Final Rule for 49 CFR Part 270: SSPP Lessons Learned

AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

Hosted by the Federal Railroad Administration (FRA) and American Public Transportation Association (APTA)

Wednesday November 25, 2020

Moderator

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APTA AMERICAN PUBLIC TRANSPORTATION ASSOCIATION

System Safety Program Part 270 Regulation

APTA Webinar

November 25, 2020

System Safety Program
Larry Day & Mike Ramsey

Agenda

Review of must complete by dates

Lessons Learned

Q & A

Key Dates

Rule Effective Date

- *May 4, 2020*

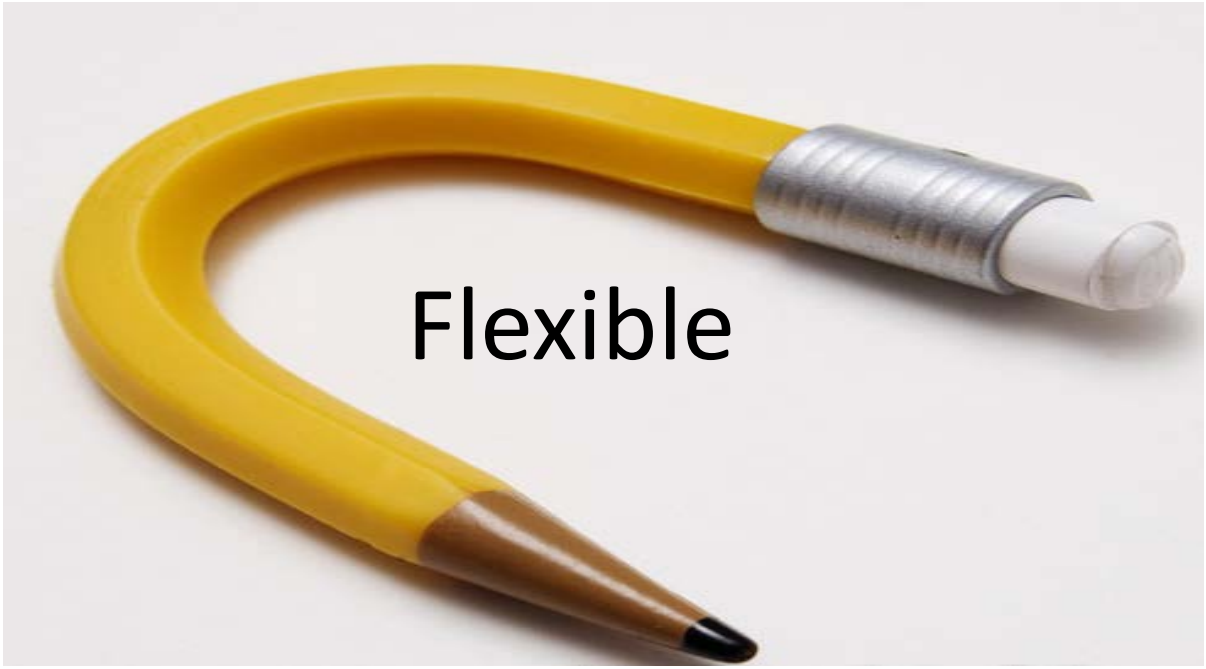
Plan Submission

- No later than **March 4, 2021**

99 days left

Consultation

- A passenger rail operation must consult in good faith and use best efforts to reach agreement with all directly affected employees on the ***contents of the SSP plan*** and amendments to the plan.



The rule provides each passenger rail operation with a certain amount of flexibility to tailor its SSP to its specific operations.

Lessons Learned

Thanks to those that have requested an informal review.

Based on those reviews are following lessons learned.

Goals

270.103 (c) – aka Element 3

The requirements are that any goals defined by the railroad must be—

1. **Long-term so that they are relevant to the railroad's SSP throughout the life of the railroad or system.**
2. **Meaningful so that they are not so broad that they cannot be attributed to specific aspects of the railroad's operations.**
3. **Measurable so that they are designed in such a way that it is easily determined whether each goal is achieved or at least progress is being made to achieve the goal.**
4. **Consistent with the overall goal(s) of the SSP, in that they must be focused on the identification of hazards and the elimination or mitigation of the resulting risks.**

Goals (Example)

Goal # 4

By May 2022 update our public web site to include the latest tools to enhance public outreach.

Strategy #1: By March 2021, the Senior Manager of Information Technology will form a team to review the current public web site and make recommendations for enhancements.

Strategy #2: By June 2021, submit the recommendations to the general manager for approval.

Strategy #3: By Aug. 2021, prepare a contract specification and bid documents for the upgrade of the public web site and solicit bids.

Strategy #4: By Dec. 2021, select contractor and initiate enhancements.

Maintenance, Repair and Inspection Program

#2

270.103 (g) – aka Element 6

This section addresses the programs, processes, and procedures that the railroad uses in the maintenance, inspection, testing, and repair of infrastructure and equipment affecting safety. Items to be addressed include, but are not limited to fixed facilities and equipment, rolling stock, signal and train control systems, track and right-of-way, passenger station platform gaps and traction power distribution systems.

FRA expects that these processes, procedures, and programs be fully documented, and be available to those qualified employees that are required to use them. The railroad may reference these manuals and procedures in its SSP plan.

Maintenance, Repair and Inspection Program

#2

Break it down / format it to make it easier to read

This section addresses the programs, processes, and procedures that the railroad uses in the maintenance, inspection, testing, and repair of infrastructure and equipment affecting safety. Items to be addressed include, but are not limited to:

1. Fixed facilities and equipment,
2. Rolling stock,
3. Signal and train control systems,
4. Track and right-of-way,
5. Passenger station platform gaps and
6. Traction power distribution systems (where applicable).

Maintenance, Repair and Inspection Program (Example)

#2

All aspects of the RRX maintenance, inspection, and repair program are performed by qualified employees.

Fixed Facilities and Equipment

All RRX fixed facilities and related equipment receive periodic inspections and maintenance in accordance with the RRX Fixed Facility Inspection/Maintenance Manual (RRX FFIM-01). The inspection/maintenance manual contains processes and procedures that provide for documentation of inspections, ADA requirements, hazard identification, correction of deficiencies, follow-up, and recordkeeping requirements.

Rolling Stock

All RRX rolling stock, including locomotives and coaches, receive daily and periodic inspections as detailed in the RRX Rolling Stock Inspection Test and Maintenance Manual (RRX ITM–01). This manual contains processes and procedures that provide for scheduling and documentation of testing and inspections, life cycle maintenance, repair methods, quality control, and recordkeeping requirements.

Signal and Train Control Systems

All RRX signal and train control systems receive daily and periodic inspections, maintenance, and repair as detailed in the RR Signal and Train Control Manual (RRX STC–01). The manual provides for schedule and documentation of testing and inspections, repair methods, quality control, and recordkeeping requirements.

Maintenance, Repair and Inspection Program (Example)

#2

Track and Right-of-Way

All RRX track and right-of-way receive daily and periodic inspections, maintenance, and repair as detailed in the RRX Track and Right-of-Way Manual (RRX TROW–01). The manual provides for schedule and documentation of testing and inspections, repair methods, quality control, and recordkeeping requirements.

Passenger Station Platform Gaps

All RRX passenger station gaps are maintained according to the RRX Gap Management Program (RRX GAP–01), which is based on the FRA guide titled "Approach to Managing Gap Safety." This program provides for regularly scheduled inspections, in addition to inspections that are performed after track surfacing has been done or new rolling stock has been introduced into service.

Traction Power Distribution Systems

All RRX traction power distribution systems receive daily and periodic inspections, maintenance, and repair as detailed in the RRX Traction Power Distribution Systems Manual (RRX TPDS–01). The manual provides for schedule and documentation of testing and inspections, repair methods, quality control, and recordkeeping requirements.

Rules Compliance and Procedures

270.103 (h) – aka Element 7

1) Does the SSPP reference process & procedures used to develop, maintain, & comply with railroad rules?

Must identify operating and safety rules and procedures that are subject to review, and detail the process of:

- developing,
- maintaining, and
- ensuring compliance with the railroad's rules, procedures, and processes.

#3 Rules Compliance and Procedures

Example

Rules Training and Recordkeeping

Employees whose activities are governed by NORAC attend an annual class of instruction and pass an annual re-qualification examination as outlined in the RRX Program of Instruction on Operating Rules as required by 49 CFR § 217.11.

Under the RRX Program of Instruction, employees who fail an annual RRX re-qualification examination are given a grace period to attend another class of instruction and pass the examination. If an employee fails the annual examination twice, or fails to attend a second class within the grace period, RRX will prohibit that employee from performing service until they attend another class of instruction and pass the examination.

Rules Compliance and Procedures
(continued)

270.103 (h) – aka Element 7

6) Does the SSPP reference Process & procedures that comply with passenger rail operator safety laws & regulations?

Must also describe how you comply with applicable operating rules, safety rules, maintenance procedures, safety laws and regulations.

Example: GCOR, NORAC, Safety Rule Book, Inspection/Test/Maintenance Plans, etc.)

#4 System Safety Program Employee Contractor Training

270.103 (i) – aka Element 8

NOTHING TO DO WITH 49 CFR Part 243 – SSP Training **ONLY**

This section addresses the system safety program training for employees and contractors who are responsible for implementing and supporting the ***SSP***. It also addresses System Safety Training for employees and any other entity or person that provides or utilize significant safety-related services. *This section does not address the training associated with specific craft or job functions – i.e. Part 243.*

#4 System Safety Program Employee Contractor Training

Figure 3 - System Safety Training

#4 System Safety Program Employee Contractor Training (Example)

8.0 System Safety Program Employee/Contractor Training

Within 15 days of FRA approval of the RRX SSP Plan, the Director of Safety will meet with the Director of Training to begin development of a training plan (RRX TP–01) and identification of employees who are responsible for implementation and support of the System Safety Program.

Within 30 days of FRA approval of the RRX SSP Plan, the Director of Training will begin implementation training. The training will consist of 8 classroom hours and will include instruction on implementing the 20 elements of the System Safety Program, including the goals of the System Safety Program. Each employee will be required to pass a written examination to test their knowledge on implementing the System Safety Program. Records of implementation training will be maintained and updated by the Director of Training, with a copy to the Director of Safety.

Persons not responsible for implementation of the System Safety Program, but whose job function is safety-related, will receive basic system safety concept training within 90 days of FRA approval of the plan. The training will consist of basic system safety concepts and their implication on their job function. This training will include employees who provide or utilize significant safety-related services, providing them overviews of the RRX SSP Plan and their roles within it. (Note: Refresher training will occur annually).

During the annual internal assessment, the Director of Safety will review compliance with the implementation training plan.

All other discipline-specific training will be conducted in compliance with 49 CFR Part 243, Training, Qualification, and Oversight for Safety-Related Employees or any other applicable FRA regulation or RRX policy.

Risk-Based Hazard Management Program

#5

270.103 (p) – aka Element 15

(1) The risk-based hazard management program shall establish:

v. The process for setting goals for the risk-based hazard management program and how performance against the goals will be reported;

vi. The process to make decisions that affect the safety of the rail system relative to the risk-based hazard management program;

vii. The methods used in the risk-based hazard management program to support continuous safety improvement throughout the life of the rail system

viii. The methods used to maintain records of identified hazards and risks and the mitigation or elimination of the identified hazards and risks throughout the life of the rail system.

#5 Risk-Based Hazard Management Program (Continued)

(2) The passenger rail operator's description of the risk-based hazard management program shall include:

i. The position title of the individual(s) responsible for administering the risk-based hazard management program;

ii. The identities of stakeholders who will participate in the risk-based hazard management program;

iii. The position title of the participants and structure of any hazard management teams or safety committees that a passenger rail operator may establish to support the risk-based hazard management program.

#5 Risk-Based Hazard Management Program (Continued)

(2) The passenger rail operator's description of the risk-based hazard management program shall include:

i. The position title of the individual(s) responsible for administering the risk-based hazard management program;

Example: The Director of Safety has the overall responsibility for administering OGX's RBHMP. Each department head (in coordination with the Director of Safety) is responsible for administering hazard management within their own department (e.g., establishing and overseeing various departmental safety committees, identifying and tracking hazards and mitigations, etc.).

#5 Risk-Based Hazard Management Program (Continued)

(2) The passenger rail operator's description of the risk-based hazard management program shall include:

ii. The identities of stakeholders who will participate in the risk-based hazard management program;

Example: All RRX department heads or their designees, along with labor in the appropriate disciplines (depending on the system being analyzed), will participate in the RBHMP. Each operating department has its own designated safety committee(s) that participate in the RBHMP. For issues outside the RRX's direct control, external partners, such as state and local entities, will be invited to participate on hazard management teams as necessary.

#5 Risk-Based Hazard Management Program (Continued)

(2) The passenger rail operator's description of the risk-based hazard management program shall include:

iii. The position title of the participants and structure of any hazard management teams or safety committees that a passenger rail operator may establish to support the risk-based hazard management program.

Example: Example: All RRX department heads or their designees, along with labor in the appropriate disciplines (depending on the system being analyzed), will participate in the RBHMP. Each operating department has its own designated safety committee(s) that participate in the RBHMP. For issues outside the RRX's direct control, external partners, such as state and local entities, will be invited to participate on hazard management teams as necessary.

#6 Risk Based Hazard Analysis

270.103 (q) – aka Element 16

Discussion of application of analysis on:

1. Equipment
2. Employee Levels & Schedules
3. Management Structure
4. Employee Training
5. *additional items not listed

11) Does the passenger rail operator conduct a risk-based hazard analysis when there are significant operational changes, system extensions, system modifications, or other circumstances that have a direct impact on passenger rail operator safety?

#6 Risk Based Hazard Analysis

270.103 (q) – aka Element 16

Discussion of application of analysis on:

1. Operating rules and practices
2. Infrastructure
3. *Equipment
4. *Employee Levels & Schedules
5. *Management Structure
6. *Employee Training
7. *Other aspects that have an impact on railroad safety not covered by railroad safety regulations or other Federal regulations.

*most commonly missed

Risk Based Hazard Analysis (Example)

Hazard identification is initiated by many different activities and sources, which include, but is not limited to, the following:

Evaluation of:

- operating rules and practices
- infrastructure and equipment
- employee levels and schedules
- management structure
- employee training

Employee fatigue and new technology
Infrastructure inspections
External safety audits
Employee observations
System modification proposals
Accident/incident investigations

Various safety committees
Internal safety audits
FRA inspections
Emergency preparedness debriefings and critiques
Customer service reports
Analysis of accident/incident data

In addition to the above, proposed changes in future operations will be assessed to assure that no new hazards are introduced into the system.

Technology Analysis & Implementation

270.103 (r) – aka Element 17 (Example)

17.0 Technology Analysis and Implementation Plan

As part of the RRX RBHMP, within 90 days of FRA approval of the RRX SSP Plan, risk-based hazard management teams will be established, and utilizing the RBHMP, they will begin a systematic evaluation and analysis of aspects of the system. The resulting risks identified will be evaluated for current, new, or novel technologies that may mitigate or eliminate hazards identified in the risk-based hazard analysis. As with all mitigation strategies, **the impact, feasibility, cost and benefits of implementing technologies will be considered** when determining the appropriate technology mitigation strategies. The risk-based hazard management teams will research industry publications, organizations representing industry, and other technological research avenues to evaluate the possible use of technology as mitigation. In addition to positive train control systems, other technologies such as processor-based technologies, electronically-controlled pneumatic brakes, rail integrity inspection systems, rail integrity warning systems, switch position monitors and indicators, trespasser prevention technology, and highway-rail grade crossing warning and protection technology will be considered as possible mitigation strategies. Other technologies may also be considered as they are identified.

If technology will be used as mitigation, the RRX will develop a technology implementation plan which will detail the RRX's plan and include a prioritized implementation schedule for the development, adoption, implementation and maintenance of those technologies over a 10-year period.

Safety Assurance

270.103 (s) – aka Element 18

5) Discussion of process for formal notifications

Include the processes to make configuration changes and the processes to ensure that all departments affected are notified and approve the change.

Safety Assurance (Example)

System Modification Review (SMR) is the process of managing proposed major changes to the RRX. Any proposed changes to the system are required to be approved by the SMR before being implemented.

The SMR process is structured to ensure that the potential impacts of a proposed major change to the system, operations, project development schedules, costs and customer service are evaluated prior to the disposition of the proposed change. RRX has established a System Modification Review Committee which consists of representatives of each operating department and is chaired by the Manager of Safety. The committee responsibilities include the identification, evaluation, and determination of proposals to make major changes to the existing system. While these proposals may result in long term capital projects, such as construction of infrastructure and facilities or equipment procurement, system modifications can also include temporary or permanent modification of operating parameters, rules, manuals, training, or software.

All proposed changes to the system are subject to approval by the General Manager. The SMR process and procedure is detailed in a section of the RRX Safety Assurance Manual (RRX SAM–01), which will be submitted to FRA, along with this SSP Plan, for review and approval.

Safety Assurance

(continued)

270.103 (s) – aka Element 18

6) Description of certification process to ensure that safety concerns are addressed prior to initiation of operations, extensions, vehicle replacements, etc.

i.e. Safety Certification: Fully describe the processes used in conjunction with the risk based hazard management process, which formalize the management of risk acceptance, identify and document the safety critical elements, tracking, and final certification of the safety critical elements prior to operation.

Safety Assurance (Example)

The Safety Certification Process is utilized by the RRX to ensure that safety concerns and hazards are adequately addressed prior to the initiation of passenger operations for new starts and subsequent major projects to extend, rehabilitate, or modify an existing system or to replace vehicles and equipment. Safety Certification will be utilized for any project over $25 million and projects under that amount will be analyzed to determine if Safety Certification is necessary to ensure safety compliance.

The RRX Safety Certification Program has the following goals: verify that acceptable safety levels are met or exceeded; document the verification of safety standards; and provide consistency for project certification. The objectives of the program include: identify and verify safety requirements of the system design; identify and verify safety for construction and system equipment installation; identify and verify that safety requirements are met or exceeded for system testing; and identify and verify that safety requirements are met for changes or modifications to standard operating procedures, training manuals, rule books, and system elements. Under the direction of the Manager of Safety, each project manager, in coordination with the appropriate department head is responsible for the management of the program.

The RRX Safety Certification Procedure (SCP) is detailed in a section of the RRX Safety Assurance Manual (RRX SAM–01).

Internal Assessments

270.303 – aka Element 20

The internal system safety program assessment is a tool that FRA requires railroads to use to measure how well and to what degree they are implementing and complying with their system safety program and plan. The internal assessment also is used to identify areas in need of improvement, recommend corrective actions, and measure the effectiveness of achieving the goals of the SSPP.

Internal Assessments
(continued)

FRA expects the railroad to include:

- A schedule of the internal assessment
- Assessment Criteria
- Assessment Teams
- Documentation and internal reporting criteria
- Improvement Plans
- Revisions and updates to the System Safety Plan
- FRA Reporting Requirements

#10

Implementation Plan (Element 5)

Three years are allowed to fully implement the plan.

- Provide a roadmap, matrix or something easy to follow that shows what will be implemented and when.
  - Suggestion, Risk Based Hazard Management should be in the first year.
- It is okay to adjust your implementation goals with the first (even second) annual submission.

#10 Implementation Plan (Example)

Implementation of the RRX SSPP is the responsibility of RRX Chief Safety, Compliance and Environmental Officer.

The following plan Elements are currently fully implemented:

- Element 6: Maintenance, Inspection & Repair
- Element 7: Rules Compliance & Procedures
- Element 9: Emergency Management
- Element 10: Workplace Safety
- Element 11: Public Safety Outreach
- Element 12: Accident/ Incident Reporting & Investigation
- Element 13: Safety Data
- Element 14: Procurement
- Element 19: Safety Culture

Each of the above, fully implemented SSPP Elements will be assessed as part of Element 20, internal assessment plan.

Implementation of Element 8, System Safety Training:

Within FY 2021, RRX will develop and deliver System Safety Training known as Safety Is Okay as identified in Element 8 of this plan.

#10 Implementation Plan (Example)

Implementation of Element 2, Safety Goals and Strategies:

Within six (6) months of plan approval and following the completion of initial SSPP training, teams from RRX, labor and where appropriate host railroads and other stakeholders will be assigned direct responsibility for each Safety Goal. Each team will be responsible for a goal and the related strategies. Teams will report quarterly on goal/ strategy activity to RRX management and labor.

Implementation of Elements 15, Risk Based Hazard Management and 16, Risk Based Hazard Analysis:

RRX's hazard management, hazard analysis and technology analysis processes and procedures, described in this plan will be implemented within 9 months of plan approval, will establish a team based program, with the first team commencing work within 60 days of completing training. It is anticipated that full implementation will be in place 36 months following implementation.

Element 17 Technology Analysis & Implementation:

Technology analysis will be a responsibility of the Hazard Teams, when identifying options for eliminating or mitigate risk.

Element 18, Safety Assurance program

Within 6 months of FRA plan approval, RRX operations and construction divisions will establish a team, to perform a analysis of what is currently in place regarding aspects of Element 18. Based on that analysis RRX will begin updating and developing all Safety Assurance programs and rolling them out within 24 months of plan approval.

NOTE: An update to this date and the results of the gap analysis will be in the first annual internal assessment submission to the FRA.


QUESTION
ANSWER

Questions?

Please raise your hand

or

Type your question in the comment section

Q&A

QUESTION:

If a passenger rail operation is funded by and/or part of a state agency with a contractor for operations and maintenance, who is responsible for compliance with Part 270 and the development of the system safety plan?

Q&A

ANSWER:

The central responsibilities of developing, filing, and implementing an SSP plan should be the passenger rail operation.

For most passenger rail operations, FRA expects the entity conducting the railroad operations to develop, submit, and implement the required SSP plan for that passenger rail operation.

Q&A

ANSWER:

The entity submitting the plan for a passenger rail operation will typically be the railroad providing the engineers and crews and physically operating the trains on that passenger rail operation's routes.

If the entities involved in a passenger rail operation determine that an entity other than the railroad operating the service should develop and file that operation's SSP plan, that different entity may be designated with such responsibility for the passenger rail operation, provided the required elements of the SSP plan are met with a single plan covering that system.

Q&A

QUESTION:

How do I submit my system safety plan to FRA?

ANSWER:

The plan can be submitted to the Associate Administrator of Railroad Safety and Chief Safety Officer in Washington D.C. and/or electronically through the FRA Railroad Portal.

For electronic submittal user guide, contact Mike Ramsey or Larry Day.

Q&A

QUESTION:

When are the annual internal assessments (audit) results required by FRA?

ANSWER:

Within 60 days of completing the internal SSP plan assessment

Q&A

QUESTION:

Are the passenger rail operations required to audit each element of the plan annually?

ANSWER:

No, you may audit a portion of the elements outlined in your plan, depending on the initial implementation schedule and/or identified concerns with specific aliments.

FRA System Safety Team

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Questions?

Thank you for your time