

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
PORTLAND ELECTRIC POWER COMPANY NEAR ASHDALE, ORE.,
ON OCTOBER 19, 1924.

November 8, 1924.

To the Commission:

On October 19, 1924, there was a head-end collision between a passenger train of the Willamette Valley & Southern Railway and a car of the Portland Electric Power Company on the line of the last-named company near Ashdale, Ore., which resulted in the injury of six employees. The investigation of this accident was made in conjunction with a representative of the Public Service Commission of Oregon.

Location and method of operation

The accident occurred on the Oregon City Division, an electric line extending between Portland and Oregon City, Ore., a distance of 14 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The automatic signals are colored light and disk signals operated by trolley contact switches. The signals are mounted on poles beside the track. When a train approaches one of these signals and finds it displaying a red indication it means that there is an opposing train in the block; when the indication is yellow it means there is a preceding train in the block; when no light or signal is displayed the block is clear. Absolute block is maintained and therefore an approaching train finding a red or yellow signal displayed must wait until the indication disappears. There is a block-signal switch 300 feet from each signal and when an approaching train finds the signal displaying no indication, the train proceeds and when the trolley on the car comes into contact with this switch it causes the signal to display a yellow indication while the signal at the next siding governing opposing movements is caused to display a red indication. The circuits however are so arranged that the stop signal is displayed for the opposing train before the yellow indication is displayed for the train about to enter the block, and when a yellow indication has been obtained in this manner it signifies that the

block is clear and the train may proceed. If a yellow indication is not displayed when the trolley comes into contact with the block-signal switch the train is not allowed to enter the block, as it indicates that something is out of order. The speed of trains when passing block-signal switches is restricted to 10 miles an hour, while rule 178 provides that first-class trains and passenger extras may take the block when such trains get the block in advance of a train moving in the opposite direction.

The point of accident was about 300 feet north of the north passing-track switch at Ashdale and 20 feet north of the northbound automatic signal at that point. The track is tangent for some distance in either direction, while the grade from the south is varying, with a sharp descending grade just before reaching the passing track at Ashdale; approaching from the north the grade is generally descending and then practically level for about 2,000 feet to the point of accident. There was a dense fog at the time of the accident, which occurred at about 8.55 a.m.

Description

Southbound line repair car 1463, of wooden construction, was in charge of Conductor Mathie and Motorman Keller, and was being operated as an extra. Its orders did not designate it as a passenger extra, but in order to expedite its movement when going out on emergency work, it has been the practice to operate this car as a passenger extra, thus permitting it under the rules to enter a block at any time provided it obtains the signal. Extra 1463 met a train at Oak Grove, 2 miles north of Ashdale, departing from that point at about 8.51 a.m., approaching West, 0.5 miles from Ashdale, found no indication displayed by the block signal, obtained a yellow indication as the trolley engaged the block-signal switch and was thus authorized to proceed to Ashdale. It had nearly reached the latter station when it collided with train No. 501, while moving at a speed estimated to have been 15 or 18 miles an hour.

Northbound Willamette Valley & Southern train No. 501 consisted of one combination passenger, express and baggage car, of steel-underframe construction, and was in charge of Conductor McConnell and Motorman Torco. According to the statements of the crew it passed Holdrum, 0.5 mile from Ashdale, at 8.54 a.m., on time, passed the northbound block signal at Ashdale, which was displaying

a stop indication, and collided with extra 1462 while traveling at a speed estimated to have been 15 or 20 miles an hour.

The force of the collision raised the head end of the line repair car and resulted in its telescoping the head end of the passenger car, both of these cars being considerably damaged. The passenger car was not derailed.

Summary of evidence

Motorman Force, of train No. 501, said he looked at his watch as his train passed the south switch at Ashdale and that it was then 8.55 a.m., the scheduled time for his train at Ashdale. On account of the dense fog he was unable to see the signal indication when his train reached the north switch, but supposing the block was clear, he released the air brakes. When 50 or 60 feet from the signal he saw it displaying a red indication, at which time the speed of his train was about 25 miles an hour, and he at once applied the air brakes in emergency. He admitted that he was operating his train at a speed in excess of that allowed under the rules. Conductor McConnell also said it was 8.55 a.m. when his train approached the south switch at Ashdale, that he then went forward into the baggage compartment, glanced out to see the indication of the southbound signal, saw it displaying a stop indication, and was about to pull the emergency cord when the motorman applied the air brakes, this being at a point 100 feet south of the signal. He estimated the speed of his train to have been about 25 miles an hour, while he estimated his range of vision in the fog to have been about 200 feet.

The statements of the crew of extra 1462 were to the effect that they received the proper signal indication at Nacif, that it was 8.52 or 8.53 a.m., when their train passed that point and that the accident occurred earlier than 8.55 a.m., in other words, they thought train No. 501 passed Ashdale about one minute ahead of time. Their statements also indicated that the fog was so dense it restricted vision to 100 or 150 feet. Motorman Keller said the speed of his train was about 15 or 18 miles an hour when the accident occurred, having been reduced preparatory to entering the north switch at Ashdale for the purpose of meeting train No. 501 on its time-table schedule.

The crews of both of the trains involved said that the air brakes on their respective cars were in good working order and had operated properly at all times.

Conclusions

This accident was caused by failure properly to observe the rules and indications of the automatic block signal system governing the operation of trains, for which Motorman Force, of train No. 501 is primarily responsible.

Under the rules a train is not allowed to pass a block-signal switch unless there is no signal displayed by the automatic signal. If the signal is displaying either a red or a yellow indication, it is required to stop at a point 25 feet clear of the block-signal switch, wait for the signal indication to disappear, and if it does not do so within two minutes the crew is required to call the dispatcher for orders. In this case Motorman Force could not see the signal indication from the block-signal switch on account of the dense fog, and approached the signal at a speed of about 25 miles an hour, resulting in his being unable to stop when he observed the signal displaying a stop indication.

There is a possibility that train No. 501 was being operated a minute or so ahead of time when passing Asndale, but the distances and time intervals involved are so slight that it is impossible to say definitely that this was the case.

Rule 180 restricts the speed of all trains "over single track between block signals" to 20 miles an hour; this is also the rule which restricts the speed to 10 miles an hour at block-signal switches. The testimony of the employees indicates that neither crew observed both of these speed restrictions on the day of the accident, while observations made on other occasions also indicated that these restrictions are not followed in all cases.

Had an adequate automatic train stop or train control device been in use on this line, this accident would have not occurred.

The employees involved were experienced men. At the time of the accident the crew of train No. 501 had been on duty nearly 3 hours and the crew of extra 1462 about 1 hour, previous to which these employees had been off duty about 14 and 15 hours respectively.

Respectfully submitted,

W. P. BORLAND,

Director.