

INTERSTATE COMMERCE COMMISSION.

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE NORFOLK & WESTERN RAILWAY AT VAUGHN, VA., ON APRIL 23, 1924.

May 24, 1924.

To the Commission.

On April 23, 1924, there was a head-end collision between two light engines on the Norfolk & Western Railway at Vaughn, Va., resulting in the death of one employee and the injury of one employee.

Location and method of operation.

This accident occurred on that part of the Shenandoah Division extending between Shenandoah, Va., and Hagerstown, Md., a distance of 106.7 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table and train orders, a manual block-signal system for passenger trains only being in use. The accident occurred on the main line between the switches of the passing siding at Vaughn, at a point 1,933 feet north of the south switch, this siding is 3,022 feet in length and parallels the main track on the east. Approaching the point of accident from the south the track is tangent for 484 feet, followed by a compound curve to the right 1,364 feet in length, extending to a point 58 feet north of the north switch, the accident occurring on this curve at a point 217 feet from its southern end where the curvature is $6^{\circ} 15'$. The grade at the point of accident is slightly ascending for northbound trains. The view across the inside of the curve is considerably restricted. The weather was clear at the time of the accident, which occurred at about 10.22 a.m.

Description.

Engine 547, hauling southbound passenger train No. 1 from Hagerstown to Shenandoah became disabled and was taken out of service at Rileyville, 3.3 miles north of Vaughn, at 3.48 a. m., a relief engine, in charge of Engineman Dadisman and Fireman Templin, being dispatched from Shenandoah. The relief engine arrived at Rileyville at 5.41 a. m., Engineman Dadisman and Fireman Templin remaining with engine 547 to bring it to Shenandoah after necessary repairs were made.

This work was completed at 9.55 a. m., after which Engineman Dadisman received an order to the effect that engine 547 would run extra from Rileyville to Shenandoah, however, no information was given concerning work extra 448 between these points. Extra 547 left Rileyville at 10.07 a. m., after which stops were made for water and for an inspection of the engine, at a point 1,089 feet south of the north switch of the passing siding at Vaughn, while traveling at a speed estimated to have been between 15 and 25 miles an hour, this engine collided with the engine of work extra 448.

Work extra 448, on leaving Shenandoah at 7.17 a.m., northbound, consisted of six empty flat cars, three gondola cars, one derrick car, and three cabooses, hauled by engine 448, and was in charge of Conductor Kite and Engineman Cole. Before departing the crew received a copy of work train order No. 38, reading in part as follows:

"Eng 448 works extra 7.10 am until 7.30 pm
between Shenandoah and Rileyville. *****"

While loading rail in the vicinity of the south switch of the passing siding at Vaughn, Flagman Foltz was stationed at Luray, 6.4 miles south of Vaughn, to protect against northbound movements, and Flagman Lauck took up a position between the switches of the passing siding, at the public road crossing located approximately 1,700 feet north of the south switch, to protect against southbound movements. After the cars at each end of the derrick car were loaded it was decided to move the work train northward on the main track just clear of the south switch, uncouple the engine, proceed with it to the north switch and return through the siding, thereby running around the train, then make the necessary switching movements to place an empty car at each end of the derrick car for further loading. Accordingly, after being uncoupled, the work engine proceeded toward the north switch, passed Flagman Lauck, and shortly afterwards while traveling at a speed estimated to have been 6 or 8 miles an hour it collided with light engine 547.

Both engines were considerably damaged. The front end of engine 547 was raised to such an extent that the pilot was against the smoke box of engine 448, and the engine truck was forced back under the cylinders. The cisterns of both tenders moved forward on their frames against the engine cabs. The employee killed was a machinist helper, who was riding on engine 547 at the time of the accident.

Summary of evidence.

Conductor Kite, of work extra 4-8, stated that at about 9.50 a. m. the work train headed in at the south switch of the siding at Vaughn to clear for a southbound extra and at this time he instructed Flagman Lauck to find out whether train No. 13, the next scheduled southbound first-class train and due at Vaughn at 10.47 a. m., was on time, as the work train would clear for them at this point and also that there was switching to be done. Conductor Kite had instructed Middle Brakeman Racer to have Engineman Cole run the work engine around the train. The conductor remained with the train after the work engine was uncoupled; he expected that Engineman Cole would arrange with Flagman Lauck for proper protection. He further stated that he could not see the flagman owing to the curve, after the engine was uncoupled it proceeded at a very low rate of speed, which led him to believe that a lookout was being maintained for the flagman, the first intimation he had of anything wrong was when the accident occurred.

Engineman Cole, of work extra 448, stated he thoroughly understood the arrangements made for flag protection while loading rail was in progress. Middle Brakeman Racer informed him of the arrangement to have the work engine run around the train. After the work engine was uncoupled it proceeded northward at a speed of about 10 or 12 miles an hour. On coming in view of the public road crossing Flagman Lauck walked over towards the main track from the direction of the telephone box, located on a pole just east of the passing siding and north of the crossing, and the speed was reduced to about 4 miles an hour. When Flagman Lauck informed him that train No. 13 was on time he assured that there was no other southbound train ahead of it, and as more than 20 minutes would elapse before train No. 13 was due at Vaughn, which would afford ample time for the intended movement, he proceeded without stopping and without arranging for further flag protection. Work engine 448 was traveling at a speed of about 10 miles an hour when he first saw extra 547, about 240 feet distant, and he immediately applied the air brakes in emergency, using both automatic and independent engine brakes, placed the engine in reverse, and sounded the whistle for brakes; he thought the speed was reduced to about 6 miles an hour at the time of the accident. Fireman Peyton and Middle Brakeman Racer were not aware of anything wrong until just prior to the accident.

Flagman Lauck, of work extra 448, stated he had no knowledge of the movement contemplated by the work engine, but when it passed him he assumed it was intended to run around the train. He did not know whether any measures had been taken to protect this movement and stated that had

he been given an opportunity to afford proper protection he would have done so. In communication with the dispatcher at about 10.10 a. m. he received information as to train No. 13 only, he did not ask about other trains and the dispatcher said nothing about Extra 547.

Engineman Dadisman, of extra 547, stated that after engine 547 was repaired at Rileyville he requested and was given running orders, but no notice was given him of work extra 448. On passing the north switch of the passing siding at Vaughn the throttle was almost entirely closed but the air brakes were not applied, the engine reducing speed of its own accord on the ascending grade to about 20 miles an hour. Shortly afterwards the fireman shouted a warning of danger and Engineman Dadisman applied the air brakes in emergency and placed the engine in reverse, the speed being reduced to about 15 miles an hour at the time of the accident. Engineman Dadisman further stated that had the work engine been standing still in this instance he could have brought engine 547 to a stop in time to have averted the accident, also that had he been properly notified that work extra 448 was between Rileyville and Shenandoah, a sharp lookout would have been maintained with the expectation of encountering a flagman at any time. Fireman Templeton stated approaching Vaughn he was looking ahead to see whether the track was clear, having been instructed to do so by Assistant Road Foreman of Engines Friedell, shortly after passing the north switch of the passing siding, at which time the speed was about 20 miles an hour, he saw the work train engine, about 12 or 15 car lengths distant, and he shouted a warning of danger. Engineman Dadisman immediately applied the air brakes in emergency. Assistant Road Foreman of Engines Friedell was riding on engine 547 at the time of the accident, his testimony practically corroborated that of the engine crew.

Trainmaster May stated that under the rules extra 547 should have been notified that work extra 448 was occupying the main track. At the time work extra 448 was originated the third track dispatcher, who was then on duty, issued orders in regard to the work train to all trains affected which were then within or outside the working limits. When extra 547 was originated the first track dispatcher was on duty, and issued the running order but failed to notify the crew of the presence of work extra 448 or furnish them a copy of the work order.

Dispatcher Apple, on duty at the time of the accident, stated that the order creating the work extra was transferred to him when he reported for duty at 7.45 a. m. He noted that this order required the work train to protect itself in both directions and he thought this was responsible for his failure to notify the crew of extra 547 of this train when they reported for orders at 9.55 a. m., it is an un-

usual occurrence to have a train originate within the working limits of a work train and he said this also doubtless contributed to his oversight. However, he did not think that this failure on his part in any way contributed to the accident.

Conclusions.

This accident was caused by the failure of work extra 448 to be afforded proper protection, for which Engineman Cole and Conductor Kite are responsible, a contributing cause was the failure of Dispatcher Apple to furnish the crew of extra 547 information concerning the work train, as required by the rules.

Under the Rules and Regulations for the Government of the Operating Department of this railroad, Form H, Forms of Train Orders, reads in part as follows.

"The work extra must, whether standing or moving, protect itself against extras within the working limits in both directions as prescribed by the rules. * * *"

"Whenever extra trains are run over working limits, they must be given a copy of the orders sent to the work extra. Should the working order instruct a work extra to not protect against extra trains in one or both directions, extra trains must protect against the work extra, if the order indicates that the work extra is protecting itself against other trains, they will run expecting to find the work extra protecting itself. * * *"

Had Engineman Cole and Conductor Kite provided proper protection for the movements contemplated, this accident undoubtedly would have been prevented. However, the conductor evidently assumed that the engineman would arrange with the flagman for proper protection, the engineman assumed, when the flagman told him that train No. 13 was on time, that there was no train ahead of it, or he would have been so informed by the flagman who had been in communication with the dispatcher just a short time previously, and therefore with the time at his disposal it would be safe to pass the flagman and undertake to make the movement contemplated without protection.

Had Dispatcher Apple properly notified extra 547 as to work extra 448, as required by the rules, engine 547 should have been operated with the expectation of encountering a flagman anywhere between Rileyville and Shenandoah, and as the view around the curve at this point was considerably restricted, the speed of engine 547 probably would have been such that the work engine would have been sighted in time to have averted the accident.

Had an adequate automatic train control system been in use on this line this accident would not have occurred.

All of the employees involved were experienced men. At the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND

Director.