

SAFETY AND SECURITY: Opportunities Exist to Improve the Safe-2-Safer Program

Audit Report OIG-A-2015-007 | February 19, 2015



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Office of Inspector General



REPORT HIGHLIGHTS

Why We Did This Review

Safety is one of Amtrak's (the company) strategic goals. A major initiative supporting this goal is the Safe-2-Safer program, launched in 2009.

The program responds to the Railroad Safety Improvement Act of 2008. It is managed by the company's Office of System Safety in the Operations department, and led by the Chief Safety Officer.

The program's primary goals were to transform the company's safety culture, reduce injuries, and achieve financial benefits.

Our reporting objectives are to review (1) the extent to which the Safe-2-Safer program goals are being met, (2) whether opportunities exist to improve program implementation, and (3) whether the program is integrated with the company's overall efforts to improve safety.

The full report is at www.amtrakoig.gov/reading-room

SAFETY AND SECURITY: OPPORTUNITIES EXIST TO IMPROVE THE SAFE-2-SAFER PROGRAM

(Audit Report OIG-A-2015-007, February 19, 2015)

What We Found

The company has demonstrated a strong commitment to Safe-2-Safer, investing about \$70.1 million in the program since 2009. However program results have been mixed and opportunities for improvement exist. Specifically

- The company's safety culture and working conditions have improved, as demonstrated by a net positive change in the safety culture since 2009 and the elimination of more than 2,700 reported unsafe working conditions.
- The number of injuries reported by employees increased each year: with 695 employee injuries reported in 2009 and 1,301 injuries in 2013. This trend continued in 2014.
- Employee injury claims increased by about 80 percent from 2009 through 2013 and the payments on these claims have cost the company about \$79.6 million, which could increase by an additional \$48.8 million.

The company expected reported injuries to increase initially, but does not understand why the trend has continued. In July 2014, the company initiated an effort to analyze why this is occurring. However, there are opportunities to consider now to improve program implementation such as strengthening employee engagement and accountability for injuries at all levels of the company. Moreover, integrating Safe-2-Safer and other safety plans and programs could help optimize the use of resources devoted to employee safety and enhance results.

Recommendations

The company agreed with our recommendations to improve the program by ensuring that employees are fully engaged in the program and accountable for reducing injuries, and that the program is fully integrated into an overall safety plan. This page intentionally left blank.





Office of Inspector General

Memorandum

То:	DJ Stadtler, Jr.
	Executive Vice President, Chief Operations Officer
From:	David R. Warren David R. Warren
	Assistant Inspector General, Audits
Date:	February 19, 2015
Subject:	<i>Safety and Security: Opportunities Exist to Improve the Safe-2-Safer Program</i> (Audit Report OIG-A-2015-007)

Amtrak (the company) has emphasized safety in its operations over a long period of time. The company's strategic plan¹ established the following safety goal: "set the standard for safety and security in the transportation industry to ensure that every passenger and employee goes home injury-free every day." The company has various safety initiatives and programs to help achieve this goal. One of the major initiatives is the Safe-2-Safer program—a behavior-based safety program. The program's overall goal is to fundamentally change the company's approach to employee safety—from a culture focused on rules and injury reporting to one focused on risk management and injury prevention.

The Safe-2-Safer program included three primary goals:

- **Transform the company's safety culture** to become cooperative and collaborative, strengthen leadership on employee safety, unify the workforce around safety and security, and create processes to encourage all employees to participate in improving safety.
- **Reduce employee injuries** by establishing a network-wide safety program designed to create a risk-based approach that would enable employees to adopt safe workplace behaviors.

¹ Amtrak Strategic Plan 2014–2018.

• Achieve financial benefits by reducing employee injury claims and associated expenses. This goal was discussed in the company's five-year financial plans in 2011 and 2012, but not in subsequent plans.

In 2009, the company developed and implemented the Safe-2-Safer program to improve employee safety in response to the Railroad Safety Improvement Act of 2008.² Under the act, the Federal Railroad Administration (FRA) required railroad operators to build strong safety cultures by developing innovative methods, processes, and technologies to address the risk factors that cause accidents and injuries. FRA further prohibited retaliation and intimidation when employees report injuries. FRA states that changes resulting from the act will lead to a change in the railroad culture from distrust to mutual cooperation while maintaining safety standards under federal regulations.

The Safe-2-Safer program office helped implement the program and coordinate program activities. The program office is now part of the larger Office of System Safety, which is part of the Operations department. The Chief Safety Officer leads that office. In this report, we refer to the Office of System Safety and the program office interchangeably.

Our reporting objectives are to review (1) the extent to which Safe-2-Safer program goals are being met, (2) whether opportunities exist to improve program implementation, and (3) whether the program is integrated with the company's overall efforts to improve safety. For a detailed discussion of our scope and methodology, see Appendix A.

SUMMARY OF RESULTS

The company has demonstrated a strong commitment to employee safety, but progress toward achieving the Safe-2-Safer program goals has been mixed, and opportunities for improvement exist. The company has made a significant resource investment in the program, which we estimate to be \$70.1 million since 2009. The investment led to improved working conditions through the identification and elimination of more than 2,700 unsafe working conditions. The company's safety culture also improved, as measured by biennial employee surveys since 2009.

² Public Law 110-432 Division A.

However, the goal to reduce employee injuries has not been achieved. The number of injuries reported by employees increased each year since 2009. Reported injuries have increased from 695 in 2009 to 1,301 in 2013. For 2013, the company's injury ratio, which is based on the injuries that must be reported to FRA, was three times the average reported by other Class I railroads.³ In 2014, this trend appeared to continue, based on injury data reported as of September 30, 2014. The company expected reported injuries to increase initially, but officials do not understand why the trend has continued. In July 2014, the program office initiated a multi-year effort with FRA to analyze why reported injuries have increased.

Also, the goal of reducing injury claim costs has not been achieved. From 2009 through 2013, the number of employee injury claims has increased by about 80 percent. The payments on these claims have cost the company about \$79.6 million and may increase by an additional \$48.8 million, based on its estimates of liability for open claims.

Complementary to the company's efforts to understand why reported injuries have increased, our work identified areas that have likely contributed to the lack of progress in achieving program goals. Addressing these areas could help optimize the use of resources and enhance overall program results:

- Enhancing employee engagement could improve accountability for safe practices, peer-to-peer observations, and the effectiveness of steering committees.
- Clarifying the roles of front-line supervisors could help ensure that they understand how to properly support the program.
- Increasing the involvement of senior leaders and defining accountability for outcomes could improve their effectiveness in leading the company toward its safety goals.
- Improving corporate metrics to include employee injuries along with the safety observation contact rate could help measure progress and increase accountability.
- Developing and implementing incentives could reinforce the importance of desired safety outcomes.

³ FRA defines Class I railroads as the seven U.S. freight railroads and Amtrak, whose annual revenues all exceed \$433.2 million.

We also noted that the company has not yet integrated the Safe-2-Safer program with other safety plans and programs. Although the Safe-2-Safer program was designated as the primary means of achieving the strategic safety goal, the company's safety policy and the System Safety Program Plan also play an important part in employee safety. The program office is updating the plan to incorporate the behavior-based safety principles that are part of Safe-2-Safer, and the Chief Safety Officer is reorganizing this office to better support the plan. Nevertheless, overall corporate targets and timeframes have not yet been established for further improving the safety culture, reducing employee injuries, and achieving financial benefits. Further, safety is the only one of the company's three strategic goals that is not included in its short-term incentive program.

We are recommending several actions to improve the effectiveness of the program. These actions include ensuring that employees are fully engaged in achieving program goals and are accountable for reducing injuries at all levels, and that the Safe-2-Safer program is fully integrated into the company's overall safety plans and programs. The company agreed with our recommendations and established timelines for implementing them.

PROGRAM IMPLEMENTATION APPROACH

Amtrak was the first major railroad in the United States to attempt to implement a behavior-based safety program on a company-wide basis, according to an FRA official.⁴ The program was designed to complement the system of local, management-led safety teams for promoting employee safety. To assist with this, the company contracted with Behavior Science Technologies (BST) in June 2009 to develop and help implement the program. The FRA Manager of Culture and Safety Performance Program recognizes BST as a leader in developing effective behavior-based safety programs geared toward changing an organization's safety culture. BST's experience has shown that implementing these types of programs at other companies has led to significant reductions in employee injuries.

⁴ During the audit, we met with officials from different components of the U.S. Department of Transportation to discuss the Safe-2-Safer program and other behavior-based employee safety programs in use in the railroad industry. These officials were from FRA and the Volpe Center, which is assisting FRA in assessing programs like Safe-2-Safer. In this report, we refer to them collectively as FRA officials.

The program established a new approach to employee safety for management and agreement (union) employees; two key efforts were implemented across most of the company from July 2009 through July 2010. One focused on improving leadership on safety issues by training and coaching non-agreement management employees. Through September 2014, approximately 2,600 management employees were trained to become more effective safety leaders, according to program office reports.

The other, larger effort focused on improving employee safety behavior through an active and extensive peer-to-peer observation process.⁵ The process called for agreement employees to observe the workplace behaviors of their peers and coach them to work more safely. Through September 2014, the program office reported that about 13,900 agreement employees were trained through program "buy-in" sessions and other classes to conduct observations and perform other program activities.

The program office implemented the peer-to-peer observation process by establishing 13 regional core teams that oversee 28 steering committees. The committees implement and maintain the program (including conduct of observations) at program locations throughout the country.⁶ The regional core teams consist of senior company management and, in some cases, local union leaders who are assisted by BST consultants. Each steering committee consists of agreement employees (assisted by a BST consultant), including a facilitator who reports directly to the steering committees' core team management sponsor.

The peer-to-peer observation process is shown in Figure 1. Program facilitators use the observers' reports to identify trends in employee safety behaviors and identify barriers to safe working conditions.

⁵ The process is based on an established inventory of safe behaviors.

⁶ Steering committees may oversee multiple locations. In this report, we refer to the area covered by a steering committee as a program location.



Figure 1. Summary of Peer-to-Peer Observation Process

Source: OIG summary of peer-to-peer observation process as of October 25, 2012

As of August 2014, we estimated that the company has spent about \$70.1 million to establish and operate the Safe-2-Safer program, including contractor costs, employee salaries, and training costs. If the company continues to operate the program as it does now, we estimate that it will spend about \$24 million more on the program in fiscal years (FY) 2015 and 2016. For more information on how the program is managed and how we estimated these costs, see Appendix A.

WORKING CONDITIONS AND SAFETY CULTURE HAVE IMPROVED, BUT INJURIES AND COSTS HAVE INCREASED

The company's progress toward its Safe-2-Safer program goals has been mixed. The program has led to the reported elimination of many unsafe working conditions and improvements to its safety culture, as measured by biennial employee surveys.

However, the program's goals to reduce reported injuries and injury claims costs have not been met.

Observations Have Increased and Unsafe Working Conditions Have Been Reduced

The Office of System Safety reports that employees have conducted almost 300,000 peer-to-peer observation contacts through the end of October 2014. These observations have led to the identification and removal of unsafe working conditions. Through September 2014, the program office also reports that the company has identified about 3,570 physical safety barriers during peer-to-peer observations and other Safe-2-Safer activities throughout the 28 program locations. A reported 2,749 of these barriers (77 percent) have been eliminated, according to program officials.

Removing safety barriers—physical barriers and unsafe operating conditions—reduces the potential for employees to incur injuries. Figure 2 shows an example of an unsafe physical barrier related to a partially obstructed stairwell. The barrier was removed by moving the pallets, repainting caution stripes, and adding signage: "KEEP AREA CLEAR."⁷

Figure 2. Example of the Removal of a Safety Barrier



BEFORE



AFTER

Source: Amtrak National Barrier Removal Report Number 2014-02-02

⁷ Signage not visibly reflected in Figure 2.

Improvements in Safety Culture Have Been Made

Since 2009, the company's safety culture improved, as measured through the results of a biennial survey that BST administered three times—in 2009, 2011, and 2013. The survey measured several aspects of organizational culture that strongly correlate with safety, according to BST's research. In 2013, almost 11,700 employees responded to the survey—a response rate of 58 percent.

Since the start of the program, the scores have improved for all of the 10 factors measured. From the 2009 to the 2013 survey, the average combined mean score for all factors increased by .12.⁸ These trends are shown in Figure 3. For descriptions of each of the 10 factors measured, see Appendix B.





Source: BST survey data as of April 14, 2014

⁸ In April 2014, BST updated its analysis to compare 2009 survey results with 2013. That update did not specify which categories had statistically significant changes.

To provide a relative perspective on these scores, BST compared the company's survey results with results from their other clients. In 2013, the company's average relative ranking for all 10 categories was at the 36th percentile compared to BST's other clients: the company's scores were better than 36 percent of these clients and worse than 64 percent. As shown in Figure 4, the company's scores were highest in the categories *approaching others about safety* and *injury reporting*—ranking in the upper half of BST's clients. The company scored the lowest in *organizational value for safety* and *management credibility*—in the bottom quartile of BST's clients in these aspects of safety culture.



Figure 4. Amtrak Scores Compared to Other BST Customers, 2009–2013

Goal of Reducing Reported Injuries is Not Being Met

Comparing 2009 to 2013, reported employee injuries for those years almost doubled from 695 to 1,301. In 2014, the company reported 987 injuries as of the end of September. According to the Safe-2-Safer program director, these injuries include the types of injuries that the Safe-2-Safer program seeks to prevent—such as sprains and strains—and other injuries that are outside of the program's purview of preventable injuries, such as those that occur during train collisions. Federal regulations require the

Source: BST data as of April 14, 2014

company to report monthly to FRA the number of employee injuries that require medical attention.⁹

FRA-Reportable Injuries Have Increased Significantly

Comparing 2009 to 2013, the number of FRA-reportable employee injuries grew from 502 to 867—an increase of about 73 percent. In 2014, 636 injuries were reported from the beginning of January through the end of September, an increase of 5 percent over the same period in 2013. The trends in total reported injuries and the number of annual total injuries that are FRA-reportable and not FRA-reportable are shown in Figure 5.

Figure 5. Total Injuries, FRA-Reportable Injuries, and Not FRA-Reportable Injuries, 2009–2013



Source: OIG analysis of company injury data, as of April 14, 2014¹⁰

Sprains and strains have been the most prevalent category of injury since Safe-2-Safer was initiated — about 39 percent of all injuries from January 2009 through December 2013, as shown in Figure 6. The number of FRA-reportable sprains and strains has increased from 161 injuries in 2009 (33 percent) to 367 in 2013 (43 percent). Sprains and strains continued to be the most prevalent type of injury in 2014. Program officials told

⁹ 49 CFR 225 states that an injury is reportable if it results in an employee's death, loss of consciousness, days off from work or restricted work, or medical attention.

¹⁰ Amtrak reports its injury data to FRA. However, the total number and classification of injuries may change over time due to injuries not having been previously reported and the reclassification of an injury from non-reportable to reportable.

us in July 2014 that this trend prompted them to take steps to specifically address the causes of these types of injuries.





Source: OIG analysis of FRA Safety data, January 2009 through December 2013, as of April 14, 2014 * Other injuries include needle sticks, ruptures, and burns, which total less than 3 percent of the total injuries in the period but sum to 14 percent when combined.

Reported Injury Ratio Is Higher than Other Railroads

To compare employee safety at different railroads, FRA uses an injury ratio—the number of employee injuries per 200,000 hours worked.¹¹ We analyzed the injury ratio data that FRA collected and maintained over a 10-year period from 2004 to 2013. Our analysis showed that since the initiation of the Safe-2-Safer program in 2009, the average injury ratio for the other Class I railroads (freights) declined by 30 percent, but the company's injury ratio increased by 74 percent from 2.34 to 4.07 in 2013. The company's FRA-reportable injury ratio was more than three times the average of the other Class I railroads in 2013.

The Chief Safety Officer and the Director of Safe-2-Safer told us the company's injury ratio could not be directly compared to the other Class I railroads because of differences

¹¹ This U.S. Bureau of Labor Statistics ratio is widely used among federal agencies as a safety metric to compare the relative incidence of injuries across organizations of different sizes and purposes in different industries.

in passenger and freight railroad operations. However, the Chief Safety Officer also noted that many company employees work in functions that are similar to the functions of employees in other Class I railroads.¹² Given the differences between passenger and freight railroads, making a precise comparison would be challenging. However, at a general level, the comparative rates can be a useful indicator and, in this case, indicate a reason for concern.

Also, the company's injury ratio trend data differs significantly from the trend experienced by BST's other customers, as shown in Figure 7. According to BST, their clients typically see about a 24 percent reduction in the employee injury rate in the first year of program implementation, and a 40 percent reduction after the fourth year of implementation. If the company had experienced the same improvements in employee safety as the average BST client, the company would have achieved an injury ratio of about 1.40 by the end of 2013, which is close to the average for other Class I railroads.

¹² Officials from FRA and the Association of American Railroads also stated that some company employees work in functions that are similar to their counterparts at other Class I railroads.





Source: OIG analysis of Amtrak, FRA, and BST data from 2004-2013, as of April 9, 2014

There have been some limited reductions in the injury ratio at 11 of 28 program locations, according to an analysis by the company's program office comparing injury ratios for FY 2011 to ratios for FY 2014 through April 2014. This reduction could indicate that these locations are starting to follow the trend of other BST clients. In reviewing the data supporting the analysis, we noted a discrepancy in reported hours worked for the total company from 2011 through 2013.¹³ Program officials told us they were revising the analysis.

¹³ Complete FY 2014 data was not available when we analyzed the data.

The Goal of Reducing Injury Claims Cost is not Being Met

Since the program's start, there has been a considerable increase in employee injury claims — from 781 in 2009 to 1,406 in 2013 (80 percent). In 2009, the payments made on these claims cost the company about \$15.9 million. Claims increased after the program was implemented, costing the company \$25.7 million in 2010, and \$22 million in 2011 as of June 25, 2014. Additionally, settled claims for 2012 have cost the company about \$12.4 million, and claims for 2013 cost about \$3.6 million; however, these costs are likely to increase because additional claims for injuries occurring in those years can still be filed. The total cost of settled claims for this period is about \$79.6 million, as of June 25, 2014.

This total could increase by about \$48.8 million, based on our analysis of the company estimates of liability for open claims filed for injuries occurring from 2009 through 2013. The number of claims and the costs to settle them could likely increase further because employees have three years to file injury claims under the Federal Employers Liability Act of 1908 (45 U.S. Code 51 and 56). This act allows railroad workers to collect for past damages. The total number of employee claims filed by calendar year for injuries that occurred from January 2009 through December 2013¹⁴ is shown in Figure 8.

¹⁴ These numbers update claims information that we previously reported on in *Governance: Injury Claims Trend Data for Fiscal Years 2010 through 2013* (OIG-MAR-2014-008, July 17, 2014).



Figure 8. Total Number of Filed Injury Claims, 2009–2013

Source: OIG Analysis of Claims Data, January 2009 through December 2013, as of June 25, 2014

OPPORTUNITIES EXIST TO STRENGTHEN PROGRAM IMPLEMENTATION

The program office has initiated efforts to analyze why reported injuries have increased to identify potential reasons for the increases. Similarly, our work indicates that there are opportunities to strengthen the program's implementation that could improve goal achievement. These opportunities involve a number of areas, including increased employee program engagement and creating accountability for reducing injuries at all levels. Engagement and accountability issues appear to be major factors contributing to the program's lack of progress in reducing injuries. These factors were largely the result of well-intended implementation decisions that had unintended consequences.

The Company Has Begun to Study the Increase in Employee Injuries

In early July 2014, the Executive Vice President, Chief Operations Officer, told us that the program office was undertaking a review supported by FRA to analyze factors that have potentially contributed to the increase in reported injuries. The Vice President and the Chief Safety Officer both stated that the company expected an initial spike in reported injuries when Safe-2-Safer started because employees were encouraged to report all injuries. However, the officials noted that the continuing rise in the number of reported injuries was not expected, and further analysis was needed to determine the reasons why.

The Executive Vice President, Chief Operations Officer, offered two possible factors that could be causing the increase—actions taken in 2009 to encourage injury reporting, and strains and sprains due to the aging of the workforce. He told us that these factors, combined with several other internal and external factors that have yet to be fully analyzed, are the likely reasons for the increase in reported injuries.

Encouragement of Injury Reporting May Account for Some of the Increases in Reporting of Injuries

Based on the results of the 2009 survey of the company's safety culture and subsequent focus groups with more than 800 employees, BST concluded that employees had not been reporting all injuries. As stated in the survey report, employees said that "repercussions such as suspension and termination, and pressure from both their peers and manager to protect the achievement of the injury rate target contribute to the underreporting of injuries." Therefore, employees believed that they would be disciplined by managers if they reported an injury because high injury rates would negatively affect the manager's annual performance ratings, according to program officials. To address this issue, the company took several actions, including:

- removing employee safety metrics from the annual goals of all managers and frontline supervisors
- changing the disciplinary process to limit the circumstances in which employees can be disciplined for injuries
- updating the safety policy to ensure that employees understand that they are required to report all injuries and that the company will not tolerate behavior designed to prevent injury reporting

Program office officials told us that the company also issued several communications to ensure that all employees were aware of these changes and expected the number of reported injuries to increase.

These policy changes have changed the company's culture on reporting injuries as measured by the safety culture surveys. The results of the 2013 survey showed an 11 percent net increase on average from 2009 to 2013 in the positive responses related to employees' comfort in reporting injuries. At four of the eight locations we visited,

employees indicated they were now more likely to report injuries than they previously did. Employees at the other four locations did not offer an opinion on this issue.¹⁵

Other evidence suggests that injury reporting may have been previously suppressed; however, there is insufficient data to determine the extent to which that may have occurred. According to FRA officials, when the number of minor injuries being reported increases relative to serious injuries, it may indicate a reduction in injury suppression. The number of minor injuries reported—injuries that are not reportable to FRA—increased from 28 percent of the total reported injuries in 2009 to 33 percent of the total reported injuries in 2013.

Impact of Aging Workforce on Reported Injuries is Uncertain

As discussed previously, strains and sprains make up the largest portion of reportable injuries from 2009 through 2013. The company believes that the prevalence of these injuries is due to the average age of company employees. However, our analysis shows that the median age of employees who have suffered reportable sprains and strains has remained relatively constant since Safe-2-Safer was started, and the median age of those reporting strains and sprains was the same in 2013 as in 2009, as shown in Figure 9. Therefore, it remains to be seen from the company's planned analysis the extent to which the aging workforce is a factor in the increase in reported sprains and strains.

¹⁵ For all of our site visits, we discussed the number of locations where employees voiced a certain opinion (unless otherwise noted). This does not imply that the employees from other locations disagreed with these opinions. Rather, it means that they did not bring up this topic during our discussions. At the 8 locations we visited, we interviewed 101 agreement and non-agreement employees. Twenty-six were supervisors and managers, and 75 were agreement employees: 8 Safe-2-Safer facilitators, 25 observers, and 42 other agreement employees. For more information, see Appendix A.





Increased Engagement Could Enhance Results

We reviewed change management principles, along with information provided by FRA officials, BST consultants, and officials from other Class I railroads that have attempted behavior-based safety culture change programs. We learned that employee and management engagement is critical to the success of these types of programs. Engagement is essential to building both awareness and a desire for the need to change. However, our review shows that company employees at all levels have not been fully engaged in the program – agreement employees, front-line supervisors and local managers, and senior leaders. This appears to be largely the result of well-intended decisions made during implementation that have had the unintended consequence of weakening participation in the program and hindering the program's success in reducing injuries.

Source: OIG analysis of FRA's injury and demographic data for Amtrak, as of August 13, 2014

Opportunity for Greater Engagement by Agreement Employees

As previously discussed, agreement employees play a large role in managing the peerto-peer observation process, and they appear to believe that they effectively work together, support each other, and that their co-workers will proactively support safe working behaviors, according to the results of the 2013 safety culture survey. Nonetheless, through our field interviews we identified many instances in which agreement employees were not fully engaged in the program.

Greater observer participation would likely enhance the benefit of training. To elicit the support of the unions for the program, Safe-2-Safer was designed to allow agreement employees to voluntarily participate as observers, according to program officials. As a result, only a reported 1,222 of about 5,000 trained employees were conducting observations, as of September 2013. The company spent about \$3.7 million training employees to conduct observations, as of the end of FY 2013. Employees we interviewed at four locations told us that more experienced employees were the most resistant to participating in the observation process.¹⁶

Steering committees can be more effective. Agreement employees lead the committees, with the assistance of a BST consultant. In April 2014, BST assessed the strengths and weaknesses of each steering committee and its ability to sustain long-term change, according to information provided by the Chief of Safety. As a result, BST found that 2 of the 28 steering committees were functioning successfully, partly because of strong metrics and engagement by steering committee members.

Of the other steering committees, BST stated that 18¹⁷ were marginally functional, and 8 were dysfunctional and did not produce any results. Our analysis of BST data indicated that BST partially attributed the ineffectiveness of these 26 committees to a lack of employee engagement. For example, at one of the program locations, BST ranked employee engagement lowest of the five evaluation factors.

Better employee understanding of the program could reduce confusion. During our site visits, we noticed a disparity among the agreement employees we interviewed with regard to their understanding of the program. For example, 32 of the 33 agreement

¹⁶ One of the Class I railroad officials we interviewed said his railroad addressed this problem by providing tailored training to senior employees to engage them in their safety program.

¹⁷ We did not include the Amtrak Police department in our analysis because they had dropped out of the program.

employees who had received training as observers and facilitators were very enthusiastic about the program and were very optimistic that it will have a positive impact on employee safety. In contrast, of the 42 agreement employees we interviewed who did not receive this level of training, about half were skeptical about its potential for success. According to a program official, some were veteran employees who did not have a thorough understanding of the observation process; they thought that the Safe-2-Safer observers were not qualified to assess their safe work behaviors because they were not qualified in their particular craft or work assignment.

More complete training of agreement employees has been shown to provide benefits. In an FRA-sponsored behavior-based pilot program aimed at reducing employee injuries among company baggage handlers at Chicago Union Station in 2005, all of the employees assigned to the pilot received training. This pilot resulted in the injury ratio dropping from 10.87 to a low of 2.59 for a one-year period ending December 31, 2005.¹⁸ Similarly, two of the three Class I railroads we contacted train all of their employees in their safety program as part of their new hire program. In October 2014, program officials told us they had begun to increase the number of employees being trained.

Additionally, agreement employees at five of the eight locations we visited were unclear about who is leading the program and with whom they should discuss safety issues. According to FRA officials, one of the keys to success is that employees believe they have ownership of the safety program. During our visits, employees at three of the eight locations told us that they viewed Safe-2-Safer as a stand-alone program, creating a separate program within the company, which is led by a contractor rather than the company because of the number of BST consultants involved in supporting the program. Employees at five locations also told us they were unclear about whom to discuss safety issues with: their supervisor, Safety Committees,¹⁹ or Safe-2-Safer program officials. In October 2014, program officials told us that it should be clear that employees should be discussing safety issues with their supervisors and that supervisors had been provided training to help facilitate this. In addition, the Chief

¹⁸ These improvements have deteriorated over time because of a lack of continued focus and resources to continue progress. In 2013, the injury ratio for the handlers climbed to 4.8.

¹⁹ These committees, which have been in place since Safe-2-Safer was initiated, help remove safety barriers in a manner similar to Safe-2-Safer. Employees at two of the eight locations we visited stated that these efforts appeared to be duplicative, likely wasting money. In the opinion of these employees, the safety committees were more effective at removing barriers than the barrier-removal teams.

Safety Officer is starting to address these issues by more closely integrating Safe-2-Safer into the overall safety program so that leadership of the program is clear.

Participation by all unions would provide consistency. To make Safe-2-Safer more acceptable to the unions, the company allowed them to choose whether they wanted to participate in the program. The employees represented by two of the unions are not fully participating in the program.²⁰

- The union representing the Amtrak Police department instructed its members to pull out of Safe-2-Safer in 2012 after two years of participation. This occurred because the steering committee for the Police department was not receiving any support from management, according to the union representative we spoke with. Employees in the Police department had an injury rate of 10.9 in 2013. Although many of the injuries resulted from police activity or training, about 51 percent of the injuries appear to be of the type that Safe-2-Safer could address.
- The union representing railroad signalmen in the Engineering department has never participated in the Safe-2-Safer program, according to a program official. This union did not agree to participate primarily because they considered the previous safety program, which was negotiated in 2000, as sufficient and binding, according to a senior labor relations official. Employees represented by this union had an injury rate of about 2.2 for 2013.

Clarifying Roles of Front-Line Supervisors and Local Managers May Be Beneficial

The protocols of the Safe-2-Safer program exclude local managers from participating in the activities of steering committees. A program official said the Safe-2-Safer program did not change the roles of supervisors and managers in promoting safety. However, ensuring that frontline supervisors and local managers are fully engaged in change programs is a key to success, according to our analysis of change management principles and discussions with officials from BST and FRA. Officials from the Class I railroads we contacted told us that their front-line managers are fully engaged in their safety initiatives. For example, the Vice President of Safety for one of these railroads told us: "Safety culture is employee-driven, but local management must be involved."

²⁰ A third union does not participate in the program, but the employees represented by this union serve in a supervisory capacity for other agreement employees, and their union believed it would be a conflict of interest to participate. Management agreed with this position, according to a company labor official.

According to BST, the company's front-line supervisors are not viewed as modeling the values and leadership behaviors required to effectively change the safety culture. BST says that front-line supervisors and managers need to communicate with steering committee members and partially faulted management for weaknesses cited in its April 2014 sustainability assessment. However, there is an inherent contradiction in this because, as we mentioned, front-line supervisors and managers are excluded from serving on the steering committees by design. At seven of the eight locations we visited, supervisors and managers told us they were shut out of the program, and they were generally confused about their roles and responsibilities. Here are some examples:

- Supervisors and managers wanted to be more involved in the process but had been relegated to providing meeting locations and lunches for steering committee members. This lack of direct involvement in the steering committee process may have contributed to the employees' perception that supervisors and managers were unconcerned about employee safety.
- They received little or no timely information about the program, its status, the results of peer-to-peer observations, and existing safety issues. One manager said he thought that the Safe-2-Safer program had been terminated because it had been so long since his office received any information or anyone had spoken to him about the program.
- Some supervisors and managers were held accountable for the number of observations that their employees performed even though they had no ability to direct them to perform the observations. At one location, we were told that front-line supervisors did not receive performance bonuses; at another location, a manager²¹ was disciplined because employees did not meet targets for completing observations. In October 2014, program officials told us that managers should be rewarded only for actions in their control, such as having effective safety discussions with employees, rather than meeting targets for observations, because managers have no control over the number of observations conducted by employees.

However, the supervisors at another location initiated a proactive engagement process with the steering committee facilitator; working together, they were able to share safety information and address safety issues together in a timely manner. This change

²¹ We visited this location during the planning phase of our work. It is not one of the eight locations we discuss in this section of the report.

generally coincided with a reduction in the employee injury ratio from 5.1 in to 1.4 over a five-month period from January to June 2014. In October 2014, program officials told us they were going to take steps to provide safety information to supervisors and local managers in a timelier manner.

Opportunity to Identify Additional Efforts to Improve Senior Leaders' Engagement

Company executives are expected to effectively lead the company to achieve its safety goals. However, the results of the 2013 survey of the employee safety culture indicated that employees did not believe they were doing this. The survey showed that many employees did not believe that the company's senior leaders were concerned about the needs and interests of its employees or were honest, consistent, fair, and open in dealing with workers on safety issues. Of the six categories that pertain to leadership in the survey, the company's scores were better than only 28 percent of BST's other clients.

The program office is trying to change the employee perception of weak executive safety leadership. During our work, the Chief Safety Officer has started to reenergize senior leaders on safety, developing the Executive Safety Council, and incorporating more executives than were on the Safe-2-Safer Executive Council. Additionally, all executives are required to perform eight safety interactions per month, which is now part of their performance ratings, according to both the Chief Operations Officer and the Chief Safety Officer. Interactions are similar to observations and can be conducted with an employee. The program office has also set up a process to collect reports of these interactions to identify and analyze any potentially significant information that emerges, according to the Chief Safety Officer.

Accountability for Injuries is Lacking

We analyzed change management principles and information provided by FRA officials, BST consultants, and officials from other Class I railroads that have attempted behavior-based safety culture change programs. We noted that accountability at all levels is critical to the success of these types of programs. However, we found that accountability for injuries was lacking at all levels of the company. This appears to be largely the result of several well-intended decisions made during the program's initial implementation phase to encourage the reporting of injuries. However, the decisions have had the unintended consequence of hindering the company's efforts to reduce injuries.

Employees Not Held Accountable for Unsafe Practices

The discipline process is a necessary component of an effective employee safety program. Without an effective discipline program for safety rule violators, employees can ignore rules and safe practices with impunity. This increases the employee's risk for injury, sets a bad example, and potentially endangers others.

In 2009, the company's labor relations office promulgated a new policy regarding the application of discipline following injuries. The policy change was not designed to prohibit discipline for safety violations. Rather, it called for employees to be disciplined when it was clearly warranted and consistent with past practices in similar situations.

Although the policy changes likely increased incentives for reporting, the manner in which they were implemented has had an unintended adverse effect on employee accountability, as demonstrated by the reduced application of discipline for safety violations. In 2009, about 12 percent of employee injuries resulted in a discipline charge against the employee. In 2013, only about 1 percent of employee injuries resulted in a discipline charge — even though injuries have significantly increased during this period.²² Managers and senior leaders told us that part of the reason for this decline may be the confusion over whether injured employees can be disciplined for safety violations that led to their injury.

Managers and Senior Leaders Should be Held More Accountable for Safety Outcomes

In January 2010, the company removed injury rates as a performance goal for management employees. At that time, managers were perceived as being more focused on managing the ratio than on identifying and reducing the risks that cause injuries, according to program officials. The intent was to move away from injury ratios as the metric to measure performance—not to reduce the focus on safety or to eliminate safety as a key performance measure for managers.

After the removal of injury ratios from management performance goals in 2010, managers and senior leaders had no easily measurable annual performance goals for safety. According to the Chief Safety Officer, this changed in June 2014 when the Executive Safety Council added the requirement for executives to hold eight safety conversations with any employee each month about his or her individual performance

²² Based on data provided by the company's labor relations office.

goals. However, we were told at two locations that front-line supervisors and local managers are being held accountable for the number of observations that their employees conduct; at the other locations, managers and supervisors did not comment on this issue. Although this level of accountability is consistent with change management principles, these responsibilities directly contradict the program's protocols of prohibiting managers' involvement in the employee-led, peer-to-peer observation process.

Moreover, when weak processes are coupled with inconsistency, it makes it challenging for supervisors to be accountable. Employees at six of the eight locations, for example, told us about weaknesses in the quality of observations. These weaknesses could limit the reliability of the observation contact rate and minimize its effectiveness as an annual performance measure. For example, employees told us the following:

- The number of contacts reported does not necessarily reflect the number of employees observed because there are no records of which employees have been observed and no requirement to observe each employee. Consequently, some employees stated that they have never been observed, and others stated that they are observed three or four times a month.
- Observers did not consistently follow established protocols. Employees at three of the eight locations identified violations of the protocols—such as not always following up on their observations with a discussion with the employee about safe and unsafe work behaviors, and the employee's commitment to use safe work behaviors.

Better Corporate Metrics Could Improve Accountability for Safety Outcomes

Consistent with other actions taken to encourage injury reporting, the company eliminated the injury ratio as a corporate safety metric. In doing so, it has limited its ability to directly measure one of the goals of the Safe-2-Safer program and the company's progress toward achieving the strategic goal of having all employees go home injury-free every day. It also has had the unintended consequence of deemphasizing the importance of reducing employee injuries, which appears to be further affected by the lack of corporate or local incentives tied to reducing employee injuries.

The observation contact rate does not measure progress toward reducing employee injuries. The company uses the *observation contact rate*²³ to measure its performance against its strategic safety goal, rather than the *employee injury ratio*. Officials from BST and FRA agreed that the observation contact rate was a useful metric, but only to measure the strength of program implementation—not to measure progress reducing employee injuries.

Rather, BST and FRA officials said that the injury ratio was the more appropriate metric to measure progress reducing employee injuries—particularly for groups of more than 100 employees, which are less sensitive to minor fluctuations in injuries. All three of the Class I railroads we contacted relied on the industry-standard injury ratio to measure progress in reducing employee injuries.

From 2012 to 2013, the Safe-2-Safer program reported a significant increase in the contact rate for peer-to-peer observations performed by employees. According to program officials, BST officials told the company that a contact rate of at least .5 was necessary to start to see a reduced injury ratio. However, the injury ratio continued to increase even with the increase in the contact rate. The average contact rate for the program for calendar year 2012 was .38, and its injury ratio was 3.67. The average contact rate for the program for calendar year 2013 was .56, and its injury ratio was 4.07. Through September, the average contact rate for the program for calendar year 2014 was .64, and the injury ratio was 4.22.

In May 2014, the program office implemented a dashboard with several metrics, including the injury ratio, and starting reviewing it in monthly Executive Safety Council meetings. This should help build their awareness of employee injuries, including employees who are seriously injured;²⁴ however, no injury reduction targets or timelines have been set in accordance with change management principles.

Employees do not appear to perceive a need to change their safety behaviors even though observers are supposed to emphasize this during observations, according to statements from program officials in October 2014. During our site visits, we asked all

²³ The observation contact rate is the total number of peer-to-peer contacts in a month or year divided by the number of people participating in the Safe-2-Safer program during the time period. An observation may contain multiple contacts.

²⁴ This dashboard also includes an advanced metric to determine the severity or potential severity of an injury in terms of resulting in a life-altering event. This metric could provide more insight into the seriousness of employee injuries over time. One Class I railroad we contacted employs a similar metric.

employees whether they knew what the company's injury rate was, what their local injury rate was, and how the company compared to other railroads. Of the 101 employees we interviewed, 76 thought the company was an industry leader in employee safety and did not perceive any problem with the company's safety performance.

Corporate incentives do not exist to stress the importance of safety or reinforce

success. Change management principles emphasize the importance of rewards to effectively reinforce success. Consistent with these principles, BST's 2013 safety culture survey report stated that the company should improve and increase its mechanisms for recognizing contributions to improving the safety culture and performance. FRA officials also told us that their experience showed that systems that recognize the actions of both employees and managers were important to the success of similar safety programs. Some Class I railroads we contacted incorporate safety measures into employee performance ratings similar to the measures recommended by BST.

However, safety is the only one of the company's three strategic goals that is not included in the short-term incentive program, which provides monetary rewards for non-agreement employees if corporate goals are achieved. Further, other safety reward programs at the local level have also been eliminated after Safe-2-Safer started. During our site visits, employees told us that prior to Safe-2-Safer there were local incentive or recognition programs for meeting safety goals. Employees also told us that elimination of these programs was a bad decision because employees were proud of going a certain number of days injury-free and being recognized for their achievements.

OPPORTUNITIES EXIST TO IMPROVE COMPANY-WIDE SAFETY PLAN

We also identified that the company has not yet integrated the Safe-2-Safer program with the company's other safety plans and programs. The company remains strongly committed to improving employee safety and has identified overall safety as one of its three strategic goals. The Safe-2-Safer program was designated as the primary means of achieving this goal, and the safety policy and the System Safety Program Plan also play an important part in the company's employee safety efforts.

However, the company has not yet fully integrated Safe-2-Safer into the plan and has not established overall corporate targets and timeframes for further improving the safety culture, reducing employee injuries, and achieving financial benefits. In October

2014, program officials told us that the company's Executive Safety Council is looking at establishing targets and timeframes for these metrics.

Safe-2-Safer Not Yet Fully Integrated with System Safety Program Plan

The 2009 strategic overview stated that safety is the overarching strategic goal of the company and that Safe-2-Safer is designed to institutionalize a program to strengthen its safety culture. The company planned to measure the success of Safe-2-Safer in terms of its effect on the injury rate, through the traditional metrics of reportable injury ratio and reduced injury claims. Subsequent plans echoed similar goals, but the 2014 strategic plan did not discuss the financial benefits of reduced injury claims, and it replaced the traditional injury ratio with the observation contact rate as the measurement of success.

In June 2010, the company revised its safety policy to include Safe-2-Safer. The policy stated that to be safer, the company would use behavioral safety principles in developing and implementing safety risk reduction programs. The company's federally mandated System Safety Program Plan was also re-issued in 2010 after the start of the Safe-2-Safer program and enactment of the Railroad Safety Improvement Act of 2008. The plan was to be used to guide the company's efforts to promote a safe environment for both employees and passengers. These statements were also made in an updated version of the policy issued in November 2014.

One of the objectives of the Office of System Safety's efforts is to update the company's System Safety Program Plan. The current plan states that safety is a line management responsibility requiring everyone from senior leaders to shop managers to lead their organizations in a proactive safety initiative to help reduce employee and customer injuries. If the draft revision of the plan is implemented as currently designed, it would require changes to the Safe-2-Safer protocols. For example, under the plan, local management would be held accountable for all phases of the safety program, including:

- developing and executing safety training programs within their job responsibilities
- establishing and enforcing safety rules and procedures within their work units
- establishing effective employee safety committees
- preventing/minimizing hazards
- reporting accidents and deficiencies

• ensuring compliance with safety and operating regulations and practices

The Draft Plan Adopts Behavior-based Safety Principles, but Does not Include Targets for Measuring Progress Toward Program Goals

An initial draft of the company's forthcoming²⁵ revision to its System Safety Program Plan reiterates many of the same requirements for employee safety that were included in the 2010 version of the plan. Most important, it will require the establishment of departmental and corporate-wide goals for employee injury reduction. Department heads will need to set employee safety goals and cascade these goals down to their subordinates. The draft plan also stated that the Executive Safety Council will meet monthly to review the safety performance of the company, including a review of employee injuries. Led by the company's Chief Safety Officer, the Council began meeting in 2014 and includes company executives from many departments.

To support this plan, the Chief Safety Officer told us that he is planning to reorganize his department around the company's business lines. He believes that embedding safety support personnel within the business lines will provide more emphasis on employee safety on a day-to-day basis and will give front-line supervisors and managers more resources to improve employee safety in their departments. This change is also intended to provide a single point of contact for employees on safety issues.

This renewed focus on employee safety should help; however, the plan does not establish overall corporate targets and timeframes for reducing employee injuries. It also does not mention targets and timeframes for improving the company's safety culture and achieving financial benefits or whether these are still valid goals.

CONCLUSIONS

The company remains strongly committed to employee safety and has made significant efforts to implement the Safe-2-Safer program. This has resulted in the elimination of many unsafe working conditions and has improved the company's safety culture. However, the goals to reduce reported injuries and injury claim cost have not been met.

²⁵ According to officials from the program office, the plan will not be updated until after FRA finalizes a rule regarding risk-reduction measures required by the Railroad Safety Improvement Act of 2008. The officials expect the rule to be issued in March 2015.

Reported injuries have risen for four straight years, and no major changes appear to have been made to the Safe-2-Safer program, other than an increased emphasis on employee observations.

Program officials are undertaking efforts to identify the underlying reason for the injury rate increases, and they plan to use that information to improve the program's results. While this effort is underway, there are opportunities to consider other actions that could improve program implementation. Key among those actions is increasing engagement in the program at all levels–agreement employees, front-line supervisors and local managers, and senior leaders–and accountability for employee injuries.

Further, the relationship of Safe-2-Safer with other company safety plans and programs has not yet been clearly defined. The integration of these efforts would help to ensure the optimal use of resources devoted to safety programs and individual and overall program results.

RECOMMENDATIONS

To assist management's efforts to improve the effectiveness of the program and to ensure that the Safe-2-Safer program is fully integrated into the company's overall safety plans and supports the company's strategic goals, we recommend that the Executive Vice President, Chief Operations Officer, take the following actions:

- 1. Clarify in the System Safety Program Plan how Safe-2-Safer activities tie to and complement other company safety programs and plans.
- 2. Establish targets for employee safety, and establish metrics to measure progress toward these goals, including milestones toward achieving program goals.
- 3. Assess the level of knowledge throughout the company about the Safe-2-Safer program and provide additional training, as appropriate, to ensure that employees understand the purpose of the program and how it works.
- 4. Document and communicate to managers and employees the company's expectations concerning adherence to safety rules and procedures, and how the discipline process works in conjunction with the Safe-2-Safer program.
- 5. Assess Safer-2-Safer program policies and procedures to identify and strengthen employee engagement and accountability.

MANAGEMENT COMMENTS AND OIG ANALYSIS

In his response to a draft of this report, the company's Executive Vice President and Chief Operations Officer agreed with our recommendations. He also provided action plans and estimated dates for completing the actions. In summary he stated with regard to:

- **Recommendation 1.** The company will link Safe-2-Safer with the areas of safety culture and workplace safety, among others, in the System Safety Program Plan and embed Safe-2-Safer process leaders within each business line and support services to underscore the relationship between behavior-based safety and other company safety processes. Estimated to be completed by June 2015.
- **Recommendation 2.** The company's enterprise system safety dashboard, which includes measures for injuries and injury frequency, will be expanded to include targets approved by the Executive Safety Council. Estimated to be completed by September 2015.
- **Recommendation 3.** Additional training has been ongoing and will continue to be provided to employees. Also, the company will continue to measure changes in its safety culture through biennial surveys. The next assessment is estimated to be completed by October 2015.
- **Recommendation 4.** The company's Executive Safety Council, with the assistance of the Law department, plans to prepare a comprehensive approach to discipline for safety rule infractions. This action is estimated to be complete by April 2015. Also, all seven safety rule-books will be revised and the company will communicate to employees that adherence to safety rules is a condition of employment. These actions are estimated to be completed by December 2015.
- **Recommendation 5.** Several actions are planned to address employee engagement and accountability issues, primarily through training and formalized communications. Most of these actions are estimated to be completed by December 2015.

The promised and ongoing actions meet the intent of our recommendations. As part of our recommendation follow-up process, we will monitor the company's actions to implement our recommendations. We included the complete management response in Appendix C.

Appendix A

SCOPE AND METHODOLOGY

The objectives of this audit are to review (1) the extent to which Safe-2-Safer program goals are being met, (2) whether opportunities exist to improve program implementation, and (3) whether the program is integrated with the company's overall efforts to improve safety. The scope of our work focused on the implementation of the Safe-2-Safer program, and we also gathered and analyzed information on other safety initiatives within the company. We primarily focused on Safe-2-Safer program implementation, cost, and results. We also reviewed how the program related to broader, company-wide safety plans, but we did not review the company's entire set of safety programs and activities. We performed our onsite work principally at organizational units in the Operations department, but our review of Safe-2-Safer data included all company components participating in the program. We also met with FRA, BST, and Class I railroad officials.

We performed our work from November 2013 through December 2014. To assess the outcome of the program, our overall methodology was to compare the processes being used to program goals. This work was performed at the company's headquarters in Washington, D.C., and at the eight program locations in the Operations department listed below.²⁶ We selected these locations to ensure that we had a cross-section of employees from across Operations who worked in different departments and units, performed different functions, and represented management and agreement employees. At these locations, we met with 101 company employees—26 non-agreement management and 75 agreement employees. The employee's units and agreement employee's steering committee affiliations are listed below:

- Washington, D.C. (Ivy City maintenance facility); Mechanical department; Mid-Atlantic Mechanical steering committee
- Washington, D.C. (Washington Union Station); Transportation department; Mid-Atlantic Transportation steering committee

²⁶ During the survey phase of the audit, we also interviewed six employees in the Transportation and Mechanical departments at another program location in Lorton, Virginia. We used the information gathered during this site visit to inform our methodology and to further support issues throughout the report. However, we did not include the results of these discussions in our survey of the other 101 employees we met with at the 8 locations.
- Boston, Massachusetts; Transportation department; Northeast Transportation steering committee
- Philadelphia, Pennsylvania; Engineering department; Mid-Atlantic Engineering-South and Electric Traction steering committees
- New York City, New York; Mechanical department; Northeast Mechanical steering committee
- Providence, Rhode Island; Engineering department; New England–North Electric Traction and Engineering steering committees
- Los Angeles, California; Transportation and Mechanical departments; Southwest Division Coastal, Transportation, and Mechanical steering committees
- Chicago, Illinois; Transportation and Mechanical departments; Central Transportation and Central Mechanical steering committees

To understand how the program was implemented, we obtained and reviewed public laws, federal regulations, company policies and procedures, and strategic planning documents related to employee safety. We also obtained and reviewed Safe-2-Safer program documents and interviewed management officials in the Operations department. We interviewed officials from BST, FRA, and the Association of American Railroads, who provided additional documents, information, and data on employee safety and behavioral-based change management programs. We also took these actions:

- We attended a BST safety conference in Dallas, Texas, to better understand BST's strategy and concepts for helping companies reduce employee injuries by using its culture-based process.
- We reviewed the peer-to-peer observation process to understand how the observation and barrier removal process worked to help improve employee work behaviors and eliminate unsafe working conditions. We also obtained information on the number of observations performed and the number of barriers identified and removed since the program was implemented.

To identify and review the results of the Safe-2-Safer program, we took these actions:

• Analyzed the results of the biennial surveys measuring safety culture. To do this, we obtained and reviewed the results of each of the three surveys conducted in 2009, 2011, and 2013, and we discussed them with officials from the company and BST. We reviewed the company's scores to determine the degree of change

in the company's safety culture for each of the three years. We also reviewed how the company's safety culture compared to other BST clients. In these instances, we relied on the data provided by BST and did not validate their information.

- Analyzed employee injury data to identify and examine trends in employee injuries since the start of the program. We obtained and reviewed company data and other Class I railroad employee safety data over a 10-year period—from January 2004 through December 2013.²⁷ We also analyzed trends in total reported employee injuries and FRA-reportable injuries, including the types of employee injuries from January 2009 through December 2013. We then compared the company's injury ratios with other Class I railroads and BST clients.
- Analyzed projected financial benefits. To determine if the company achieved planned financial benefits, we reviewed claims data for injuries from January 2009 through December 2013. We documented the number of filed claims for each year and the corresponding claims payments over the same period as of June 2014.

To determine why the goals of the program have not been met, we met with company officials to discuss the challenges facing the company in implementing the program. To assess the company's view that the increases in injuries are due, in part, to policy changes and aging employees, we discussed these changes with program and other officials. We discussed this analysis with management officials and took these actions:

• We met with officials from BST and FRA who provided additional information and data relevant to programs in employee safety and behavior-based change management. We relied on the information provided by these officials and did not validate this information further. We also met with a change management expert from the University of Maryland's business school and reviewed several books and articles on change management, including the company's preferred framework for change management activities. We interviewed safety officials from three Class I railroads to better understand their safety programs.

²⁷ We used calendar year data as the basis for our analyses of injury—rather than fiscal year—because this was the format that the company originally provided to measure employee safety over time.

• To better understand employees' perceptions of the program, we relied on the safety culture scores and interviews with 101 agreement and management employees at the 8 locations we visited. This helped us assess the degree to which employees were actively engaged in the program and whether they were accountable for working safely.

To determine the need to integrate the Safe-2-Safer program into the company's overall safety efforts, we reviewed the company's safety policies and plans, including a draft of its planned revision to the System Safety Program Plan. We analyzed whether the Safe-2-Safer program was integrated with the company's policies and plans, and whether the draft plan included targets for improving employee safety. We discussed our analysis with officials from the Office of System Safety.

We conducted this performance 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.

Methodology for Estimating Program Costs

We developed a methodology for estimating Safe-2-Safer program costs from July 2009 through September 2016. Our estimate includes the costs for BST; for training employees; and for offices, teams, and committees that were established to implement the program. These are the components of the Safe-2-Safer program:

- **Program office**. This office is primarily responsible for establishing and implementing the program, ensuring that resources are available for program operations, and monitoring results. BST supported the program office by providing employee training and the procedures and software programs to implement the peer-to-peer observation process. The program office is now part of the System Safety Office in the Operations department and reports to the company's Chief Safety Officer, who reports to the Senior Vice President, Operations.
- **Regional core teams.** Thirteen regional teams are responsible for planning and coordinating Safe-2-Safer training, coaching steering committee employees, overseeing steering committees, and managing teams that remove barriers to

safety identified by the steering committees. The core teams consist of management, agreement employees, and BST consultants.

- Steering committees. There are 28 steering committees across the company. Headed by full-time agreement employee facilitators, they include several other agreement employees who are appointed by their union representatives and are assisted by a BST consultant, according to the program office. Steering committees work with employees across the company and are responsible for three major aspects of the program: creating an inventory of safe behaviors, identifying barriers for removal, and assigning employees to conduct peer-topeer observations of employees' work behavior.
- **Observers**. Agreement employees are assigned by their steering committees and are responsible for conducting peer-to-peer observations of other agreement employees. Peer feedback provided by observers to each employee about safe and unsafe work behaviors is the key function of the program, according to the program office. BST has provided training to observers to qualify them to perform effective observations.

We developed our methodology for estimating program costs by identifying resources devoted to the program and discussing ways to estimate the cost of those resources with officials of the Finance and Operations departments. We also reviewed the BST contracts and identified current and future training requirements. We validated our methodology with program officials and others in the Operations department.

We estimate that the program has cost the company about \$70.1 million through September 2014, as shown in Table 1. We also estimate that costs will increase about another \$24.1 million on the program during FY 2015 and 2016 if the company continues to operate the program in generally the same manner.

Cost Category	Amount 2009–2014	Amount 2015 & 2016
1. Employees assigned to the Safe-2-Safer program office or as facilitators	\$16.4	\$8.6
2. BST professional fees	27.6	2.7
3.Other support costs for travel expenses and office supplies	0.5	0.3
4. Employees participating in steering committees, regional core teams, and barrier removal teams	6.0	3.0
5. Employees conducting observations	4.3	2.7
6. Training	15.3	6.8
Totals	\$70.1	\$24.1

Table 1. Estimate of Program Costs FY 2009 to 2016 (in millions)

Source: OIG analysis of Amtrak cost and program data as of August 8, 2014

We developed our estimates for the six cost categories as follows:

- Category 1–Safe-2-Safer Program Office Personnel Expenses. These costs are based on the actual program office costs for FY 2009–2013 as reported in the company's financial system. To estimate these costs for FY 2014–2016, we used the 2013 actuals, and we assumed there is no change to wages, salaries, or benefits in order to ensure that our estimate is conservative.
- **Category 2–BST Professional Fees.** These costs are based on (1) the actual costs reported in the company's financial system for the BST contract for FY 2009–2013, and (2) an estimate of costs for BST services through FY 2016.
- **Category 3–Other Support Costs.** These costs are based on the actual expenses of the program office for FY 2009–2013, as reported in the company's financial system. To estimate these costs for FY 2014–2016, we used the FY 2013 actuals.
- Category 4–Steering Committees, Regional Core Teams, and Barrier Removal Teams. These costs are based on an estimate from the program office for the

amount of work expended on these functions in FY 2014.²⁸ To calculate the costs of these functions in FY 2014, we multiplied the number of hours by the FY 2010–2014 average salary or hourly wage and benefit rate, based on information provided by the Operations department's business operations office. To estimate the other years, we used the costs in FY 2014, and we assumed there is no change to wages, salaries, or benefits.

• Category 5–Observations. These costs are based on an estimate from the program office for the number of observations, observers, and amount of time spent per observation in calendar years 2012 and 2013. To calculate the costs of these functions in calendar years 2012 and 2013, we multiplied those numbers by the FY 2010–2014 average salary or the hourly wage and benefit rate provided by the Operations department's business operations office. To estimate the other years, we used the amount spent in 2012 and 2013, and we assumed there is no change to wages, salaries, or benefits.

Category 6–Training. These costs are based on an estimate from the program office for the amount of agreement and management employee program-related training hours from FY 2009–2014. To calculate the costs of functions from FY 2009–2014, we multiplied those numbers by the FY 2010–2014 average salary or the hourly wage and benefit rate provided by the Operations department's business operations office. To estimate the other years, we used the amount spent from FY 2009–2014, and we assumed there is no change to wages, salaries, or benefits.

Internal Controls

We reviewed the management controls used to implement the Safe-2-Safer program. We assessed the extent to which the company has incorporated controls into its Safe-2-Safer program—specifically, as they relate to program cost, implementation, and measuring the extent to which the program's goals were achieved. This report focuses on identifying ways to improve the program's overall implementation control environment.

²⁸ Our estimate includes 27 steering committees—rather than 28—because data from the program office included information on just 27 committees.

We did not review the company's overall system of controls for safety programs, beyond looking at the extent to which a plan existed to coordinate the activities of various safety programs. We also did not review the company's overall strategic planning process, beyond determining that safety is a strategic goal.

Computer-Processed Data

We used computer-processed data from four information systems.²⁹ We did not review the overall reliability of these systems, but we did review applicable documentation, and we interviewed company officials to obtain a general understanding of how the data were collected and input into the systems. We did not validate the data, but we verified them with other documentation and relied on an FRA audit of employee injury data. Based on this analysis, we determined that the data in these systems were sufficient for our purposes.

Prior Audit Reports

We identified three OIG and FRA reports as being relevant to this audit:

- *Governance: Injury Claims Trend Data for Fiscal Years 2010 through 2013* (OIG-MAR-2014-008, July 17, 2014
- Claims Program: Use of Best Practices Would Strengthen Management Controls (OIG-A-2012-016, August 14, 2012)
- National Railroad Passenger Corporation (NPRC) Amtrak Congressionally Mandated Accident/Incident Reporting and Record Keeping Audit (Federal Railroad Administration, December 12, 2012)

²⁹ These are the elements of the Amtrak Safety Information System, the company's system for collecting and storing data on employee injury, lost time, and restricted time: (1) Amtrak's SAP Enterprise Resource Planning system, which collects and stores its operating cost data, including expenditures on the Safe-2-Safe program; (2) Amtrak's claims database, which is used to document all injury claims, payments liabilities, and other claim status; (3) FRA's Office of Safety Analysis website, which FRA uses to make safety data available across the railroad industry; and the (4) Amtrak Safety Information System database, which tracks the company's injury data.

Appendix B

DESCRIPTIONS OF MEASURES USED IN EMPLOYEE SURVEYS

To measure the company's safety culture, BST used the following 10 factors in its surveys of the company's employees in 2009, 2011, and 2013:

- 1. **Perceived Organizational Support:** perception of the organization's concern for the needs and interests of employees and of the availability of support
- 2. **Management Credibility:** perception of management's judgment, honesty, consistency, fairness, and openness in dealing with workers
- 3. **Organizational Value:** perception of the extent to which the organization values safety as represented by its prioritization of safety to other concerns
- 4. **Procedural Justice:** perception of the fairness of front-level supervisors' actions that impact employees
- 5. **Leader-Member Exchange:** beliefs about the strength of employees' working relationships with the supervisor, such as the supervisor's willingness to "go to bat" for the employee
- 6. **Upward Communication:** perceptions of the quality and quantity of upward communication about safety and comfort to raise safety concerns and issues with supervisor
- 7. Teamwork: perception of workgroups to function as an effective team
- 8. Work Group Relations: the degree to which co-workers treat each other with respect, listen to each other's ideas, help each other out, and follow through on commitments
- 9. **Approaching Others:** beliefs about the likelihood that workers will speak up to a co-worker who they think is at risk for injury, pass along information about safety, or step up to help a co-worker do a job safely
- 10. **Injury Reporting:** the tendency of workers to report injuries and incidents, as well as the general climate around reporting

Appendix C

MANAGEMENT COMMENTS

From Department Subject	DJ Stadtler, EVP/Chief Operations Officer Operations Employee Safety: Opportunities Exist to Improve the Safe-2-Safer
Department	Officer Operations Employee Safety: Opportunities
	Operations Employee Safety: Opportunities
Subject	
	Program (Draft Audit Report for Project No. 001-2014 January 14, 2015)
сс	Joseph Boardman Eleanor Acheson Matthew Gagnon Rod Gibbons William Herrmann Theresa Impastato Michael Logue Mark McKeon Barry Melnkovic Joe McHugh Melantha Paige Peggy Reid Gerald Sokol
	b) report entitled " <i>Employee Safety:</i> which was issued January 14, 2015.
h your recom	mendations and have included responses on.
	ommendations identified within your to contact Michael Logue or me.
1	
	r Program" v h your recom for completion oping the reconse, feel free

Recommendations for Improvement	Action Plan	Action Plan Owner	Estimated Completion Date
 Clarify in the System Safety Program Plan how Safe-2-Safer activities ite to and complement other company safety programs and plans. 	Management agrees with the OIG's recommendation. Amtrak will link Safe-2-Safer (S2S) and the System Safety Program Plan (SSPP) through, among others, the areas of Safety Culture and Workplace Safety. S2S documentation of peer-to-peer observations and leader interactions produces data which may be used to evaluate safety culture and work place safety. Subsequently, additional metrics may be created to further refine improvements in safety culture and workplace safety. To ensure successful implementation of the goals and objectives of the SSPP with regard to the Safe-2-Safer process, the System Safety department will realign the organization to imbed S2S process leaders within the Safety organizations for each Business Line and Support Services. This realignment will further underscore the relationship between Behavior Based Safety efforts and other company safety processes.	System Safety	June 2015

Management agrees with the OIG's recommendation. The System	Improvement
Safety department has established an enterprise level System Safety dashboard that measures injuries and injury frequency at the Business Line level; several of these metrics are also tracked on Amtrak's Balanced Scorecard, e.g., Safe-2-Safer Contact Rates and Passenger Injuries per 100 Million Miles. We also are tracking safety and regulatory training. This will be expanded and appropriate safety metrics will be added so that targets can be developed and tracked. Goals and targets will be evaluated and set by the Executive Safety Council.	 Establish targets for employee safety and establish metrics to measure progress toward these goals, including milestones toward achieving program goals.
act Rates and Passenger tracking safety and nd appropriate safety leveloped and tracked.	Balanced Scorecard, e.g., Safe-2-Safer Cont Injuries per 100 Million Miles. We also are regulatory training. This will be expanded a metrics will be added so that targets can be o Goals and targets will be evaluated and set b

Recommendations for Improvement	Action Plan	Action Plan Owner	Estimated Completion Date
 Assess the current level of knowledge throughout the company about the Safe-2-Safer program and provide additional training, as appropriate, to ensure that employees understand the purpose of the program and how it works. 	Management agrees with the OIG's recommendation. The level of knowledge was assessed in FY14 and the results showed that we were in need of additional training. In response, the "Safe-2-Safer Basics" presentation was developed, all Block Trainers and Engineering Boot Camp trainers were instructed in it, and training was provided to all Transportation, Engineering, and Mechanical employees in FY14. More than 13,000 employees attended. S2S process leadership within the System Safety department will actively monitor the training to ensure consistency in message. In addition, a similar process and training "Safe-2-Safer Overview," was provided during FY14 to more than 1,100 non-field operating personnel. Further, a "Safe-2-Safer Introduction" was provided to Human Capital for use during New Employee Orientation in order to provide all new hires with a basic understanding. The SafeAlign process will continue to be used to teach culture change behaviors to all new managers and supervisors. Amtrak will continue to assess the level of process knowledge of employees through the Behavior Accident Prevention Program (BAPP) process and use the BAPP metrics to measure progress. Amtrak will continue to use the Organization Culture Diagnostic Instrument (OCDI) results to measure culture change.	System Safety	Our plan, as indicated, will be to continually reassess employee and provide additional training as appropriate, on an ongoing basis. Our next assessment will be completed by October 2015.

Action Plan	Recommendations for Improvement	Action Plan Owner	Estimated Completion Date
Management agrees with the OIG's recommendation. The Executive Safety Council has taken up the subject of Safety Rules compliance and discipline. On February 9, 2015, the Law department made a presentation to the ESC regarding Amtrak's obligations under the FRSA that will inform a comprehensive approach to discipline for safety rule infractions. After approval, this will be provided to all management for use with Amtrak employees. The Safety Rule Book Revision process has been started to completely revise all seven of Amtrak's Safety Rule Books. As part of the SSPP, Amtrak will implement a formal safety communication process that covers many topics, of which adherence to safety rules is one, as a condition of employment.	Document and communicate to managers and employees the company's expectations concerning adherence to safety rules and procedures, and how the discipline process works in conjunction with the Safe-2-Safer program.	System Safety	April 2015 December 2015
A r	Management agrees with the OIG's recommendation. The Executive Safety Council has taken up the subject of Safety Rules compliance and discipline. On February 9, 2015, the Law department made a presentation to the ESC regarding Amtrak's obligations under the FRS. that will inform a comprehensive approach to discipline for safety rule infractions. After approval, this will be provided to all management fo use with Amtrak employees. The Safety Rule Book Revision process has been started to completely revise all seven of Amtrak's Safety Rule Books. As part of the SSPP, Amtrak will implement a formal safety communication process that covers many topics, of which adherence to safety rules is one, as a	Owner	

Recommendations for Improvement	Action Plan	Action Plan Owner	Estimated Completion Date
 Assess Safe-2-Safer program policies and procedures to identify and strengthen employee engagement and accountability. 	 Management agrees with the OIG's recommendation. The following actions have been planned for implementation during calendar year 2015. a. Conduct another OCDI of all Amtrak personnel in October 2015 to assess the improvement in safety culture. b. A comprehensive description of non-agreement roles in S2S has been developed. These expectations and roles will be incorporated into the new two-day SafeAlign material being developed in FY2015. c. Accountability for the behaviors described in these roles and responsibilities will be clarified to non-agreement employees. d. The leadership classes being conducted by HCM will be evaluated for inclusion in all leadership roles and responsibilities. e. Safe-2-Safer will conduct a formal Sustainability Review for every process in 2015 and provide action items for each process. f. The presentation, "Basics of Behavior Based Safety," will be included in all New Employee Orientation classes to ensure all new employees (agreement and non-agreement) fully understand the process. g. A new, customized report template will be created by BST and used by Facilitators monthly to provide managers at the Director level in each process with At-Risk behavior trends. h. All communications regarding safety will be centralized and standardized in accordance with System Safety department guidelines. We will continue to work with Corporate Communications and the Law department to regularly publish articles on the Safe-2-Safer process. 	System Safety	 a. December 2015 b. September 2015 c. September 2015 d. Ongoing e. September 2015 f. June 2015 g. April 2015 h. July 2015

Recommendations for Improvement	Action Plan	Action Plan Owner	Estimated Completion Date
	 i. System Safety will oversee the barrier removal process and will publish the National Barrier Removal Report. j. To further enmesh S2S with the System Safety department, the Safe-2-Safer website will be incorporated as part of a comprehensive Amtrak System Safety department website. 		i. Septembe 2015 j. Septembe 2015

Appendix D

ABBREVIATIONS AND ACRONYMS

- BST Behavioral Science Technology
- FRA Federal Railroad Administration
- FY Fiscal Year
- OIG Amtrak Office of Inspector General

the company Amtrak

Appendix E

OIG TEAM MEMBERS

Calvin Evans, Assistant Inspector General, Inspections and Evaluations

Jason Venner, Senior Director, Lead

Carl Manora, Senior Audit Manager

John L MacMichael, Senior Operations Analyst

James Simpson, Contractor

Joshua Moses, Senior Auditor

Robert Dyer, Operations Analyst

OIG MISSION AND CONTACT INFORMATION

Amtrak OIG's Mission	The Amtrak OIG's mission is to provide independent, objective oversight of Amtrak's programs and operations through audits and investigations focused on recommending improvements to Amtrak's economy, efficiency, and effectiveness; preventing and detecting fraud, waste, and abuse; and providing Congress, Amtrak management, and Amtrak's Board of Directors with timely information about problems and deficiencies relating to Amtrak's programs and operations.		
Obtaining Copies of OIG Reports and testimony	Available at our website: <u>www.amtrakoig.gov</u>		
To Report Fraud,	Report suspicious or illegal activities to the		
Waste, and Abuse	OIG Hotline (you can remain anonymous):		
	Web: www.amtrakoig.gov/hotline		
	Phone: 800-468-5469		
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