Annual PTC Progress Report

2015

Terminal Railroad Association of St. Louis

Docket FRA-2010-0070

The Annual Positive Train Control (PTC) Progress Report is due by March 31"of each year until full PTC system implementation is complete. The Annual PTC Progress Report must cover the railroad's implementation efforts and progress from the directly previous calendar year, and must be submitted electronically to the Federal Railroad Administration (FRA) via the FRA Secure Information Repository at https://sir.fra.dot.gov.

Name of Railroad or Entity Subject to 49 U.S.C §20157(a): Terminal Railroad Association of St. Louis

Railroad Code: TRRA

Annual PTC Implementation Progress Report for: 2016

PTCIP Version Number on File with FRA (basis for goals stated): PTCIP Revision 1.4, January 27, 2016

Submission Date: March 31, 2016

Contents

1 Summary

Please provide a narrative summary of overall PTC implementation progress during the preceding calendar year (January 1 to December 31, 2015):

TRRA is still in negotiations for a contract for providing and installing PTC on its territory and locomotives. Discussions involve the potential Contractor and Union Pacific Railroad in addition to TRRA and its engineering consultant, Burns Engineering, Inc. No equipment has been furnished or installed to date

Category	Quantity installed during CY 2015	PTCIP Year End Goal (if Applicable)	Cumulative qty installed at end of CY2015	Total Required for PTC Implementation
Locomotives Fully Equipped	0	0	0	17
Installation/Track Segments completed	0	0	0	4
Radio towers fully installed and equipped	0	0	0	21
Employees trained	0	0	0	230
Back office locations completely installed and fully operable	0	0	0	None Required
Dispatching locations completely installed and fully operable	0	0	0	1
Route miles in testing	0	0	0	12.47
Route miles in RSD	0	0	0	12.47
Route miles in full PTC operation	0	0	0	12.47

2 Update on Spectrum Acquisition

Required content:

- The amount of spectrum acquired and available for use during the applicable calendar year and the cumulative amount acquired and available for use at the end of the applicable calendar year, as compared to the amount the railroad stated would be acquired and available for use by the end of that calendar year and in total for PTC implementation in the applicable revised PTCIP, as amended
- The basis for how the railroad is determining that the acquired spectrum is available for use by PTC radios (e.g. ensuring non-interference with other radios)

Spectrum Area or Location	Spectrum Acquired and available for use (owned/leased) during CY 2015	Cumulative amount of spectrum acquired and available for use (owned/leased) at end of CY 2015	PTCIP Year-end 2015 goal for spectrum acquired and available for use	Total spectrum required for PTC implementation, as reported in PTCIP
St. Louis, MO	0	0	0	350kHz

Please provide any additional narrative for Spectrum Acquisition below:

Using Union Pacific acquired spectrum.

3   Quality Update on Hardware Installation

Required content:

- Separated by each major hardware category and subcategory below, the amount of PTC hardware installed during the applicable calendar year and the cumulative quantity installed at the end of the applicable calendar year, as compared to the amount the railroad stated would be installed by the end of that calendar year and in total for PTC implementation, in the applicable revised PTCIP as amended.

3.1   Locomotive Status

Category/Installation Feature	Quantity installed during CY 2015	PTCIP year-end goal	Cumulative qty installed at end of CY 2015	Total required for PTC implementation as reported in PTCIP
Locomotive (Apparatus)				
Onboard computer (e.g., TMC)	0	0	0	17
Software for Train Management & other applications	0	0	0	17
PTC User Displays	0	0	0	34
Event Recorders	0	0	0	17
Onboard Antennas	0	0	0	17
Transponder readers as applicable	0	0	0	None Required
GPS receivers	0	0	0	34
Locomotive radios – Primary communications (e.g. 220 MHz radios)	0	0	0	17
Secondary communications – cellular	0	0	0	17
Secondary Communications - WiFi	0	0	0	2

Please provide any additional narrative for Locomotive Status below:

PTC locomotive equipment supply and installation has not been contracted yet.

3.2   Infrastructure / Back Office Status

Category/Installation Feature	Quantity installed during CY 2015	PTCIP year-end goal	Cumulative qty installed at end of CY 2015	Total required for PTC implementation as reported in PTCIP
Infrastructure (Back Office)				
Dispatching Locations (installation complete)	0	0	0	1
Back Office Locations (installation complete)	0	0	0	None Required

Please provide any additional narrative for Infrastructure/Back Office Status below:

TRRA will be using the Back Office Server from the Union Pacific Railroad and does not plan to install its own BOS.

3.3   Installation / Track Segment Status

Category/Installation Feature	Quantity installed during CY 2015	PTCIP year-end goal	Cumulative qty installed at end of CY 2015	Total required for PTC implementation as reported in PTCIP
Infrastructure – Wayside (By installation/Track Segment per the PTCIP)				
Installation/ Track Segment Identification: **ALL TERRITORY**				
Wayside Interface Units	0	0	0	11
Communications towers or poles	0	0	0	21
Switch Position Monitors	0	0	0	None Required
Fiber or ground wiring (per mile)	0	0	0	0
Wayside Radios	0	0	0	11
Base Station Radios	0	0	0	None Required

Please provide any additional narrative for Installation/Track Segment Status below:

PTC wayside equipment supply and installation has not been contracted yet.

4   Quantity Update on Employees Trained

Required content:

• Separated by each employee category identified below, the number of employees trained during the applicable calendar year and the cumulative number of employees trained at the end of the calendar year, as compared to the number the railroad stated would be trained by the end of that calendar year and in total, per the applicable revised PTCIP as amended.

Employee Category	Number employees trained during CY 2015	PTCIP Year-end goal	Cumulative number of employees trained at end of CY 2105	Total as reported in PTCIP
T&E Crew (Operations) Employees	0	0	0	125
Mechanical Employees	0	0	0	31
MOW/Engineering/Roadway Worker Employees	0	0	0	40
Management Employees	0	0	0	16
Other Employees	0	0	0	0
TOTAL EMPLOYEES	0	0	0	230

Please provide any additional narrative for Employee Training below:

Complete Employee Training to be conducted in 2016 and 2017

5   Progress on Implementation Schedule / Milestones

In its annual progress reports, each subject railroad and entity must provide a progress update with respect to its project schedule. A railroad should only submit schedule information demonstrating actual progress as measured against the schedule in its revised PTCIP, as amended. This could be accomplished by providing detailed project schedules and visual aids (e.g., a Gantt chart) if available, or any other information documenting current progress as compared to the implementation schedule in the railroad's revised PTCIP, as amended. Details regarding any notable variances or trends that are affecting, or could possibly affect, PTC implementation goals should also be explained in the annual progress reports. Where circumstances are adversely affecting a railroad's implementation of PTC, the railroad must also provide an action plan to recover from, or mitigate, any adverse consequences.

Required content:

- •   Schedule/Milestone Progress Information as described above.
- •   The extent to which the railroad or other entity is complying with the implementation schedule it provided in its revised PTCIP, as amended.

- •   The following table illustrates the schedule and sequence for implementing PTC on the TRRA, showing that all implementation will be complete by the end of 2017.

Element of PTC	Implemented in 2015	Implemented in 2016	Implemented in 2017	Summary
Onboard PTC Apparatus and Radios	0	12%	88%	100% by 2017
Back Office System	0	0	0	Using UPRR Back Office Server (BOS)
Wayside Interface Units	0	9%	91%	100% by 2017
Communications Towers	0	14%	86%	100% by 2017
Wayside Radios	0	9%	91%	100% by 2017
Spectrum Acquired	0	100%	0	100% by 2017
Spectrum Available	0	0	100%	100% by 2017
Employees Trained	0	22%	78%	100% by 2017

Please provide any additional narrative for Progress on Implementation Schedule/Milestones below:

TRRA anticipates meeting the schedule for completion as noted above.

6 Summary of Update of Challenges / Risks

Required content:

- Any update to the summary of remaining technical, programmatic, operational, or other challenges that the railroad or other entity provided in its revised PTCIP, as amended, including challenges with availability of public funding, interoperability, spectrum, software, permitting. and testing, demonstration, and certification
- Schedule Risk Updates (e.g., funding, technology, agreements)

Please provide Summary Update of Challenges/Risks below:

(aa) availability of public funding; - No public funding is involved in the TRRA PTC deployment, therefore there is no challenge.

(bb) interoperability; Interoperability is already discussed in Section 9 of this document.

(cc) spectrum; Spectrum is already discussed in Section 2 of this document.

(dd) software; There is a challenge for I-ETMS software to be stable enough for TRRA successful testing based on railroad experience of multiple errors and related hardware failures during testing and Revenue Service Demonstrations.

(ee) permitting; There are no current issues with permitting of the TRRA PTC.

(ff) testing, demonstration, and certification; As TRRA proceeds with the deployment of PTC on its property, the challenge of testing for interoperability with multiple tenant railroads will be encountered .

7 Progress on Revenue Service Demonstration (RSD) or Implementation

Required content:

- The total number of rout miles on which PTC has been initiated for revenue service demonstration (RSD) or implementation as compared to the number of route miles required to have a PTC system installed
- Estimated start date (month and year) for RSD

Segment Identification[4]	Number of Route Miles in segment	Status at end of CY 2015	Estimated Start date for RSD if not yet begun
ALL TERRITORY	12.47	X Not Started O Installing O Testing O Operational/ Complete	05/11/2017

Segment identification should be consistent with the segments listed in Section 3.3

8 Update for Intercity or Commuter Rail Passenger Transportation (if applicable)

If this section is not applicable to your railroad, please mark N/A

Required content (if applicable):

• For each entity providing regularly scheduled intercity or commuter rail passenger transportation, a description of the resources identified and allocated to implement PTC.

Please provide Update for Intercity or Commuter Rail Passenger Transportation below, if applicable:

AMTRAK is a tenant on the PTC-equipped territory of TRRA. AMTRAK locomotives will be equipped for I-ETMS by others and will be available in the time frame of TRRA's deployment of PTC.

9 Update on Interoperability Progress and Other Formal Agreements

Required content:

• For host railroads: Provide updates to any agreements and key milestones for all tenant operations.
• For tenant railroads: provide updates to any agreements and key milestones for all operations over tracks hosted by another railroad.

Please provide Update on Interoperability below:

There are no changes to any host/tenant agreements at this time.

The following are the known key milestones involving tenant operations on TRRA:

Railroad	In-Service Milestone
AMTRAK	December 31, 2018.
BNSF	December 31, 2018.
Union Pacific	December 31, 2018.
Norfolk Southern	December 31, 2018.
CSXT	December 31, 2018.
Kansas City Southern Railway	December 31, 2018.

10 Estimated PTC Safety Plan (PTCSP) Submission Date (if not already submitted)

If this section is not applicable to your railroad, please mark N/A.

PTCSP Submission Date
June 30, 2018

Please provide any additional narrative for PTCSP Submission below:

TRRA believes that the estimated date for PTCSP submittal will be met.

11 Testing and Integration Efforts (if applicable, laboratory, integration, and revenue service demonstration)

Please provide Update on Testing and integration efforts below:

No testing and/or integration of the PTC has been conducted to date.

12 Updated Information That FRA Can Use to Maintain Its Geographic Information System (GIS) Database – Segments Complete and Operable

In its annual progress reports, a subject railroad or entity may submit a geographic information system {GIS} shapefile to indicate where various roil segments that must have PTC are located, as long as it includes the following fields: (1) a PTC attribute field (coded with "Y" if line segment is to hove PTC installed , otherwise left blank); {2) a SUBDIV attribute field (populated with subdivision name); (3) a MONTH attribute field (populated with the month in which PTC is to be installed); and (4) a YEAR attribute field (populated with the year in which PTC is to be installed).

If a railroad chooses to submit the required information by means other than shapefile format, please inform FRA as to the railroad's preference prior to the March 31st annual reporting deadline.

Please provide any additional narrative for GIS Information below:

TRRA will not be able to provide GIS shapefile data at this time.