

In Re. Investigation of an accident which
occurred on the Norfolk & Western
Railway, at Bluefield, W.Va.,
on January 26, 1916

March 24, 1916.

On January 26, 1916, there was an explosion of a car loaded with powder in the eastbound classification yard of the Norfolk & Western Railway, at Bluefield, W. Va., which resulted in injury to four employees and property damage amounting to approximately \$2,400.00.

In the yard where this accident occurred cars are switched by gravity; the scale house at which point cars are out off, is located on the lead at the western end of the yard. The accident occurred on what is known as track No. 6, at a point about 2,890 feet east of the scale house.

On the day of the accident, switch engine No. 850 in charge of Assistant Yardmaster Woolwine and Enginemen Evans, was engaged in making up an eastbound train on track No. 6. Sixteen cars had been dropped in on this track and had come to a stop near its eastern end. About 6:40 p. m., P.R.R. car 559061, of steel underframe construction, loaded with 400 kegs of black powder, was dropped in on the same track and coupled to the sixteen cars previously placed there. The switch engine then went to the scale yard and was placed on the west end of a cut of 44 cars, intending to push them eastward past the scale house on the lead track, the first six cars to

be dropped on various tracks, the remaining 38 to be placed on track No. 6 behind the 17 cars already there. This move was being made, the first six cars having been disposed of, when the tenth car of the remaining 38 was discovered to be a bad order car, which necessitated its being cut out. Accordingly, the first nine cars, in charge of two brakemen, were cut off and allowed to run down on track No. 6. The brakemen were unable to control the speed of these cars, and when within a few car lengths of the car of powder they got off. The cars continued to run, striking the car of powder at a speed estimated to have been about 8 miles an hour, causing the powder to explode.

The explosion destroyed the body of the car in which the powder was loaded, also the two head cars of the 9 cars which collided with it. Twenty other cars and a "dead" locomotive, which were in the immediate vicinity, were considerably damaged. The accident occurred about 6:55 p. m. The weather at the time was cloudy, and about 15 minutes prior to the accident there had been a light shower, which resulted in a slippery rail.

Yard Brakeman Adams stated that he has been employed in Bluefield Yard about 27 years. On the night of the accident he was head brakeman on the nine cars which were cut off and which followed the car of powder on track No. 6. He stated that the cars were standing still at the time they were cut off, and at that time the brake on the leading car was set.

After the cars were cut off he started back and set the brakes on the 3 following cars, when he came upon Brakeman Harry on the top of the fifth car. The application of the brakes was ineffective, as the wheels were sliding. He then got off, at that time being about 2 car lengths from the car of powder. Brakeman Adams stated that on previous occasions he had ridden 17 cars down this incline alone.

Yard Brakeman Harry stated that when the nine cars were cut off he got on the next to the last car and immediately began to set the brakes. He succeeded in setting the brakes on the 3 rear cars, but the brakes on the fourth car had a loose ratchet wheel and he could not get it to hold, and thinking that he did not have time to climb down from the car, he jumped from the roof to the ground and struck the ground about the time the explosion occurred.

Assistant Yardmaster Woolwine, who was in charge of the switch engine, stated that at the time the nine cars were cut off there were two men on them, and that under ordinary conditions two hand brakes would have been sufficient to properly control them. In switching cars in this yard the usual practice is to assign one man to each seven cars cut off. Mr. Woolwine stated that he is familiar with the rules covering the handling of explosives, but that it has been customary at Bluefield to drop from the scale house gravity, either a car containing powder or a car following. He admits that the rules in this respect have not been obeyed.

Agent Hale, of Powder, W. Va., stated that P.R.R. car 559061 was loaded at his station and was forwarded at 3:30 p. m., January 24th. He thoroughly inspected the car before loading was begun, and found it to be in first-class condition. He was present during part of the time the car was being loaded, and after the loading was completed he inspected the bracing and staying. In his opinion the lading was secured in such a manner that it could not have been dislodged by any ordinary shock, or unless the car was turned over. Agent Hale stated that the car was destined for Kingspur, Fla., but, as he was unable to secure proper routing on the car at that time, he permitted it to go forward, expecting to obtain the routing before the car left Bluefield. He further stated that empty cars for powder loading are brought to his station from Bluefield, at which point they are supposed to be thoroughly inspected and passed upon as to their fitness for powder shipments. He said that in the past cars have been brought to his station with bolts protruding, and draft and king bolts exposed. Notwithstanding this, the cars had been passed upon at Bluefield as being suitable for powder shipments, and had been marked "O.K."

Terminal Trainmaster McIlhany stated that the car of powder had been held in Bluefield yard for two days, awaiting billing instructions. He had seen the car personally, and it was properly placarded. He stated that, to the best of his knowledge, explosives had been handled

in Bluefield yard as closely in compliance with the rules as was possible in a gravity yard.

From statements of the car inspectors, it appears that it is not customary to make inspections as to the condition of brakes on tops of cars, or of running-boards, other than inspections made from the ground.

This accident was caused by a car, loaded with powder, being struck by other cars which were being switched in a manner contrary to the rules, for which Assistant Yardmaster Woolwine is responsible.

Rule No. 1689, of the "Regulations for the Transportation of Explosives and Other Dangerous Articles," reads in part as follows:

"They must be coupled carefully and all unnecessary shocks must be avoided. Other cars must not be cut off and allowed to strike a car containing explosives."

Assistant Yardmaster Woolwine was familiar with this rule. He knew that he was handling a car of gunpowder, but, notwithstanding this, no special precaution was taken to guard against an accident such as this, and there apparently was no good reason why the rule should not have been complied with in this instance. The investigation not only disclosed that this rule was not observed, but that the car of powder itself was detached from the locomotive and permitted to run down the incline, contrary to rule 1688, which reads:

"When handling cars containing explosives in yards or on sidings, they must, if it is practically possible, be coupled to the engine, protected by a car between, and they must never be cut off while in motion."

Not only were these rules violated in this instance, but the evidence indicates that it is customary to handle cars in this manner.

The testimony of the agent at the point of origin of this car indicates that cars, after being inspected, frequently come to his station in a condition which renders them unfit for powder loading, and that it has been customary for him to fill out the certificate of inspection, as he was unable to secure such a certificate from Bluefield, the point where the cars were inspected.

The evidence indicates that the number of cars containing explosives handled through this yard, varies from two or three per week to one or more each day, and under such conditions it would seem that even an ordinary amount of supervision would have detected such loose practices as existed in this yard relative to the handling of such shipments.

An inspection of the remaining seven cars of the cut disclosed the fact that the brake on one of them was not in proper operating condition, and it is claimed by one of the brakemen riding the cars that one brake was ineffective on account of a loose ratchet wheel. If these conditions existed, the use of these cars was not in conformity with the

Safety Appliance Act, which requires that: "All cars must be equipped with secure sill steps and efficient hand-brakes."

The safety of its employees and the general public, would seem to require that immediate steps should be taken to secure the proper observance of the Safety Appliance Acts and the Regulations for the transportation of Explosives and Other Dangerous Articles.