



NATIONAL TRANSPORTATION SAFETY BOARD
Office of Railroad, Pipeline, and Hazardous Materials Investigations
Washington, D.C. 20594

Track and Engineering Factual Addendum

– Federal Railroad Administration- Train Approach Warning Watchman/Lookout Requirements

Report Date: June 29, 2017

ACCIDENT

LOCATION: Edgemont, SD
TRAIN: Westbound E-DOLEBM0-01
OPERATOR: BNSF Railway
DATE: January 17, 2017
TIME: 10:09 a.m. Mountain Standard Time
NTSB #: DCA17FR004

SYNOPSIS OF THE ACCIDENT

For a summary of the accident, refer to the *Accident Summary* within this docket.

Track & Engineering Group Members

Mr. Cyril E. Gura
Safety Engineer [Railroad]
National Transportation Safety Board

Mr. Craig C. Clarke
Track Safety Inspector
Federal Railroad Administration—Region 8

Mr. Adam Miller
General Director Maintenance - Powder River
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Division Engineer – Powder River
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Mr. Rafer Nichols
Project Engineer – Engineering Services
BNSF Railway

Mr. George Loveland
Vice General Chairman – Burlington System Division
Brotherhood of Maintenance of Way Employees Division

Prepared by Joe Gordon- NTSB Investigator in Charge

Requirements for Properly Equipped Watchman/Lookout

49 Code of Federal Regulation (CFR) Part214 requires that the rules and operating procedures governing track occupancy and protection shall be maintained together in one manual and be readily available to all roadway workers.

49 Code of Federal Regulation (CFR) Part214.7: Definitions

On-track safety manual means the entire set of on-track safety rules and instructions maintained together in one manual designed to prevent roadway workers from being struck by trains or other on-track equipment. These instructions include operating rules and other procedures concerning on-track safety protection and on-track safety measures.

Federal Railroad Administration (FRA) Train Approach Warning/Watchman Lookout Regulations

49 Code of Federal Regulation (CFR) Part214.7: Definitions

On-track safety means a state of freedom from the danger of being struck by a moving railroad train or other railroad equipment, provided by operating and safety rules that govern track occupancy by personnel, trains and on-track equipment.

Train approach warning means a method of establishing on-track safety by warning roadway workers of the approach of trains in ample time for them to move to or remain in a place of safety in accordance with the requirements of this part.

Watchman/lookout means an employee who has been annually trained and qualified to provide warning to roadway workers of approaching trains or on-track equipment. Watchmen/lookouts shall be properly equipped to provide visual and auditory warning such as whistle, air horn, white disk, red flag, lantern, fuse. A watchman/lookout's sole duty is to look out for approaching trains/on-track equipment and provide at least fifteen seconds advanced warning to employees before arrival of trains/on-track equipment.

49CFR Part214.329 Train approach warning provided by watchmen/lookouts. Amendment published on June 10, 2016.

Roadway workers in a roadway work group who foul any track outside of working limits shall be given warning of approaching trains by one or more watchmen/lookouts in accordance with the following provisions:

- (a) Train approach warning shall be given in sufficient time to enable each roadway worker to move to and occupy a previously arranged place of safety not less than 15 seconds before a train moving at the maximum authorized speed on that track can pass the location of the roadway worker. The place of safety to be occupied upon the approach of a train may not be on a track, unless working limits are established on that track.
- (b) Watchmen/lookouts assigned to provide train approach warning shall devote full attention to detecting the approach of trains and communicating a warning thereof, and shall not be assigned any other duties while functioning as watchmen/lookouts.
- (c) The means used by a watchman/lookout to communicate a train approach warning shall be distinctive and shall clearly signify to all recipients of the warning that a train or other on-track equipment is approaching.
- (d) Every roadway worker who depends upon train approach warning for on-track safety shall maintain a position that will enable him or her to receive a train approach warning communicated by a watchman/lookout at any time while on-track safety is provided by train approach warning.
- (e) Watchmen/lookouts shall communicate train approach warnings by a means that does not require a warned employee to be looking in any particular direction at the time of the warning, and that can be detected by the warned employee regardless of noise or distraction of work.
- (f) Every roadway worker who is assigned the duties of a watchman/lookout shall first be trained, qualified and designated in writing by the employer to do so in accordance with the provisions of §214.349.

(g) Every watchman/lookout shall be provided by the employer with the equipment necessary for compliance with the on-track safety duties which the watchman/lookout will perform.

Federal Railroad Administration, 49 CFR Part 214, Railroad Workplace Safety; Roadway Worker Protection Miscellaneous Revisions (RRR); Final Rule

In 2016, FRA made Miscellaneous revisions to the RWP Final Rule. In the Federal Register, Vol. 82, No. 112, dated Friday, June 10, 2016 Part III, Department of Transportation, Federal Railroad Administration, 49 CFR Part 214, Railroad Workplace Safety; Roadway Worker Protection Miscellaneous Revisions (RRR); Final Rule, the FRA discussed some comments by the Brotherhood of Maintenance of Way Employees (BMWED) pertaining to the usage of audio and visual warnings by a watchman lookout.

“The BMWED’s later comment expressed concern that some railroads are not providing watchmen/lookouts with any audible or visual warning devices to provide appropriate train approach warning. The comment points out the existing definition of the term ‘watchman/lookout’ in § 214.7 requires, in part, that roadway workers acting as watchmen/lookouts be properly equipped to provide visual and auditory warning, such as whistle, air horn, white disk, red flag, lantern, fuse. The comment urges FRA to clarify in this final rule that use of such audible and/or visible warning devices are mandatory to provide train approach warning under § 214.329. FRA concurs with the BMWED. Both the definition of watchman/lookout, and the operative train approach warning regulation at § 214.329(c) and (g), provide that watchmen/lookouts must be properly equipped to provide train approach warning. As explained in the preamble to the 1996 final rule implementing subpart C:

‘this section further imposes a duty upon the employer to provide the watchman/lookout employee with the requisite equipment necessary to carry out his on-track safety duties. It is intended that a railroad’s on-track safety program would specify the means to be used by watchmen/lookouts to communicate a warning, and that they be equipped according to that provision.’

“Thus, FRA emphasizes that under the existing RWP regulation, a railroad must properly equip a watchman/lookout with the equipment specified by the railroad’s on-track safety program to properly communicate a warning. Except in limited circumstances (e.g., a watchman/lookout assigned to provide train approach warning for a single welder and who is located immediately next to the welder to provide a warning), if a railroad does not provide equipment with the specified auditory or visual warning capabilities to the roadway workers a watchman/lookout is protecting, the railroad is in violation of § 214.329. If an on-track safety program fails to specify the “requisite equipment necessary” for a watchman/lookout to provide on-track safety for a roadway work group, the program also is not compliant with part 214.”

Interview of FRA Headquarters Track Specialist Roadway Worker Protection and Roadway Maintenance Machines

On April 6, 2017, investigators conducted an interview with FRA Headquarters Track Specialist with responsibility for Roadway Worker Protection (RWP) and Roadway Maintenance Machines (RMM). This interview was conducted to understand FRA's position on the requirement that a Watchman/Lookout be equipped with specified auditory and visual warning capabilities as well as other topics regarding regulatory requirements when using Train Approach Warning (TAW) as a method of on-track safety.

During this interview, an NTSB investigator asked, "Are railroads required to prescribe warning devices for different situations?" The interviewee responded, "Their on-track safety rules would need to specify the appropriate form of providing the warning. And I don't think I can say any more than that". The interviewee further stated "The definition establishes the responsibility of the watchman/lookout to -- or for the -- to provide -- for his duty to be exclusively looking out for approaching trains or on-track equipment. And it talks about what some of the possible proper equipment that a railroad might utilize. It's not exclusive in nature."

Later in the interview the question was asked "What does that mean, shall be provided with the equipment?" The equipment referred to was equipment to provide audible and visual warning of an approaching train or on-track equipment. The interviewee responded saying "That means that if in their policy they say that -- a railroad says that the warning to be provided will be via with an air horn or a whistle, that equipment has to be there. If it indicates some other form of equipment, such as any one of the items that were listed under 214.7 of the watchman/lookout, if they include that equipment, then that equipment has to be there."

Investigators asked the following question about a review of BNSF's roadway worker protection program: "In the FRA Compliance Manual, it says that each railroad -- railroad's roadway worker protection program is subject to critical review by the FRA. Has the BNSF's program been reviewed?" The interviewee answered saying "It obviously in the beginning of the rule, per the regulation, received a review. I don't know that -- and I don't really know if it's been reviewed since that particular time. Obviously, pieces of it are". Investigators asked "And so can you tell us a little bit about that guidance? I mean, has the question been posed -- I guess, BNSF's rules do not require that a watchman's equipped with a flag and a horn. Has the question been posed is this an exception under FRA regulation?" The interviewee referred to a previous answer regarding the preamble language to the original rule.

On April 11, 2017 NTSB sent a request for information to FRA for the following information and received the responses on June 29, 2017:

1. FRA Internal Database Violations for BNSF for the year 2016 (BNSF/SD/County) for § 214.329 defects/violations.

Answer: For the year 2016, FRA issued no defects or violations of § 214.329 to BNSF for Fall River County, South Dakota.

2. Copy of all FAMES reports involving train approach warning (including one dated 01/06/2014).¹

Answer: See attached the January 6, 2014 report.

3. Opinion from FRA legal staff as the definition of shall/will in § 214.329(g) for required roadway worker items.

Answer: Section 214.329(g) reads: “Every watchman/lookout shall be provided by the employer with the equipment necessary for compliance with the on-track safety duties which the watchman/lookout will perform.” The use of “shall” imposes a mandatory duty upon the employer to, as stated in FRA’s Roadway Worker Protection Compliance Manual, “provide the watchman/lookout employee with the requisite equipment necessary to carry out his on-track safety duties. It is intended that a railroad’s on-track safety program would specify the means to be used by watchmen/lookouts to communicate a warning, and that they be equipped according to that provision.”

4. Copy of 01/2009 Sunshine Arizona accident report that involved BNSF.

Answer: Please see attached a copy of FRA’s accident report. Per our phone conversation on June 14, 2017, please contact me if you need copies of the attachments to the accident report. If so, the attachments would then either have to be kept in the closed (non-public) docket due to containing personally identifiable information, or redacted.

5. Any and all documents associated with a review of BNSF’s Roadway Worker Program for the time period of 01/2009 through present pursuant to 49 C.F.R. 214.307(b). Has BNSF’s Roadway Worker Protection program been reviewed, if so by what region, employees and what was the date of such review. Were there any exceptions taken with regard to such review. Please provide all relevant documents.

Answer: FRA reviewed BNSF’s On-Track Safety Program pursuant to 49 C.F.R. 214.307(b) between 1998 and early 2000s, but does not have documents associated with that review. Per our phone conversation on June 14, 2017, FRA has reviewed relevant sections of BNSF’s On-Track Safety program as part of certain accident investigations (including the Edgemont accident investigation) and as part of other enforcement activities since 01/2009. Please contact me if you would like documents related to those reviews.

6. Comments received by FRA for the original 1996/1997 Roadway Worker Program Rule as well as any comments that relate to amendments to the Roadway Worker Program Rules including but not limited to amendments to adjacent track requirements, miscellaneous revisions and revisions to the RWP program.

Answer: All comments to FRA’s electronic dockets can be accessed on www.regulation.gov. Please search for docket number FRA-2008-0059 for the Adjacent Track rule (there were

¹ Fatality Analysis of Maintenance of Way and Signal Employees

multiple publications over a period of a few years all associated with the same docket number) and FRA-2008-0086 for the Miscellaneous Revisions. The comments to the 1996 Rule were not in an electronic docket. FRA is still attempting to locate and gather copies of the comments to provide to NTSB.

7. Any and all documents related to post-accident audits of BNSF Roadway Worker Protection Programs undertaken by the FRA for the time period of January 2017 through April 6, 2017 that arose from the Edgemont Accident, whether voluntarily done by BNSF or completed by FRA.

Answer: FRA’s investigation is ongoing at this time. With that said, following the Edgemont accident, as part of its investigation FRA reviewed the watchman/lookout provisions of BNSF’s On-Track Safety Program and noted no exceptions.

Compiled by: _____ Date _____
Joe Gordon, NTSB
Investigator in Charge

-- End of this report section --

List of Exhibits

1. NTSB Interview of Joseph Riley, FRA Headquartered Track Specialist
2. 49 CFR Part 214 Roadway Workplace Safety; Roadway Worker Protection Miscellaneous Provisions (RRR); Final Rule
3. Copy of 01/2009 Sunshine Arizona accident report that involved BNSF