

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED AT THE  
CROSSING OF THE MONON RAILWAY AND THE BALTIMORE &  
OHIO RAILROAD AT ROACHDALE, INDIANA, NOVEMBER 15,  
1929

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January 9, 1930

To the Commission:

On November 15, 1929, there was a side collision between a Baltimore & Ohio passenger train and a Monon freight train at the Baltimore & Ohio - Monon crossing at Roachdale, Indiana, which resulted in the injury of 4 passengers and 5 employees.

The Decatur subdivision, Indianapolis Division, of the Baltimore & Ohio Railroad extends westward from Indianapolis, Indiana, to Springfield, Illinois, a distance of 194.5 miles. At Roachdale, 35.3 miles west of Indianapolis, this line crosses at grade the Fourth Subdivision, Southern Division, of the Monon Railway, which extends southward from Shops (Lafayette), Indiana, to McDoel, Indiana, a distance of 103.3 miles. These are both single track lines and the crossing is practically at right angles. The law of Indiana requires that trains operated over railroad crossings which are not protected by interlocking must be stopped not less than 40 feet nor more than 500 feet from such crossings, and at Roachdale there are stop signs on both roads at the approaches to this crossing. There is also a crossing gate, manually operated, adapted to be swung into position across either line when the route is clear for the other line. It is mounted upon a switch-stand base located in the southwest angle of the intersection, 10 feet from the center line of each track, the mast being 19 feet in height and having mounted at its top a switch target and lamp, the night indications of which are red for stop and green for proceed. The gate arm is mounted approximately 7 feet above the base and is about 12 feet in length, the outer end for a distance of 6 feet being of wood, 8 inches wide, painted red, with three 4-inch holes with painted white rings around them, and is adapted to be secured in position at right angles to either track by means of an iron rod hooked to a spike in a tie. On the Monon there is an automatic block signal system in use, the signals being of the normal clear, three position type, automatic signals governing both northbound and southbound movements are located on a bracket mast in the southwest angle of the intersection. There is a dead section in the track circuit of about 12 feet at the crossing,

and the crossing gate is not interconnected in any way with the signal system. There are train-order signals for both roads located at the station which is in the southeast angle of the intersection. The view from trains approaching on either road is not obstructed and signals and the crossing gate can be seen for considerable distances.

Approaching Roachdale crossing from the west the Baltimore & Ohio track is tangent for a distance of more than a mile, the grade is slightly ascending west of the station and then practically level for a distance of about 700 feet, the crossing where the accident occurred being located in this level track. The Monon track is tangent for several miles in each direction, approaching from the south the grade is level for a considerable distance, followed by a descending grade of 0.73 per cent for 1500 feet and then level track for 2100 feet to the point of accident.

The trains involved in this accident were Baltimore & Ohio eastbound passenger train No. 49, consisting of 1 locomotive, 1 mail car, 1 baggage car, 1 coach, 1 sleeping car and 1 parlor-cafe car, in the order named, the first three cars being of all-steel construction, the 4th car being of steel-underframe construction, while the last car was of wooden construction, and Monon northbound freight train extra 570, consisting of 1 locomotive, 52 loaded and 2 empty cars, and caboose. Train No. 49, with Conductor Glidewell and Engineman Shaffer in charge, was eastbound from Springfield and arrived at Roachdale at 12.21 p.m., on time, it was moving over the crossing at low speed when the parlor-cafe car was struck at about its center by Monon extra 570. Extra 570 was not brought to a stop before reaching the crossing, and was traveling at a speed estimated at from 3 to 5 miles per hour when it struck the rear car of the passenger train. The weather was clear at the time of the accident.

As a result of the collision Baltimore & Ohio cafe car was overturned and badly damaged, and Monon locomotive No. 570 was partly derailed. All the persons injured were in the cafe car.

#### Summary of Evidence

Engineman Shaffer of Baltimore & Ohio train No. 49 stated that he made the crossing stop at Roachdale and was preparing to make the station stop when he heard whistle signals, he saw the Monon train approaching, and realized that the whistle signals were intended as a warning and that the Monon train would not be stopped before reaching the crossing. He stated that he released the brakes and moved forward in an attempt to clear the crossing before the Monon train reached it.

he thought his train was moving at the rate of about 5 miles per hour when the collision occurred. Engineman Shaffer's statement was practically corroborated by Conductor Glidewell who also stated that when he realized the situation he gave the engineman a signal to keep going.

Trainmaster Partlow was riding in the rear car of train No. 49 and just as this train was about to make the regular station stop his attention was suddenly attracted to a series of short blasts of an engine whistle. He saw the Monon train approaching and only had time to reach the rear door of the parlor car when the collision occurred.

Engineman Cole of Monon train extra 570 stated that the brakes of his train were inspected before leaving McDoel and he had no difficulty in controlling or stopping his train at points enroute between McDoel and Roachdale. He stated that he was running at a speed of 25 or 30 miles per hour when he passed the south switch of Roachdale passing track, approximately 4300 feet south of the crossing, and at that point he made an application of the brakes. At the crossover switch approximately half a mile south of the crossing, at which point he could see the crossing rate, he made a further brake pipe reduction. As he approached the crossing he saw the engine of the Baltimore & Ohio passenger train start over the crossing and as he was then afraid he was not going to get stopped he began to sound the whistle. For the last few seconds before the collision occurred he thought his train would be stopped before it reached the crossing but he continued to sound the warning signals by means of his engine whistle. He stated that the first brake pipe reduction was about 10 pounds and then after a minute or a minute and a half he drew off 20 or 25 pounds, when he realized he was not going to stop he moved his brake valve to emergency and reversed the engine. He stated that he saw the crossing rate was against him when he made the second reduction, had he seen the train at that time he would have made an emergency application instead of the second service reduction. Then he finally did go to emergency position he did not get emergency effect on account of the preceding service reductions. After his engine was rerailled and the train proceeded northward following the accident, an inspection and test of the brakes was made at Whitesville, at the time of this inspection 3 brakes were not applied, one of which the conductor had bled off and he thought that the other two had leaked off. He said that while no trouble had been experienced in the operation of the brakes and the control of the train prior to the accident, a number of

cars were picked up at Bainbridge, some of which had long piston travel, and he thought that might have reduced the efficiency of the train brakes somewhat. The engine was recently out of the shops and Road Foreman of Engines Martin operated the engine part of the time, he experienced no difficulty in the operation of the brakes or the control of the train.

Conductor Meehan of extra 570 stated that his train consisted of 27 loads and 3 empties when leaving McDoel, at Bainbridge 22 loads were picked up and at Wallace Junction 3 loads were picked up. After leaving those points he noticed that the brake pipe gage in the caboose registered 70 pounds, he noted no unusual speed and did not notice particularly the operation of the brakes approaching Rosedale. He was writing in the caboose and did not know that an accident occurred until the rear brakeman told him. After the accident occurred the train was inspected and it was found that all the brakes were cut in. Leaving Rosedale the brake on one car was sticking and he bled it off.

Brakeman Jacobs of extra 570 stated that after cars were picked up at Bainbridge they waited several minutes for the brake pipe pressure to be pumped up. Approaching Rosedale he was riding on the engine. The enginemen had shut off steam some distance back on account of the descending grade and did not again use steam before the accident occurred. The first brake pipe reduction was made at the south switch of the passing track and the enginemen did not release before the second reduction was made. From his position in the cab he could not see the air gage and consequently he did not know the amount of these reductions. At the south end of the platform as the enginemen began to sound warning whistle signals he got off and gave the Baltimore & Ohio train a signal to go ahead.

Traveling Fireman Mitchell who was riding on the engine of extra 570 stated that when going down the grade at Carpentersville south of Rosedale the enginemen controlled the speed by means of the engine brake. When they were at about the crossover switch the fireman called attention to the approaching Baltimore & Ohio train and at about that time they saw that the crossing gate was against them. The enginemen had already applied the brakes. Just before the engine reached the depot platform the enginemen set the brakes in emergency. He estimated the speed at the time the Baltimore & Ohio train was first seen at about 25 miles per hour, and at about 10 miles per hour when the brake valve was placed in emergency position. When asked what in his opinion was the cause of the accident he stated that he thought their train must have been running a little faster than they realized on account of the engine being new and

the road being in good condition. He thought the engineman operated the brakes in the usual manner for making the required stops at this point.

Fireman Bridges of extra 570 stated that he saw the passenger train when they were about at the cross-over switch or a little south of it and called the engineman's attention to it. He also saw the red gate set against his train and called that. The engineman had applied the brakes but as the train approached the depot he saw that it was not going to be stopped and he got off just south of the station platform.

Road Foreman of Engines Martin who operated the engine part of the way during this trip stated that he thought the accident was due to the fact that Engineman Cole did not start braking strong enough the proper distance from the crossing. He handled the engine on its trip northward from Roachdale after the accident and while there had been some change in the position of cars in the train he did not think that materially affected the efficiency of the air brakes and he had no difficulty in controlling the train during that part of part of the trip.

Operator Lewis who was on duty at Roachdale stated that a northbound Monon extra left that point at 10:01 p.m. and after it departed he turned the crossing gate so as to clear the route for the Baltimore & Ohio line; train No. 49 made the usual crossing stop west of the station and was partly over the crossing when he noticed extra 570 was approaching too fast to make the crossing stop. He gave the Baltimore & Ohio engineman signals to go ahead in an effort to clear the crossing before the Monon train arrived. He thought both trains were traveling at a speed of 3 or 4 miles per hour when the collision occurred.

#### Conclusions

This accident was caused by the failure of Engineman Cole of Monon extra 570 properly to control the speed of his train, which resulted in failure to bring his train to a stop before entering upon the crossing which was already occupied by a train on the conflicting line.

The investigation disclosed that no difficulty was experienced in properly controlling the train prior to or following the accident, approaching Rosendale there were no unusual conditions encountered and it is apparent that the brake equipment of this train was adequate to properly control it at this point. It is believed that Engineman Cole underestimated the speed of his train and either did not begin braking soon enough or

did not make a sufficiently heavy initial brake pipe reduction to bring his train properly under control before reaching the crossing

The evidence disclosed that Engineman Cole realized he was not going to be able to stop in time and attempted to make an emergency application, but because of the previous service reductions he was unable to obtain any additional braking power as a result of this emergency application

During this investigation it was noted that the crossing gate was not connected in any manner with the automatic block signals or the Monon at this point and because of the dead section in the track circuit these automatic signals would not indicate that the crossing was obstructed. The signals are in a location where they are likely to be seen for a greater distance than the crossing gate and had the crossing gate been so connected with the signal system that the automatic block signal would display stop indications when the crossing gate was set against Monon trains, it is possible Engineman Cole would have realized the necessity for heavier braking earlier than he did and he might then have been able to avert the accident.

All of the employees involved in this accident were experienced men and none of them was on duty contrary to the provisions of the hours of service law

Respectfully,

V. P. BORLAND,

Director