

1909

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON TRACK OPERATED JOINTLY BY THE BALTIMORE &
OHIO AND THE PENNSYLVANIA RAILROADS NEAR KYLESBURG, OHIO,
ON APRIL 19, 1934.

June 30, 1934.

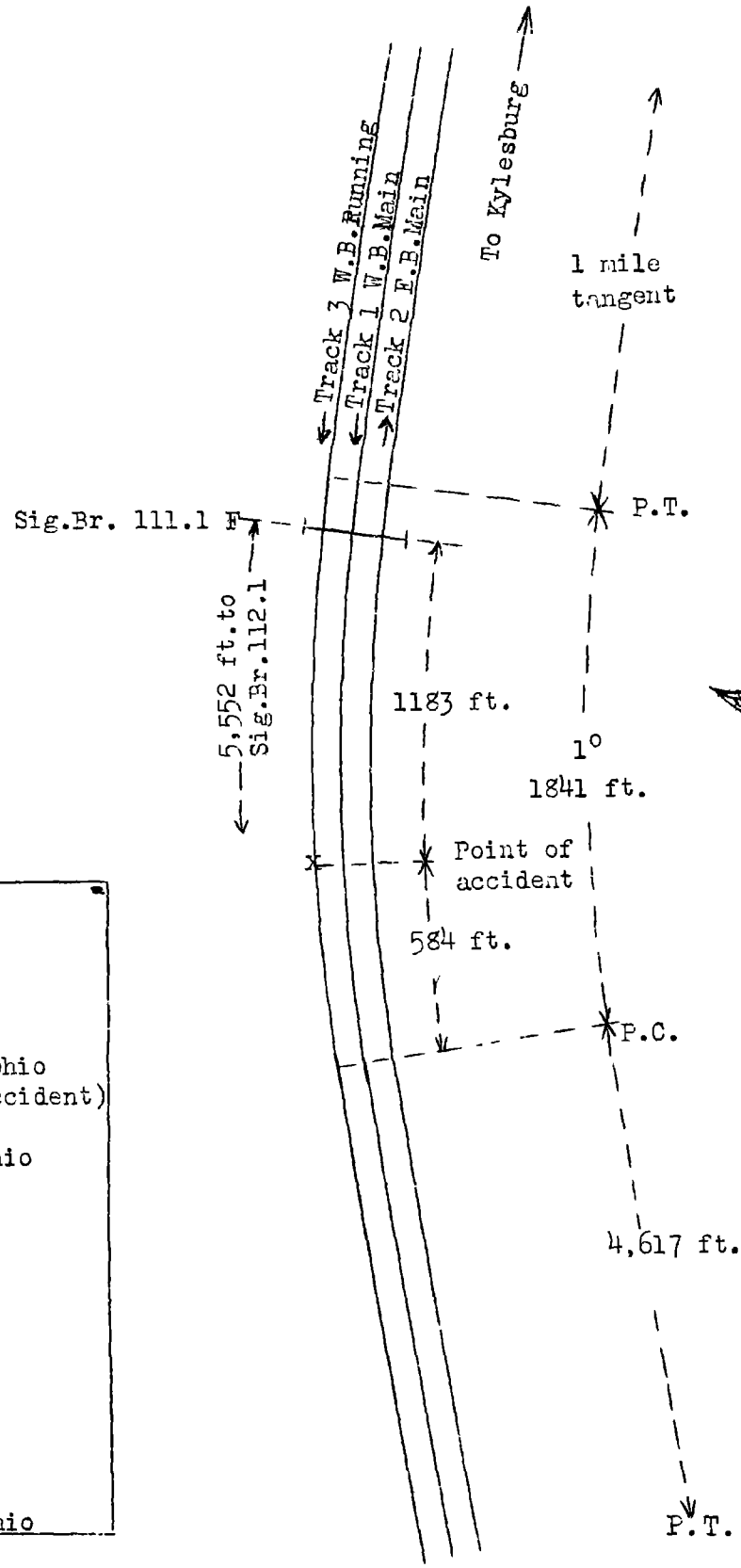
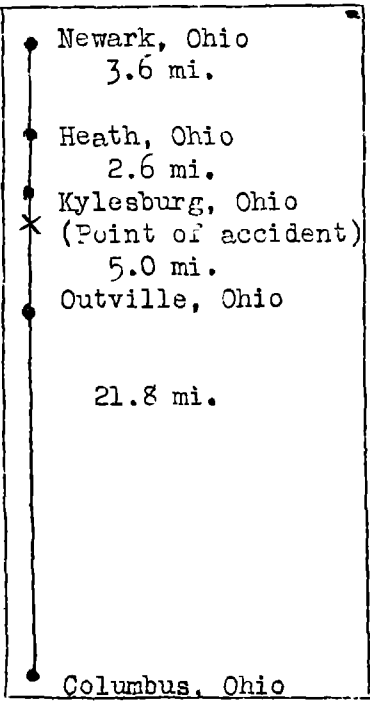
To the Commission:

On April 19, 1934, there was a head-end collision between a Baltimore & Ohio Railroad freight train and a Pennsylvania Railroad freight train on joint track of the two roads near Kylesburg, Ohio, which resulted in the death of 1 employee and the injury of 3 employees. This accident was investigated in conjunction with the Public Utilities Commission of Ohio.

Location and method of operation

This accident, occurred on the division extending between Columbus and Newark, Ohio, a distance of 33 miles, which is owned jointly by the two railroad companies and operated by the Baltimore & Ohio under Pennsylvania operating rules. This is for the most part a double-track line; between Outville, 5 miles west, and Heath, 2.6 miles east of Kylesburg, there is a third track known as the west-bound running track which is used principally by west-bound freight trains; when running with the current of traffic trains are operated by time table and an automatic block-signal system, a cab-signal system also being in operation on Pennsylvania engines; trains running against the current of traffic are operated by train orders and a manual block-signal system. The tracks are designated from north to south as follows: track 3, west-bound running track; track 1, west-bound main track, and track 2, east-bound main track. The accident occurred on track 3 at a point about 1 mile west of Kylesburg or 1,183 feet west of signal bridge 111.1F; approaching this point from the west, the track is tangent for a distance of 4,617 feet, followed by a 1° curve to the right 1,841 feet in length, the accident occurring on this curve at a point about 584 feet from its western end. Approaching from the east there is approximately 1 mile of tangent, followed by the curve on which the accident occurred. The grade for west-bound trains is 0.84 percent ascending at the point of accident.

The automatic signals are of the position-light type, located on signal bridges spanning the tracks. PRR engine 3706 which was involved in this accident was equipped with automatic



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cab signals which function when running forward with the current of traffic but was not equipped with cab signals to operate when running backward. Under special instructions contained in the time table, engines backing up are limited to a speed of 15 miles per hour while freight trains operating over track 3 are limited to a speed of 25 miles per hour.

The weather was clear at the time of the accident, which occurred about 5:45 p.m.

Description

East-bound Baltimore & Ohio freight train Extra 2765 consisted of 53 cars and a caboose, hauled by engine 2765, and was in charge of Conductor Evans and Engineman Mercer. This train left Columbus at 2:40 p.m., according to the train sheet; at Outville, 21.8 miles east of Columbus, the crew received train order 243, form 19, authorizing that train to run against the current of traffic on track 3, and reading as follows:

B&O Extra 2765 East has right over
opposing trains on westward No. 3
track Outville to Heath Westward
trains get this order at Heath

While approaching Kylesburg, the opposing train was observed approaching, but owing to the curve it was not known upon which track it was traveling until the trains were only a short distance apart; the engineman then applied the air brakes in emergency, following which his train collided with Extra 6706 while traveling at a speed estimated to have been about 25 miles per hour.

West-bound Pennsylvania freight train Extra 6706 consisted of engine 6706, which was being operated backwards, nine cars and caboose, and was in charge of Conductor Heery and Engineman Ryan. The cars were picked up at Heath and at 5:30 p.m., according to the train sheet, the train left that point, with the caboose being pushed ahead of the engine, without a copy of train order 243, form 31, previously quoted, having been delivered to the crew by the operator or the train order signal having been displayed. On arrival at Kylesburg, a closed office, the caboose was switched back to the rear of the train, and Extra 6706 departed from that point about 5:41 p.m. Approaching signal bridge 111.1F the automatic signal was observed to be displaying a clear indication, and as the engine passed under the bridge at a speed estimated to have been between 12 and 15 miles per hour the indication changed to stop, the engineman assuming that this was caused by the tender passing the signal; shortly afterwards

the opposing train was observed approaching, and when it was realized that both trains were on the same track the engineman applied the air brakes in emergency and his train had stopped or was just barely moving when it was struck by Extra 2765.

The tender of engine 6706 was derailed and badly damaged, some of the wheels of the tender being forced under the front end of engine 2765; the lead trucks of the first two cars in Extra 6706 were knocked off center. The tender of engine 2765 was practically destroyed and nine empty tank cars immediately behind it were turned crosswise toward the south, blocking tracks 1 and 2, while the thirty-eighth car, a box car, collapsed. The employee killed was the head brakeman of Extra 2765; the employees injured were the engineman and fireman of that train and the fireman of Extra 6706.

Summary of Evidence

None of the members of either crew was aware of anything wrong as their trains approached each other around the curve; each engineman at first thought the other train was on track 1 or track 2, and although both of them immediately applied the air brakes in emergency when they realized that the opposing train was on track 3 it was then too late to avert the accident. Engineman Mercer, of Extra 2765, said that at Outville he received train order 243, giving his train right over opposing trains on track 3 Outville to Heath; approaching Kylesburg his train was drifting down the grade at a speed of about 25 miles per hour; he saw smoke from the opposing train across the inside of the curve but he could not definitely determine upon which track it was moving until within about 10 to 14 car lengths from it, whereupon he applied the air brakes in emergency, but at the time of the collision the speed had not been materially reduced. Conductor Evans said that the air brakes were tested and worked properly. When there was work to perform at Heath, which was the case in this instance, it was customary to use track 3 from Outville to Heath upon train-order authority, as the automatic signals do not function for trains moving against the current of traffic.

Engineman Ryan, of Extra 6706 west, stated that the conductor went into the telegraph office at Heath and after about 3 or 4 minutes he came out; the train was made up on the east-bound passing siding and the air brakes were tested. The proper interlocking signal indications were displayed for his train to move from track 2 across track 1 to track 3 and accordingly his train departed, no copy of train order 243 having been delivered to the crew by the operator nor was the train order signal displayed.

On arrival at Kylesburg the caboose, which had been shoved ahead of the engine, was dropped back on the spur track and then placed on the rear of the train and the air brakes were tested again before departing. On reaching a point about 1,000 feet east of signal bridge 111.1F he observed that the automatic signal was displaying a clear indication; shortly afterwards the fireman called the indication as clear and the engineman repeated it. The engineman was riding backwards and could not see the signal again until the engine was backing under the bridge; he passed this point at a speed of about 12 to 15 miles per hour and the indication then appeared to be changing from caution to stop; he assumed that the tender entering the block section had caused the signal to function. Shortly afterwards he saw the other train approaching around the curve, but did not realize that it was on the same track as his own train until it was only about 12 car lengths away; he then immediately applied the air brakes in emergency and thought that his train had just about stopped when the accident occurred. Fireman Hartsough said he saw the automatic signal on signal bridge 111.1F when he was about 500 feet east of it and at that time it was displaying a clear indication and he called it, following which he worked on the fire and was not aware of anything wrong until the engineman shouted a warning of danger just prior to the accident.

Conductor Heery said that while at Heath he went inside the telegraph office and the operator told him to get nine cars at that point and gave him some bills; then the conductor inquired whether his train would be able to depart right away and the operator said he did not know. The conductor did not notice train order 243, form 31, lying on the operator's desk; he said he was in the office only about 2 minutes and that he told the operator if his train departed on track 3 the caboose would be dropped by and placed at the rear of the train at Kylesburg. Conductor Heery left the office and after coupling up the cars on the east-bound siding the proper interlocking signal indications were displayed for his train to move across to track 3 and his train departed; he was unaware of anything wrong until the collision occurred.

Second Trick Operator Miller, at Heath, stated that when he received train order 243, form 31, he laid it on the table and put the safety lock on the lever controlling the switch to track 3. The order gave Extra 2765 authority to run against the current of traffic on track 3 from Outville to Heath and specified that west-bound trains would get the order at Heath. Operator Miller, however, did not display the train order signal; saying he had been under the impression that the train order signal should be displayed only for trains using track 1, the west-bound main track; in the event the train order signal was displayed when he had a hold order for west-bound trains on track 3, it might result in unnecessarily stopping a west-bound

train on track 1; he thought that under the rules he was not permitted to momentarily remove the train order signal in the event a west-bound train should approach on track 1. He said he was very busy handling other train movements, communicating with two dispatchers, one of whom was on another railroad, and performing other duties; during the course of one of these other train movements he removed the safety lock or reminder from lever 3 of the interlocking machine which controls the switch to track 3 and dropped it over a dead lever, and then forgot to put it back on lever 3. When the operator at Outville asked for the block for Extra 2765, at about 5:25 p.m., he gave it to him. Conductor Heery, of Extra 6706, came into the office and got the bills and requested that his train be routed on track 3, so that the caboose could be dropped behind the train at Kylesburg; when the operator reported that train as being ready to go he stated the dispatcher said "OK on track 3". Operator Miller said he then overlooked the fact that Extra 2765 was occupying the block, lined the route for Extra 6706 and let that train enter the same block, having failed to replace the reminder on the lever after handling another train movement. About 10 minutes after the westbound train departed he reported it to the operator at Outville; he did not realize what he had done until he OSed that train to the dispatcher at about 5:42 p.m., and the dispatcher asked him whether Extra 2765 had arrived. The only excuse Operator Miller could offer for his failure to deliver the order, forgetting to replace the reminder on lock 3, forgetting that he had given the block to Outville for the east-bound train, and then letting the west-bound train into the same block, was that he was busy and just overlooked it and did not realize what was happening. Operator Miller said that at the last rules examination, held on July 29, 1930, he brought up the subject of displaying the train order signal, as there was some question regarding delay to trains on track 1 in the event it was displayed when there was a hold order for track 3, but that something else came up and the matter was dropped. He said that he had been at Heath for 5 years and while he knew the rules required the train order signal to be displayed under such circumstances, he did not know it could be momentarily taken down and immediately displayed again, being of the opinion that when it was once displayed it could not be taken down until the order was completed; when he learned to operate the interlocking plant at Heath he was not instructed to display the train order signal for track 3 and that was the way he learned the work and the way it was handled there. Movements similar to the one involved were frequently made, but such hold orders were never delivered, the west-bound train being handled by signal indications and not being permitted to go until the order was fulfilled by the east-bound train and annulled by the dispatcher and the block clear, the reminder being depended upon to afford necessary protection. Operator Miller said that prior to going on duty at 3 p.m. he had been off duty for 40 hours

and during that time he had obtained proper rest; he was not ill and had nothing to worry him.

Dispatcher MaMahon stated that it was his intention to have Extra 6706 proceed on track 1 when the operator at Heath called and reported that train as ready to go, and the dispatcher was under the impression that he told the operator "OK on track 1" and not "OK on track 3". While the dispatcher had marked a figure "3" on the train sheet, he said it was customary for him to mark the figure down after the train was OSeD by the operator; in this case the operator OSeD the departure of the extra west on track 3 about 5:42 or 5:43 p.m., and the dispatcher said that in all probability he put the figure "3" down then; the dispatcher immediately realized what had happened and although an attempt was made to stop the train by telephoning to the section foreman at Kylesburg, it was then too late to stop either train. Dispatcher MaMahon said that the operator usually informs him when the caboose is to be dropped behind the train at Kylesburg, but that nothing of this character was reported to him on this day, and it did not occur to the dispatcher that the operator would let Extra 6706 proceed on any track other than track 1. It was customary in allowing trains to run against the current of traffic on track 3 from Outville to Heath to permit them to stand on that track while work was performed at Heath; otherwise traffic would be tied up there.

Rules Examiner Baird did not recall any discussion with Operator Miller at the time he was examined on the rules July 29, 1930, about displaying the train order signal, maintaining that he always instructed employees to adhere strictly to the rules.

First Trick Operator Price and Third Trick Operator Hines, at Heath, stated that under circumstances similar to those involved in this case they always displayed the train order signal for the west-bound train on track 3 and in addition the movement was safeguarded by placing the safety lock on the interlocking machine so that no opposing train would be permitted to enter the block when occupied by the east-bound train. In the event a west-bound train was approaching on track 1 and was to continue through on that track the train order signal would be momentarily taken down, a red flag by day and a red light by night being used for this purpose, and as soon as that train passed it would immediately be replaced.

Shortly after the occurrence of the accident Signal Supervisor Harding tested the signal apparatus involved and it was found to be in proper working order.

It appears from the investigation that Extra 6706 approached signal bridge 111.1F prior to the time that Extra 2765 entered the second block section in advance, and that when last observed signal 111.1F governing the westbound movement was clear. The east-bound train was being operated at a considerably higher rate of speed than the west-bound train and the accident occurred before the west-bound train reached the next signal location.

Conclusions

This accident was caused by the failure of Operator Miller at Heath to display the train order signal and to deliver a form 31 hold order to the crew of Extra 6706; and by his further error in lining up the route and displaying signal indications admitting this train to a block which he had pledged to and which was occupied by an opposing east-bound train.

Rule 221a, of the operating rules, reads in part as follows:

When a train order is to be delivered to a train, the Fixed-signal must be displayed at Stop for the track and in the direction of the approaching train, and a Train-order signal must be displayed in the place provided for the purpose, a red Train-order signal indicating "31" orders * * *.

Operators must not clear these signals for an approaching train unless they know that the train is not the one to which orders are addressed.

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Operator Miller claimed that he had been under the impression that the train order signal should be displayed only for track 1, the west-bound main track, and for that reason he did not display the train order signal when he had a hold order for west-bound trains on track 3, as he thought that in the event it was displayed under such circumstances it might result in unnecessarily stopping a west-bound train on track 1, and that once a train order signal was displayed it could not be taken down under any consideration until the order was completed. He said that movements similar to those involved in this case were frequently made, but that the hold order would not be delivered to the west-bound train involved; that train, being controlled by signal indications, would not be permitted to proceed until the order was fulfilled by the east-bound train and annulled by the dispatcher and the

block clear. When Extra 3706 was ready to depart, Operator Miller according to his own statement forgot the order which he had received and which was lying on his table requiring west-bound trains on track 3 to be held at that point. There can be no excuse for the deviation from the practices prescribed by the rules which resulted in this accident.

The 2. & O. train was being operated against the current of traffic; under these conditions the automatic block signal system does not function to provide adequate protection, and the rules and practices provide for a manual block system to protect such movements. A safety device, known as a keeper or reminder, was provided and required by the rules to be used on the lever of the interlocking machine to preclude possibility of a conflicting movement being authorized after the block had been pledged. In this instance, however, Operator Miller removed the reminder from lever 3 in order to arrange for another train movement at Heath, and then he said he forgot to replace it; overlooking the fact that he had pledged the block to the east-bound train, he then lined the route for the west-bound train and permitted it to enter the occupied block without having delivered copy of the hold order to the crew of that train or having displayed the train order signal for the west-bound train.

This portion of the line and Pennsylvania engines operated over it are also equipped with an automatic cab signal system of the continuous type; while a number of engines on this line have been equipped with cab signal apparatus for reverse movements the PRR engine involved in this accident was equipped with cab signals which are operative only when engine is being run forward in the normal direction of traffic. In this case the Pennsylvania engine was being operated backward in the direction of traffic; had the engine been operated forward, or had the engine been equipped with cab signal apparatus for reverse running, Engineman Ryan would have received a cab signal indication that the block was occupied in sufficient time to have enabled him to prevent the accident.

Respectfully submitted,

W. J. PATTERSON,

Director.