

SUPPLEMENTAL REPORT OF THE DIRECTOR OF THE BUREAU OF
SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH
OCCURRED ON THE LINE OF THE UNION TRACTION COM-
PANY OF INDIANA NEAR INGALLS, IND., ON FEBRUARY
2, 1924.

September 30, 1924.

To the Commission:

A supplemental investigation has been made of a head-end collision between two passenger trains which occurred on February 2, 1924, on the line of the Union Traction Company of Indiana near Ingalls, Ind. This accident resulted in the known death of 16 passengers, and the injury of 35 passengers and 1 employee.

Summary of report of March 10, 1924.

The accident occurred on the Anderson Division, at a point where an automatic block-signal system is installed; this signal system, however, was not in use at the time of the accident and had not been used for several weeks on account of certain changes which were being made. Scheduled trains have fixed time-table meeting points, with no superiority by direction. The trains involved in the accident, Nos. 24 and 21, were running behind their scheduled time, but as it appeared to the dispatcher that they would reach their regular meeting point with each other at about the same time he did not issue orders changing this meeting point. While train No. 24 was en route, however, an order was issued to the crew of train No. 917 for delivery to the crew of train No. 24 on its arrival at the point at which train No. 917 was waiting for it; according to the dispatcher, and also the crew of train No. 917, this order provided for train No. 24 to meet train No. 23, which was following train No. 21; the crew of train No. 24, however, thought the order provided for a meet with train No. 21, and therefore operated their train past their regular meeting point and collided with train No. 21.

The investigation of this accident disclosed certain lax operating practices and other features which were criticized in the report of March 10; the practices directly involved in the accident were the issuing of train orders to the crew of one train for delivery to the crew of another train, and of trainmen checking train

registers and registering for the crews of other trains. Other features noted were the poor maintenance of the automatic block-signal system, with almost daily issuance of train orders to disregard the stop indications of signals, operation of trains at full speed over switches when the switch lights were extinguished, and the condition of the train dispatcher's order book in which erasures and alternations were of frequent occurrence. In view of these conditions, the supplemental investigation was made for the purpose of ascertaining what measures had been taken by the officials to provide greater safety in train operation.

Facts developed by supplemental investigation

At the time of the accident there was a rule which authorized agents to take orders for delivery to train crews; it was clearly apparent that this referred to bona fide agents at stations, but it was advanced as an excuse for the practice of delivering orders to one train crew for delivery to the crew of another train. That rule has since been revoked by instructions issued under date of March 12, 1924, which specifically provide that "in no instance must orders be given through agents, operators, or other trainmen," and during the supplemental investigation no instance was noted of train crews taking orders for some other crew, or of a crew registering for another train. The officials have clearly been giving serious attention to the question of registering properly and also to the proper issuance of train orders and the method of keeping the dispatcher's order book; trainmen turn in their orders each day, and a form has been provided on which each division superintendent reports daily to the superintendent of transportation that he has personally checked all train orders and order books and found them correct, while another form has been provided to cover the division superintendent's personal check of all train registers within his territory, and the superintendent of transportation in turn reports daily on these subjects to the general manager. The instructions issued on March 12 also provide that no order shall be given to the crew of any regular train to meet an opposing train unless the meeting points for all intervening scheduled trains are included.

At the time of the original investigation the rules governing the operation of the block-signal system were not included in the rule book, but a new book of rules has since been published, in which they are in-

cluded, several of the old operating rules have been modified and improved. In addition to the new book of rules and new forms for daily checks by division superintendents, a new form of train-register blank has been provided, as well as a new train-order blank which insures a fresh carbon for each order.

Inspection of the block-signal system indicated that much work in the way of maintenance and renewals has been done, the monthly reports of the superintendent of power distribution showed that the maintenance expense for the three months ending June 30, 1924, was more than three times the expense for the same period of 1923. The number of signal failures, however, and of train orders issued to disregard the indications of automatic signals, was still large, during the week beginning August 24 there were 21 such orders issued, while 18 were issued in the week beginning July 20. These orders usually authorize crews to disregard the indication of a particular signal and to proceed with caution, but at the time of the first investigation it was observed that crews in the possession of such orders ignored the instructions to proceed cautiously. The instructions issued on March 12 include a provision that dispatchers must require strict compliance with an order of this character and allow for consequent delays; at the time of the supplemental investigation, on one occasion when a crew was observed operating under such an order the train was moved in accordance with the provisions of the order.

The reports of the signal department for the three months ending June 30, 1924, showed a total of 304 signal failures, involving the stopping of 1,840 trains, as against 266 failures in the same period of 1923, involving the stopping of 1,596 trains. In some of these cases a single cause might be responsible for several failures, as a broken wire causing two or more signal failures. Of the 304 failures reported in 1924 for the period in question, 61 signals were found clear on inspection and test. Efforts have been made, and still are being made by the signal department toward improving the signal performance, and if continued they should result in making the signal system a real safeguard for train operation.

Conclusions

The supplemental investigation showed that the officials of this line have been actively engaged in correcting the various practices and conditions which were criticized in the original report, and that material improvement in the safety of operating practices has been effected. This supplemental investigation also showed what can be done to correct dangerous practices when the proper effort is made.

Respectfully submitted,

W. P. BORLAND,

Director.