Risk Reduction Program
Executive Summary

Current regulations, safety rules, regulatory compliance, rules compliance, and employee disciplinary policies are considered important and effective minimum standards of the overall safety system in the U.S. rail industry. However, because of the punitive, disciplinary and often blame-oriented nature inherent within such a system, any individual component of traditional rule-based systems has the potential to foster widespread fear of punishment or reprisal and may actually suppress the honest and accurate reporting of important precursor events to an accident. When this occurs, accident risk increases because important safety critical information that could have prevented future accidents from occurring is being withheld. To the extent this occurs on a widespread basis, the structural integrity of the regulatory and compliance-oriented framework may be compromised and serve as an inherent barrier to further improvements in safety. Risk-based approaches present an opportunity to protect the minimum standard created by regulations while at the same time creating an environment that values and encourages the adoption of supplemental risk reduction programs. By utilizing both the traditional regulatory standards with risk based approaches, we have the opportunity to change the current railroad culture from one of distrust to one of mutual cooperation, at least in the regards to true safety improvements.

Since 2005, the railroad industry has already hired over 40,000 new employees, with another 40,000 expected to be hired in the next 3 years. Such a massive influx of new employees brings an opportunity for fresh ideas to improve safety. In addition, safety statistics indicate current safety systems have more or less reached the limits of their effectiveness. For these reasons, FRA believes that an important opportunity now exists to implement industry-wide changes that could significantly reduce accidents in the railroad industry.

What is the Risk Reduction Program?

The Risk Reduction Program (RRP) is an FRA-led industry-wide initiative to reduce accidents and injuries, and build strong safety cultures, by developing innovative methods, processes, and technologies to identify and correct individual and systemic contributing factors using "upstream" predictive data.

Using voluntary, non-regulatory approaches, RRP will incorporate precursor data management and confidential reporting systems to better identify and proactively correct individual and systemic factors that contribute to accidents. It is proactive – rather than reactive – because it encourages prevention of accidents. The essential ingredients of the proposed approach include developing knowledge of precursors to actual accidents, confidential reporting, effective problem analysis, and corrective actions. The adoption of new non-regulatory approaches creates the opportunity for accelerated improvement, but does not supersede current regulatory approaches. This combination of traditional

regulatory activities and enhanced non-regulatory approaches will allow FRA, the railroads, labor groups, and other stakeholder groups to make more rapid progress in achieving their safety missions.

Regulations necessarily tend to involve specification of engineering and in some cases procedure-based risk management measures. However, the effectiveness of such systems ultimately depends on the organizational systems that support safety. Organizational systems such as those used for performance management, staff development, etc., and the culture that makes such systems effective are at the core of safety excellence. This aspect of safety, which is where safety directly interacts with fundamental organizational management, cannot be solely dictated by regulation. Rather it must be encouraged through establishing an environment favorable to safety-supporting cultures.

What would RRP entail?

As a significant component of the non-regulatory approach, voluntary risk reduction projects will target operations, equipment or systems that pose a risk to operational & personnel safety and will establish pilot projects that effectively prevent an accident or incident. The FRA will assist those who wish to participate in establishing pilot projects that will be used to identify and address risk including measurable goals & reporting processes. The FRA will also work with the industry to identify current programs that are successfully reducing risk. The FRA will compile the information and disseminate the lessons learned nationwide. Successful pilot projects may develop into nationwide programs.

FRA envisions a wide variety of projects that could fit under the RRP umbrella. Some examples include the close call reporting systems, peer observation programs, management development systems, the Collision Hazard Analysis currently in place on some commuter railroads. In addition, use of the Track Quality Index for predictive maintenance or capital investment and use of wayside equipment monitors and sensors. In fact, any innovative use of predictive data could be seen as a potential pilot.

Creating data collection and risk -based safety systems that make precursor data more readily available affords a better understanding of the systemic contributors to accidents and why those accidents occur.. FRA recognizes that there may be a need to incorporate waivers or formal Memoranda of Understanding.

Successful pilots will incorporate a number of criteria that include the following;

1. Commitment from all stakeholders
2. Voluntary, confidential, non-punitive participation
3. Systematic and objective data gathering, analysis, and reporting
4. Problem solving and corrective action
5. Long-term sustaining mechanisms

Where do we go from here?

Initially, the Risk Reduction Program will be composed of a set of pilot projects targeting specific risk categories in limited studies. FRA will work with railroad, labor, and other interested organizations that volunteer to conduct pilot projects. FRA will coordinate the project development, oversee project implementations, and evaluate the projects to determine the effectiveness of countermeasures and corrective actions taken. FRA will then disseminate information about successful pilot projects to encourage more wide-scale adoption of effective risk reduction solutions. Finally, FRA will support the adoption of some pilot projects on a nationwide scale.

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