

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE-  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON  
THE PACIFIC ELECTRIC RAILWAY AT RIALTO, CALIF.,  
ON JANUARY 14, 1925.

March 7, 1925.

To the Commission:

On January 14, 1925, there was a rear-end collision between an express train and a freight train on the Pacific Electric Railway at Rialto, Calif., resulting in the death of one employee, and the injury of one express messenger and one employee. The investigation of this accident was made in conjunction with a representative of the Railroad Commission of the State of California.

#### Location and method of operation

This accident occurred on the San Bernardino line of the Northern Division, which is an electric line, extending between Los Angeles and San Bernardino, Calif., a distance of 57.78 miles. That portion of the road on which the accident occurred is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. Eastbound trains out of Los Angeles are shown in the time-table as out-bound trains, trains moving westward are shown as in-bound trains. Train orders are transmitted by telephone, and are received and copied by train conductors at intermediate stations where operators are not employed. The accident occurred within the city limits of Rialto, where the railway crosses Palm Street; approaching this point from the west the track is tangent for a considerable distance, while the grade is generally descending for eastbound trains, being 0.25 per cent for 2,800 feet, 1.10 per cent for 400 feet, and then 0.19 per cent descending to the point of accident, 125 feet distant.

About 477 feet east of the point of accident is located a switch leading to the Crestmore branch line, and about 135 feet beyond this switch is the telephone booth and registering office where conductors report the arrival of their trains and receive orders from the dispatcher.

The weather was clear and a bright moon was shining, but owing to smudge pots burning in the orchards on both sides of the track, a dense smoke had settled in the vicinity, restricting the range of vision to a distance of less than one car length. The accident occurred at 5 a.m.

#### Description

Before outbound local freight train extra 1622, in charge of Conductor Salisbury and Motorman Manning, departed from Claremont, 20.4 miles west of the point of accident, the crew received train order No. 5, reading as follows:

"To Conductor and Motorman, Motor 1622, Claremont.  
Motor 1622 run extra Claremont to San Bernardino not protecting against outbound extras."

Upon arriving at Rialto at 4.40 a.m., one car was set out and motor 1622 with six cars attached proceeded to Poole station, 1/2 mile distant on the Crestmore line, leaving the caboose and two loaded freight cars standing on the main track. About 20 minutes later the caboose was struck by extra 1453.

Outbound express train extra 1453 consisted of motor 1453, in charge of Conductor Mann and Motorman Durbin. At North Pomona the crew received a copy of train order No. 5, previously quoted, together with an order to run extra from North Pomona to Rialto. Extra 1453 departed from North Pomona at 4.23 a.m., departed from Upland, 17.2 miles from Rialto, at 4.36 a.m., and collided with the caboose of extra 1622 at Rialto while traveling at a speed estimated to have been from 15 to 20 miles an hour.

The force of the impact drove the three cars of extra 1622 forward a distance of about 70 feet, demolishing the rear end of the caboose and crushing the front vestibule of motor 1453. None of the cars was derailed. The employee killed was the motorman of extra 1453.

### Summary of evidence

Conductor Salisbury, of extra 1622, stated that he had been in charge of the local freight run for several weeks prior to the date of this accident and that it had been the practice for the dispatcher to protect the rear end of his train by train order against following extras in order that the flagman might be utilized in handling the local freight and also in assisting in switching movements. Conductor Salisbury said the weather was clear and the moon was shining brightly between Los Angeles and Willow Avenue siding, the east switch of which is approximately 670 feet west of the point of accident, but at that switch his train encountered a very dense smoke from smudge pots burning in that vicinity, which according to his estimate restricted the range of vision to about 60 or 70 feet. He said his train arrived at Rialto at 4.40 a.m., and he remained at that point to attend to the writing of reports while the motor and six cars went to Poole, on the Crestmore line. He was doing his work at the telephone booth and registering office, and was still so engaged when he heard the crash of the collision. Conductor Salisbury said train order No. 5 permitted his train to occupy the main track without protecting against following extras and he considered that he was entirely within his rights in leaving a part of his train on the main track unprotected while the motor and train crew were performing other work, regardless of the obscured view as a result of smoke from the smudge pots. He expected that extra 1453 would approach under absolute control and be able to stop within one-half the range of vision of the motorman. Under the existing condition he thought the motorman of extra 1453 should have been especially careful, expecting to find his train in that vicinity, as had occurred on several previous occasions, and he also should have been very careful in view of the fact that his train was approaching the junction switch of a diverging line, where it was necessary to stop, line up the switch, register the arrival of the train, and obtain further orders before it could proceed. The statements of Motorman Manning, of extra 1622, brought out no additional facts of importance, except that he thought the smoke extended about 100 feet back from the rear of his train.

Rear Brakeman Brasen stated that he was riding in the caboose approaching Rialto and before leaving it to assist in the switching movements to be made he noticed that the markers were burning and showing red to the rear. He said it did not occur to him that flag protection was necessary on the morning of the accident, even in view of the restricted visibility, and he relied

entirely on train order No. 5 for protection. The statements of other members of the crew of extra 1622 brought out no additional facts of importance.

Conductor Mann, of extra 1453, stated that train orders Nos. 5 and 6 were received at North Pomona and after he had delivered the orders to the motorman, who read them back to him, the motorman inquired if the dispatcher had said anything about extra 1622 and he informed him that the dispatcher said extra 1622 had departed from Upland at 3.03 a.m. and should be into clear at Rialto very soon, he said he last reported to the dispatcher at Upland and that his train left that station at 4.36 a.m. Conductor Mann was riding in the head end of the car with the motorman and he said a dense smoke bank was encountered about the time the train reached the east switch of Willow Avenue siding, at which time the speed was about 20 or 25 miles an hour. The train was in the smoke before its density was realized, but as the motorman at once applied the brakes he thought nothing of it until he suddenly saw the markers of a car about 30 feet distant; he thought the speed was about 15 miles an hour at the time, and did not think there was any emergency application of the brakes. Conductor Mann expressed the opinion that the crew of extra 1622 were entirely within their rights in leaving part of the train on the main track without protection, and that he would have done the same thing with an order similar to train order No. 5. He also thought that had an emergency application of the air brakes been made when the smoke was first encountered the accident might have been averted. He also made a further statement that he did not think his train ran more than 200 feet in the smoke before the collision occurred, although the distance from Willow Avenue switch to the point of accident is 670 feet.

The statements of Assistant Superintendent Peachy, who accompanied the wrecking train to the scene of the accident, and of General Foreman Gilbert of the Mechanical Department and Assistant Trainmaster Monroe, the latter two officials arriving at the scene of the accident in automobiles, indicated that the smoke in the vicinity was of such density that it was practically impossible to see objects at a greater distance than 15 or 20 feet.

Dispatcher McGrath said he talked with both conductors while their respective trains were at Upland and remembered telling Conductor Mann that extra 1622 had not arrived at Rialto up to that time. Dispatcher McGrath stated that he had no knowledge of the unusual

condition existing at Rialto on the morning of the accident; had he known of the heavy smoke he would have warned the crew of extra 1453, or have issued a different form of train order. Under ordinary conditions he considered the form and wording of train order No. 5 to be safe and proper, and expressed the opinion that the order abrogated the flagging provisions of the rules and made it unnecessary for the crew of extra 1622 to protect against following extras. It was his understanding that the chief dispatcher had issued written instructions authorizing this method of handling local freight trains by including the "non-protection" clause in such orders, but a strict search subsequently made of the files in the chief dispatcher's office failed to disclose such instructions. Chief Dispatcher Miller disclaimed any knowledge of such instructions having been issued. Investigation of the train-order files disclosed that this practice had been followed for a period of about four years.

After motor 1453 had been moved to the shops at San Bernardino the brake pipes were plugged on the damaged end of the car and an air-brake test made, but nothing was found that would indicate any defective condition existed in the air-brake system prior to the occurrence of the accident. General Foreman Gilbert, who conducted this test, was of the opinion that the air brakes were not applied in emergency prior to the collision, but that they were applied automatically when the pipes and other connections were broken by the force of the impact.

#### Conclusions

This accident was caused primarily by the failure of Motorman Durbin, of extra 1453, to have his train under proper control when approaching Rialto. A contributing factor was the issuance of a train order which authorized the crew of extra 1622 to occupy the main track without protection against outbound extra trains.

Rule 156-A requires a train to approach junctions, etc., "under control and prepared to stop unless the switches and signals are right and the track clear," while rule 65 defines "under control" as follows: "To be able to stop with service application of brakes within half the distance track is seen to be clear, and in no case exceeding a speed of 15 miles per hour." According to the statement of Conductor Mann, Motorman Durbin had read train order No. 5 and neither he nor

the motorman knew whether or not extra 1622 had arrived at Rialto. Under these circumstances and in view of the rule requiring trains to approach junctions under control, it was the duty of Motorman Durbin to approach the junction at Rialto under full control. If the dense smoke extended as far back as the east switch at Willow Avenue siding then Motorman Durbin had operated his train a distance of 670 feet in the smoke without being able to see whether the track was clear, and was still running at an excessive rate of speed at the time the accident occurred, if the smoke did not extend more than 200 feet west of the point of accident, as indicated by one of Conductor Mann's estimates, and the speed was 20 or 25 miles an hour when the smoke was encountered, then the train was moving at a comparatively high rate of speed at a point where it should have been under control preparatory to stopping short of the junction switch, 477 feet east of the point of accident. Under either estimate as to the extent of the dense smoke, therefore, it seems clear that the speed had not been properly reduced in view of the provisions of train order No. 5 and the requirements of rule 156-A. Conductor Mann was riding in the vestibule with the motorman, was fully aware of the existing conditions, and is also at fault for not seeing to it that his train was brought under proper control.

The rear portion of extra 1622 had been standing on the main track for a period of about 20 minutes prior to the occurrence of the accident, although there was ample room, as well as opportunity, to place this portion of the train on a passing track; during all of this time the very unfavorable conditions caused by the dense smoke continued to exist. Conductor Salisbury was aware of these conditions and knew that extra 1453 often overtook his train at this point, and in view of his long years of experience, he having been employed in engine service on the Chicago, Milwaukee & St. Paul Railway for a period of 22 years before entering the service of the Pacific Electric Railway in 1919, good judgment and considerations of safety should have prompted him to do something besides rely on train order No. 5 for protection; he could easily have prevented the occurrence of the accident by placing the rear of his train on a passing track, or by sending a flagman back beyond the limits of the smoke which was drifting across the tracks.

The statements of all concerned indicate that it has been the custom for several years to issue train orders similar to train order No. 5, this being done for the purpose of enabling the flagman to assist the other members of the crew in the work to be done. The effect

of such an order is to nullify the flagging rules and encourage a disregard for all measures of protection against rear-end collisions, regardless of weather conditions, physical characteristics, or other conditions affecting visibility. That complete confidence and dependence were placed in train order No. 5 is shown by the testimony of the crew of extra 1622; it apparently never occurred to any member of that crew to take the least additional precaution toward protecting that part of their train left standing on the main track in a smoke bank of such density that it was practically impossible to see a distance greater than 15 or 20 feet. Even the conductor of the colliding train was not certain that he would have made any effort to provide protection for the rear of his train had he been in charge of extra 1622 on the morning of the accident. The officials of this road would do much toward the establishment of a better standard of safety if the practice were discontinued of issuing train orders embodying a "without protection" clause for trains operating in a territory not protected by adequate block signals.

Had an adequate block-signal system been in use on this line this accident probably would not have occurred; an adequate automatic train stop or train control device would have prevented it.

At the time of this accident the crew of extra 1622 had been on duty 8 hours and the crew of extra 1453 had been on duty 2 hours and 10 minutes, previous to which these crews had been off duty nearly 14 and 9 hours, respectively.

Respectfully submitted,

W. P. BORLAND,

Director.