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SHORT LINE SAFETY INSTITUTE: A SAFETY CULTURE ASSESSMENT MODEL TRANSFERABLE FROM FREIGHT TO COMMUTER OPERATIONS

SUMMARY

The Short Line Safety Institute (SLSI) is dedicated to the continuous improvement of safety and safety culture across all short line and regional railroads in the United States. Strengthening a railroad's safety culture creates a safer working environment that may result in less frequent or severe accidents.

SLSI defines safety culture as the shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands, based on the U.S. Department of Transportation (DOT) Safety Council's safety culture definition (Morrow & Coplen, 2017). SLSI is dedicated to railroad safety, the improvement of safety culture, and continuing education. To further these commitments, SLSI investigated the utility of its Safety Culture Assessment (SCA) model in another railroading sector, Commuter Operations.

SLSI uses a multi-method SCA process to assess the safety culture of Class II and Class III freight railroads across the United States. A Volpe National Transportation Systems Center (Volpe) evaluation, sponsored by the Federal Railroad Administration (FRA), recognized this model as "the most robust assessment model in the industry" (Kidda & Howarth, 2019) and it continues to provide strong effective results for participating railroads.

Until recently, SLSI's model has only been applied to short line freight railroads. The importance of promoting and improving safety cultures within railroads is not limited to the freight sector; the critical elements of a strong safety culture within the industry remain the same despite the railroad type. This report describes the results of a pilot study conducted in 2019 by SLSI on a commuter railroad and highlights the transferability of its SCA model from freight to commuter railroads.

BACKGROUND

Since 2015, SLSI has been conducting voluntary, non-punitive, confidential SCAs at participating short line and regional freight railroads (i.e., Class II and Class III railroads) across the United States. After an SCA, SLSI offers technical assistance to railroads that are looking to implement changes with the goal of strengthening their safety culture. SLSI also conducts follow-up assessment visits to further assist participating railroads in their efforts to improve safety. As of July 2020, SLSI has conducted 89 SCAs.

OBJECTIVES

In 2019, SLSI conducted a pilot study with a Commuter Operator utilizing the SCA process that had previously only been applied to short line freight railroads. The purpose of this pilot study was to investigate the extent to which SLSI's SCA process can be adapted and applied to commuter or transit operations that carries passengers (Commuter Operations).

METHODS

The Commuter Operator utilized almost all procedures and materials used for freight SCAs. For example, the SCA, like all previous SCAs, consisted of the following steps. First, an SLSI Lead Assessor visited with the railroad to describe the program—its mission, vision, and process—to management, who agreed to the SCA and designated a primary point of contact. Prior to visiting the site, the Assessors reviewed the Federal Railroad Administration's (FRA) safety data in addition to safety rules and other safety documents. Then, the Assessors arrived on site to conduct field observations of railroad crews. The Assessors interviewed employees at various levels of the organization, including senior leaders, managers, supervisors, and craft employees. Finally, the Assessors analyzed the information and met with railroad representatives for a close-out meeting to verbally present SCA findings and Opportunities for Improvement.

SLSI aided the Commuter Operator in identifying Opportunities for Improvement on its properties that may lead to stronger, sustainable safety culture, practices and training, and ultimately improve safety. In efforts to investigate the transferability of the SCA model to a Commuter Operator, this evaluation was based on the DOT Safety Council's *Ten Core Elements for a Strong Safety Culture* (Morrow & Coplen, 2017).

ANALYSIS

SLSI's Manager of Research and Organizational Development conducted an analysis of the transferability of SLSI's SCA model from freight operations to a Commuter Operation. An analysis took place through discussions with the pilot study Team Leader and SLSI's Director of Safety Culture Assessments. The author conducted additional analyses by reading the Commuter Operator's final report and feedback survey. The author compared procedures for the freight and commuter SCAs to determine the transferability and reliability of SLSI's SCA model.

RESULTS

SLSI has unique expertise and is positioned to adapt its existing protocols and procedures to ensure they are tailored to measure safety culture on Commuter Operations.

Two notable changes to protocol and procedure occurred to successfully conduct the pilot study. First, there are additional Federal regulations specific to Commuter Operations to be considered for the SCA. The Assessors familiarized themselves with these additional regulations prior to visiting the site. The additional regulations were also added to SLSI's Document Inventory list as part of the evaluation. Second, the observation stage of the SCA was slightly altered in the pilot study. Specifically, the Assessors rode the trains as passengers as part of their observations. In prior freight railroad SCAs, Assessors did not ride the trains as part of the SCA process. This was a slight change in procedure. Maintenance and mechanical observation procedures remained the same.

Despite these two adaptations of the SCA process, SLSI's SCA model is transferable from freight to Commuter Operations.

Results of the pilot study shed light on the possible demand of more resources and staff assigned per SCA if SLSI were to continue working with Commuter Operations. While freight railroads can vary greatly in size and scope, Commuter Operations are likely to be larger scale SCAs. For example, the Commuter Operator who participated in the pilot estimated that the survey was offered to approximately 2,000 employees during July 2019 and August 2019. A total of 1,131 (57 percent) employees responded to at least half of the survey items. This response total is larger than the average size of the freight railroads previously assessed by SLSI. This pilot required the assignment of more Assessors than typically required for freight SCAs. This a consideration for future SCA application and expansion.

Results of this pilot study suggest that safety culture continues to be an area worthy of further improvement and resources within the United States' railroad industry.

CONCLUSIONS

Promoting and improving safety culture is not limited to the freight sector of the United States' railroads; it is an industry-wide mission. Results of this study suggest that Commuter Operations would benefit from SLSI's services. Additionally, results suggest that SLSI's SCA process is easily transferable from freight to commuter railroads with minor revisions.

FUTURE ACTION

SLSI may build off of the Commuter Operator's SCA results in two initial ways: first, by providing technical assistance to assist the railroad in strengthening its safety culture; second, by conducting a follow-up SCA to examine the extent to which the railroad implemented the SLSI-identified Opportunities for Improvement. These follow up steps may assist the Commuter Operator with maintaining a strong safety culture.

REFERENCES

Kidda, S., & Howarth, H. D. (2019). *Short Line Safety Institute: The Most Robust Model for Assessing Safety Culture in the U.S. Railroad Industry*. Research Results No. RR 19/15. Washington, DC: U.S. Department of Transportation, Federal Railroad Administration.

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