
Office of Inspector General

Audit Report

FRA HAS TAKEN STEPS TO IMPROVE SAFETY DATA REPORTING BUT LACKS STANDARD PROCEDURES AND TRAINING FOR COMPLIANCE AUDITS

Federal Railroad Administration

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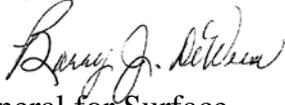


U.S. Department of
Transportation
Office of Inspector General

Memorandum

Subject: **ACTION:** Final Report – FRA Has Taken Steps
To Improve Safety Data Reporting but Lacks
Standard Procedures and Training for Compliance
Audits
Federal Railroad Administration
Report Number ST2017045

Date: May 3, 2017

From: Barry J. DeWeese 
Assistant Inspector General for Surface
Transportation Audits

Reply to
Attn. of: JA-30

To: Federal Railroad Administrator

In 2015, there were nearly 12,000 reported accidents and incidents on our Nation's railways. Improving rail safety and protecting the lives of passengers, employees, and the public depends on effectively tracking, identifying, and mitigating safety risks. The Federal Railroad Administration (FRA) tracks the safety record of the rail industry in its public databases of accident and incident data. FRA uses these data to develop its annual National Inspection Plan,¹ which FRA uses to target inspection resources and monitor how regions are meeting their inspection goals.

Quality data are critical to the successful development and implementation of a data-driven, risk-based approach to safety oversight. However, much of FRA's safety data are self-reported by the rail industry, which poses challenges in ensuring their accuracy and completeness. Because of the Agency's reliance on railroads' self-reporting, and the impact these data have on FRA's safety enforcement planning and priorities, we initiated this audit with the objective to assess FRA's collection and management of railroad safety data. Specifically, we assessed FRA's (1) guidance for reporting accident and incident data and (2) audits for ensuring compliance with accident and incident reporting requirements.

¹ FRA's National Inspection Plan provides guidance to each of its eight regional offices on how its inspectors in each of FRA's five inspection disciplines should divide their work by railroad and State, with numeric goals generated by predictive modeling.

We conducted this review in accordance with generally accepted Government auditing standards. Exhibit A details our scope and methodology, and exhibit B lists the organizations we visited or contacted.

RESULTS IN BRIEF

FRA provides detailed, up-to-date guidance for reporting accident and incident data, but some reporting problems remain. FRA's guidance primarily consists of the FRA Guide for Preparing Accident/Incident Reports (FRA Guide), which is organized by the type of reporting form used to report an accident and closely follows reporting regulations in Part 225.² According to FRA's recommended violations data, between 2005 and 2015 the number of Part 225 violations³ declined, indicating that accident and incident reporting by railroads has improved since FRA began auditing the reporting process in 2005. However, in 2015 there were still over 100 Part 225 violations and more than 1,600 reporting defects identified by FRA inspectors. While there is no evidence of widespread underreporting of accidents, these violations and defects are due in part to the complexity of FRA's reporting requirements and data reporting systems, which require detailed guidance that is open to interpretation by its users. This increases the risk that reporting officers and inspectors may miss requirements or interpret them inconsistently. However, FRA does not routinely train reporting officers on how to interpret key reporting requirements or avoid common errors nor does FRA provide specific audit training to FRA staff. Specifically, we observed instances where differences between what was included in the FRA Guide and in the reporting form field instructions impacted proper oversight and reporting of incidents. Without experience or routine training from FRA, reporting officers and inspectors conducting compliance audits may not find information provided in the FRA Guide that is needed to correctly assess and report accidents/incidents. As a result, FRA continues to identify reporting defects and violations that could otherwise be prevented.

FRA conducts audits of all Class I railroads to verify compliance with safety reporting requirements, but lacks standard procedures or training and does not audit all non-Class I railroads as frequently as required. For Class I railroads,⁴ FRA specialists and inspectors⁵ review railroad reporting information required by Part 225 regulations, including audits of rail grade crossing accident data required

² 49 CFR Part 225 (Part 225), "Railroad Accidents/Incidents: Report, Classification, and Investigations," has requirements for railroad accident/incident reporting intended to ensure railroads provide accurate information to FRA concerning hazards and risks that exist on the Nation's railroads.

³ An example of a Part 225 violation is not reporting a rail equipment accident that caused damage exceeding \$10,500.

⁴ As of 2015, Class I railroads are railroads with operating revenues that exceed approximately \$457.9 million. Currently, there are seven Class I freight railroads. FRA audits Amtrak with the Class I railroads. All others are non-Class I railroads.

⁵ FRA has two specialists responsible for conducting Class I railroads audits. They are often assisted by regional inspectors. Some of these regional inspectors are also responsible for auditing non-Class I railroads in their regions.

by the Rail Safety Improvement Act of 2008 (RSIA). The scope of FRA's audits includes more reporting requirements than mandated, and specialists audit the seven Class I railroads plus Amtrak every 2 years, as required. According to FRA, these railroads account for nearly 84 percent of train miles operated. In addition, these specialists told us that in fiscal year 2016 they also began auditing six holding companies that own or control several short line railroads. However, FRA has not met requirements to audit all of the roughly 800 non-Class I railroads every 5 years. Between 2005 and 2015, FRA's inspection data show FRA did not audit 126 of the approximately 800 non-Class I railroads, in part because the Agency does not centrally track or prioritize audits for these railroads. Furthermore, FRA's overall audit process is taught on the job, without written audit procedures or formal training on how to verify compliance. According to FRA, this approach gives staff the flexibility to respond to different railroad companies' operating environments. However, it leaves FRA vulnerable to losing its ability to conduct effective reviews or continue operations if one of the small number of experienced specialists or inspectors leave the Agency.

We are making recommendations to clarify reporting guidance, improve FRA's oversight of non-Class I railroads' mandatory reporting, and formalize the Part 225 audit process.

BACKGROUND

Railroads are required to report information on accidents and incidents that meet or exceed parameters listed in Part 225. These regulations prescribe conditions for immediate reporting of certain accidents/incidents as well as monthly reporting of accidents or incidents, such as those involving highway rail grade crossings, rail equipment damage above a certain dollar⁶ threshold, death or certain injuries to passengers or others, and certain injuries and occupational illnesses of railroad employees. Part 225 includes record retention requirements and requires each railroad to adopt an Internal Control Plan to ensure the accuracy of reported data.

The four primary forms used for accident/incident reporting are as follows:

- Form 6180.54 (Form 54) Rail Equipment Accident/Incident Report,
- Form 6180.57 (Form 57) Highway-Rail Grade Crossing Accident/Incident Report,
- Form 6180.55 (Form 55) Railroad Injury and Illness Summary, and
- Form 6180.55a (Form 55a) Railroad Injury and Illness Continuation Sheet.

⁶ During this audit, the threshold was \$10,500 in damages.

Railroads may submit accident/incident data to FRA in hard-copy reports, through an electronic reporting tool called AIRGNET, or through other electronic means, which must comply with certain standards.

FRA's Railroad Safety Information Management Division collects and manages these data with its Railroad Accident Incident Reporting System (RAIRS) and Railroad Safety Information System (RSIS). FRA describes RSIS as a series of databases used to house and manage various railroad safety-related data, including the accident/incident repository. Once the railroad safety data are collected and stored, they may be queried by the public. Accident and incident data are not updated with the findings from FRA accident investigations. Investigation reports are stored separately.

FRA is required⁷ to audit all Class I railroads at least once every 2 years and to conduct audits of all Class II and III railroads⁸ at least once every 5 years in order to ensure that all grade crossing collisions and fatalities are reported to FRA. This requirement addresses the findings and recommendations of an audit report our office published in 2005⁹ and stems from Section 209 of the RSIA.

FRA'S ACCIDENT REPORTING GUIDANCE IS EXTENSIVE AND PART 225 COMPLIANCE HAS IMPROVED, BUT VIOLATIONS AND DEFECTS REMAIN

FRA provides detailed, up-to-date reporting guidance in its FRA Guide, its Companion Guide: Guidelines for Submitting Accident/Incident Reports by Alternative Methods, and the Office of Safety Analysis Web site. The FRA Guide is organized by the type of reporting form used to report an accident (e.g., FRA form F6180.54 is used to report accidents involving rail equipment) and closely follows Part 225 reporting regulations. Railroad reporting officers also receive corrections and guidance from inspectors conducting audits and contractors processing reports submitted manually and those submitted electronically through AIRGNET.

⁷ FRA audits of railroads' Part 225 reporting are required by 49 USC § 20901.

⁸ Railroad class is determined by the adjusted operating revenues generated by the company each year. In 2015, the adjusted operating revenue for Class I railroads exceeded roughly \$457.9 million. Class II railroads have annual operating revenue between approximately \$36.6 million and \$457.9 million. Class III railroads have annual operating revenue of less than roughly \$36.6 million.

⁹ *Audit of Oversight of Highway Rail Grade Crossing Accident Reporting, Investigations, and Safety Regulations* (OIG Report No. MH-2006-016), November 28, 2005. OIG reports are available on our Web site at <https://www.oig.dot.gov/>.

Between 2005 and 2015, Part 225 violations and defects¹⁰ declined approximately 69 percent and 39 percent, respectively. During this period, FRA began conducting Part 225 audits and put more controls in place to identify errors when reports are submitted, such as edit controls in its electronic reporting tool, AIRGNET, and contractor validation checks of hard-copy reports. In addition, the railroad industry discontinued the Harriman Award in 2012, which was given to railroads with outstanding safety records, as measured by the number of reported employee injuries. FRA officials said ending this award removed a significant incentive for railroads to underreport injuries.

While Part 225 compliance continues to improve, according to FRA's data some accident and incident reporting problems remain, despite FRA's extensive reporting guidance and data controls. In 2015, FRA inspectors recommended 123 violations and 1,643 defects of Part 225 regulations. Most of these violations were for failure to report accidents. About half of the defects were for errors on reporting forms.

Some of these reporting errors may result from how the FRA Guide is organized. Information needed to make the right decisions on whether to report accidents/incidents and how to correctly complete reports is located throughout the FRA Guide. We observed that reporting officers who file reports and inspectors who review them spend significant time sorting through the FRA Guide's information. This increases the risk that they may miss a requirement or interpret the guidance inconsistently.

For example, we observed that members of an FRA audit team defined differently which accident conditions qualify as "obstructions." The definition of an "obstruction" accident type is explained within the FRA Guide, but is not included or referenced in the reporting form field's instructions. Without thorough knowledge of the information in both the FRA Guide's definitions and form field instructions, accident types may be coded incorrectly by reporting officers or an inspector may identify a defect when the correct code was actually used. To resolve this difference, one of the FRA specialists leading the audit explained which accident conditions should qualify as obstructions by citing definitions of these accident types consistent with the FRA Guide.

In another example from an FRA audit we observed, a railroad reporting officer did not know to include the cost of a part used to fix a damaged car when calculating and reporting the accident/incident total damage, because the part was taken from an out-of-service car. This calculation is used to determine if the damage from an accident/incident exceeds the reporting threshold. The FRA

¹⁰ When FRA inspectors identify noncompliance with regulations, they may recommend a defect (for example, when there is an error on a reporting form) or recommend a formal violation (for example, for repeated defects or a failure to report an accident). A violation is a formal reprimand that may result in a civil penalty.

inspector explained to the reporting officer that parts obtained at no cost from old equipment must be included in the total damage calculation at fair market value. This explanation was supported by instructions accompanying the reporting form in the FRA Guide. However, this aspect of calculating total damages was not mentioned in the definition of reportable damage in another section of the FRA Guide.

Some reporting violations and defects may result from difficulties with the structure of FRA's reporting tools. FRA's systems are well documented and, based on our limited testing, the data are reliable. According to FRA, the Agency regularly updates its systems and maintains railroad safety data going back to 1975. However, a railroad organization we interviewed described a few reporting process issues that led to inspectors flagging defects. For example, some accidents have no obvious contributing cause, so reporting officers may repeat the primary cause code in the secondary cause code field. In many of these cases, FRA's contractor will ask the reporting officer to remove the repeated code and leave the contributing cause field blank. Later, these blank entries are often flagged as defects by FRA inspectors during Part 225 audits. The FRA Guide recommends entering not applicable (N/A) in this situation, but according to the railroad organization, AIRGNET does not print N/A entries on the forms that must be signed.

These problems are further compounded by the fact that FRA does not provide specific audit training to FRA staff or routinely train reporting officers on how to interpret key reporting requirements or avoid common errors. While FRA does provide detailed guidance and oversight to ensure railroads are reporting accurate accident/incident data, the complexities of these processes result in voluminous, detailed guidance that must be interpreted by numerous FRA officials and railroad reporting officers. Interpreting this guidance correctly is necessary to properly report data and, in doing so, limit Part 225 defects and violations.

FRA PERFORMS AUDITS OF RAILROAD COMPLIANCE BUT HAS NOT FORMALIZED THE PROCESS OR TRAINING

FRA conducts audits to verify railroads' compliance with reporting requirements, but lacks formal written audit procedures. The scope of FRA's audits includes more reporting requirements than mandated. FRA conducts audits for the seven Class I railroads and Amtrak every 2 years, as required. However, FRA does not ensure all of the roughly 800 non-Class I railroads are audited every 5 years, as required. In addition, FRA has no written procedures for specialists or inspectors to conduct audits of compliance with FRA requirements because, according to FRA, each railroad operates differently. There also is no formal audit training. Without written policies or procedures to formalize the audit process, FRA does

not have sufficient controls to meet Federal internal control standards¹¹ over this important oversight activity.

FRA Exceeds Requirements by Auditing All Railroad Accident Reporting

FRA conducts audits that are more comprehensive than regulations require. FRA is only required to audit railroad reporting of rail grade crossing collisions and fatalities, but the Agency audits all Part 225 reportable accidents/incidents and casualties because these data are used to make important decisions, such as allocating inspection resources, and must be accurate, according to FRA. The purpose of these audits is to check for properly completed reports and verify the reported data, including identifying accidents or incidents that meet thresholds but were not reported.

FRA audits all seven Class I railroads and Amtrak every 2 years as required. Specialists and inspectors conducting the Class I audit we observed were experienced inspectors who used criteria in the FRA Guide, along with Part 225, as the basis for their audits. These specialists said that in fiscal year 2016 they also began auditing six holding companies that own or control several short line railroads. According to FRA's recommended violations data, as of 2015, Part 225 violations had declined by more than two-thirds (approximately 69 percent) from when audits began in 2005.

FRA Does Not Ensure Non-Class I Railroads Are Audited as Frequently as Required

FRA is required to audit the approximately 800 non-Class I railroads' accident and incident reporting every 5 years. However, 126 of the roughly 800 non-Class I railroads (16 percent) have not received a Part 225 audit since 2005. Some of these railroads may not be required to report because of the nature of their operations,¹² but 83 (66 percent) of them submitted a monthly injury and illness summary in 2015, which indicates they are operating and therefore likely are required to report. These 83 include multiple railroads that transport passengers.

This occurred in part because FRA lacks a standardized inventory of non-Class I railroads that must be audited and a method for prioritizing audits of these railroads. While FRA Headquarters periodically generates a report identifying which railroads have not been audited in the required timeframe, each FRA region is responsible for conducting and tracking Part 225 compliance audits. However,

¹¹ GAO, *Standards for Internal Control in the Federal Government*, September 2014.

¹² For example, a railroad museum without covered service employees or a plant railroad with track that is not connected to the railroad system are not required to report under Part 225, according to the FRA regional offices to which they are assigned.

FRA regional offices could provide reports on only 28 of the 40 randomly selected audits we requested from their lists of non-Class I railroads.

FRA's centralized non-Class I audit planning is currently limited to the lists of planned audits the Office of Rail Safety collects in FRA's annual National Safety Program Plan (NSPP); however, this plan does not detail every non-Class I railroad that FRA must audit to comply with the 5-year audit requirement, and some regions did not provide such information in the NSPPs we reviewed. Some regional offices merely reported the number of audits that would be performed. Moreover, the list is only an annual statement of audits to be conducted that year, and does not speak to the rationale behind which railroads were chosen or how many must still be audited to meet the 5-year mandate, which may have contributed to the number of railroads that have failed to receive an audit since 2005.

As a result, the larger non-Class I railroads may not receive the same level of review as Class I railroads, even though some non-Class I railroads, such as New Jersey Transit, have comparable numbers of reportable accidents. To address this tracking problem, FRA says it is embarking on an initiative to establish a new team focused on rail safety audit management across several programs. Completion of a pilot project is anticipated in June 2017. Without additional risk-based oversight of the major non-Class I railroads, FRA may not have the data necessary to accurately judge risks presented by this group and direct resources accordingly.

FRA Lacks Standard Procedures or Formal Training for Part 225 Compliance Audits

FRA does not have a documented process or formal training for conducting Part 225 compliance audits. Accident and incident reporting requirements are outlined in regulations and the FRA Guide. These requirements are also addressed generally in FRA's inspector training courses. Specialists and inspectors conducting audits use these sources of guidance, but they do not have standard procedures to follow when assessing compliance or deciding what information to target. FRA also lacks specific formal training on how to conduct these audits.

According to FRA, the Agency lacks standard procedures in part because reporting environments¹³ vary by railroad. FRA relies on two specialists to lead and conduct compliance audits for the seven Class I railroads and Amtrak, and the scope of each review is adjusted to fit the audit schedule and type of information

¹³ Class I railroads are not required to be uniform in their data collection and reporting practices. Federal regulations detail what information must be collected and reported in specific timeframes, but allow for alternative methods of submitting some reporting forms. For example, instead of completing FRA Form 6180.54, a railroad may use a proprietary data system to send rail equipment accident reports to FRA electronically in one of the approved file formats.

available (e.g., centralized electronic reporting versus dispersed hard-copy reports). Audits we observed of both Class I and non-Class I railroads addressed most, if not all, Part 225 reporting requirements, but the audit process relies largely on individual judgment without the guidance of specific training on routine processes, potential information sources, and Agency priorities. For example, specialists and inspectors conducting audits we observed generally displayed a common understanding of audit criteria and expectations, but accepted and analyzed various types of information in different ways to answer questions. Specific methods of review were sometimes determined or modified on the spot. For example, an inspector accepted alternative records—conductor logs—he considered stronger evidence in place of dispatch center documentation of unusual occurrences. In another instance, specialists and inspectors used an Excel spreadsheet in place of an official form without checking whether it included all fields required by Part 225 and detailed in FRA’s guidance.

As a result of the lack of standard procedures, inspectors documented non-Class I audits inconsistently, and in some cases documentation did not address all requirements. While the Class I audit reports we reviewed followed a common structure and addressed key elements of Part 225 requirements, several of the non-Class I audit reports we reviewed did not. We reviewed two of the most recent Class I audit reports. We also reviewed a random selection of 6 out of 29 Class I audit reports FRA produced between 2009 and 2015 and reports from audits of 28 randomly selected railroads from the lists of 894 non-Class I railroads¹⁴ provided by FRA’s regional offices. The Class I and Amtrak audit reports we reviewed were similarly structured and shared a common scope. Four of six audit scopes included additional steps to follow up on previous findings or issues particular to that railroad. All audit reports we reviewed included recommendations for violations or defects for reporting errors and missing reports. In contrast, the non-Class I audit reports we reviewed showed more variation in report structure and audit scope, because there are no specific documentation requirements or training for the regional inspectors conducting these compliance audits. Six of 28 were in report format, while most were submitted as inspection forms. The audit scopes described in these reports varied in several areas, including how much effort went to identifying accidents/incidents that met thresholds but were not reported by railroads. Two of these reports reflected interpretations of criteria different from regulations. Overall, the variation we observed in how inspectors conducted non-Class I railroad audits does not reflect oversight sufficient to ensure FRA can consistently identify and correct major reporting errors by smaller railroads.

¹⁴ The list of non-Class I railroads provided by FRA’s regional offices had a total of 894 railroads, but some of these companies may not be active.

Establishing standard procedures and training is particularly important given the small, specialized workforce that currently performs FRA's audits with assistance from other inspectors, as necessary. Two specialists are responsible for conducting the seven Class I and Amtrak audits every 2 years. As of 2016, these specialists say they are also now responsible for auditing six holding companies. In the 2 regions whose inspectors we interviewed, 2 inspectors are responsible for auditing approximately 130 non-Class I railroads every 5 years, in addition to other duties. Because FRA lacks formal training on its audit procedures, the individual pieces of information that specialists and inspectors review during audits, their standards for evidence, and methods are only shared through on-the-job training and documented in the major steps described briefly in audit reports. As a result, FRA is vulnerable to losing its ability to conduct effective reviews of rail safety data reporting or continue Part 225 audit operations if even one of its current specialists and key inspectors conducting these audits leaves the Agency, particularly the two experienced Class I audit specialists.

CONCLUSION

Effectively tracking rail accidents and incidents is a key component to improving rail safety. FRA's actions to reduce reporting violations and defects reflect an understanding of the importance of quality data to a data-driven, risk-based approach to safety oversight. While FRA established detailed guidance for railroads, in addition to regularly auditing how well railroads report accident and incident data, FRA can do more to ensure requirements are better understood and that railroads submit timely, accurate reports. Until then, FRA may continue to face challenges with ensuring it effectively targets its inspection resources to the areas with the greatest risk.

RECOMMENDATIONS

To improve FRA's management and collection of railroad safety data, we recommend that the Federal Railroad Administrator:

1. Update reporting guidance so users can more efficiently and accurately identify reporting requirements for different accident and incident types and better understand the definitions of terms used on reporting forms.
2. Implement routine or Web-accessible training or other outreach to improve how information is provided to railroad reporting officers and enhance their understanding of key reporting requirements and common reporting errors.
3. Develop and implement a standard method for identifying and listing railroads in each FRA region subject to 49 CFR Part 225 requirements.

4. Develop and implement procedures for tracking 49 CFR Part 225 audits of non-Class I railroads and identifying entities exempt from 49 CFR Part 225 reporting requirements.
5. Establish a risk-based prioritization for auditing non-Class I railroads every 5 years. Part of the prioritization process should include determining whether any higher-risk non-Class I railroads should be audited more frequently.
6. Formalize the 49 CFR Part 225 audit process with written guidance that identifies basic procedures, standards of evidence, and common sources of information, along with a process to update these standards and reevaluate audit priorities or scope when necessary.
7. Develop and initiate regular training to FRA staff responsible for 49 CFR Part 225 audits and establish a procedure to update the training when necessary.

AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

We provided FRA with our draft report on March 2, 2017, and received its response on April 17, 2017, which is included as an appendix to this report. FRA concurred with recommendations 3 through 7 and provided appropriate planned actions and completion dates. FRA partially concurred with recommendations 1 and 2.

For recommendation 1, FRA stated that updating or revising the FRA Guide for Preparing Accident/Incident Reports (FRA Guide) would take years because an update requires FRA to amend its regulation, which incorporates the FRA Guide by reference. FRA agreed that its staff and railroad reporting officers would benefit from more guidance and stated that it will develop and publicize questions and answers to address issues identified during the Agency's compliance audits as well as our review. For recommendation 2, FRA stated that railroads, not FRA, are responsible for identifying their employees' training needs. However, FRA agreed that greater access to training is needed, and, as an alternate action, FRA stated it will increase the availability of accident reporting training materials. FRA's proposed alternative actions meet the intent of recommendations 1 and 2.

ACTIONS REQUIRED

We consider recommendations 1 through 7 resolved but open pending completion of planned actions.

We appreciate the courtesies and cooperation of FRA representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-5630 or Wendy Harris, Program Director, at (202) 366-2794.

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cc: The Secretary
DOT Audit Liaison, M-1
FRA Audit Liaison, ROA-2

EXHIBIT A. SCOPE AND METHODOLOGY

We conducted our work from March 2016 through March 2017 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.

We identified criteria pertaining to FRA's collection of accident and incident data and related prior OIG and GAO audit findings and recommendations. Criteria documents we reviewed included the FRA Guide for Preparing Accident/Incident Reports, Companion Guide: Guidelines for Submitting Accident/Incident Reports by Alternative Methods, Railroad Safety Data Frequently Asked Questions (FAQ), Operating Practices Compliance Manual, General Manual, and Part 225-related inspector training materials. We also reviewed FRA's Risk Reduction Program rulemakings and related documents.

To identify industry concerns with accident and incident reporting and FRA's oversight of railroad safety data, we interviewed representatives from the Association of American Railroads (AAR) and the American Short Line and Regional Railroad Association (ASLRRA).

We reviewed documentation of FRA's safety data collection and storage systems and performed limited data reliability tests using a representative sample of 71 out of 63,345 reporting forms submitted from July 2011 to December 2015. To examine FRA's database design we reviewed system development documentation for RAIRS and RSIS, including system requirements, the configuration management plan, data dictionaries for the current configuration, and a recent rulemaking used to update the systems. We also reviewed system testing documentation. We identified how FRA determines what data to collect, what reporting the law requires, and any additional data points FRA collects. We interviewed FRA staff and the former contractor responsible for collecting and storing railroad safety data to identify the procedures for collecting accident and incident data railroads provided to FRA's public safety database, and the procedures for identifying reporting errors. We reviewed the contract for the former contractor responsible for collecting accident/incident data and the request for proposal for the solicitation of the new contract.

To further assess FRA's data collection efforts, we compared FRA reporting forms, AIRGNET and associated input controls, the RAIRS configuration, and FRA's reporting guidance and supplemental materials in order to identify any major inconsistencies. We interviewed Railroad Safety Information Management Division staff about the development, administration, and day to day use of

FRA's railroad safety database; the process for updating reporting guidance; and any other efforts to improve consistency in reporting. We identified the processes FRA and its contractor used for data updates and related reconciliation checks. We collected and reviewed related validation reports.

We reviewed FRA's process and guidelines for investigating an accident or incident to identify any impact FRA's accident investigations have on accident/incident data maintained by FRA. This included the relationship with the National Response Center and criteria for assigning an investigation to FRA headquarters or the Regions. We also interviewed FRA officials responsible for accident investigation to identify the outputs of the investigation process and how FRA stores investigation data.

To identify the Part 225 audit process and documentation generated by FRA audits of Class 1 railroads and Amtrak as well as the non-Class II railroads, we interviewed FRA Class I audit specialists from FRA's Operating Practices Division and Regional inspectors responsible for conducting these audits. We also observed a Class I Part 225 audit at three sites, and two non-Class I audits in two regions while they were being performed. We selected these audits to observe because they took place during our verification phase and were in different FRA regions. We specifically interviewed FRA specialists and inspectors responsible for conducting audits about the scope, methodology, and depth of FRA reviews, as well as preparations FRA made before the audits began. We also reviewed two of the most recent reports from audits of Class I railroads.

We selected random samples of 6 of 29 Class I railroad audits from calendar years 2009 through 2015, and 40¹⁵ of 894 non-Class I railroads¹⁶ listed by FRA's regional offices. We reviewed the 34 sample reports FRA was able to provide¹⁷ to determine whether audits were conducted with a consistent scope/methodology, whether they are designed to identify both reporting errors and missing reports, and what types of outputs are generated. We also identified common themes between the Class I audit we observed and the six Class I audit reports we reviewed in our sample. In addition, we reviewed recommended Part 225 defects and violations data for calendar years 2005 through 2015 to identify the potential impact of audits on compliance through changes in the rate of violations overall.

¹⁵ We selected a random sample from the lists of 894 non-class I railroads; this random sample identified 139 railroads, and we reviewed the first 5 sample reports identified in each region.

¹⁶ The lists of non-Class I railroads provided by FRA's regional offices had a total of 894 railroads, but some of these may not be active. We used this list because it was provided by FRA in response to our request for a list of the non-Class I railroads the regions are responsible for auditing. FRA estimates the number of active non-Class I railroads is closer to 800.

¹⁷ FRA provided all 6 of the Class I audit reports we randomly selected, but regional offices could only provide reports for 28 of the 40 randomly selected audits we requested from their lists of 894 non-Class I railroads.

Exhibit A. Scope and Methodology

We reviewed requirements for accident/incident narratives in response to comments from FRA officials that railroads may not provide narratives describing reportable accidents/incidents because the narratives may be used in lawsuits against the railroads. Regulations do not require specific content for narratives on accident reporting forms. To determine whether railroads provide narratives on accident reporting forms, we analyzed narratives on 71 randomly selected reporting forms out of 63,345 reporting forms (FRA forms 6180.54, 55a, and 57) submitted from July 2011 through December 2015. We found narratives were provided on 47 of 71 forms, but we did not project our findings. We reviewed a study FRA commissioned on the use of safety and performance data in litigation. We consulted with our own Office of Legal Counsel regarding requirements for narratives and how they may be used in legal proceedings. We also identified any additional legal limitations or privacy guidelines on the use of safety data reported to FRA by regulated railroads.

EXHIBIT B. ORGANIZATIONS VISITED OR CONTACTED

ActioNet (former FRA contractor)

Adirondack Scenic Railroad, Utica, NY

American Short Line and Regional Railroad Association (ASLRRA)

Association of American Railroads (AAR)

Canton Railroad Company, Baltimore, MD

FRA Accident and Analysis Branch

FRA Office of Safety, Railroad Safety Information Management Division

FRA Operating Practices Division

FRA Region 1

FRA Region 2

Norfolk Southern Government Reporting Office, Atlanta, GA

Norfolk Southern Claims Office, Atlanta, GA

Norfolk Southern Claims Office, Birmingham, AL

EXHIBIT C. MAJOR CONTRIBUTORS TO THIS REPORT

<u>Name</u>	<u>Title</u>
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Makesi Ormond	Statistician



U.S. Department
of Transportation

**Federal Railroad
Administration**

Memorandum

Subject: INFORMATION: Management Response to Office
of Inspector General (OIG) Draft Report on Safety Data
Reporting, Federal Railroad Administration (FRA)

Date: April 17, 2017

From: Patrick T. Warren
Executive Director, FRA

A handwritten signature in black ink, appearing to read "Patrick T. Warren".

To: Barry J. DeWeese
Assistant Inspector General for
Surface Transportation Audits

Safety is the U.S. Department of Transportation's and FRA's highest priority. The foundation for FRA's safety oversight program is strategic use of data. FRA continuously analyzes railroad data to validate field observations and identify safety risks, trends, and emerging issues. FRA then deploys its compliance oversight resources to the most safety critical lines of effort. Ensuring the data are as accurate and consistent as possible is therefore vital to the effectiveness of our approach to reducing rail accidents and incidents.

FRA appreciates OIG's acknowledgement that our safety data are reliable, our data systems are well-documented, and no evidence exists to indicate widespread accident underreporting. Further, OIG found that our accident and incident reporting guidance is up-to-date and our routine compliance audits review more reporting requirements than mandated. FRA's formal and informal feedback and training have improved the railroads' understanding of the reporting process and subsequently reduced the number of reporting violations and defects by approximately 69 percent and 39 percent, respectively, from 2005 to 2015, as OIG reported.

FRA reviewed the draft report and offers the following comments in response to OIG's findings and recommendations:

- FRA regulations require railroads to report accidents and incidents timely and accurately to FRA. Furthermore, the regulations require railroads to establish clear reporting procedures and to be responsible for their employees' training on and compliance with the procedures and requirements.

- FRA audits evaluate whether the railroads are complying with their procedures and Federal regulations.
- FRA inspectors, safety specialists, and attorneys are routinely available to answer railroads' questions as they arise, in addition to FRA's publicly available written guidance.

Based on our review of the draft report, FRA concurs with recommendations 3 through 7, as written. FRA plans to complete actions to address these recommendations by the following dates: recommendation 3 – December 15, 2017; recommendations 4 and 5 – January 15, 2018; recommendation 6 – February 15, 2018; and recommendation 7 – May 15, 2018.

FRA partially concurs with recommendation 1. Updating or revising the *FRA Guide for Accident/Incident Reporting* (Guide) requires FRA to amend its regulation, which incorporates the Guide by reference. Because updating any regulation typically takes several years to complete, FRA proposes an alternate action to supplement the current Guide, which is searchable and contains an index. FRA will develop questions and answers (Q&As) to address issues we have found in our railroad audits and those OIG identified. FRA will then post the Q&As on its Web site and publicize their availability to inspectors, specialists, attorneys and railroad reporting officers. FRA plans to complete these actions by December 15, 2017.

FRA partially concurs with recommendation 2. Railroads, not FRA, are responsible for identifying their employees' training needs. As an alternate action, FRA will increase the availability of accident reporting training materials. Such materials might include Web-accessible training, recordings of live training sessions, and training Webinars. FRA plans to complete these actions by December 15, 2017.

We appreciate this opportunity to comment on the OIG draft report. Please contact Rosalyn G. Millman, FRA Planning and Performance Officer, at (202) 493-6363, with any questions.