

IN RE INVESTIGATION OF AN ACCIDENT WHICH
OCCURRED ON THE ERIE RAILROAD AT SUS-
QUEHANNA, PA., ON DECEMBER 6, 1917

January 8, 1918.

On December 6, 1917, there was a collision between a passenger train and a freight train on the Erie Railroad at Susquehanna, Pa., resulting in the death of four persons and the injury of four persons. After investigation of this accident, the Chief of the Bureau of Safety reports as follows:

The Susquehanna Division of the Erie Railroad, on which this accident occurred, is a double track line equipped with automatic block signals. The collision occurred between eastbound trains occupying the westbound main track. The point of collision was within yard limits, 2.6 miles west of Susquehanna passenger station, and 4,440 feet west of SR interlocking tower, from which point switches and signals are operated controlling crossover movements between the east and west bound tracks. At the point of collision the track is straight, but there is a 2° curve beginning just west of the point of accident and a sidehill cut between 10 and 15 feet deep on the south, or left hand side of the track for eastbound trains.

The trains involved were passenger train No. 48, in charge of Conductor Parkinson and Engineman Kelly, and freight train No. 80, in charge of Conductor Callaghan and Engineman Green.

Train No. 80, consisting of 72 cars and a caboose, hauled by engine 1879, arrived at the west end of Susquehanna Yard at 10:58 p.m. December 5th, and was held on the eastbound main track just west of SR tower until about midnight, on account of lack of track room to receive it in the yard. Sometime about midnight yard track No. 3 was cleared by an eastbound train leaving the yard, and train No. 80 was then moved into the vacated track.

A short time previous to this movement, Operator McMahon at SR tower, working the 8-hour trick from 4 p.m. to 12 midnight, obtained permission from Yardmaster Bowman to leave the tower and ride into the yard on the engine of train No. 80, upon stating to the yardmaster that Operator Kinney, his relief man, was then on his way to the tower. Operator McMahon thereupon got on the engine of train No. 80 and rode into the yard, leaving the tower unattended.

Upon pulling into the yard, train No. 80 was held on track No. 3 before its caboose was entirely into clear,

because of a derailment in the east end of the yard, but Conductor Callaghan's register was accepted by Yardmaster Bowman at 12:15 a.m., December 8th, and the yardmaster stated that he considered Callaghan off duty at that time.

When Operator McMahon left the tower, Yardmaster Bowman instructed Yard Clerk Murphy to assume the operator's duties temporarily, and Murphy reported train No. 80 to the dispatcher as clear of the main line at 12:10 a.m. Upon learning that No. 80's train could not be pulled into clear the eastbound main line, Yardmaster Bowman instructed Murphy to line up the crossover switches so that train No. 80 could be pulled back onto the westbound main track. He then had engine 1488, which was then standing on the westbound track, couple onto the rear end of train No. 80 and pull the entire train back west of SF tower. This move was made between 12:15 and 12:20 a.m., without notifying the dispatcher, or obtaining permission from him to make the move. When train No. 80 stopped on the westbound track, engine 1488, coupled to its rear end, and headed west, stood 4,440 feet west of SF tower, just at the beginning of the curve previously mentioned. While standing there, it was struck, about 12:47 a.m., by train 48, running east on westbound track.

Train No. 48, hauled by engine 2566, and consisting of 1 steel underframe palace horse car, 2 wooden express cars, 1 wooden baggage car, 2 wooden coaches, and 3 steel underframe Pullman sleeping cars, passed Great Bend, the last telegraph office, about 4 miles east of the point of collision, on time, at 12:29 a.m. Train No. 48 was then running on the eastbound track. Arriving at HC crossover, 3.7 miles east of Great Bend, the train order board was found in the stop position. This train order board is controlled by the operator at Great Bend, there being no operator at HC crossover. There is a telephone located in a booth at the crossover, by means of which train crews are required to communicate with the operator at Great Bend, and through him obtain orders issued by the dispatcher affecting the movement of their trains, whenever the board is found in the stop position. Upon entering the booth and calling the operator at Great Bend, Engineman Kelly and Conductor Barvinson were given 19 train order No. 1, reading as follows:

"C.& L. train 48, at Great Bend:
phoned to HC.

No. 48, engine 2566, has right
over opposing trains on westward track
HC crossover to SF crossover, carefully
observing time table rule E."

This order was made complete at 12:32 a.m. There was no paper nor order blanks in the telephone booth, and no copies of the order could be made. Engineman Kelly took the order and received the complete after repeating it back, afterwards repeating the order to Conductor Parkinson. The train was then crossed over to the west-bound track and left HQ at 12:40 a.m. Time table Rule E referred to in the order, reads as follows:

"It is required that trains moving against the current of traffic shall not exceed a speed of twenty (20) miles per hour over facing point switches, and that careful watch be kept for trackmen."

HQ crossover is 2.4 miles west of SE tower. Passing through Hickory Grove, approximately one mile east of HQ the train slowed down to conform to the direction of rule E, and picked up speed to about 25 miles per hour after passing that point. Engineman Kelly had no knowledge of the presence of train No. 80 on the west-bound track and owing to the curve he was unable to see the headlight of engine 1488 until he was within a very short distance of it. He applied the emergency brakes, but the speed was very little, if at all, reduced before the collision.

The force of the collision demolished the baggage car and one of the express cars, instantly killing the baggageman. The horse car was derailed and turned at an angle across the track, as was also the express car immediately in its rear. The tender of engine 2566 was derailed and turned at right angles to the track, coming to rest clear of the rails on the left hand side of the track. The fireman, who was in the tender at the time of the collision, was killed. The two coaches and two Pullman sleepers remained on the rails and suffered little or no damage. The caboose of train No. 80, which was immediately behind engine 1488, was entirely demolished, and two brakemen who were in the caboose at the time were killed. The weather at the time was clear and dark.

Eastbound freight train No. 78, with 58 cars and caboose passed Great Bend on the eastbound track at 12:13 a.m. and stopped with engine just west of SE tower at 12:30 a.m. Flagman Berry of this train stated that he went back immediately with flagging equipment to protect his train; when about 50 car lengths back he heard train No. 48 coming and hurried back until he got around the curve and was able to see on the straight line to Hickory Grove. He said that when he saw train 48 approaching he lighted a fuse and started to flag the train with both red light and fuses. He said the train was coming

at a high rate of speed, and as it approached closer he noted that it was running on the westbound track. He then made further efforts to stop the train, as he knew that a freight train was standing on the westbound track west of SR tower, but the engineman paid no attention to his signals.

Engineman Kelly of train No. 48 stated that upon arrival at HQ crossover he found the train order board in the stop position, and upon calling the operator at Great Bend he was given an order to use the westbound track from HQ to SR. He found no paper nor order blanks in the telephone booth, and after repeating the order back to the operator and receiving "Complete" at 12:32 a.m. he stepped out of the booth where Conductor Parkinson and Brakeman Lawrence were standing, and repeated the order to them. He then crossed over to the westbound track, and after calling in his flagman started east on the westbound track at 12:40 a.m. He said that he ran slowly through Hickory Grove, over to a facing point switch at that place, and then picked up speed to between 20 and 25 miles per hour, which was maintained until the accident occurred. He said that when nearing the end of the straight track east of Hickory Grove he saw a flagman standing near the south rail of the eastbound track, with a red and white lantern in one hand and a lighted fusee in the other. He thought the flagman was about 5 car lengths from engine 1488 and 15 car lengths from the rear of his own train. He said he had a good view of the flagman for about 30 car lengths before passing him, and that the flagman gave him no signal. When he first saw the flagman he said he sounded two short blasts of the whistle to let the flagman know that he saw him, and then blew a long whistle to warn any person who might be along the train on the eastbound track. The first he knew of the westbound track being occupied was when he saw the headlight of engine 1488, only 30 or 40 feet distant. He said he talked with Flagman Berry after the accident, and asked him why he did not hold him up, and Berry replied that he thought the train was on the other track.

Conductor Parkinson of train No. 48 stated that when his train stopped at HQ crossover, the engineman received the order from the operator at Great Bend, and repeated it to him as he received it, but did not write it down as there was no paper in the telephone booth. His train then crossed over and proceeded eastward on the westbound track. At the time of the collision he estimated the speed of his train at 20 to 25 miles per hour.

Operator Kinney, who relieved Operator McMahon at

NR tower, stated that he arrived at the tower about 12:30 a.m., at which time there was no one in the tower. The dispatcher was then calling the tower, and when he replied the dispatcher asked him for a report of the last westbound train on the block record. He replied that the last westbound train passed at 11:58 p.m., and the dispatcher then gave him a 31 order, addressed to the yardmaster, operator, and conductor and engineman of westbound trains, giving train No. 48 rights over all trains on westbound track from H₂ crossover to SR tower. He said he saw an engine on the westbound track facing east, but thought it was a switch engine, although he had no information from the yardmaster concerning it, neither did he tell the dispatcher there was an engine in the block before receiving the order from him, nor did he require the yardmaster to sign the order, although it was addressed to him. He said that after he received the order, Yardmaster Bowman called him up and abused him for arriving late at the tower, and told him to let train 78, which was coming on the eastbound track, into the yard, and then hung up his phone. He said he afterwards tried to call the yardmaster to find out about the engine on the westbound track, but he did not answer. When he afterwards got the yardmaster he would not talk about the engine, but told him to hurry up and get 78 in the yard. He said that he tried two or three times to find out from the yardmaster what he wanted done with the engine on the westbound track, and notify him that train No. 48 was coming on that track, but the yardmaster would not talk to him. He said he took no action to see that this engine was protected against train No. 48, because he had no red nor white lantern in the tower. The globe of his white lantern was broken, and there had been no red lantern in the tower since he had been working there (about one week). When he turned the office over to his relief at 8 a.m. the order authorizing train No. 48 to use the westbound track was still effective, but he did not transfer it to his relief in the regular form, because there was no book for that purpose at SR tower.

Yardmaster Bowman stated that shortly before midnight Operator McMahon called him up and told him that Operator Kenney was on his way to the tower, and that there was nothing ahead of train No. 48. He therefore gave McMahon permission to ride into the yard on the engine of train No. 80. When he found that train No. 80 could not be pulled into clear he instructed Yard Clerk Murphy to go into the tower and line up the crossover switches so that the train could be pulled back onto the westbound track by engine 1408, which was done. He said he did not instruct Murphy to obtain permission from the dispatcher to make this move, although he was familiar

with the rule governing such movements. His object in making this move was to leave the eastbound track clear for the passage of train No. 48. He said that between 12:15 and 12:20 he called the dispatcher and found that train 78 was east of Great Bend, and told the dispatcher that he was in bad shape to receive the train, as train No. 80 was on the westbound track, but did not specify that this train stood west of the crossover. He said that he then figured on letting train 78 into the yard on track three, as this train, having but 33 cars, could be pulled into clear; he would then let train No. 80 follow train 48 through the yard on the eastbound track. He said that after this talk with the dispatcher he did not wait for a reply from him and had no knowledge that train 48 was using the westbound track until Operator McManey told him. Train 78 had then started to pull into the yard, whereupon he stopped it and instructed the operator to get train No. 80 moving out of the way of train 48. He said he knew that it was forbidden to make a crossover movement without protection when the view is obstructed, and no protection was given for this move, as he said nothing about protection to Conductor Callaghan, who was in the yard office the entire time the move was being made.

Operator McManey stated that he was instructed by Yardmaster Bowman to let train No. 80 into the yard at 11:55, and the yardmaster told him he could get on No. 80's engine and go home, and that Yard Clerk Murphy would throw the levers to line up the switches after the train pulled in. He said he understood the rule forbidding him to leave the tower until the arrival of his relief, or without permission from the chief dispatcher. He made no transfer of orders, and although engine 1488 stood west of the crossover when he left the tower he did not leave any notice to his relief that this train was in the block. He said he knew the yardmaster had no authority over crossover movements except when permission is granted by the dispatcher, and admitted that if he had remained on duty until the arrival of his relief the accident would probably not have occurred, as he could not have accepted the order, knowing that there was a train west of the tower. He said there was a white lantern and a red globe in the tower when he left, but the lantern was not lit, although he knew there was a rule that towermen should keep both red and white lanterns on hand, and that they should be lighted.

Yard Clerk Murphy stated that Yardmaster Bowman told him to put engine 1488 behind train 80 so that the train could be crossed over to the westbound track. He said he did not know it was necessary to get permission from the dispatcher to make this move, and did not secure such permission. He said he had never before relieved operators in this manner, and was not qualified to do so, as

he was not familiar with the rules. He said that while he was in the tower the dispatcher called him up and told him that train No. 78 was coming to SR ahead of train No. 48, and that 48 was on time, and he conveyed this information by phone to the yardmaster. He said that he did not remain in the tower after lining up the switches for No. 80, but went over to the yardmaster's office and arrived there before No. 80 started to move to the westbound track. While in the yard office he said he heard the yardmaster ask the dispatcher if train 48 was running around, and upon receiving a reply the yardmaster said "Good God" and immediately left the office. He said Conductor Callaghan was also in the office at the time and overhearing the conversation between the yardmaster and dispatcher, said there were 2 or 3 brakemen in the caboose whom he did not want to see killed, and he also left the office. Murby said that Yardmaster Bowman at first told him to relieve Operator McMahon and stay in the tower until the relief man arrived, but afterwards instructed him to line up the switches for No. 80 and then come to the yard office and make out train slips for No. 80.

Conductor Callaghan of train No. 80 stated that his train arrived at SR tower about 11 p.m. on the 6th and stood on the main track until about midnight, and then pulled into track No. 3. When the train stopped after pulling into the yard the caboose stood between the switch point and the frog, fouling the main line. Yardmaster Bowman then had engine 1482 couple onto his caboose and pull the train over to the westbound track. He said he did not accompany his train when this move was made, but his three brakemen were in the caboose, and his engine remained on the train. He said he did not instruct his crew to provide protection in making this move, although he understood that protection was necessary in yard limits when on the line of a first class train, or when the view is obstructed, or in foggy or stormy weather. He said that he was familiar with rules 109 and 111, and understood that it was his duty to bring his train into clear before going off duty. Rule 109, referring to crossover movements, is as follows:

"When a train crosses over from one main track to another, it is required that the movement, unless otherwise provided for, first be protected as prescribed by rule 99 against trains on both tracks."

Rule 111 prescribes the rights of trains in yard

limits and is similar to rule 93 of the standard code.

Brakeman Stitt of train No. 80 stated that when his train was pulled back on the westbound track he got on the caboose and rode back almost to the point of collision. He then got off on the ground and was standing one or two car lengths from the caboose when the accident occurred. Train 78 stood on the eastbound track, with its caboose 5 or 6 car lengths east of the caboose of train No. 80. The flagman of train 78 was then out with a lighted fusee, and was some distance west of the caboose of train 80, as Brakeman Stitt said he saw him very plainly. He could not say that the flag was out when train 48 was approaching, however, as he had time to walk only about 2 car lengths after getting off the caboose before the collision occurred.

Engineman Moore of engine 1488 said that after pulling No. 80's train back on the westbound track he came to a stop with his engine on the east end of the curve, about 12:25 a.m. He did not know the exact time of the collision, as he did not look at his watch. He said he saw the reflection of the headlight of train 48, and when he saw that it was coming on the westbound track he shouted to his fireman and jumped out the window. He said he judged from the crash that train 48 was running 35 or 40 miles per hour. He saw a flagman come back from a train on the eastbound track and go out of sight.

Train Dispatcher Conroy, who was on duty at the time of the accident, stated that he took the trick from Dispatcher Donellan at midnight, and that train No. 80 was reported to Dispatcher Donellan as clear of the main track at SR at 12:10 a. m. At 12:20 a.m. he called SR tower and asked whether train 78 could be taken into the yard to clear 48 promptly, as if not he wanted to make arrangements to detour train 48. He said that at 12:25 he was advised by the man working at SR tower, whom he took to be Operator Kenney, that the yardmaster could not take train 78 before train 48, and requested that train 78 be backed over at HQ crossover to permit 48 to pass. He said that he replied to the operator that train 78 was already past HQ and he would not be able to back it over at that point, but that he would run 48 on the westbound track from HQ to SR. He then had the order board at HQ placed in the stop position, and placed a 31 order at SR, and gave train 48 at HQ a 19 order by telephone, through the operator at Great Bend, authorizing that train to use the westbound track from HQ to SR. This order was placed at 12:30, Operator Kenney signing for it for the operator at SR. At 12:40 a. m., Operator Kenney notified him that the yard wanted train 48 to come on the eastbound track, and was informed

that the train had already received orders and had left HQ on the westbound track. About two minutes later he said that Yardmaster Bowman called on the telephone and asked if the operator at SR had accepted a 31 order for train 48 to use the west track, and he told him that the train was then using the west track to SR. He said that about 12:25 a.m., Yardmaster Bowman called him and started to tell him that he could not take train 78 in the yard on account of a derailment, and he asked the yardmaster to wait a minute until he could get the orders out for 48 in order to get them around without delay. The yardmaster did not at that time tell him anything about having pulled train No. 80 over on the west track, and he had no advice to that effect until about 1:20 or 1:30 a.m., when he received notice of the collision from the Susquehanna office. He said that as the switches and signals at SR are controlled entirely by the operator in the tower, as soon as he received the operator's signature for the order after he had repeated it, he considered it a holding order. He said there was no absolute reason for addressing the order to the yardmaster, as he had no control over train movements of that nature; his only purpose in addressing the yardmaster was a matter of information.

The primary cause of this accident was the failure of Operator McMahon to remain on duty at SR tower until relieved by Operator Kenney, in violation of rules prescribing his duties. Rule 400, relating to the duties of telegraphers, forbids them to leave or close their offices without permission from the chief dispatcher, and rule 403 requires that there always be one operator on duty in offices where two or more operators are employed during the day or night. Yardmaster Bowman had no authority to permit him to leave the tower, and he had absolutely no right to desert his post of duty until he was relieved in the regular way.

Operator Kenney is also to blame for accepting the order when he knew the block was occupied. He should have promptly notified the dispatcher of the situation before accepting the order; furthermore, he should have required the yardmaster's signature to the order before repeating it back to the dispatcher, as required by rule, and he took no proper measures to clear the westbound track after receiving the order. Had operator Kenney properly performed his duty the accident would no doubt have been averted, notwithstanding the dereliction of Operator McMahon.

Dispatcher Conroy shares responsibility with Operators McMahon and Kenney, inasmuch as he made the order complete without the signature of the yardmaster, although it was addressed to him. Dispatcher Conroy said that he addressed the order to the yardmaster, not because it was necessary, but simply as a matter of information. This does not seem to be a very good explanation; if he considered it necessary for the yardmaster to have the "information" contained in the order, he should have been assured that the yardmaster had received this information before completing the order.

Yardmaster Bowman and Conductor Callaghan also contributed their full share to the cause of this accident. The yardmaster was particularly culpable in assuming to authorize a movement of this kind without notifying the dispatcher, or giving him any information about the situation on the westbound track; also in assuming jurisdiction over the duties of operators in SR tower. He also did wrong in accepting Conductor Callaghan's register off duty before train No. 80 was into clear. Conductor Callaghan had no right to leave his train until it was into clear, and in the crossover movement to the westbound track he should have taken measures to protect it, as required by rule.

This investigation has disclosed bad operating conditions generally on this division of the Erie Railroad. The fact that train No. 48 was permitted to make an important movement against the current of traffic on purely verbal orders, because of lack of paper in the telephone booth at a point where orders are given to train crews indicates small regard for safety. The practice of controlling an order board from a station more than three miles away, and transmitting orders to train crews at these outlying points by the indirect method herein disclosed is not conducive to safe operation.

The lack of proper flagging material, and proper blanks for transfer of orders at SR tower indicates great lack of regard for safe operation, and is a condition that should at once be corrected.

At the time of the accident the crew of train No. 80 had been on duty about 15 hours and the crew of train No. 48 had been on about 5 hours.

W.P.B.