

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE  
PENNSYLVANIA RAILROAD NEAR MACKSVILLE, INDIANA, ON  
AUGUST 14, 1930.

September 23, 1930.

To the Commission:

On August 14, 1930, there was a head-end collision between a passenger train and a freight train on the Pennsylvania Railroad near Macksville, Ind., which resulted in the injury of 12 employees, 1 of whom subsequently died, and the injury of 16 passengers and 2 persons carried under contract. The investigation of this accident was held in conjunction with representatives of the Public Service Commission of Indiana.

#### Location and method of operation

This accident occurred on the St. Louis Division, which extends between Ben Davis Tower, Indianapolis, Ind., and East St. Louis, Ind., a distance of 231.7 miles, in the immediate vicinity of the point of accident this is a single-track line over which trains are operated by timetable, train orders, and a manual block-signal system. The accident occurred at a point approximately 4.3 miles west of Macksville, or 1 mile east of Farrington, Ill., on the Indiana side of the state line; approaching this point from the west, the track is tangent for a distance of 4,534 feet, followed by a  $0^{\circ}59'$  curve to the left 1,054 feet in length, and then tangent track for a distance of 10,348 feet, the accident occurring on this latter tangent at a point 1,300 feet from its western end. Approaching from the east, there is a  $2^{\circ}08'$  curve to the right 665 feet in length, followed by the long tangent on which the accident occurred. The grade at the point of accident is 0.692 per cent ascending for westbound trains.

The weather was clear at the time of the accident, which occurred about 4.48 p.m.

#### Description

Westbound freight train extra 6776 consisted of 95 cars and a caboose, hauled by engine 6776, and was in charge of Conductor Hollingsworth and Engineman Carey. This train departed from Terre Haute, 2.6 miles east of Macksville, at 4.25 p.m., and while passing Macksville, the crew received a copy of train order No. 284, Form 19, providing in part for a meet with train No. 26 at Farrington, and were given a clear block indication covering the block between Macksville and Farrington. Extra 6776 continued towards the latter point, and was traveling at an estimated speed of 10 miles per hour when it collided with

train No. 26.

Eastbound passenger train No. 26 consisted of five mail and express cars, one combination coach and baggage car, one coach, two Pullman sleeping cars, and one dining car, all of steel construction, hauled by engine 3772, and was in charge of Conductor Birge and Engineman Garhart. This train left East St. Louis, 158 miles west of Farrington, at 12.48 p.m., three minutes late, passed Farrington at 4.46 p.m., on time, under a clear block signal indication and without orders, and shortly afterwards it collided with extra 6776 while traveling at a speed estimated to have been between 30 and 35 miles per hour.

Engine 6776 was derailed but remained upright and in line with the track. The second to the seventh cars, inclusive, in extra 6776, were also derailed, three of them being overturned. Engine 3772, the first two cars, and the forward truck of the third car, in train No. 26 were derailed. The engine stopped in an upright position, the first car came to rest on top of engine 6776, the second car stopped with its forward end resting on engine 3772 and its rear end on the tender of that engine, and the forward end of the third car was raised about 6 feet off its frame. The employce killed was a dining-car waiter.

#### Summary of evidence

Engineman Carey, of extra 6776, stated that his train approached Macksville at a speed of about 5 miles per hour and when the engine passed the tower the operator handed on a train order fixing meets with other trains, one of which was with train No. 26 at Farrington; he also received a message directing him to hurry to Farrington as train No. 26 was on time. His train entered the block at about 4.34 p.m., under a clear signal indication and was approaching Farrington, traveling at a speed of 25 or 30 miles per hour, when he observed the passenger train as it rounded the curve just west of the point of accident. He immediately applied the brakes in emergency, and estimated that the speed had been reduced to about 10 miles per hour by the time the accident occurred.

Fireman Vanderhoof, of extra 6776, stated that the head brakeman was riding behind him, and his first warning of danger was when the brakeman shouted that train No. 26 was approaching, whereupon he looked ahead, saw that train coming around the curve, and immediately jumped off. Head Brakeman Ingle said his train had attained a speed of between 32 and 35 miles per hour after passing Macksville, and after getting a drink of water he stepped to the gangway on the left side of the engine, looked ahead, and noticed train No. 26 rounding the curve west of the point of accident. After giving a warning he jumped off, and while in the act of doing so, he heard the brake valve

exhausting. The statements of Conductor Hollingsworth and Flagman Shryer, both of extra 6776, brought out no additional facts of importance.

Engineman Garhart, of train No. 26, stated that while approaching the tower at Farrington he observed the home signal displaying a clear indication, while the train-order board was not displayed, consequently he permitted his train to pass that point without stopping. He did not learn that the block was occupied until the train reached a point near the leaving end of the curve west of the point of accident, at which time the fireman called to him to stop. On account of his position on the outside of the curve, he could not see the opposing train, but just as soon as the fireman shouted the warning, he applied the brakes in emergency, at which time the speed of his train was about 65 miles per hour. He jumped off just before the collision occurred, and by that time he thought the speed had been reduced to 30 or 35 miles per hour. Engineman Garhart had no knowledge that his train was to meet extra 6776 at Farrington until informed of the fact by the engineman of that train after the accident.

Fireman Cagle of train No. 26, stated that he was riding on his seatbox approaching Farrington and noticed that the home signal was in the clear position, with no train-order signal being displayed, and when the engine passed the tower he waved a customary salute, although he did not see any one in or near the tower. He remained on the seatbox, and when the train was rounding the curve east of Farrington, he observed the freight train approaching; he shouted to the engineman "that will do, stop her" and the engineman in turn immediately made an emergency air-brake application. Fireman Cagle then got down on the steps and jumped off. He estimated the speed of his train at the time the opposing train first came into view as 70 miles per hour, and at the time he got off, at 35 miles per hour.

Conductor Birge, of train No. 26, stated that when his train passed Farrington, he noticed that the home signal was displaying a clear indication, the train-order board was not displayed, and he did not see any one in the tower. Flagman Thompson was riding in the rear end of the last car when the train passed Farrington and he thought he saw some one sitting in the tower, but was not positive. Immediately after the accident, he went back to Farrington tower to protect his train and also to report the accident, and when he arrived he found the operator and the operator's wife in the tower, the operator appearing to be very nervous.

Operator Fuller, on duty at Macksville, stated that he copied train order No. 284 at about 4.15 p.m., and heard the operator at Farrington "X" the order, which was made complete at 4.31 p.m. While eastbound freight train

extra 6778 was passing the office, he called the operator at Farrington and informed him to that effect, and at the same time he asked that operator if it would be a clear block for westbound extra 6776, as soon as the eastbound extra had cleared. The operator at Farrington inquired as to the time to enter on the block sheet and Operator Fuller advised him to make it at 4.32 p.m.; the operator at Farrington replied "clear block at 4.32". Operator Fuller then left the office, and when extra 6776 was passing he delivered train orders to the crew. Upon returning to the office he attempted to call the operator at Farrington in order to report the entrance of this train into the block, but was unable to get in touch with him. He then lined the switches for a crossover movement of an engine at his station, reported it to the dispatcher, and the dispatcher instructed him to inform the engine crew that train No. 26 would pass Farrington at 4.56 or 4.57 p.m. He again left the office to deliver these instructions, and when he returned the operator at Farrington called and reported that train No. 26 had entered the block. Upon inquiry as to what time extra 6776 cleared at Farrington, the operator at that point stated that that train was not into clear. Operator Fuller also said that the operator at Farrington had not asked for the block for train No. 26 and that this train was not mentioned at any time during their conversation until it was reported to have entered the block by that operator.

Dispatcher-Operator Hasfurther, on duty at Farrington, stated that he was promoted to train dispatcher in 1909, and since that time he had been employed as assistant trainmaster and transportation inspector, and that although he had not been examined on the rules since December, 1928, he was familiar with and thoroughly understood them. On the day of the accident, the dispatcher called him several times to inquire about eastbound extra 6778 and he therefore kept watching the circuit indicator as well as answering other telephone calls and attending to his duty of dispatching on the Peoria Branch, which connects with the main line at Farrington. At one time, the dispatcher advised him that it probably would be necessary to run extra 6776 to Farrington to meet train No. 26, and finally the dispatcher again called and directed him to copy train order No. 284. He complied with this request, but made only one copy instead of three copies as required by the rules, as he wanted to avoid building up a new pad of orders, being of the opinion at the time that the dispatcher intended it as a holding order against train No. 26 and that it would not be delivered. As soon as it was copied, he gave the "X" response, which was at 4.15 p.m., without waiting for instructions from the dispatcher to do so. He then placed this order under the edge of a cloth binding that holds his block sheet, but did not display the train-order signal for the reason that extra 6778 had not yet arrived, and he did not wish to delay that train by having the board displayed. A few

minutes later extra 6778 passed and he left the tower to watch this train go by, leaving the door and windows open. After the train passed, he returned to the office, set the signal behind the train, called the operator at Macksville and reported the train into the block at 4.24 p.m. He also notified the dispatcher that this train had passed, but did not hear the dispatcher mention extra 6776 at this time, although the dispatcher might have done so after Hasfurder hung up the telephone receiver. In the meantime, the train order disappeared from his desk during his absence, but he did not miss it upon his return, and this fact, coupled with the fact that he had other duties to perform, caused him to forget about it entirely. When the operator at Macksville called and reported extra 6778 clear at 4.32 p.m., he said he acknowledged by saying "O.K.- block 26" and he then understood the operator at Macksville to answer by saying, "clear at 4.32", or words to that effect. At no time did he hear the operator ask for the block for extra 6776. He entered the time on the block sheet, and then cleared the signal for train No. 26, still failing to remember that he had copied an order for that train. After train No. 26 passed, he reported it to the operator at Macksville but received no response. Following this, he reported it to the dispatcher and the dispatcher inquired as to the location of extra 6776, and it was not until then that he recalled he had received the meet order for train No. 26. He had no recollection of the dispatcher telling him, after extra 6778 had passed Farrington, that extra 6776 would come to Farrington for train No. 26. Dispatcher-Operator Hasfurder further stated that while it was possible a misunderstanding occurred between the operator at Macksville and himself, yet he was positive that the operator at Macksville did not request the block for the westbound train. It also appeared from the statements of Dispatcher-Operator Hasfurder that there was no usual place in which he kept his orders, but that it had been his custom, in the case of a hold order or an order to be acted upon immediately, to place it on the block sheet and weight it down with something. In this particular case, however, he tucked it under the cloth binding instead of following his usual practice. The weights usually used for weighting down orders consisted of "some insulators, a washer or two, and some other things we have picked up there".

Dispatcher Wilson stated that he issued train order No. 284 and that as soon as he completed transmitting it, the operator at Farrington "X"-ed it at 4.15 p.m., without his permission, also that the order was made complete at Macksville at 4.30 p.m. He did not make the order complete at Farrington as it was his intention to use it as a hold order and to annul it as soon as extra 6776 cleared at that point. At the time the operator at Farrington reported extra 6778 by that station, he thought he told the operator that extra 6776 would probably delay train No. 26 four or five minutes, but he did not remember whether the

operator made any response. About 15 or 20 minutes after the accident, the operator at Farrington called and requested him to repeat the order and he then read the contents of the order from the order book, after which he remarked to the operator that the latter had "X"-ed the order at 4.15 p.m., and the operator replied that it must have blown away. Dispatcher Wilson further stated that he knew the rules required that a train order must not be sent to a superior train at the meeting point if it can be avoided, but his reason for doing so in this instance was that it would be necessary for extra 6778, which was being delayed by a broken rail west of Farrington, to reach Macksville so that extra 6776 could leave that point and avoid delaying westbound train No. 19, and at the time the order was put out he thought it was then too late to issue it to train No. 26 through the office at Aden, the first open office west of Farrington, without delaying the train. He later admitted, however, that the order could have been sent to Aden for train No. 26. Dispatcher Wilson also was familiar with the fact that when a train order is sent to a superior train at the meeting point, that fact must be stated in the order; he did not comply with this provision of the rules, and when asked about it, his statements were as follows:

- Q. Are you in the habit of putting it in the order, under similar circumstances?
- A. Sometimes we do, yes sir, most always.
- Q. Just got in a rut?
- A. Not exactly that, but we consider at Farrington we have plenty of protection.
- Q. But the rule does not provide for that?
- A. No, sir. We have taken other precautions. The fact is, I never could see what that meant on there, anyhow. I never could see that it ever did any good.
- Q. You and I could not change it ourselves?
- A. No, sir, we could not do that, but I never could see what it meant.

#### Conclusions

This accident was caused primarily by the failure of Dispatcher-Operator Hasfurther to deliver a meet order. Contributing causes were the failure of Dispatcher Wilson to comply with the rules when issuing the order in question, together with a misunderstanding by the operators in the operation of the manual block.

According to the evidence, train order No. 284

was issued to train No. 26 at Farrington and to extra 6776 at Macksville. This order was delivered to the crew of extra 6776 but was not delivered to train No. 26. Operator Hasfurder stated he only made one copy of this order at the time it was received, having in mind that it was merely a holding order and would not be delivered. He laid the order on his desk and shortly afterwards he left the office to watch another train pass. During his absence, for some unaccountable reason, the order disappeared, and this caused him to forget it until after the occurrence of the accident, with the result that he failed to have the train-order signal displayed when train No. 26 passed his station.

There appears to have been some misunderstanding concerning the clearing of the block for the trains involved in the accident. According to the statements of Operator Fuller while the eastbound freight train was passing his office he asked operator Hasfurder for the block to permit extra 6776 to enter it and upon inquiry from Operator Hasfurder as to the time, he instructed that operator to show the time on the block sheet as 4.32 p.m. Operator Hasfurder maintained, however, that when this conversation was taking place he heard no mention made of extra 6776 but instead he asked for the block for train No. 26 and understood Operator Fuller to say that the block was clear at 4.32 p.m., He, therefore, cleared the signal and permitted train No. 26 to pass his station without stopping and without having been given a copy of train order No. 284.

The rules require that a train order must not be sent to a superior train at the meeting point if it can be avoided, if it is so sent that fact must be stated in the order. At the time Dispatcher Wilson issued the order to the operator at Farrington, it was his intention to have it serve only as a hold order, annulling it as soon as extra 6776 cleared at that point. The reason he issued the order at the meeting point was to prevent delay to train No. 26, as well as another first-class train bound in the opposite direction, but subsequently he said he could have put out the order at the preceding station. No apparent reason was developed for his further failure to comply with the rules by stating in the order that train No. 26 was to get the order at Farrington. Strict compliance with the rules by Dispatcher Wilson probably would have prevented the occurrence of this accident.

The circumstances surrounding the occurrence of this accident add one more chapter to the long record of accidents involving carelessness in block operation and loose practices and disregard of rules in connection with the handling of train orders. Here is the record in this case.

1. The dispatcher issued an order to a train at

the meeting point when it could have been avoided.

2. The dispatcher further violated the rules by failing to include in the order a provision that the superior train was to get the order at the meeting point. No particular excuse was offered for this failure to observe the rules, except, perhaps, the fact that he never could see any reason for the existence of this provision of the rules.

3. The dispatcher-operator on duty at Farrington, which was the meeting point designated in the order, made only one copy of the order, instead of the three copies required, assuming that the order was intended only as a hold order and would be annulled. This action was taken through force of habit, according to his statements, and yet he had been a train dispatcher, assistant trainmaster, transportation inspector, and division operator, all on this same railroad.

4. The dispatcher-operator at Farrington "X"-ed the order immediately upon its receipt, without being instructed to do so, as required by the rules.

5. The dispatcher-operator at Farrington had no regular place for keeping his orders, but said he usually placed them on his block sheet and weighted them down with some kind of a weight, in this case, however, he deviated from his practice and tucked the order in a corner of the pad holding the block sheet, with the result that it probably blew out of a window.

6. The dispatcher-operator at Farrington, and the operator at Macksville, had a misunderstanding as to the operation of the block, with the result that two opposing trains were allowed to enter upon clear signal indications. It did not appear that they used the words prescribed by manual block rule 317-B for use when asking for and pledging the block to each other.

7. The train order involved was sent to Farrington, Macksville, and Aden. The operators at the two points last mentioned heard the operator at Farrington give the "X" response, but neither of them heard the other repeat the order to the dispatcher, nor did the dispatcher-operator at Farrington hear the other two repeat the order. The rule governing the issuance of orders on Form 31 says each operator "must observe", whether the others repeat correctly, but the rule governing orders on Form 19 says only that they "should observe", etc. In this case, therefore, there was no mandatory provision requiring operators to listen, and naturally none of them did so. And it might be noted that this could occur with all orders issued, since according to Dispatcher Wilson, orders on Form 31 are not used.

Consideration of the above facts, and of the



statements of the various employees, leads only to the conclusion that what was said and done was a matter of practice. Under such circumstances the only wonder is that a serious accident has not occurred before this time. The reports of this Bureau have pointed out again and again what is bound to occur when there is any deviation from the rules, especially those governing the handling of train orders. These reports are given wide distribution, and it would appear that the majority of those concerned have had ample opportunity for reading of the unfortunate experiences of others and in this way to profit thereby. Such does not appear to have been the case in this instance.

The holdings of periodical examinations affords definite assurance that those so examined are thoroughly acquainted with the rules, but no official can sit back in his chair and assure that the rules are being obeyed simply because all concerned are acquainted with them. In the case of train orders, written records are available to show what practices are being followed, and there is absolutely no excuse to be offered for the failure of supervising officials to know whether such practices conform with the rules, and to take corrective measures when violations exist. If it is felt that deviations from one or more rules will result in a saving of a few seconds in time, then the obvious remedy is to modify the rules so as to authorize the desired practice, but if officials do not care to take the responsibility for modifying their own rules, then they should insist upon strict enforcement of the rules as they stand. Much is heard of promoting safety in many lines of activity connected with the operation of a railroad; in other words, "Safety first." The application of this idea to operating practices, such as are mentioned above, should do much toward preventing these serious accidents. This particular accident resulted in the death of 1 person and the injury of 29 persons, with a property damage estimated to have been upwards of \$50,000. The application of this amount of money would have gone a long way in the work of correcting unsafe practices, not to mention the saving of life and limb.

The St. Louis Division of this railroad extends between Indianapolis and St. Louis, and is equipped with automatic block signals except between Smithboro and Marty, a distance of 15.6 miles, and between Farrington and Macksville, a distance of 5.3 miles. These two sections were omitted when the automatic signal installation was completed, because the company at that time was considering the question of double-tracking and also improving the grade and alignment on these two portions of the road. The train movement over the portion of the road where this accident occurred averaged 39.6 trains daily for a period of 30 days prior to the accident. Under these circumstances

the officials of this company, in addition to strict rule enforcement, should consider a program either of completing the double-tracking of the territory in question, or providing the additional protection which can be had from an automatic block-signal system.

The employees involved were experienced men and 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.