

Southeastern Pennsylvania Transportation Authority (SEPTA)

Roadway Worker Protection (RWP) Assessment

Scope Of Work

- **Assessment of Protection Level vs. Type of Work**
- **Assess RWP Safety Management Culture**
- **Brief Senior Staff**
- **Provide a Summary Report**
- **Subject Matter Experts (SMEs)**
- **SEPTA Support**

Activities

- 8 Hour RWP Training
- Headend Observations (MF, NTHS, BSS Lines)
- Visit Employee Facilities
- Track Walks
- Informal Discussions
- Employee Interviews (52)
- Review Records, Rules, Procedures

Key Observations: ITD

- **Greatest Area of Concern**
 - Hazards are Compounded with ITD
 - Lone Worker-Common Practice
 - Lone Worker-Interlocking Areas
 - Use of Local Control Varies by Line
 - Most Frequent Near Miss Incidents
 - Practical Drift

Key Observations: ITD & TAW

- Trains Pass Employees at Track Speed
- Simultaneous Train Movement on Multiple Tracks
- 4 Foot Clearance Rule (Configuration Concern)
- Track Access not Explicitly Restricted during Peak Hours
- Inspections / Maintenance
 - Tight Headways
 - Inefficient time of day
- Non-Adherence-“Hot-Spot” Instructions

Key Observations

FT

- **Foul Time**
 - **Negative Connotation-Time Consuming**
 - **Employees inventing non-uniform “work arounds”**
 - **Organizational Reluctance to use FT (>BSS)**
 - **Employees “Know” Not to Ask for It**
 - **Organization may benefit from “Verbal Hold” and “Temporary Block” Practices**

Near Miss Incidents

- ITD Most Frequent Form of Protection
- Occurred on all Lines of the System
- Incidents Not Reported / How to Report
- Workforce Unclear what is a Near Miss
 - Work Zone Incursions
- Involved:
 - Train Movement/Trains Entering Work Zones
 - 2 Track & 4 Track Locations
 - Spring Garden (3 Occurrences)
 - Platform areas
 - Inclement Weather

Safety Culture

- **“Get it Done” Mentality-Short Cuts**
- **Non-Reporting of Near Misses**
- **Institutionalized Practical Drift**
- **Need to Move Toward a Learning Culture**
- **Siloed Organization (e.g. Hot-Spots)**
- **Balance is Tilted in Favor of Service vs. Safety**
- **Internal Oversight**
- **External Oversight (FRA vs. FTA/PennDot)**

Compliance & Oversight

- ITD and TAW is used in hot spots
- Limited Organizational Knowledge of Hot-Spot Requirements
- Hot Spots Not Part of Training
- Watch Person Performs other Duties
- Unauthorized Workarounds are Developed due to FT's negative connotations
- The 4-ft. "foul zone" is routinely encroached upon while clearing (infrastructure and rule are not compatible)

Compliance & Oversight

- PPE requirements not complied with or adapted to “improve” safety (metal flashlights, hard hats backwards, footwear)
- No formalized compliance audit program other than safety department
- 1st and 2nd level managers are often in the field
- Higher level managers rarely / never seen in field

8-Hour RWP Training

- Instructor was knowledgeable and communicated well
- Too much time was spent on active shooter & see something / say something.
- Reallocated time would allow greater focus on safety critical responsibilities of watchperson & flag person who are qualified by this class.
- No mention of blue light stations & Hot-spots
- Discuss Near Misses and Actions to take when one occurs, i.e. Clear the Track, notify Control, etc.

8-Hour RWP Training

- A tabletop exercise on determining site distance including time to clear would be helpful
- Greater Emphasis that time must be added to 15-seconds to allow clearing to safe location
- Field exercises were very valuable and well organized
- Not every student had an opportunity to demonstrate hands on skill as a watchperson
- Training Personnel Not Aware of Hot-Spot List-Not part of Training
- Safety Hotline Information should be added to Training

General Observations

- Discontinued RWP Safety Practices
- Wayside Sign Maintenance
- W Sign Removal
- Hot-Spot Information-Global Sharing
- Organizational Communication
- Radio Dead Spots/Proactive Health Checks
- Employee Reporting/Management Follow-Up
- Non-Punitive Confidential Reporting System
- Lingering Problems
- Backpacks Worn with Both Straps on Track
- External (Customer) vs. Internal (Employee) Complaints, i.e. Veritas System

RWP Enhancements

- High Rail Vehicles-Back Up Cameras
- Use of rail bound vehicles for riding inspections
- Improved Signal Designs (CBTC-PTC)
- Automated Inspections/High Resolution Cameras
- Bi-directional Communication-NTSB R08-09

RWP Enhancements

- Roadway Worker Clearance Code Protection
- Equip wayside “Blue light” telephone locations with the capability for employees to immediately remove third rail power in an emergency. This should be incorporated into future system expansion, and as part of major Capital investments into the existing system

Recommendations

- **Immediately Mitigate Hazards Associated with the use of ITD**
- **Enforce minimum levels of protection and remove QPE discretion to use lower forms of protection at Hot-Spots**
- **Develop strategies to provide greater forewarning to Train Operators to alert them of employees on the Trackway**
- **Invoke speed reductions when passing employees on trackway**

Recommendations

- Establish a rule to define what time of day non-emergency work is prohibited
- Evaluate implementing a rule to prevent two trains from simultaneously passing an employee clearing between tracks
- Provide Written Instructions on New Advance Watchman Process and Face-to-Face Instruction (Miranda Card)
- Create interdisciplinary team-review and Survey system hot-spot vs. Levels of protection
- Incorporate Hot-Spots into RWP Training

Recommendations

- **Combine and Standardize the 4 RWP Compliance Audit / Education Programs**
- **Evaluate Moving Inspection / Maintenance work to hours when train service is less intense and prioritize by most hazardous Hot-Spots.**
- **Create incentives to attract employees off tours**
- **Establish a 50 Foot Minimum Rule for Watchman**
- **Evaluate Managements ability to Assign Personnel to off tours**

Recommendations

- Evaluate Control Center Workload as part of Existing/Organizational Changes (RWP/Wrench Time)
- Evaluate Engineering Out Hazards such as Third Rail Aprons
- Promote Safety Hotline, e.g. RWP Training
- Audit Train Operator Horn Practices
- Proactively Verify Radio Functionality
- “No Meetings Day” to increase Senior Leadership interaction with Field Personnel and Field Conditions

Recommendations

- Review Persistent Problems and Mitigate
- Establish a Near Miss Criteria & Reporting Mechanism
- Evaluate Establishing a Minimum Period of Employment before Qualifying as a QPE
- Evaluate More Frequent Classroom RWP Training
- Procure Non-Conductive Work Zone Sign Covers to reduce shock hazard

Questions

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