investigation or an audit is documented in an inspection report (Form FRA F6180.96). S&TC inspectors also may evaluate compliance with HOS requirements for signal employees and they document their work in inspection reports. See table 1 for the numbers of HOS-related inspection reports completed from 2017 through 2022.

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<sup>14</sup> Seven of the 17 railroads were Class I.

Table 1. Number of HOS-related Inspection Reports

Calendar Year	OP Total Number of Reports with Activity Code 228, 228P, or HSL	S&TC Total Number of Reports with Activity Code 228, 228P, or HSL
2017	394	336
2018	336	286
2019	394	315
2020	224	204
2021	394	248
2022	543	203

Source: OIG analysis of FRA inspection data

While FRA’s General Manual provides guidance for inspectors conducting any type of complaint investigation, no specific guidance exists for HOS complaint investigations or the completion of HOS-related inspection reports. The two FRA HOS Compliance Manuals do not contain any oversight guidance or process descriptions for inspectors, but instead focus on interpretations of HOS law and regulations for railroads.

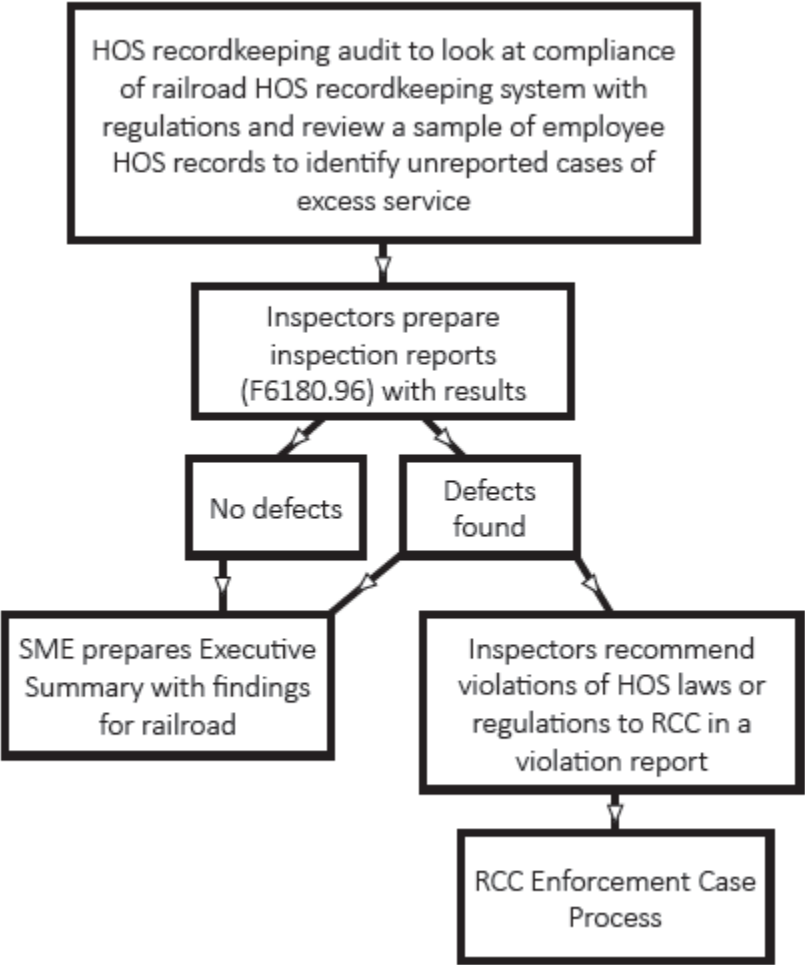
Based on our direct observations of two audits and review of documentation from three prior audits, we found that during OP’s HOS audits, the HOS SME and the assigned OP inspectors do an in-depth review of the railroad’s compliance with HOS recordkeeping requirements. The only written guidance for these audits is a draft electronic recordkeeping checklist with the regulatory requirements. The HOS SME and inspectors may also identify violations of HOS law or regulations while reviewing records for the audit. From January 2017 through June 2023 our analysis showed FRA conducted 21 HOS audits. More than half of these HOS audits (12 of 21) were of 5 of the 7 Class I freight railroads. Seven of the 38 passenger carriers, including Amtrak, were audited. One of the roughly 16 Class II freight railroads was audited.

During our audit, FRA did not provide any information on HOS audits of the more than 500 Class III railroads. At the exit conference FRA officials described a District-led HOS audit process of Class III railroads that does not include the HOS SME. FRA provided a list of these District-led Class III audits from 2017 through late 2023 from the Agency’s Railroad Safety Information System (RSIS). However, after reviewing all inspection reports corresponding with audits listed in 2022, we found the list to be unreliable. Our in-depth review of these inspection reports, which are the source of RSIS data, showed only one District-led audit of a Class III

railroad in 2022. The remaining listed Class III audits in 2022 were actually HOS-related inspections that took place in the course of oversight such as a complaint investigation or derailment follow-up.

We compiled a description of the HOS recordkeeping audit process used by the HOS SME based on FRA documentation, interviews with FRA officials, and direct observations of HOS audits in 2023 of Amtrak and Alaska Railroad, which is shown in figure 2, below.

Figure 2. FRA Hours of Service Recordkeeping Audit Process



Source: OIG analysis

The HOS SME's audit team is currently comprised of three OP inspectors who participate in HOS audits as a collateral duty. To expand FRA's HOS oversight beyond the Class I railroads and to build HOS expertise within the agency, the HOS SME stated that he needs a dedicated staff of four inspectors with a thorough understanding of HOS laws and regulations. The HOS SME's goal is to

lead HOS recordkeeping audits for two Class I and two commuter (passenger) railroads each year. In addition, each of those four inspectors would have districts in which they would conduct HOS recordkeeping audits of Class III railroads with participation from OP inspectors in the same geographic area. No additional information was provided by the HOS SME to support this need, but the audits we observed demonstrated the need for skilled enforcement staff for HOS oversight.

To verify how the HOS SME and his three OP inspectors conduct recordkeeping audits, we observed two HOS audits (Amtrak and Alaska Railroad) these FRA officials conducted in 2023. We also reviewed materials from three other HOS recordkeeping audits. From observing these audits and reviewing documentation of prior audits, we identified the HOS SME's process:

- The HOS SME notifies railroads of the upcoming on-site audit in writing about 1 month prior. The HOS SME requests documents from the railroad that he reviews before the beginning of FRA's audit, such as employee rules training or medical examination dates to identify co-mingled service. The FRA team reviews excess service reports and recent complaints at the start of the audit.
- During an audit we observed, the FRA team collaboratively looked at the railroad's recordkeeping system and employee records for regulatory compliance. The FRA audit team has a draft job aid to assess railroads' compliance with the detailed electronic HOS recordkeeping requirements. However, we observed the FRA audit team use the regulation rather than the job aid to comprehensively check the electronic recordkeeping system.
- At the conclusion of the audit, the HOS SME sends an executive summary of findings to railroads, and the inspectors prepare their inspection reports and, if necessary, violation reports under the close supervision of the HOS SME. The audit-related documentation is maintained by the HOS SME and the inspection and violation reports are centrally stored in FRA's information systems.

Aside from the electronic recordkeeping job aid, the processes the HOS SME and team uses to identify railroads for audit and conduct audits are not documented.

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## **HOS-Related Inspection Activities Are Not Always Accurately Reported**

We reviewed 6 years of inspection data (January 2017 through December 2022) from RSIS and found that HOS-related inspection activities are not always

accurately reported by OP and S&TC inspectors. Specifically, the data indicate that inspectors cited violations of HOS law without looking at HOS records, and that many more passenger rail employees exceed HOS than were observed. Sometimes, the data also inflated the number of HOS records inspectors reviewed. Because of inspectors' inaccurate reports, FRA officials cannot accurately identify how many HOS records their inspectors reviewed or how many freight or passenger railroad employees exceeded HOS. Additionally, FRA cannot use its inspection data to accurately measure how much HOS-related work its inspectors have done. For example, when we requested this data, FRA officials relied on their own files to provide the number of HOS audits and dispatch center reviews completed in certain timeframes rather than on reported inspection data in RSIS. Further, FRA also cannot accurately identify HOS trends based on this data or use them to effectively inform inspection planning.

These HOS inspection reports do not accurately represent the information FRA is seeking to collect, contrary to DOT's data management policy in DOT Order 1351.34, which describes policies for enhancing practices concerning planning, collecting, processing, disseminating, sharing, safeguarding, and evaluating data and information. According to this policy, data quality is integral to every step of the data and information management lifecycle. In addition, GAO's Internal Control Standards state that Federal managers should use quality information to achieve the organization's objectives and evaluate the information's data sources for reliability.

Many of the data quality issues we identified can be attributed to FRA's lack of guidance on how to correctly record HOS activities such as audits and dispatch center reviews in inspection reports. FRA's only written direction on the proper use of HOS-related activity codes, which are used to document inspectors' field activities, is in the appendices of the OP Compliance Manual and the Signal Compliance Programs and Policies (S&TC Technical Manual), see our summarization of this direction in table 2 below. For example, an appendix in the OP Compliance Manual states that activity code 228 must be listed with either activity code HSL or 228P. Aside from the activity code appendices, no further written guidance on completing HOS-related inspection reports is provided by FRA in any of its manuals for inspectors.

Table 2. FRA HOS-Related Activity Code Guidance for Inspectors

Activity Code	Purpose	Discipline
228	To determine if railroad HOS <b>records</b> are in compliance with Part 228.	OP, S&TC
HSL	To record <b>excessive service</b> by <b>employees</b> in <b>freight</b> train service or <b>dispatching</b> service. When using HSL, the inspector must have a companion 228 activity code.	OP
228P	To record <b>excessive service</b> by <b>employees</b> in <b>passenger</b> train service. When using 228P, the inspector must have a companion 228 activity code.	OP
211	To record one unit for each <b>signal employee</b> who <b>exceeded</b> the hours of service. When using 211, the inspector must have a companion 228 activity code.	S&TC

Source: OIG summary of FRA guidance in the OP Compliance Manual and the S&TC Technical Manual

Generally, the OP Compliance Manual directs inspectors to document compliance as well as noncompliance in their inspection reports, but FRA has no activity code for an inspector to document employees in compliance with freight or passenger HOS law. Unlike other OP activity codes, HSL and 228P are not worded neutrally. They should only be used in instances of noncompliance. However, inspectors may do HOS work in addition to a records review—such as gathering information through interviews or discussions with railroad employees about their HOS—to determine compliance with freight or passenger HOS law, but FRA does not have activity codes able to capture this data.

According to FRA officials, OP inspectors participating in HOS audits or complaint investigations receive direction on how to complete HOS-related inspection reports from FRA’s HOS SME. It is not clear if this direction extends to the use of source or activity codes. Based on FRA’s approach in other areas, this type of detailed instruction is usually provided to inspectors in written procedures and reinforced by training. For example, FRA recently updated its written accident investigation procedures in the General Manual and the Agency requested new inspector training from its contractor to accompany these changes.

## **FRA Conducts its Most Detailed HOS Oversight Through Audits and Dispatch Center Reviews, but Has No Guidance on Which Source Codes To Use for Those Inspections**

In addition to activity codes inspectors use to document their field activities on inspection reports, they also use source codes to designate why the inspection is taking place. According to FRA's General Manual, source codes indicate the purpose of the inspection and FRA frequently filters inspection data based on source codes to create specialized summary reports. None of FRA's manuals—the OP Compliance Manual, S&TC Technical Manual, or the General Manual—identify a source code inspectors should use for audits or dispatch center reviews. One FRA official stated that inspectors use source code "W" on reports when conducting audits, but the General Manual states this code is reserved for future use. Additionally, source code "D" was previously used for all audits. According to the General Manual, "D" designates special inspections or investigations.

To identify the universe of HOS oversight activities, we asked FRA for a summary report of the number of HOS audits and dispatch center reviews performed from 2017 to 2022. However, FRA was unable to provide this information from the inspection database because there are no particular source codes for these types of inspections. Instead, FRA officials put this information together from their own files, but stated it was a challenge to provide information on audits and dispatch center reviews performed by staff in regional offices prior to the Office of Railroad Safety reorganization in 2020, as the regional offices stored that information.

## **While an Increasingly High Proportion of HSL Defects Were Recommended for Violations From 2017 Through 2022, Inspection Reports With Activity Code HSL Often Did Not List Activity Code 228, as Required**

OP's Compliance Manual tells inspectors the purpose of an HSL inspection is to record excess service by employees in freight train or dispatching service. An HSL activity code is meant to document noncompliance only. Per the manual, activity code HSL must be used with companion activity code 228. As the HOS SME explained, activity code 228, which indicates a HOS record review, must be used with HSL or 228P because an inspector must review a HOS record to identify excess service. When an inspector uses HSL without 228 the resulting inspection data indicate they are citing a HOS law violation without looking at the employee's HOS record. However, OP Inspectors entered activity code HSL without code 228 more than half of the time in 2022 (53 percent (231 of 436)) and 2021 (57 percent (159 of 279)). Most of the HSL defects cited in these reports were ultimately recommended for civil penalties. See table 3 below for each OP inspection data year we reviewed.

Table 3. OP Inspector Form 96 Reports With HSL Defects

Calendar Year	Number of Covered Freight Employees exceeding HOS (units)	Number of HSL Defects	Number of HSL Recommended Violations	Percent of Reports Completed Incorrectly - (HSL w/o 228)	Percent of HSL Defects Recommended for Violation
2017	838	218	156	39%	72%
2018	469	233	162	42%	70%
2019	443	235	164	30%	70%
2020	405	141	113	26%	80%
2021	699	580	481	57%	83%
2022	985	778	705	53%	91%

Source: OIG analysis of FRA inspection data

S&TC inspectors completed significantly fewer reports listing activity code HSL—only 23 in 2021 and 2022—but those were completed 33 percent and 21 percent of the time, respectively, without activity code 228. Unlike OP inspectors, S&TC inspectors have no written guidance on using activity code HSL. The S&TC Technical Manual lists “211” as the appropriate activity code for S&TC inspectors to designate the number of signal employees who exceed hours of service. However, this guidance is outdated. OP’s HOS SME informed us that activity code 211 is no longer used and now HSL also covers excess service for signal employees. We found no inspection reports that listed activity code 211 from 2017 through 2022. Table 4 below shows details for each year of S&TC inspection data we reviewed.



Table 4. S&TC Inspector Form 96 Reports with HSL Defects

Calendar Year	Number of Covered Freight Employees exceeding HOS (units)	Number of HSL Defects	Number of HSL Recommended Violations	Percent of reports completed incorrectly- (HSL w/o 228)	Percent of HSL Defects Recommended for Violation
2017	202	43	27	19%	63%
2018	215	30	16	38%	53%
2019	452	22	12	32%	55%
2020	33	20	13	8%	65%
2021	16	14	11	33%	79%
2022	79	19	16	21%	84%

Source: OIG analysis of FRA inspection data

### **OP Inspectors Used Activity Code 228P Incorrectly 82 Percent of the Time From 2017 to 2022**

The purpose of a 228P activity code during an inspection is to record excess service by employees in passenger train service. According to the OP Compliance Manual, activity code 228P must be used with companion activity code 228. OP inspectors completed 45 reports listing activity code 228P but did not list activity code 228 in 37 of these reports. Like activity code HSL, activity code 228P differs from other activity codes used by OP inspectors because it is meant to document noncompliance only—not whether the railroad is compliant or not. Inspectors often used 228P to document the number of records reviewed, rather than to indicate the number of passenger railroad employees exceeding HOS. Due to incorrect use of activity code 228P, the number of passenger employees that exceeded HOS is erroneously inflated by 392 percent in FRA’s RSIS data. As a result, FRA is unable to use its data to identify trends or the number of passenger train employees its inspectors found violating HSL.

Inspectors also used activity code 228P to document any activity that involved a passenger railroad. For example, an inspector listed activity code 228P in his inspection report, but in the description field, stated the passenger train employee had “appropriate rest.” This type of incorrect activity code use may also be occurring with activity code HSL. For example, an inspector participating in an HOS audit in 2021 used activity code HSL to describe a discussion with

employees who misunderstood the HOS law, but none were found to have exceeded HOS.

### **Some Inspection Reports for FRA's Recent Amtrak HOS Audit Do Not Follow the Guidance on Same-Day Reports in OP's Compliance Manual**

FRA's inspection reporting guidance pre-dates the Office of Railroad Safety's 2020 reorganization so it does not reflect current practices for completing HOS-related inspection reports. For example, the practice for OP inspectors participating in a HOS audit is to complete a separate inspection report for each defect cited. According to the HOS SME, it is easier to convert defects cited in separate reports to recommended<sup>15</sup> violations, but this practice is not documented in written procedures. In May 2023, we observed an inspector review 44 HOS records during FRA's HOS audit of Amtrak. The inspector listed these 44 records as sub-units<sup>16</sup> in 10 separate inspection reports, all using activity code 228. Nine of these 10 inspection reports were done on the same day. This is contrary to the OP Compliance Manual's direction as to when inspectors should create additional same-day reports, such as when they need to use additional activity codes. As a result, FRA's RSIS data indicates the inspector looked at 440 records, when in fact we observed it was only 44 records. This erroneously inflates the number of records reviewed by the inspector. Thus, FRA may not be able to use RSIS data to accurately identify the number of HOS records its inspectors reviewed.

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## **HOS Oversight Planning is Informal and is Not Included in Division Planning**

FRA's OP Division uses the Focused Inspection Process (FIP) that incorporates data from inspections and other sources to allocate oversight resources. According to the OP Compliance Manual, the purpose of FIPs<sup>17</sup> is to reduce human factor-caused train accidents through the analysis of FRA data by inspectors. However, an FRA official stated OP FIPs do not include HOS data, such as data from complaints and excess service reports. The FIPs are a tool for inspectors to plan their work, but HOS oversight activities are directed separately by the HOS SME, not by inspectors themselves.

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<sup>15</sup> Inspectors may recommend violations to RCC using a violation report. RCC manages the civil penalty process.

<sup>16</sup> With activity code 228 sub-units indicate the number of HOS records the inspector reviewed.

<sup>17</sup> According to the OP Compliance Manual, FIPs include three data sources: (1) accidents/injuries, (2) all FRA inspection activity, and (3) activity code 217T observations (where inspectors accompany railroads performing operational tests).

There is no documented planning process for HOS oversight directed by the HOS SME. According to an OP official, the current complaint-driven process ensures adequate coverage of HOS issues across the industry. However, as described earlier, most HOS complaint investigations are of Class I railroads, and it is not always clear that complaints fully reflect HOS compliance issues at a railroad. For example, an FRA official stated that one Class I railroad submits more excess service reports than any other, but that employees at this railroad do not submit HOS complaints. In another instance, we observed FRA's HOS audit of a railroad that had only received roughly eight or nine complaints in the last few years. This audit was a follow-up to a 2013 HOS audit. However, FRA's audit uncovered many problems with the railroad's HOS recordkeeping system program logic, employees' HOS records, and cases of unreported excess service. At this railroad, the number of complaints did not indicate the extensive problems the FRA audit team observed.

As previously described, the HOS SME focused on auditing Class I freight railroads based on complaints. Additionally, the HOS SME said FRA District personnel inform his selection of passenger railroads for HOS audits based on issues the District personnel identified with those railroads. The HOS SME's audit selection process is not documented. FRA's ad-hoc approach to HOS planning does not give enough consideration to non-Class I railroads and exposes HOS audits to resource risks. Despite being the most in-depth mechanism FRA uses for HOS oversight, FRA has only audited 11 different railroads since 2017 and the number of audits varies each year. For example, the HOS SME and his team conducted seven HOS audits or follow-up audits in 2022 but conducted just two HOS audits in 2023 as of July. By not improving and incorporating HOS-related data (e.g., audit reports, excess service reports, and complaint investigations) into formal planning processes, the agency may not identify significant risks. GAO's Internal Control Standards state management should identify, analyze, and respond to risks and use quality data to achieve objectives. As a result, FRA cannot be sure that it is targeting its limited HOS oversight resources to the highest risk areas and providing adequate oversight of different types of railroad operations.

The S&TC Division does not use FIPs but has an ad-hoc planning process for HOS oversight based on issues identified in prior inspections, according to a S&TC Division official. Additionally, the S&TC Division conducts annual dispatch center reviews focusing on S&TC Division-specific issues, such as reviewing the HOS records of signal employees sent out to repair or troubleshoot issues identified in credible reports. According to FRA officials, the S&TC Division receives very few complaints—not more than 5 a year—while the OP Division received about 750 complaints in 1 year. However, we found during our review of inspection reports that HOS inspections as a proportion of all OP and S&TC inspections are about the same each calendar year. For example, in 2022 HOS inspection reports

comprised about 4 percent (543 of 14,633) of all OP reports and about 3 percent (203 of 7,728) of all S&TC inspection reports.

The Office of Railroad Safety reorganization concentrated knowledge regarding HOS trends and oversight processes in the single HOS SME. There is no record of findings and trends regarding HOS that could be used to inform future planning efforts. For example, the HOS SME stated he compares excess service reports to the number and type of complaints FRA received, which should roughly mirror one another. He passes on any issues he identifies to the OP inspectors with whom he usually works. The HOS SME is the only official who conducts the initial review of incoming HOS complaints and decides whether the complaint merits a field investigation. The HOS SME is also the only official to review the monthly railroad excess service reports for substance. The results of his review of both complaints and excess service reports, as well as any processes he uses, are not documented.

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## FRA Lacks Guidance for Many HOS Civil Penalty Amounts and Procedures for Producing Annual Enforcement Reports

FRA issues civil penalty amounts for HOS violations; however, the Agency lacks guidance for imposing these penalties and often settles violations for less than the violation base. FRA has also reported incorrect violation counts in its Annual Enforcement Reports and other required information is outdated.

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## FRA Does Not Have Civil Penalty Guidelines for Many HOS Violations

FRA assesses civil penalties for violations, including railroads' violations of HOS requirements. However, we found that FRA lacks guidelines for many HOS civil penalty amounts. The dollar amounts of HOS civil penalties are based on several statutes and a regulation with consideration of other penalty guidance, as shown in table 5. Importantly, the Civil Penalties Schedule specifies the penalty that FRA will ordinarily assess for the violation of a particular section or subsection of a safety regulation (violation base).

Table 5. Parameters for HOS-Related Civil Penalty Dollar Amounts

Description	Legal Citation or Source	Minimum	Maximum
Violation of HOS Law as of 2023	Section 21303(a)(2) of Title 49 of the U.S.C	at least \$500	not more than \$25,000
Violations of HOS Regulations as of 2023	49 C.F.R. § 228.6(a)	at least \$1,052	not more than \$34,401
HOS Violation Base	The Civil Penalties Schedule specifies the penalty that FRA will ordinarily assess for the violation of a particular section or subsection of a safety regulation (violation base).	\$1000 <sup>18</sup>	\$2000 for willful violations
FRA Minimum Rail Safety Penalty	Based on 49 U.S.C. Chapter 213 on penalties. All are inflation adjusted annually and are published in the Federal Register <sup>19</sup> as "DOT: Revisions to Civil Penalty Amounts."	For violations occurring from 2017 to 2022 the minimum rail safety penalty ranged from \$853 to \$976. <sup>20</sup>	
FRA Ordinary Maximum Rail Safety Penalty			For violations occurring from 2017 to 2022, the ordinary maximum rail safety penalty ranged from \$27,904 to \$31,928
Maximum Penalty for an Aggravated Rail Safety Violation			For violations occurring from 2017 to 2022, the aggravated maximum rail safety penalty ranged from \$111,616 to \$127,712

Source: OIG summarization of HOS civil penalties in law and regulation; FRA, *FRA's Civil Penalties Schedule (2023)* (March 8, 2023); and Revisions to Civil Penalty Amounts for 2017 through 2022.

<sup>18</sup> Notice of Updated Civil Penalty Schedules and Guidelines, 88 Federal Register (Fed. Reg.) 15116, 15117 (March 10, 2023). FRA doubled civil penalties for all rail safety violations occurring on or after March 8, 2023. As a result, the violation base for HOS doubled to \$2,000 and the willful violation base increased to \$4,000.

<sup>19</sup> See, for example: Revisions to Civil Penalty Amounts, 87 Federal Register (Fed. Reg.) 15839 (March 21, 2022).

<sup>20</sup> Revisions to Civil Penalty Amounts, 83 Fed. Reg. 60732, 60738 (November 27, 2018); Revisions to Civil Penalty Amounts, 84 Fed. Reg. 37059, 37065 (July 31, 2019); Revisions to Civil Penalty Amounts, 86 Fed. Reg. 1745, 1751 (January 11, 2021); Civil Penalty Amounts, 86 Fed. Reg. 23246 (May 3, 2021); Revisions to Civil Penalty Amounts, 87 Fed. Reg. 15839, 15858 (March 21, 2022).

The HOS civil penalty dollar amounts affect the enforcement process in several ways. As described in the Annual Enforcement Reports, the civil penalty portion of FRA's enforcement process starts when FRA inspectors submit reports alleging violations of safety laws and regulations to RCC. RCC then uses the violation base as a guide to assess a penalty for each alleged violation that it deems legally sufficient. During our audit's scope, the violation base for HOS was \$1,000 with a willful violation base of \$2,000. RCC aggregates alleged violations of the same type into a single case and sends a penalty demand letter to the railroad or other entity. If the railroad does not agree to pay the full initial penalty amount, FRA will negotiate with the railroad. These negotiations often take place during annual settlement conferences during which multiple cases may be discussed. The railroad presents defenses and arguments for mitigation. During the negotiation process RCC attorneys consider the strengths and weakness of each case and the overall goals of FRA's safety program. RCC officials may settle a violation for less than the initial penalty amount if they remain above FRA's minimum rail safety penalty, which was \$976 for HOS violations occurring in 2022. When a settlement cannot be reached, FRA may refer cases for litigation; however, according to FRA, the Agency closes the vast majority of its civil penalty cases without litigation.

FRA makes a distinction between two different types of HOS violations: (1) substantive HOS law and regulation violations, and (2) HOS recordkeeping violations. Currently, the published Civil Penalties Schedule for HOS violations covers four sections of 49 C.F.R. 228 Subpart B on recordkeeping but does not cover other sections of 49 C.F.R. Part 228 on passenger HOS or 49 U.S.C. Chapter 211 on HOS. Without specific penalty guidelines for all types of HOS violations, future HOS violations will continue to be initially assessed at the violation base and often settled for less. Without clarifying to what elements of HOS law and regulations FRA's Civil Penalties Schedule applies and determining the appropriate civil violation base for these HOS violations, FRA cannot be sure its enforcement actions will achieve HOS laws and regulations' goal of reducing fatigue among the covered railroad employees.

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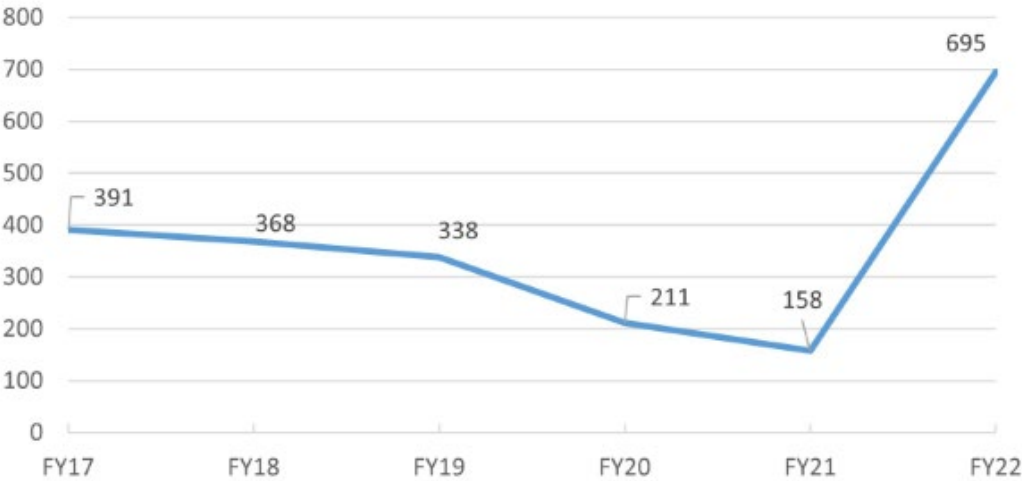
## **FRA Often Settles HOS Violations for Less Than the Violation Base**

To identify FRA's HOS enforcement actions occurring in each fiscal year from 2017 to 2022, we initially obtained data from FRA's published Annual Enforcement Reports. However, these reports did not provide accurate counts of the number of violations associated with the HOS cases FRA closed each year. We describe the inaccurate counts in detail in the next section. Because of this error in FRA's reported data, we were not able to compare HOS enforcement against enforcement actions for other types of rail safety violations.

Limitations in the Annual Enforcement Reports also make analyzing settlement amounts associated with closed HOS violations difficult. Specifically, Annual Enforcement Reports list closed safety cases and associated violations by the fiscal year they were closed, not the year the violation was identified. As a result, some cases closed in fiscal year 2017, for example, may come from prior years and have a lower minimum rail safety penalty amount than 2017's minimum rail safety penalty of \$853. However, the \$1,000 HOS violation base remained the same during this period. In addition, the case data as reported in the Annual Enforcement Reports make it difficult to disaggregate total and partial case terminations, for which the associated settlement amount is \$0. Notwithstanding these data limitations, we were able to analyze FRA's enforcement and settlement data and identify trends.

**Closed HOS violation trends.** Our analysis of FRA's enforcement data shows that HOS violations in cases closed by FRA fell steadily from 391 in fiscal year 2017 to 158 in fiscal year 2021, before rising steeply to 695 in fiscal year 2022 (see figure 3). During this timeframe, 69 railroads and contractors had at least one HOS violation closed by FRA, including all 7 Class I railroads and Amtrak. The Class I railroads and Amtrak accounted for 82 percent of all HOS violations closed by FRA. According to one RCC official, the violations closed trend can be partially explained by several factors: FRA did not conduct HOS audits for several years because the HOS SME position was vacant, violations for one major Class I railroad were put on hold due to litigation, and there was a recent rise in HOS complaints.

Figure 3. Number of HOS Violations Closed by FRA, Fiscal Years 2017-2022



Source: OIG analysis of FRA data

**Substantive and recordkeeping HOS violation trends.** FRA makes a distinction between two different types of HOS violations: (1) substantive HOS law and regulation violations, and (2) HOS recordkeeping violations. For example, HOS law<sup>21</sup> and regulations<sup>22</sup> limit on-duty time for both passenger and freight train employees to 12 consecutive hours. In addition to what 49 C.F.R. Part 228 calls the “substantive” HOS requirements, Subpart B of 49 C.F.R. Part 228 outlines HOS recordkeeping and reporting requirements for both freight and passenger railroads. For example, 49 C.F.R. § 228.11 requires railroads to keep a record of the hours each employee spent on duty.

When we disaggregated the HOS data into HOS recordkeeping violations and violations of HOS law and regulations closed by FRA, we found that HOS recordkeeping violations had fallen relative to violations of HOS law and regulations. An FRA official stated that this might be a result of a planned shift in the HOS enforcement approach away from individual inspectors looking for recordkeeping violations and focusing instead on HOS audits and identifying HOS law violations.

**HOS violation penalty amount trends, including terminations.** We found that FRA often closes violations, including HOS violations, for less than the initial penalty assessment. From fiscal year 2017 to 2022, the initial penalty assessment for 2,161 HOS violations totaled \$2,307,201. The revised assessment amount, which accounts for some terminated violations based on initial reviews of cases by RCC attorneys, was \$2,037,246. FRA ended up settling for \$1,716,777. The average HOS civil penalty settlement amount varied between \$566 and \$1,048 each fiscal year, ending in fiscal year 2022 at \$917 (see figure 4). The overall average settlement amount from fiscal year 2017 to 2022 was \$794. Furthermore, the average settlement amount from fiscal year 2017 to 2022 for violations of HOS law and requirements did not substantively differ from HOS recordkeeping violations at \$835 and \$730, respectively.

Our analysis of closed safety cases includes total and partial case terminations. This means that some cases with multiple violations may have had one or more violations terminated during RCC’s review or following the settlement conference with railroads. Limitations to the case data as reported in the Annual Enforcement Reports mean that our count of violations may include terminated violations with associated \$0 amounts. As a result, our settlement amount averages may be lower than they would be if such terminated violations were excluded. However, our analysis is consistent with FRA’s reporting, which includes these terminations in their counts of closed violations in the Annual Enforcement Reports.

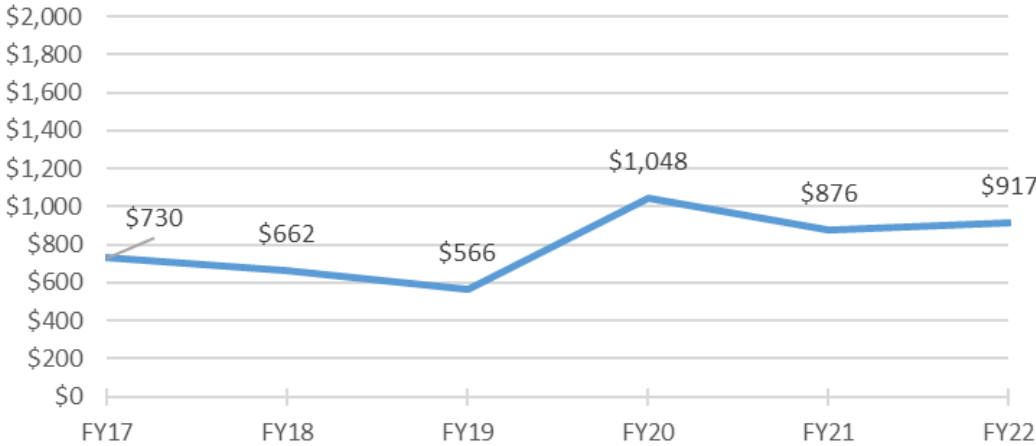
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<sup>21</sup> 49 U.S.C. § 21103(a)(2).

<sup>22</sup> 49 C.F.R. § 228.405(a)(2) requires that passenger train employees have 10 hours off-duty if they have been on duty for 12 consecutive hours before returning to duty.



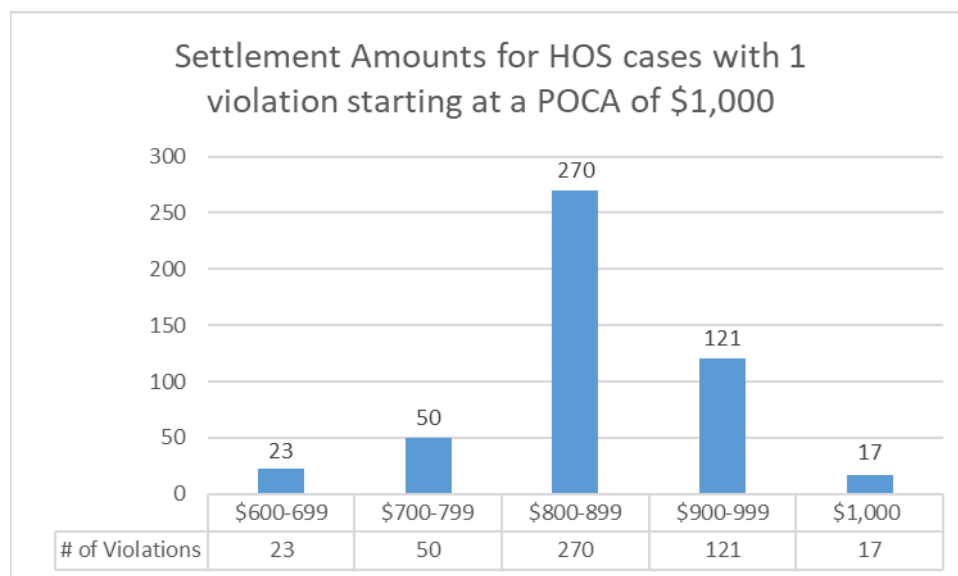
Figure 4. Average Settlement Amounts for Closed HOS Violations, Fiscal Years 2017-2022



Source: OIG analysis of FRA data

**HOS violation penalty amount trends without terminations.** To evaluate how often FRA reduces a civil penalty for a case, we identified a subset of HOS cases that listed just one violation with an initial penalty assessment at FRA’s violation base of \$1,000. This subset excludes cases with partial or total terminations so that \$0 settlement amounts would not affect the average. Of 1,068 HOS cases closed between fiscal years 2017 to 2022, 481 cases with a total of 481 violations fit these criteria. Fifty-six percent (270 of 481) of the violations were settled for an amount between \$800 and \$899. Just 17 of the 481 violations were settled for FRA’s civil penalty violation base of \$1,000 (see figure 5).

Figure 5. Settlement Amounts for HOS Cases With Initial Violation Amounts of \$1,000 Without Terminations, Fiscal Years 2017-2022



Source: OIG analysis of FRA data

**Factors impacting the HOS enforcement process and outcomes.** RCC officials identified multiple reasons why FRA settles many cases for less than the violation base. Specifically, RCC officials stated that FRA routinely meets with railroads and other respondents at settlement conferences where they discuss multiple cases concerning different types of violations. RCC attorneys and, at times, the HOS SME, attend these conferences. RCC officials stated one reason why FRA may settle for less than the initial penalty assessment, or the \$1,000 violation base, is because railroads or other respondents may provide additional evidence or mitigating circumstances concerning a case.<sup>23</sup> However, the settlement amount must be above the minimum rail safety penalty as required by 49 U.S.C. Chapter 213.<sup>24</sup>

FRA is also starting the settlement process with a relatively low civil penalty violation base of \$1,000 for HOS violations. One RCC official stated the \$1,000 violation base for HOS violations was likely set since \$1,000 is a common recordkeeping violation amount. The official explained it is common practice to use this \$1,000 violation base for all violations of HOS law and regulations as well as HOS recordkeeping violations but was unsure why. But importantly, as

<sup>23</sup> Per 49 U.S.C. § 21303(a)(3) “The Secretary may compromise the amount of the civil penalty under section 3711 of title 31. In determining the amount of a compromise, the Secretary shall consider—(A) the nature, circumstances, extent, and gravity of the violation; (B) with respect to the violator, the degree of culpability, any history of violations, the ability to pay, and any effect on the ability to continue to do business; and (C) other matters that justice requires.”

<sup>24</sup> The minimum rail safety penalty for violations occurring in 2022 was \$976.

discussed earlier, the published Civil Penalties Schedule for HOS violations only covers four sections of 49 C.F.R. 228 Subpart B on recordkeeping, so there are no specific guidelines for other types of HOS violations.

Notably, civil penalties for violations of other regulations outside of 49 C.F.R. Part 228 that mention HOS have higher violation bases. For example, a drug and alcohol regulation in 49 C.F.R. Part 219 has a \$2,500 violation base for failure to terminate random collection for drug testing due to HOS expiration. This is important because FRA determined in its Schedule of Civil Penalties that a failure to end a drug test due to HOS expiration has a violation base of \$2,500. In contrast, a substantive violation of HOS, such as a locomotive engineer on a train working beyond the applicable HOS limit, has a violation base of just \$1,000. In response to our concern that penalties are low for HOS violations, an FRA official informed us they are planning to impose more ordinary maximum penalties on railroads for violations of HOS but that those cases require more documentation to sustain the penalty.

In February 2023, Secretary Buttigieg called on Congress to raise the maximum fines DOT can impose on railroads for violating safety regulations. However, without clarifying specific penalty guidelines, future HOS violations will continue to be initially assessed at the violation base and often settled for less.

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## **FRA Reported Incorrect Violation Counts in its Recent Annual Enforcement Reports, and Other Required Information is Outdated**

We found that FRA's Annual Enforcement Reports for Fiscal Years 2020, 2021, and 2022 contain inaccurate counts of the number of violations closed. After working with RCC to correct these errors for our analysis of HOS enforcement data, we also found that the errors on the Annual Enforcement Reports increased each year from fiscal year 2020 to 2022. These errors are due to a calculation issue in RCC's case management system, the Railroad Compliance System (RCS). Additionally, the Annual Enforcement Reports contain outdated information.

FRA's Annual Enforcement Reports inform members of the public and industry about the results of FRA enforcement actions. Section 20120 of Title 49 of the U.S.C. outlines requirements for FRA's Annual Enforcement Reports. The statute requires FRA's reports to include, among other things, the number of civil penalties assessed,<sup>25</sup> an analysis of the effect of the number of inspections

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<sup>25</sup> 49 U.S.C. § 20120(a)(2)(A).

conducted and enforcement actions taken on the number and rate of accidents and railroad safety,<sup>26</sup> and an explanation of any changes in enforcement programs or policies that may substantially affect the information reported.<sup>27</sup> DOT's information dissemination quality guidelines<sup>28</sup> state that DOT Components such as FRA will ensure disseminated information is accurate, clear, complete, and unbiased in substance and presentation, and presented in a proper context. The guidelines also direct DOT Components to use reliable data sources, sound analytical techniques, and quality control procedures. Without ensuring the accuracy, timeliness, and relevance of the data published in the Annual Enforcement Reports, FRA risks presenting an inaccurate picture of its enforcement actions.

### **The Number of Incorrect Violation Counts in FRA's Annual Enforcement Reports Increased from Fiscal Years 2020 to 2022**

FRA publishes an Annual Enforcement Report every fiscal year. These reports summarize a range of FRA enforcement activities, including, among other items:

- the number of rail safety and hazmat compliance inspections and audits conducted,
- civil penalty enforcement actions sorted by type of alleged violation and type of respondent,
- a discussion of the relationship between inspections and enforcement actions, the number and rate of reportable accidents and incidents, and railroad safety, and
- a list of civil penalty cases FRA closed.

A single civil penalty case is based on a violation report filed by an FRA inspector. The violation report may recommend one or more violations. FRA's Annual Enforcement Reports state that the number of violations provides a better opportunity for standardized review and comparison of FRA's enforcement actions than does the number of cases. However, FRA has not correctly reported the number of violations associated with closed safety cases in its fiscal years 2020, 2021, and 2022 Annual Enforcement Reports.

OIG identified this error when analyzing FRA's HOS enforcement actions using violation counts and other data published in the Annual Enforcement Reports. According to an RCC official, the errors are primarily caused by RCS. FRA

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26 49 U.S.C. § 20120(a)(3).

27 49 U.S.C. § 20120(a)(6).

28 DOT, Information Dissemination Quality Guidelines (DOT-OST-2019-0135), October 1, 2019.

migrated to RCS from the Railroad Enforcement System (RES) in 2020. Primarily, RCS is used by RCC attorneys to track and manage civil penalty cases, and to communicate with railroads, hazardous material shippers, contractors, and individuals on these cases. FRA also uses data from RCS to produce Annual Enforcement Reports.

At our request, an RCC official manually validated and corrected violation counts for closed HOS cases for fiscal years 2020, 2021, and 2022 to facilitate our analysis of FRA's HOS enforcement actions. For example, the fiscal year 2020 Annual Enforcement Report listed one violation of HOS regulations for a freight railroad. However, when the RCC official reviewed the case, she found that two of the railroad's employees allegedly violated 49 C.F.R. § 228.11(b) requirements. Since both employees violated the same HOS rule, RCS counted just one violation, instead of appropriately counting two violations.<sup>29</sup> While the corrections we requested were limited to HOS cases, they provide an example of the possible extent and growth over time of the violation count errors that may also affect other types of safety cases in RCS.

The violation count errors increased from fiscal year 2020 to fiscal year 2022. In fiscal year 2020, 9 percent (11 of 126 cases) had errors in the reported violation counts. In fiscal year 2021, 53 percent (48 of the 90) HOS cases had violation count errors. In fiscal year 2022, 66 percent (239 of the 362) HOS cases had violation count errors (see table 6).

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<sup>29</sup> As noted later in this finding, the errors relate to summary-level reporting on violations, not the enforcement process itself. According to an RCC official, although the system incorrectly counted the number of violations, the case was transmitted to the respondent with the correct recommended civil penalty amount.

Table 6. Violation Count Errors in Enforcement Report Closed HOS Cases, Fiscal Years 2020-2022, and RCC Corrections

Fiscal Year	Total Number of Closed HOS Cases	Number of Closed HOS Cases with Violation Count Errors	Number of HOS Violations Changed by a Manual RCC Review	Corrected Total Number of HOS Violations
2020	126	11	17 added, 18 removed*	211
2021	90	48	68 added	158
2022	362	239	329 added	695
Total	578	298	432 changed	1,064

\*In fiscal year 2020, RCC’s manual review found that 17 violations should have been added and 18 should have been removed from a total of 11 HOS cases.

Source: OIG analysis of FRA data and FRA corrections to that data

RCC officials stated that these violation count errors are the result of the method RCS uses to calculate the number of violations based on other case data fields. To address the violation count error, RCC developed a new data field in 2021 that is intended to correct one issue with the violation counts. According to DOT’s data management policy,<sup>30</sup> data and information need to be fully described so that users have sufficient information to understand their strengths, weaknesses, analytical limitations, security requirements, and how to process them. Per the Order, DOT and its components, such as FRA, will document data schemas and dictionaries for all data and information. However, RCC could not provide system documentation to show how that field is calculated. The only system documentation FRA provided was an outdated RCS User Guide which does not explain how any RCS fields are calculated.

According to an RCC official, the contractor who built RCS generated a user guide with workflows for documentation in 2020, but currently, there is a different contractor managing RCS and they also support multiple program offices at FRA. An RCC official said she requested an updated User Guide from the new contractor, which was being reviewed by RCC as of July 2023. However, if this updated User Guide does not provide detailed, updated system documentation such as a data dictionary or updated workflows, neither OIG nor RCC officials will

<sup>30</sup> DOT, *Data Management Policy* (DOT Order 1351.34), July 13, 2017.

be able to confirm that the calculations in the new violation count field are accurate.

Furthermore, we learned the new data field does not fully fix the violation count issue. An RCC official stated the new field generates accurate violation counts for each citation of a rule or statute being violated and allows RCC attorneys to generate demand letters and complete their enforcement process using accurate data. However, RCS still does not accurately calculate the total number of violations associated with a case. As a result, reporting or analysis of FRA's enforcement actions using RCS data still will not correctly report the total number of violations closed. An FRA official told us she requested FRA's IT group implement a new field that would calculate the total violation count per case in RCS in July 2023.

According to RCC officials, a case and its data go through multiple layers of review during the enforcement process. An RCC official informed us that a critical data quality step is an RCC attorney's review of their assigned cases. Attorneys should identify any errors in data fields that are used to calculate the violation count and edit those fields directly in RCS. They also should identify data errors when generating and reviewing civil penalty demand letters for respondents, since the letters include a violation count. However, there is limited current guidance on data quality steps attorneys should take when reviewing a case in RCS. There is the outdated RCS User Guide that provides high-level guidance on navigating RCS. There are also informal SOPs that describe process steps for actions like reviewing or transmitting a case. Some of these steps include discussion of data quality in the enforcement process. Additionally, the official stated that not all RCC attorneys may be aware of the violation count issue and that some attorneys are more meticulous than others in their reviews of case data. In July 2023, RCC sent a reminder to attorneys regarding data quality when they review their cases. Ultimately, the total violation count error is the result of a system calculation issue in RCS, as discussed above, and, as a result, cannot be fixed by RCC attorneys during their data quality checks during the enforcement process. In other words, while attorney reviews may catch other types of inaccuracies before the cases are transmitted, these reviews do not affect the accuracy of the case-level violation counts used in the Annual Enforcement Reports.

Another stage at which the violation count errors could have been identified and corrected is when FRA uses RCS data to prepare the Annual Enforcement Reports. However, RCC officials informed us there is no guidance for producing Annual Enforcement Reports. For the 2020 report, an RCC official informed us an RCC attorney manually pulled data from RCS. The fiscal year 2022 report was the first Annual Enforcement Report to use a direct export of data from RCS. Other FRA offices outside of RCC are also involved in the report development process, but there is no description of their roles.

## Information FRA Provides on Other Required Annual Enforcement Report Elements is Outdated

In addition to publishing inaccurate violation count data, FRA's Annual Enforcement Reports contain outdated information. While FRA is required by statute to analyze the effect of their oversight on the number and rate of accidents and railroad safety, from the fiscal year 2009 report until the most recent fiscal year 2022 report, FRA has used excerpts from the same 2009 study, "The Federal Railroad Administrations Use of Civil Penalties in the Federal Railroad Safety Program," to satisfy this requirement. As recently as the fiscal year 2020 report, this section has included a chart of the train accident rate using data last labeled fiscal year 2008. Despite the age of this study, an RCC official informed us FRA includes the study because the information remains relevant.

FRA is also required to provide an explanation of any changes in enforcement programs or policies that may substantially affect the information reported. For instance, the fiscal year 2013 report stated that FRA transitioned to a paperless enforcement system, but subsequent Annual Enforcement Reports do not note more recent changes such as the shift to a new system, RCS in 2020, or problems such as the violation count errors RCS introduced into the fiscal years 2020, 2021, and 2022 reports. Additionally, the Annual Enforcement Reports do not mention other changes, such as FRA's reorganization of its Office of Railroad Safety in 2020, which centralized some oversight areas under specialists based at FRA headquarters and made other substantial changes to how the Agency oversees compliance with railroad safety regulations.

According to an RCC official, some changes at FRA, such as the reorganization of its Office of Railroad Safety, may not merit inclusion as a change in its Annual Enforcement Report. However, FRA currently has no guidance on the production of Annual Enforcement Reports, and there is no definition of what FRA considers a change in enforcement program or policy that substantially affects information reported. There is also no explanation of FRA's process for analyzing the effect of the number of inspections conducted and enforcement actions taken on the number and rate of accidents and railroad safety, as required.

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## FRA Has Not Consistently Ensured Passenger Railroads' Compliance With Fatigue Management Requirements

Title 49 C.F.R. § 228.407 (work schedule analysis regulation) requires FRA to review and approve passenger and tourist railroad work schedules and any



associated FMPs, and to audit these work schedules every 2 years. In addition, 49 C.F.R. § 228.6 allows FRA to cite civil or criminal penalties for violations of any requirement of 49 C.F.R. Part 228. We found that FRA, with OP and AMD staff, jointly reviewed and approved passenger railroad work schedules as required after the issuance of the work schedule analysis regulation in 2011. However, since 2012, FRA has not consistently ensured that passenger railroads are complying with railroads' requirement to submit updated work schedules and FMPs. Additionally, FRA has not audited these work schedules every 2 years, as required. One of AMD's fatigue SMEs informed us that this did not occur because the OP Division did not reach out to them to review updated work schedules or to conduct audits after the initial 2012 reviews. Additionally, the lack of an SOP outlining responsibilities and procedures to conduct these reviews was a reason why FRA's oversight of these requirements was inconsistent, and why FRA did not conduct audits of the work schedules as required. These impacts from a lack of written procedures and adequate planning underscore the importance of clearly documenting internal controls that may appear in management directives, administrative policies, or operating manuals, as stated in GAO's Internal Control Standards.

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## **FRA Began a Review in 2022 To Bring Railroads Into Compliance, but Did Not Complete It**

According to the HOS SME, in summer 2020 FRA identified the gap on oversight of passenger railroad work schedules following the initial 2012 approvals of work schedules and FMPs railroads submitted as required by the work schedule analysis regulation. From January 2022 to June 2022, OP and AMD staff requested work schedules from a subset of larger passenger railroads for review and approval with the goal to bring the passenger railroads back into compliance with the work schedule analysis regulation. OP would coordinate work schedule and FMP reviews and was responsible for enforcing compliance with the regulation. AMD reviewed railroad work schedules and analyzed the schedules using a fatigue modeling tool called Fatigue Audit InterDyne (FAID). Documentation we reviewed shows FRA staff discussed work schedules for 13 passenger railroads. FRA approved work schedules and FMPs from six railroads and rejected those from two railroads because the FMPs did not meet the requirements in the work schedule analysis regulation. FRA also developed guidance for railroads to help them comply with the work schedule analysis regulation. However, according to FRA officials, this review was put on hold around June 2022 because the OP staff member's detail ended and OP had other HOS oversight priorities, such as responding to higher volumes of HOS complaints.

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## **FRA Drafted Guidance for Reviewing FMPs and Conducting Fatigue Program Reviews, but Has Not Finalized It**

FRA officials drafted an SOP that places responsibility for the work schedule analysis regulation oversight with AMD. This SOP outlines a plan to conduct program reviews of passenger railroads every 2 years to meet the audit requirements stated in the work schedule analysis regulation.<sup>31</sup> AMD has also developed a draft process document for conducting a baseline review to bring all 37 passenger railroads into compliance with the work schedule analysis regulation. Additionally, AMD maintains guidance for performing its fatigue analyses. However, FRA's draft SOP does not describe how staff would review work schedules and FMPs for compliance with the work schedule analysis regulation. According to a fatigue SME, reviews of the FMPs have relied on their professional judgement. The fatigue SMEs informed us they are considering adding steps to their draft guidance that would provide more detail on how to conduct these reviews.

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## **FRA Has Not Cited Any Railroads for Work Schedule or Fatigue Mitigation Plan Defects or Recommended Violations**

FRA officials have not cited any defects or recommended violations for any railroad's failure to comply with the work schedule analysis regulation in the more than 10 years since the rule was issued. Prior to our audit, there was no written procedure outlining responsibilities or procedures for this enforcement activity. In addition, according to FRA's RSIS manager, FRA does not have defect codes that would allow FRA officials to cite defects and violations of the work schedule analysis regulation in its inspection data entry system, Railroad Inspection System for Personal Computers (RISPC). However, FRA was developing these codes in August 2023 so that AMD officials such as the fatigue SMEs can recommend enforcement action against noncompliant railroads. AMD's new draft guidance gives AMD staff the responsibility for writing defects and violations of the work schedule analysis regulation.

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<sup>31</sup> AMD calls these reviews "program reviews" instead of "audits" because they are not designed to meet generally accepted Government auditing standards.

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## FRA Recognized but Has Not Addressed Gaps in Its Work Schedule and Fatigue Mitigation Plan Oversight of Tourist Railroads

In 2011, FRA estimated there were 140 tourist railroads that must comply with the work schedule analysis regulation in its final rule for 49 C.F.R. Part 228. A fatigue SME informed us an official in FRA's Passenger Rail Division coordinated with tourist railroads when the regulation was first issued, but there was little documentation of FRA reviews or approvals for these tourist railroads. It is unclear how many of the roughly 140 tourist railroads were reviewed by FRA. The official further noted that most tourist railroads do not have higher risk schedules and would need to submit a letter to FRA certifying they do not have higher risk schedules instead of submitting a work schedule analysis. However, tourist railroads with dinner service or other service in evening or nighttime hours do have a requirement to analyze their work schedules and, if necessary, develop FMPs. The fatigue SME attributed this gap in oversight to a lack of an SOP covering the tourist railroads. FRA's current draft guidance and draft process document for conducting a baseline review do not explicitly mention tourist railroads. AMD's fatigue SMEs asserted both documents should cover tourist railroads and they intend to add tourist railroads to these documents.

Additionally, by July 13, 2023, FRMPs were due from railroads required to comply with risk reduction regulations as part of their respective Risk Reduction Program or System Safety Programs for FRA review and approval. The FRMP is described as a comprehensive, system-oriented approach to safety in which a railroad determines its fatigue risk by identifying and analyzing applicable hazards and takes action to mitigate or eliminate that fatigue risk. According to a fatigue SME, FRMPs go beyond FMPs required by the work schedule analysis regulation because of the systems-level approach. Additionally, passenger railroads must develop FRMPs regardless of their work schedule types, unlike under the work schedule analysis regulation where only passenger railroads with high-risk work schedules must develop FMPs. In the FRMP final rule, FRA states that passenger railroads can use existing programs and work schedule analyses used for compliance with the work schedule analysis regulation as a starting point for developing their FRMPs. However, as described above, FRA has not consistently overseen these fatigue requirements under the work schedule analysis regulation since 2012.

To execute its fatigue management oversight responsibilities, FRA is charged with enforcing railroad compliance with work schedule, fatigue analysis, and FMP requirements, all of which contribute to railroad employee and passenger safety.

FRA has developed draft guidance and a plan to meet these requirements. However, without ensuring that passenger and tourist railroads comply with this regulation, FRA cannot be sure these railroads are mitigating the risk of employee fatigue.

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## Conclusion

The Nation relies on tens of thousands of railroad employees to get people and goods to their destinations safely. To address the adverse impacts and underlying causes of fatigue in the railroad industry, FRA oversees railroad hours of service compliance and fatigue management. However, the Agency lacks documented procedures, reliable reports, and risk-based, data-driven plans for conducting oversight of HOS compliance and the passenger railroad fatigue analysis and mitigation requirement. As a result, the Agency does not know whether it is effectively deploying its limited HOS and fatigue management oversight resources in the most efficient ways to foster safe railroad operations that protect railroad employees, the travelling public, and the communities through which trains travel.

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## Recommendations

To improve FRA's oversight of HOS and fatigue management, we recommend that the Federal Railroad Administrator:

1. Finalize and implement the draft HOS complaints SOP to provide details on the HOS SME's evaluation, investigation procedures, and tracking.
2. Develop, document, and implement a process to routinely analyze HOS complaint data to identify trends and communicate results to enforcement staff.
3. Develop, document, and implement a process for analyzing excess service reports, identifying trends, and communicating results to enforcement staff.
4. Improve how excess service reports are submitted by railroads or processed by FRA to facilitate data collection and analysis.
5. Formally document the HOS audit process, including factors to consider when selecting railroads for audit (such as complaints, excess reports, and/or other factors), in a compliance manual or SOP.

6. Develop and implement centralized storage for key HOS audit documents, such as executive summaries, inspection reports, or other pertinent correspondence.
7. Evaluate inspector and SME staffing needs based on data to effectively perform HOS oversight, including audits, and document the results.
8. Update the OP Compliance Manual, the Signal Compliance Programs and Policies, and/or General Manual to clarify the definitions of HOS-related activity codes for OP and S&TC disciplines so that inspectors can accurately record activities that do not result in findings of noncompliance and include specific guidance to inspectors completing HOS-related inspection reports, including the correct use of source codes for specific HOS activities, and when multiple same-day HOS reports should be created.
9. Modify the Railroad Inspection System for Personal Computers (RISPC) to only accept correct HOS-related inspection report entries and add activity codes to record defects and violations of 49 C.F.R. § 228.407.
10. Develop and implement training for OP and S&TC Division specialists and inspectors on reporting HOS-related inspections correctly, including the mandatory use of activity code 228 in conjunction with either HSL or 228P, and the meaning of those activity codes.
11. Develop, document, and implement a review process that includes the HOS SME to check the accuracy of HOS-related inspection reports.
12. Document and implement HOS oversight planning processes, including guidance on data sources that should be used to inform planning.
13. Review and clarify FRA's Civil Penalties Schedule to include all sections of 49 U.S.C. Chapter 211 and 49 C.F.R. Part 228 Subparts D and F in the published violation base amounts for HOS civil penalties.
14. Correct the RCS error that results in incorrect case-level violation counts.
15. Document the current RCS configuration that shows formulas for calculations performed by the system and data sources.
16. Formalize existing RCC enforcement process guidance in a standard operating procedure, memo, or manual and provide training for users of RCS, including data quality steps.
17. Develop, document, and implement guidance on producing Annual Enforcement Reports, including parameters for what information is included or updated, and validating the accuracy of reported data.

18. Finalize the process document for conducting a baseline review of all passenger railroads subject to 49 C.F.R. § 228.407 and complete the baseline review.

19. Finalize and implement the draft SOP for oversight of 49 C.F.R. § 228.407.

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## Agency Comments and OIG Response

We provided FRA with our draft report on February 5, 2024, and received its formal response on March 5, 2024. FRA's response is included in its entirety as an appendix to this report. FRA concurred with our 19 recommendations and provided appropriate actions and completion dates. Accordingly, we consider all recommendations resolved but open pending completion of the planned actions.

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## Actions Required

We consider recommendations 1 through 19 resolved but open pending completion of planned actions.

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## Exhibit A. Scope and Methodology

This performance audit was conducted between November 2022 and February 2024. We conducted this audit in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Our review focused on FRA's HOS and fatigue management oversight activities from 2017 through 2022. Some data we requested from FRA was readily available only from roughly March 2020 to present due to the Office of Railroad Safety reorganization that moved some oversight responsibilities from FRA's regional offices to headquarters. We identified criteria related to FRA's oversight of HOS and fatigue management, including HOS laws and regulations in 49 U.S.C. Subtitle V, Chapter 211 and 49 C.F.R. Part 228. We also reviewed fatigue management regulations in 49 C.F.R. Part 228, 49 C.F.R. Part 270, and 49 C.F.R. Part 271. We reviewed 49 U.S.C. Subtitle V, Chapter 213, Penalties; 49 U.S.C. § 20120, Enforcement Report; 49 U.S.C § 20156, Railroad safety risk reduction program; 49 C.F.R Part 211, Waivers; and FRA's Civil Penalty Schedules. We reviewed FRA's *Hours of Service Compliance Manual for Freight Operations* (2013), *Hours of Service Compliance Manual for Passenger Operations* (2014), *Operating Practices Compliance Manual* (2012), *Signal and Train Control Compliance Programs and Policies* (2012), *General Manual* (2018), including Chapter Four, FRA Accident Investigation Program (2022), *User Guide for Railroad Compliance System* (2020), FRA's SOP on HOS Complaints, FRA's internal Office of Railroad Safety Waiver Process, FRA's draft HOS Electronic Recordkeeping Checklist, FRA Fatigue Analysis guidance, informal RCC guidance on the enforcement process, and draft FRA guidance on passenger railroad work schedule reviews. We applied DOT Order 1351.34 Data Management Policy and DOT's Information Dissemination Quality Guidelines. Finally, we also applied GAO's *Standards for Internal Control in the Federal Government* to our review.

To assess FRA's HOS oversight, we reviewed the working list used to track the status of all complaints maintained by an OP official outside of EDMS. This list tracks all complaints received by the OP Division from March 2020 to February 2023, including those related to HOS. FRA also provided a draft SOP on the complaint review process. We also reviewed Form FRA F6180.3 excess service reports submitted by railroads. These reports are stored on FRA file drives and manually sorted into folders. Given variations in how railroads label and group their PDF file submissions, we worked with OIG statisticians to select a sample of 2 months from a sample universe of 15 months, from January 2022 to March

2023 using systematic sampling. We then analyzed 772 instances of excess service submitted in 26 excess service reports during those 2 months, June and December 2022, for common characteristics and to identify how many forms included handwriting. Additionally, we obtained a list of HOS audits FRA had conducted from 2017 through 2022. We requested and reviewed documentation associated with 3 of the 19 audits on this list. We also observed the HOS SME and FRA inspectors conduct two HOS audits of Amtrak and Alaska Railroad in 2023 and reviewed associated documentation. We requested and obtained access to FRA's RSIS after a significant delay of 56 days. After receiving a system walk-through, we used RSIS to download and review FRA HOS inspection data and inspection reports from 2017 through 2022 for the OP and S&TC Divisions. During this analysis and data reliability review, we identified several data quality concerns that are the basis of findings in this report. During our exit conference, FRA officials described HOS audits of Class III railroads led by the Agency's Districts and subsequently provided a description of this District-led process and a RSIS-generated list of District-led Class III audits from 2017 through November 9, 2023. To validate this list, we obtained one year of the RSIS source data—inspection reports—for the year 2022 and reviewed the content of the inspection reports to verify whether the FRA inspections were done pursuant to HOS audits in 2022. We also reviewed FRA's HOS smartphone application and compared the app to FRA's HOS Compliance Manuals. Finally, we interviewed FRA officials in the OP, S&TC, and Railroad Safety Information System Divisions, as well as representatives from two labor unions (Brotherhood of Locomotive Engineers and Trainmen and Sheet Metal Air Rail Transportation, Transportation Division), on FRA's HOS oversight and communication processes.

To assess FRA's HOS enforcement actions, we analyzed the data in reports from our scope years of fiscal years 2017 through 2022. We compared closed case, violation, and civil penalty dollar amount data for HOS cases and other safety cases for these fiscal years. However, when validating our methodology and initial results with FRA RCC officials, we identified data errors that had been published in the fiscal years 2020, 2021, and 2022 Annual Enforcement Reports. The data error meant that the total number of violations associated with closed cases was not correct, impacting our ability to accurately analyze closed HOS violations. We worked with an RCC official to obtain an export of closed case data from RCC's case management system, the Railroad Compliance System, for fiscal years 2020 through 2022. That RCC official manually validated and corrected the number of violations associated with each closed HOS case for those fiscal years. We determined the corrected data were reliable. However, we did not ask FRA to correct violation counts for other types of safety violations because of the resource-intensive nature of this validation. As a result, we did not compare HOS enforcement against enforcement actions for other types of rail violations. We also reviewed documentation of RCC's requests for updated fields and fixes to RCS and interviewed RCC officials on FRA's enforcement processes, HOS



enforcement actions, on the data errors, and FRA's plan to address those errors in RCS.

To assess FRA's fatigue management oversight activities, we requested documentation related to FRA's oversight of the FRMPs required under the Risk Reduction and System Safety Program rules. We also obtained training documentation that AMD staff had presented to railroads. However, since these FRMPs were not due to FRA until July 13, 2023, we did not review FRA's review of the FRMPs. For oversight of passenger and tourist railroad work schedules under 49 C.F.R. § 228.407, we obtained documentation of FRA's 2012 review and approval of passenger railroad work schedules. We also reviewed documentation associated with FRA's 2022 review of 13 passenger railroads' work schedules and FMPs. FRA provided a draft SOP for future work schedule reviews outlining roles and tasks. We contacted FRA's RSIS manager to identify whether there were any defect codes in RISPC that would allow FRA to recommend a violation of the work schedule requirements and found there were none. Finally, we interviewed AMD's two fatigue SMEs about their fatigue management activities and plans for fatigue management oversight.

To review FRA's other HOS oversight activities, we interviewed an FRA official from the Accident Reporting and Analysis Division about fatigue analyses conducted as part of accident investigations. We reviewed summary-level data on the number of FRA investigations assigned between 2017 and 2021 and fatigue analyses completed in 2020 and 2021. We also interviewed RCC officials and reviewed public docket information for the 15 HOS waivers identified in January 2023 by FRA as active or pending.

To assess FRA's fatigue research activities, we reviewed reports published by FRA: *Cognitive and Collaborative Demands of Freight Conductor Activities: Results and Implications of a Cognitive Task Analysis* (2012), *Fatigue Status of the US Railroad Industry* (2013), and *The Impact of Commute Times on the Fatigue and Safety of Locomotive Engineer and Conductors* (2023). We reviewed documentation related to a pilot study on employee fatigue and railroad calling windows FRA was mandated to conduct under the Bipartisan Infrastructure Law (Pub. L. No. 117-58 (2021)). We also interviewed officials from AMD and FRA's Human Factors Research division on their fatigue research activities.

To assess whether and how FRA's 2023 Supplemental Safety Assessment of Norfolk Southern addressed HOS oversight and fatigue management, we reviewed FRA announcements, documentation of the fatigue SMEs' role in the safety culture assessment, Congressional correspondence, and the Supplemental Safety Assessment published on August 9, 2023. We also interviewed AMD and OP officials to identify their roles in the assessment.

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## Exhibit B. Organizations Visited or Contacted

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### Federal Railroad Administration

#### FRA Headquarters

Audit Management Division, Office of Data Analysis and Program Support, Office of Railroad Safety

Human Factors Research Division, Office of Research, Data, and Technology

Incident Management, Security, Preparedness, Accident Reporting and Analysis Division, Office of Railroad Safety

Office of Safety Law, Office of the Chief Counsel

Operating Practices Division, Office of Railroad Systems and Technology, Office of Railroad Safety

Rail Safety Data and Information Management Division, Office of Data Analysis and Program Support, Office of Railroad Safety

Signal, Train Control, and Crossings Division, Office of Railroad Systems and Technology, Office of Railroad Safety

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### Other Organizations

Alaska Railroad

Brotherhood of Locomotive Engineers and Trainmen (BLET)

Sheet Metal Air Rail Transportation, Transportation Division (SMART-TD)

National Railroad Passenger Corporation dba Amtrak

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## Exhibit C. List of Acronyms

AMD	FRA's Audit Management Division
C.F.R.	Code of Federal Regulations
DOT	Department of Transportation
EDMS	Electronic Document Management System
FAID	Fatigue Audit InterDyne biomathematical fatigue model
FIP	Focused Inspection Process
FMP	Fatigue Mitigation Plan
FRA	Federal Railroad Administration
FRMP	Fatigue Risk Management Program
GAO	Government Accountability Office
HOS	Hours of Service
Norfolk Southern	Norfolk Southern Railway
OIG	Office of Inspector General
OP	Operating Practices
RCC	FRA's Office of Chief Counsel
RCS	Railroad Compliance System
RES	Railroad Enforcement System
RISPC	Railroad Inspection System for Personal Computers
RSIA	Rail Safety Improvement Act of 2008
RSIS	Railroad Safety Information System
S&TC	Signal, Train Control, and Crossings
S&TC Technical Manual	Signal Compliance Programs and Policies
SME	Subject Matter Expert
SOP	Standard Operating Procedure
T&E	Train employees
U.S.C.	United States Code

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## Exhibit D. Major Contributors to This Report

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SENIOR ANALYST

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ANALYST

ATTORNEY ADVISOR

WRITER-EDITOR

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## Appendix. Agency Comments



U.S. Department  
of Transportation

Federal Railroad Administration

# MEMORANDUM

Subject: INFORMATION: Management Response to Office of Inspector General (OIG) Draft Report, FRA Lacks Written Procedures and Formal Planning for Oversight of Railroad Hours of Service Compliance and the Passenger Railroad Fatigue Management Requirements

Date: March 4, 2024

From: Amit Bose   
Administrator, Federal Railroad Administration

To: David Pouliott  
Assistant Inspector General for Surface  
Transportation Audits

Reply to the Attn of: RCFO-50

The Federal Railroad Administration (FRA) is committed to continuously improving efforts to address fatigue related safety risks. To enhance these efforts, FRA issued regulations in 2022 to expand regulatory oversight of fatigue, requiring certain freight and passenger railroads to develop and implement Fatigue Risk Management Programs (FRMPs), as part of their Risk Reduction or System Safety Programs. Beginning in late 2022, FRA acted to comprehensively modernize its rail safety civil monetary penalty schedules, increase the penalty amounts recommended in its guidelines, and ensure that the amounts in FRA penalty guidance keep pace with inflation. This work culminated in 2023 with the adoption of new penalty schedules doubling base penalty amounts and providing for annual increases in these amounts for inflation. In all cases during the covered period, FRA imposed penalty amounts that complied fully with the law and applicable FRA guidelines, and the new base penalty amounts will enable FRA to assess higher penalties, as appropriate, including when settlement occurs.

Civil monetary penalties are but one metric for enforcement activity; other key indices include inspections, individual liability actions (such as warning letters or disqualification from safety sensitive service), special notices for repair, compliance orders, and emergency orders, all of which FRA utilizes as part of a comprehensive enforcement framework to ensure that all safety requirements, including those relating to Hours of Service (HOS), are followed.

Further, FRA has built and expanded a team of subject matter experts to administer FRA regulations that includes experts in operating practices and signal employee HOS laws and regulations, as well as experts in fatigue analysis and management. This team coordinates and collaborates across three separate Divisions in FRA's Office of Railroad Safety to ensure best practices are developed and followed. This team is supported by experts in FRA's Office of the Chief Counsel and FRA's Office of Research, Data, and Innovation who develop and manage the various systems and databases to track and manage inspections, audits, and enforcement actions.

FRA has the following initiatives underway:

- Documenting procedures for inspecting, auditing, and evaluating compliance of railroad HOS systems, as well as evaluating work schedules for fatigue risk and review/approval of railroad FRMP plans;
- Expanding the HOS and Fatigue Management teams to support increasing demands to perform inspections and audits, review and approve railroad plans, and respond to complaints;

- Updating databases/systems to enhance the identification of safety trends and analysis of inspections and audit reports to support the risk-based prioritization of the Office of Railroad Safety’s regulatory oversight activities; and
- Formalizing guidance for enforcement processes and procedures for producing Annual Enforcement Reports.

Based on our review of the draft report, FRA concurs with OIG’s 19 recommendations as written. The table below includes target action dates of when we plan to address each recommendation:

<b>Recommendation</b>	<b>Target Action Date</b>
Recommendations 1, 6, 8, 9, 10, 11, and 12	September 30, 2024
Recommendations 2, 16, 17, and 18	December 30, 2024
Recommendations 3, 4, and 5	February 28, 2025
Recommendations 7, 13, and 14	May 31, 2024
Recommendation 15	December 31, 2025
Recommendation 19	July 31, 2024

We appreciate the opportunity to comment on OIG’s draft report. Please contact Ms. Rosalind Howard, FRA Audit Liaison, at [Rosalind.Howard@dot.gov](mailto:Rosalind.Howard@dot.gov) with any questions.

U.S. Department of Transportation  
Office of Inspector General

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