

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS RAILWAY AT GRANTS, OHIO, JUNE 18, 1925.

September 21, 1925.

To the Commission:

On June 18, 1925, there was a derailment of a passenger train on the Cleveland, Cincinnati, Chicago & St. Louis Railway at Grants, Ohio, resulting in the death of 1 passenger and 1 other person, and the injury of 79 passengers and 3 employees.

Location and method of operation.

This accident occurred on the Sandusky Division, extending from Sandusky, O., to Springfield, O., a distance of 130.7 miles, time-table directions being east and west; in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders, and a manual block-signal system. Grants is a station 69.1 miles west of Sandusky. At this point there are two passing tracks on the south side of the main track; the westbound passing track is 5,002 feet in length; the switch stand of the east switch is located on the north side of the main track 50 feet west of the west switch of the eastbound passing track. The main track and westbound passing track are spaced 16 feet center to center; the frog is No. 10, while the turnout is 200 feet in length, and the south rail has an elevation of $1\frac{1}{2}$ inches from frog to point of tangent. The turnout was tie-plated and double-spiked. The main track and the turnout are laid with 90-pound rails, 33 feet in length, with 20 oak and beech ties per rail-length, the ballast being gravel 12 or more inches in depth. The turnout and east end of the passing track are located partly upon a 5-foot cinder fill. The siding from point of tangent is laid with 80-pound rails, 33 feet in length, with 18 or 20 oak, beech and pine ties per rail-length, single-spiked and ballasted with cinders about 12 inches in depth. Speed through the turnout was restricted to 12 miles per hour. The switch stand at the east end of the westbound passing track is located 6 feet 10 inches from the gauge side of the north rail, and the top of banner is 9 feet 7 inches above the base of the rail; the banner measures 3 feet across and 1 foot in depth, a white banner being displayed when the switch is set for the main track and red when set for the passing track. A small building used as telegraph office is located on the north side of the track 12 feet 8 inches from the north rail and 22 feet east of

the switch; the westbound train-order signal is located 265 feet east of the switch; near its base the signal pole is 7 inches in diameter and it is 6 feet 10 inches distant from the north rail. Approaching from the east the position of the switch banner could be distinguished for a distance of 2,640 feet from the right side of an engine cap. The track is tangent for several miles in each direction, and the grade is slightly descending westward. The maximum speed limit is 70 miles per hour.

At the time of this accident new rail was being laid in the main track between the switches of the westbound passing track and traffic was being diverted through the passing track.

The accident occurred at 4.44 p.m., at which time the weather was clear.

Description.

Westbound passenger train No. 3 consisted of engine 6477, one combination baggage car and smoker, two coaches, one dining car, and two parlor cars, in the order named, all cars being of steel construction; this train, with Conductor Garner and Engineman Fritz in charge, was en route from Toledo to Cincinnati, and was received upon the Sandusky Division at Berwick at 4.05 p. m., 15 minutes late, it departed from Forest, the last open telegraph office, 6.9 miles east of Grants, at 4.35 p.m., 16 minutes late, approached Grants at a speed estimated to have been between 60 and 70 miles per hour, entered the westbound passing track at an estimated speed of 40 or 45 miles per hour, and was derailed at the west end of the turnout about 200 feet west of the switch.

The engine came to a stop in an upright position with its pilot 571 feet west of the switch, the engine truck and first pair of driving wheels remaining on the rails, the other driving wheels and the trailer-truck wheels standing on the ties to the south of the passing-track rails. The tender and first car were turned over on their left sides on an embankment on the south side of the track. The two coaches and the front truck of the dining car were derailed, the two coaches coming to a stop in a position leaning toward the south. The north rail remained in place; from the point of tangent for a distance of 321 feet the south rail was torn from the ties, and it was broken 203 feet west of the initial point of derailment; four rails passed through the cistern of the tender, indicating that the tender turned on its side at least 130 feet from the point where it stopped. The ties were bunched under the tender and forward truck of first car, and 16 rails were destroyed.

Summary of evidence.

Engineman Fritz stated that he did not know the westbound passing track at Grants was being used as main track; he had received three train orders but all of them related to other matters. Approaching Grants his train was running at the rate of 65 or 70 miles an hour; when he reached a road crossing about 1,300 feet east of the east switch of the westbound passing track he saw the operator come out of the telegraph office and flag him and at about the same time saw that the switch was set for the passing track; he immediately applied the brakes in emergency, and he thought the speed had been reduced to 40 or 45 miles per hour when his train entered the passing track. He thought that the coaches were derailed first and pulled the tender off, as he said that he felt two hard jerks, looked back and saw the cars turn over, and at that time the engine was running evenly. He said the air brakes on his train were operating properly on this trip and took hold properly when he made the emergency application just before the accident occurred. He said the train-order signal pole and the telegraph office obstructed to some extent the view of the switch target, and it was difficult to distinguish the position of the switchstand before reaching the road crossing.

Fireman Thode stated that he read the orders but there was nothing in them about the westbound passing track at Grants being used as main track. He thought the switch could be seen a little better from his side of the cab than from the engineman's, but as the train approached Grants he was wetting down the coal and was not looking ahead. He had no knowledge of anything wrong until the engineman applied the brakes in emergency. He estimated the speed at that time at 65 or 70 miles per hour, and at 40 or 45 miles per hour at the time it entered the siding.

Conductor Gainel and other members of the train crew also stated that they had no knowledge that the westbound passing track at Grants was being used as main track, and had no knowledge of anything wrong prior to the emergency application of the brakes which was made just as the train was passing the road crossing east of Grants. They estimated the speed at that time to have been about 60 miles per hour, and from 30 to 45 miles per hour when the train entered the passing track.

Foreman Murray was in charge of an extra gang of about 60 men which was laying rail near the point of accident. He stated that at about 1.30 p. m. on the date of the accident he called the operator at Grants by telephone and asked him to obtain permission from the dispatcher to use the main track until 5.30; after a period of about three minutes the operator told him that it was "O.K. until 5.30". He asked the operator to open the east switch, opened the west switch himself, and then told the section foreman that the passing track was main track and that they could go ahead laying rail. He stated that was the usual practice for handling work of this kind; he did not have flagman out as he understood from the operator's statement to him that the situation was protected by train order, and this understanding was confirmed by the fact that prior to the arrival of train No. 3 two freight trains passed through the passing track.

Supervisor Lease, of the maintenance of way department, stated that when rail is being laid between switches and the passing track is being used as main track, it is the practice not to protect by flag. There were no rules or instructions specifically covering this situation, but he considered that when the passing track was designated as main track by train order the section of main track between switches was taken out of service. He was familiar with and approved of the arrangement made for protecting this track work; prior to the accident he came out of the westbound passing track on a motor car and at that time the switch was set for the passing track; he was satisfied that the situation was properly taken care of although he had not seen the order which had been issued by the dispatcher.

Operator Beem, at Grants, stated that shortly after 1.30 p.m., Extra Gang Foreman Murray called him and said he wanted to work between switches and asked to have the dispatcher use the westbound passing track as main track. He communicated with the dispatcher and after the necessary train order had been issued he told the extra gang foreman that the arrangement requested had been made and that he would open the east switch. He said a copy of the order was addressed to him for his information, that he listened to the other operators repeat the order and that there was nothing unusual about it. During the forenoon of the same day a similar order had been issued but later annulled as the foreman advised they would not begin laying rail between switches until 1.30 p. m. Several trains passed through the passing track between the time the order was issued and the arrival of train No. 3. When he was relieved by the second track operator he called particular attention to this order and there was some conversation about it and the possibility that an engineman might forget it.

Second Trick Operator Case, at Grants, stated that as a result of this conversation he decided to carry a flag when he went out to look over westbound trains, and he did so as train No. 3 approached. As the train was approaching at high speed and the engineman had not shut off steam he gave stop signals with his flag which were acknowledge by the engineman. As the train entered the passing track the cars began to turn over but the engine seemed to stay on the rails.

Dispatcher Clark, on duty from 7 a.m. to 3 p. m., stated that when he came on duty he had a note from the retiring dispatcher stating that at about noon the westbound passing track at Grants would be used as main track, and at 11.01 a. m. he issued train order No. 55, form 19, addressed to all trains west at Carey, all freight trains east at Gest Yard and all passenger trains east at Bellefontaine depot, this order reading as follows:

"Westward siding at Grants will be used as main track from 12.01 p.m. until 11.59 p. m. Thursday, June 18th."

Later he learned that Foreman Murray of the extra gang was not prepared to have the westbound passing track used as main track until about 1.30 p. m., and he therefore annulled train order No. 55. At about 1.30 p. m. the operator at Grants advised they were then ready to begin laying rail between switches and he issued order No. 74, form 19, that "westward siding Grants will be used as main track from 1.35 p. m. until 5.30 p. m. Thursday, June 18th." He stated he addressed this order the same as order No. 55 except that by mistake he addressed it to "freights west", instead of "all trains west", at Carey. The only explanation of this error which he could offer was that the order was addressed to "Freights east at Gest" and he must have inadvertently used the same wording, "Freights west" instead of "All trains west," at Carey. He stated that in issuing an order of this character it was customary to address it to freight trains and passenger trains instead of to first, second and third class and extra trains as classified in the book of rules and timetable. Dispatcher Clark stated he understood the extra gang foreman had flagmen out in both directions while the track was being torn up, although he had no direct knowledge to that effect and he did not inquire of the operator.

Second Trick Dispatcher Passman stated that order No. 74 was included in the transfer when he came on duty and Dispatcher Clark also informed him that the westbound passing track at Grants was being used as main track, but that he had no occasion to go back and check up the order, and he did not learn that the order was not properly addressed, and therefore not delivered to train No. 3, until after the accident.

Chief Dispatcher Haley stated that he heard Dispatcher Clark issue order No. 55 at 11.01 a. m., but nothing was said about it as it was in accordance with the practice which had been followed to give up main tracks for sectionmen to lay steel and he considered the arrangement to be proper. He did not know the first order had been annulled and another order issued; he had not looked over the train-order book that day.

Conclusions

This accident was caused by an error of Dispatcher Clark in addressing a train order, as the result of which the order was not received by the train involved and it entered an open passing-track switch at excessive speed. A contributing cause was the failure of Engineman Fritz properly to observe the switch target, and to reduce the speed of this train to the prescribed rate before entering the passing track.

Failure of Dispatcher Clark properly to address this order was a blunder for which there is no excuse, and upon him rests the primary responsibility for this accident.

The order involved in this accident applied to all trains and because of local operating conditions it was necessary to issue this order at three different points; had this order been addressed to all trains, instead of designating the kinds of trains which would receive it at the several different points, the error which caused this accident would not have been made. Under the rules trains are designated as regular or extra, and the time-table prescribes different classes of regular trains; had these designations been used in addressing the order, instead of passenger and freight, the error would probably have been avoided.

The investigation disclosed that the east switch of the westbound passing track could be seen from the cab of a westbound train for a distance of 2,640 feet, but Engineman Fritz did not notice that the switch was open until about the time he was flagged by the operator and when only about 1,200 feet from the switch. Had Engineman Fritz maintained a proper lookout when approaching Grants he would have observed that the switch was open in time to have reduced speed sufficiently to avert this accident.

The accident occurred 1 hour and 44 minutes after Second-trick Dispatcher Passman came on duty; had he made a careful check of the train orders transferred to him by the first trick dispatcher he might have discovered the error in the address of train order No. 74 in time to prevent the accident.

Had an automatic block-signal system been in use on this line this accident probably would not have occurred; an adequate automatic train control device would have prevented it.

Dispatcher Clark was employed as an operator in 1913 and promoted to dispatcher August 16, 1923; he had had about 4 months' experience as relief dispatcher, working one or two nights a week. Engineman Fritz was employed as fireman in 1892 and promoted to engineman in 1901. His record contains the following entries:

12-14-23. Failed to observe rules in switch light tests Belle Center.

5-8-24. Reprimanded acct. violation in efficiency test Belle Center May 28th, Tr. 2, switch lights out. Passed over switches 60 miles per hr.

None of the employees involved in this accident was on duty contrary to the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.