



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Watchman/Lookout:

Your coworkers depend on you

The problem

Train Approach Warning (TAW) protection provided by a watchman/lookout does not restrict either trains or equipment from entering a work location.¹



- If a watchman/lookout does not devote his full attention to detecting approaching trains, **he may not provide warning in sufficient time for the work group to clear to a safe location.**
- When a watchman/lookout does not consider variables such as train speed, track characteristics, sight distance, noise, environmental conditions, and whether the train carries freight or passengers, **TAW does not provide adequate safety for the work group.**
- If a watchman/lookout does not provide a clear and distinct warning of approaching trains, **roadway workers are unlikely to clear the track before a train arrives.**
- If a job briefing for on-track safety is incomplete, **roadway workers may not be aware of vital information**, such as the location of a previously arranged place of safety, the required sight distance to detect an approaching train, or the means the watchman/lookout will use to communicate an approaching train.

¹ *Train approach warning* is a method of establishing on-track safety to warn roadway workers of the approach of trains in ample time for them to move to or to remain in a place of safety in accordance with the requirements of Title 49 Code of Federal Regulations (CFR) 214.



Discussion

On January 17, 2017, about 10:09 a.m. mountain standard time, a BNSF Railway westbound train traveling at 35 mph struck and killed two roadway workers, including the watchman/lookout. The three members of a roadway work group had been cleaning snow and ice from a track switch on a main track in Edgemont, South Dakota. The engineer sounded the train horn and bell, and both members of the train crew applied emergency braking; however, there was no response from the work group, and the train was unable to stop before reaching the work location.

After assessing the accident site, investigators found that the sight distance was about half the distance needed by the Federal Railroad Administration (FRA) regulations, which require a work group be able to clear the track and be in a previously arranged place of safety for at least 15 seconds before a train moving at the maximum authorized speed can pass the work location.² Witness statements indicated that the job briefing did not cover several important topics such as the required sight

distance, the required time needed to clear to a place of safety, the location of the place of safety, and the type of warning the watchman/lookout would use to notify the work group of an approaching train. Investigators also found that prior to the accident, the watchman/lookout may not have been vigilant in watching for approaching trains.

The NTSB considers roadway worker safety to be of utmost importance. The NTSB addressed this issue in 2014 with the *Special Investigation Report on Railroad and Rail Transit Roadway Worker Protection*.³ In that report, the NTSB stated: **“Railroad and rail transit roadway workers are subject to on-the-job risks and hazards markedly different from those faced by other railroad employees. The jobs of railroad engineers and conductors include risks primarily related to moving trains—derailments, and collisions with other trains. ... The jobs of roadway workers involve hazards that include moving rolling stock and other equipment and vehicles, as well as falls, electrocution, and natural hazards.”**

² Title 49 *CFR* 214.329.

³ National Transportation Safety Board, *Special Investigation Report on Railroad and Rail Transit Roadway Worker Protection*, [NTSB-SIR-14/03](#) (Washington, DC: National Transportation Safety Board, 2014).



How can roadway workers avoid similar accidents?

The FRA, in collaboration with railroad labor and management representatives, formed the **Fatality Analysis of Maintenance-of-Way Employees and Signalmen (FAMES) Committee** to review roadway worker fatalities. The FAMES Committee issued a report in 2014 that highlighted the hazards of insufficient TAW.⁴ This accident in Edgemont, South Dakota, as well as other similar accidents—such as ones involving Amtrak and New York City Transit in 2016—may have been avoided had the roadway workers adhered to the recommendations, found below, that were outlined in the FAMES report:

- Watchmen/lookouts **must focus their sole attention** to the detection of approaching trains and equipment.
- Watchmen/lookouts should position themselves **outside the foul of any track** whenever possible. Each roadway worker must maintain a position so he or she can receive a warning from a watchman/lookout at all times.
- Whenever environmental or working conditions change that could interfere with a watchman/lookout's ability to detect the approach of a train or provide appropriate warning, the watchman/lookout **must immediately clear roadway workers from the tracks** until proper protection can be established.
- Watchmen/lookouts should take into consideration that **passenger trains are generally quieter and faster** than freight trains.
- If the work requires oversight and supervision from a roadway worker in charge (RWIC), **the RWIC must not perform the duties of a watchman/lookout.**
- The RWIC must communicate precise instructions and expectations to watchmen/lookouts during the on-track safety briefings and ensure that watchmen/lookouts **have a clear understanding of their responsibilities and duties.**
- The RWIC should consider **rotating watchman/lookout assignments periodically.**
- During the on-track safety briefing, the RWIC **must identify the method that the watchman/lookout will use** to indicate when it is safe for roadway workers to re-enter the foul of the track.
- Roadway workers must not be in the foul of the track anytime they believe that TAW protection is insufficient or no longer appropriate. **Roadway workers have the right and responsibility to initiate a good faith challenge when necessary.**
- **Never anticipate the direction or track from which the next train may approach.**

4 Fatality Analysis of Maintenance-of-Way Employees and Signalmen, *Fatal Accidents Under Train Approach Warning (Watchman/Lookout)*, January 6, 2014.

Other methods to use as protection

- **Exclusive track occupancy**, in which a train dispatcher or control operator denies permission for trains or other equipment to occupy the track.
- **Foul time**, in which a train dispatcher or control operator notifies the roadway worker that no train will operate in a particular area of the track until the roadway worker informs them that they have cleared the track.
- **Train coordination**, in which a roadway worker establishes working limits with the crew of a train holding exclusive authority to move.



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