OFFICE of INSPECTOR GENERAL
NATIONAL RAILROAD PASSENGER CORPORATION

SAFETY AND SECURITY:

The Company Can Take Steps to Evaluate Its Current Safety Culture

Interim Audit Report OIG-A-2021-001 | October 2, 2020

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Memorandum

To: Steven Predmore
Executive Vice President / Chief Safety Officer

From: Jim Morrison
Assistant Inspector General, Audits

Date: October 2, 2020

Subject: *Safety and Security: The Company Can Take Steps to Evaluate Its Current Safety Culture* (Interim Audit Report OIG-A-2021-001)

One of Amtrak's (the company) top priorities is to ensure the safety of its employees and passengers, and the company has devoted significant resources to this effort. From fiscal years 2015 through 2019, however, safety incidents have resulted in 26 passenger and employee fatalities, numerous injuries, and more than $208 million in actual and estimated liability payments. The National Transportation Safety Board (NTSB) investigated at least four accidents and found that the company's weak safety culture contributed to three of these incidents. These safety problems persist; the company has reported three employee fatalities to date in fiscal year 2020.[1] Research by the Department of Transportation (DOT) and others has also shown that a strong safety culture—the shared values, actions, and behaviors that demonstrate a commitment to safety—reduces incidents and accidents.

In 2017, the company began its latest safety initiative, the System Safety Program Plan—commonly known as a Safety Management System (SMS)—which the company proactively undertook well ahead of a March 2021 deadline to meet a federal requirement.[2] The company designed this initiative to redefine its approach to safety by transitioning from a system that reacts to incidents and results in punitive actions to one that proactively identifies risks and mitigates them before safety incidents can occur.

[1] Two of these employee fatalities were on-duty employees, and the third was an off-duty employee struck by an Amtrak train.
[2] The company is federally mandated to develop a System Safety Program Plan, per 49 C.F.R. § 270. Its SMS is intended to meet this requirement.

Our prior work has shown, however, that the company has invested significant time, effort, and resources in past safety improvement initiatives with mixed success.[3]

In April 2020 we began auditing the company's progress implementing and overseeing its SMS. Our work is ongoing. During this work, however, we found a potential issue that the company could address in the near term. As a result—and in response to the Chief Safety Officer's request to provide early alerts of needed changes—we are providing this separate report.

The foundation of any successful program, such as SMS, is whether it achieves the intended results. Therefore, in this report, we assessed the extent to which the company has taken steps to determine employees' current perspectives about safety and developed a baseline measure of its safety culture to track progress improving its culture over time. To conduct our assessment, we reviewed our prior reports and NTSB accident reports, researched and identified the types of measurements the transportation industry uses to measure safety culture and improvements over time, interviewed company officials and subject matter experts in safety culture, and reviewed company planning documents. For additional details on our scope and methodology, see Appendix A.

SUMMARY OF RESULTS

Company leadership acknowledges longstanding challenges with its safety culture. They do not, however, know the extent of these challenges because they do not have data to establish a baseline against which to measure improvement. According to industry research and a joint study conducted by DOT and the Federal Railroad Administration (FRA), a primary method for establishing a baseline is surveying employees' values, attitudes, and perceptions about safety and their organization's actions to improve it. The company has an opportunity to efficiently conduct a survey of nearly all of its frontline employees as part of its upcoming safety training, which is scheduled to begin in October 2020. Moreover, the DOT Safety Council has defined 10 elements of a strong safety culture that could help the company expeditiously identify the factors that are critical to its safety culture and the survey questions to

[3] *Safety and Security: Opportunities Exist to Improve the Safe-2-Safer Program* (OIG-A-2015-007); February 19, 2015. In 2015, we reported that the company spent $70.1 million on an enterprise-wide safety program that attempted to enhance safety outcomes through more employee accountability. We made recommendations to improve this program, which the company implemented, but the company ultimately discontinued the program in 2017.

assess them. These include, for example, leadership's commitment to safety and whether safety is prioritized over competing demands. We found that other commuter and freight railroads use these elements to survey their employees and assess their safety cultures.

Therefore, we recommend that the company develop and deploy a survey as soon as practical, use the results to establish a measurable safety culture baseline, assess progress improving the safety culture over time, and take action to address issues the survey identifies. In commenting on a draft of this report, the Executive Vice President / Chief Safety Officer agreed with our recommendations. He said that the company will begin implementing a survey to establish a safety culture baseline by December 31, 2020, and will conduct follow-up assessments every two years to measure its progress in improving its safety culture. For management's complete response, see Appendix C.

BACKGROUND

The company's Safety department is responsible for developing and collaborating with the four Operations departments —Transportation, Mechanical, Engineering, and Stations—to implement the company's SMS. The SMS consists of four interconnected lines of effort:

- **Safety policy**. Efforts to define safety-related policies, practices, and organizational structures to accomplish their goals.
- **Risk management**. Efforts to identify, analyze, and mitigate hazards.
- **Safety assurance**. Efforts to continually audit and evaluate safety policies and practices and use this information to inform management about the effectiveness of safety programs.
- **Safety promotion**. Efforts to communicate enterprise-wide the SMS strategy and to inform all employees, including through training, that safety is one of the company's core values and top priorities.

Federal regulations require the company to submit its safety plan to FRA for approval by March 4, 2021.[4] The company took proactive steps to implement the SMS based on a draft of the federal rule and submitted its initial plan to FRA in November 2018—16 months before the rule went final in March 2020, and 28 months before

[4] 49 C.F.R. § 270.201(a)(1).

the deadline. Once the FRA approves it, the company has three years to fully implement its SMS plan.

Although the company continues to face major challenges from the coronavirus pandemic, it remains committed to implementing the SMS on schedule. As part of its safety promotion efforts, the company is in the process of designing its "Safety Starts with Me" training. The Safety, Operations, and Human Resources departments designed this one- to two-day course to expose frontline employees to fundamental SMS concepts. Although the company has made some adjustments to its initial safety training timeline based on impacts from the coronavirus pandemic, the Safety and Human Resources departments plan to begin rolling out the training to Operations department frontline employees in October 2020 and completely train all these employees by October 2021.

THE COMPANY CAN TAKE STEPS TO EVALUATE ITS CURRENT SAFETY CULTURE

The company has developed and tracks measurements to monitor its safety performance, such as customer and employee injuries, consistent with fundamental program management principles that call for metrics to ensure that a program is achieving its intended results. Senior company leaders acknowledged, however, that they do not know the extent of the challenges with its safety culture because the company has not established a baseline and measurements to assess whether its safety culture is improving as a result of its SMS investments. DOT and independent research have found that a strong safety culture has a positive impact on safety outcomes: when safety culture is strong, accidents are less frequent and less severe. For example, the National Academy of Sciences found that four transit agencies improved their safety cultures and reduced major accidents and employee injuries and fatalities.

According to a joint DOT and FRA report[5] and other transportation industry research, surveys are a primary method of evaluating employees' values and attitudes about safety, as well as their perceptions of an organization's actions to improve safety. Additionally, DOT has identified 10 critical elements that organizations can use to establish this baseline and measure progress, as Table 1 shows.[6]

[5] *Safety Culture: A Significant Influence on Safety in Transportation* (DOT/FRA/OR-17/09), August 2017.
[6] For a complete list of DOT's 10 culture elements, see Appendix B.

Table 1. DOT's 10 Elements of a Strong Safety Culture

1.	Leadership is clearly committed to safety
2.	Open and effective communication exists across the organization
3.	Employees feel personally responsible for safety
4.	The organization practices continuous learning
5.	The work environment is safety-conscious
6.	Safety incident reporting systems are clearly defined and not used to punish employees
7.	Decisions demonstrate that safety is given priority over competing demands
8.	Employees and the organization work to foster mutual trust
9.	The organization responds to safety concerns fairly and consistently
10.	Safety efforts are supported by training and resources

Source: DOT/FRA/OR-17/09*: Safety Culture: A Significant Influence on Safety in Transportation*

Several commuter railroads and freight railroads have used DOT's 10 elements to develop surveys and other tools to establish baselines and measure their safety culture. FRA found that at least two of these railroads used the results to improve their safety culture. These organizations structured their survey questions around each of the 10 elements, as the following examples illustrate:

- To measure the extent to which its employees perceived that the work environment is safe, one survey asked employees questions such as whether they felt encouraged to raise safety concerns and felt free to report safety hazards.
- To measure the extent to which employees thought management's decisions demonstrated that it gave safety priority over competing demands, one survey asked employees questions such as whether safety was ever sacrificed for quality, speed, or production during a job.
- To measure the extent to which its employees feel personally responsible for safety, one survey asked employees whether they felt that being safe was the most important part of their job.

Safety department officials told us the company intends that its upcoming safety training will be one of the first mechanisms for communicating SMS concepts and part

of the foundation for improving its current safety culture. Company officials acknowledged that they had not considered establishing a baseline of the company's current safety culture prior to delivering the training or implementing SMS but said it would be advantageous to do so. Moreover, the company has done so previously. For example, in 2009 the company conducted an employee survey in conjunction with its initiation of a safety improvement program.[7] One way the company could establish a baseline without delaying the training would be to integrate an employee survey at the beginning of its safety training in October 2020. Using DOT's 10 elements of a safety culture to develop its survey questions could help the company expedite the survey and avoid delays. Survey results could enable the company to establish a safety culture baseline, diagnose and address barriers to improving its safety performance, inform and adjust its future training, and measure the impacts on the safety culture over time.

CONCLUSIONS

As the company navigates major challenges in response to the coronavirus pandemic, it will need to remain focused on improving its approach to keeping employees and customers safe. Taking actions now to establish a safety culture baseline in conjunction with its SMS safety training program would help the company ensure that it is efficiently developing this important component of an effective and sustainable safety program.

RECOMMENDATIONS

To ensure that the company's SMS and training effectively address the company's needs, the Chief Safety Officer, in coordination with the Chief Operating Officer, should take the following actions:

1. Develop and deploy an employee survey and use the results to establish a measurable safety culture baseline. This survey could be based on the DOT's 10 elements of a strong safety culture and should be conducted in conjunction with the planned training or as soon as practical without delaying the training.

[7] In 2009, the company hired outside consultants to establish a baseline of its organizational safety culture. The company utilized these consultants again in 2011, 2013, and 2015 to track improvements in organizational safety culture over time.

2. Use the survey's results to measure the company's progress improving safety culture over time and take action to address additional issues the survey identifies.

MANAGEMENT COMMENTS AND OIG ANALYSIS

In commenting on a draft of this report, the company's Executive Vice President / Chief Safety Officer agreed with our recommendations and described the company's actions and plans to address them, which we summarize below.

Recommendation 1: Management agreed with our recommendation to conduct a safety culture assessment. The company is preparing to deploy the safety training program, Safety Starts with Me, and said it is considering administering a short safety culture survey to participants as part of this training. The company intends to define and implement the survey methodology in the first quarter of FY 2021. The target completion date is December 31, 2020.

Recommendation 2: Management agreed with our recommendation to use the results of a safety culture assessment baseline to evaluate progress improving the company's safety culture over time. The company plans to conduct follow-up surveys at least every two years, with the first no later than FY 2023. Management stated that they would use these follow-up surveys to compare against the baseline and assess the company's progress toward advancing its safety culture. The target completion date is September 30, 2023.

APPENDIX A

Objective, Scope, and Methodology

To assess the extent to which the company has taken steps to determine employees' current perspectives on safety, we reviewed our prior audit reports and NTSB accident reports, researched and identified methodologies to measure safety culture in the transportation industry, interviewed company personnel and safety culture subject matter experts, and reviewed company documents. To assess the extent to which the company established a baseline of its safety culture, we interviewed company personnel and safety culture subject matter experts, and we reviewed company documents.

We conducted this performance audit in accordance with generally accepted governmental 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 objective.

Internal Controls

We reviewed the management controls for overseeing the program and mitigating associated risks. In particular, we assessed the internal control components and underlying principles and determined that one component was significant to our audit objective:

> **Monitoring Activities.** Ongoing evaluations, separate evaluations, or some combination of the two are used to ascertain whether the components of internal control are present and functioning.
>
> > *Establishes Baseline Understanding.* The design and current state of an internal control system are used to establish a baseline for ongoing and separate evaluations.

We developed audit work to ensure that we assessed this control. Because our review was limited to this internal control and the one underlying principle, it may not have disclosed all of the internal control deficiencies that may have existed at the time of this audit.

Computer-processed Data

We accessed computer-processed data from company systems for limited analysis of employee and customer injuries data, as well as monetary injury claims data. We compared the data we retrieved to reports the company provided and did not identify any material differences. We concluded that the data provided were sufficiently reliable for the purposes of our audit.

Prior Reports

- *AMTRAK: Top Management and Performance Challenges—Fiscal Years 2019 and 2020* (OIG-SP-2018-011); September 28, 2018
- *Safety and Security: Opportunities Exist to Improve the Safe-2-Safer Program* (OIG-A-2015-007); February 19, 2015

APPENDIX B

Safety Culture Elements

DOT's 10 Elements of a Safety Culture	
1.	**Leadership is clearly committed to safety.** Leaders across the company must model safety-first attitudes and behaviors. Employees learn the accepted practices by following the example of their management.
2.	**Open and effective communication exists across the organization.** Employees must feel comfortable communicating to their supervisors about safety issues and communicating with their peers when they see unsafe behaviors.
3.	**Employees feel personally responsible for safety.** Empowering employees helps the entire organization identify and correct risks proactively. Those who feel more personally responsible for safety take more ownership of risks and are more likely to speak up when they see unsafe behavior.
4.	**The organization practices continuous learning.** Maintaining a strong safety culture necessitates a learning environment where opportunities to improve safety are continuously sought out and implemented.
5.	**The work environment is safety-conscious.** Employees should be encouraged to raise safety concerns through reporting systems without fear of reprisal. Maintaining a strong safety culture requires constant awareness of the importance of safety.
6.	**Reporting systems are clearly defined and not used to punish employees.** Ensure that reporting systems are in place so safety issues can be promptly identified, evaluated, and addressed**.**
7.	**Decisions demonstrate that safety is prioritized over competing demands.** A strong safety culture will consistently choose safety over performance when faced with the choice of cutting corners to increase performance. A strong safety culture has a decision-making process that prioritizes safety over competing demands.
8.	**Employees and the organization work to foster mutual trust.** One of the cornerstones of safety culture is trust. Employees who have developed a relationship of trust with their supervisors may be more willing to honestly communicate safety concerns without fear of reprisal.
9.	**The organization responds to safety concerns fairly and consistently.** Employees should feel free to raise safety concerns without fear of retaliation. The organization must respond to safety concerns in a manner that employees perceive as fair, just, and consistent**.**
10.	**Safety efforts are supported by training and resources.** The company must ensure that the personnel, procedures, and other resources needed to ensure safety are available to employees. Staff must have the necessary knowledge to determine the safety risks in their duties, and they must have the proper equipment to safely perform their jobs.

Source: DOT/FRA/OR-17/09*: Safety Culture: A Significant Influence on Safety in Transportation*

APPENDIX C

Management Comments

NATIONAL RAILROAD PASSENGER CORPORATION

Memo

Date	September 10, 2020	From	Steven C. Predmore, EVP, Chief Safety Officer
To	Jim Morrison, Assistant Inspector General, Audits	Department	Safety, Health and Environmental
		cc	Eleanor Acheson, EVP General Counsel Carol Hanna, VP Controller Stephen Gardner, Sr. EVP Roger Harris, EVP Justin Meko, VP Dennis Newman, EVP Scot Naparstek, EVP Mark Richards, Sr Director Qiana Spain, EVP DJ Stadtler, EVP Tracie Winbigler, EVP CFO Christian Zacariassen, EVP CIO

Subject Management Response to *Safety and Security: The Company Can Take Steps to Evaluate Its Current Safety Culture (*Draft Audit Report for Project No. 016-2020)

The purpose of this letter is to provide an immediate response to Audit Report 016-2020, *Safety and Security: The Company Can Take Steps to Evaluate Its Current Safety Culture*. In FY 2018, the effort to transition to a safety program based on the principles of Safety Management Systems (SMS) commenced with urgency. From 2015 to 2018, Amtrak had experienced four consecutive years where an NTSB-classified accident occurred, resulting in customer or employee fatalities. As SMS best practices were introduced, a wealth of information from sources throughout the organization was processed, analyzed, and considered. This information included NTSB investigation reports, internal reports, feedback directly from employees and input from the FRA, among other sources. We believe this information provided us with a robust understanding on the current state of our safety culture at the time.

FY 2019 marked a high point for Amtrak's safety performance, ending the pattern of recurring NTSB classified accidents and achieving the goal of zero employee and customer fatalities. However, the development and implementation of a robust SMS is a multi-year effort; and, at the start of FY 2020 we experienced a tragic reminder of the progress that remains when two on-duty employees and one off-duty employee were fatally injured. We responded by advancing those elements of our SMS that are focused most directly on engaging our frontline employees and improving work activities in the areas of highest risk. Our internal investigation process was designed to drive down to the root causes of these events, enabling the development of robust corrective and preventive actions that effectively mitigated the risk of recurrence. Over the remainder of FY 2020, we have achieved and subsequently exceeded our safety

goals for customer and employee injury rates, reaching historic lows even when accounting for COVID-19's impact.

Recommendations:

To ensure the company's SMS and training effectively address the company needs, the Chief Safety Officer, in coordination with the Chief Operating Officer should:

1. **Develop and deploy an employee survey and use the results to establish a measurable safety culture baseline. This survey could be based on the DOT's ten elements of a strong safety culture and should be conducted in conjunction with the planned training or as soon as practical without delaying the training.**

   Management Response/Action Plan: We concur with the OIG's recommendations to conduct a safety culture assessment and use the results as a baseline to evaluate progress over time. We are at a point in our program and culture development where a survey will provide us with useful and targeted information as we strive to continuously improve our SMS, particularly as SMS becomes a regulatory requirement for the industry. Given the challenges of communicating directly with many of our frontline employees, we are in the process of evaluating the most effective methodology for conducting the survey such that we capture a representative sample of agreement employees that will give us confidence in the validity of the results. As we transition into FY 2021, Amtrak is preparing to deploy the safety training program *Safety Starts with Me* with two versions of the course that have been designed specifically for all management and agreement employees. One possibility we are strongly considering is to include a short survey to participants as part of administering this training—as the training will reach all employees. Our target is to define and implement the survey methodology during the first quarter of FY21, and we will keep your office informed as we pursue our final solution.

   Responsible Amtrak Official(s): Steve Predmore, EVP Chief Safety Officer and Justin Meko, VP, Safety Compliance & Training

   Target Completion Date: December 31, 2020

2. **Use the survey's results to measure the company's progress improving safety culture over time and take action to address additional issues the survey identifies.**

   Management Response/Action Plan: Management agrees with the OIG recommendation. The survey will be performed biennially at a minimum. The first survey will be administered in FY21 to establish a safety culture baseline. The results from the next survey, which will be conducted no later than FY23, will be used to compare against this baseline to assess our progress toward advancing our culture.

   Responsible Amtrak Official(s): Steve Predmore, EVP Chief Safety Officer and Justin Meko, VP, Safety Compliance & Training

   Target Completion Date: Biennially, with first recurrent survey administration in FY23

NATIONAL RAILROAD PASSENGER CORPORATION

Thank you for bringing these recommendations to our attention and we look forward to receiving the OIG's full report on Amtrak's SMS.

APPENDIX D

Abbreviations

DOT	Department of Transportation
FRA	Federal Railroad Administration
NTSB	National Transportation Safety Board
OIG	Amtrak Office of Inspector General
SMS	Safety Management System
the company	Amtrak

APPENDIX E

OIG Team Members

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OIG MISSION AND CONTACT INFORMATION

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.

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