

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3220
UNION PACIFIC RAILROAD COMPANY
REPORT IN RE ACCIDENT
NEAR BONNEVILLE, OREG., ON
DECEMBER 18, 1948

SUMMARY

Railroad: Union Pacific

Date: December 18, 1948

Location: Bonneville, Oreg.

Kind of accident: Head-end collision

Equipment involved: Track motor-car : Track motor-car and trailer

Consists: Motor-car 580 : Motor-car 623 and trailer

Estimated speeds: Unknown : 15 m. p. h.

Operation: Timetable, train orders and automatic block-signal and train-control systems

Track: Single; 0°30' curve; 0.03 percent descending grade westward

Weather: Clear

Time: 5:30 p. m.

Casualties: 3 killed; 14 injured

Cause: Failure to provide adequate protection for movement of track motor-cars

Recommendation: That the Union Pacific Railroad Company provide adequate block-signal or train-order protection for the movement of track motor-cars on its line

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3220

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

UNION PACIFIC RAILROAD COMPANY

February 16, 1949

Accident near Bonneville, Oreg., on December 18, 1948,
caused by failure to provide adequate protection
for the movement of track motor-cars.

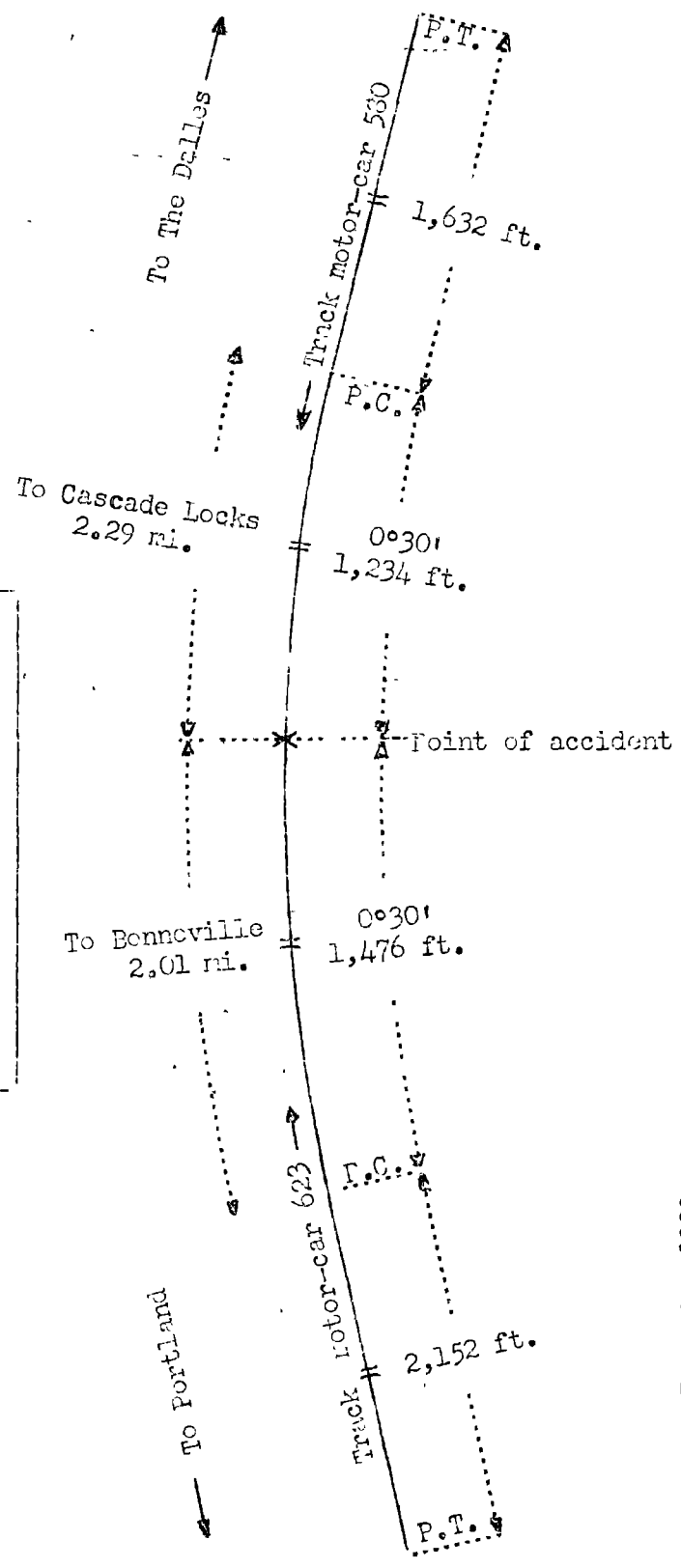
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On December 18, 1948, there was a head-end collision between two track motor-cars on the Union Pacific Railroad near Bonneville, Oreg., which resulted in the death of 3 maintenance-of-way employees and the injury of 14 maintenance-of-way employees.

¹
Under authority of section 17 (?) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.

o	The Dalles, Oreg.	42.80 mi.
o	Cascade Locks	2.29 mi.
X	Point of accident	2.01 mi.
o	Bonnaville	4.50 mi.
o	Dodson	2.50 mi.
o	Oneonta	4.50 mi.
o	Bridal Veil	26.60 mi.
o	Portland, Oreg.	



Inv. No. 3220
 Union Pacific Railroad
 Bonnaville, Oreg.
 December 18, 1943

Location of Accident and Method of Operation

This accident occurred on that part of the Oregon Division extending between The Dalles and Portland, Oreg., 85.8 miles, a single-track line, over which trains are operated by timetable, train orders, and automatic block-signal and train-control systems. Track motor-cars are operated by the rules governing maintenance-of-way employees. This accident occurred on the main track 45.09 miles west of The Dalles and 2.01 miles east of Bonneville. From the east there are, in succession, a tangent 1,632 feet in length, and a 0°30' curve to the left 1,234 feet to the point of accident and 1,476 feet westward. From the west there is a tangent 2,152 feet in length, and then the curve on which the accident occurred. The grade is 0.08 percent descending westward.

This carrier's maintenance-of-way rules and instructions governing the operation of track motor-cars read in part as follows:

99 (L): Copy of current time-table, and the following supply of signal equipment * * * must be on each gang car whenever it leaves point of tie-up:

Single Track

DAYS	NIGHTS
4 red flags, 12 fusees, Not less than 36 torpedoes.	In addition to the white light at front and the red light at rear, 2 lanterns with clear globes, 3 lanterns with red globes, 4 red flags, 12 fusees, Not less than 36 torpedoes.

* * *

TRACK CARS

1500. Track cars must be * * * in charge of employes who have been examined and qualified as track car operators.

* * *

1501. Before occupying main track with track cars, employes in charge of them must, if possible, obtain information from operator or train dispatcher in writing as to train movements. Such information, however, does not relieve employes from observing the rules for protection of track cars.

* * *

1502. Before starting on track car there must be a thorough understanding as to what part each man must take should an emergency arise. * * * men must be assigned to face in both directions and all men must keep sharp lookout for trains, obstructions in flangeways, dogs and other animals, and anything which might derail the car.

Men must be seated and distributed on cars so each will have secure footing and handhold and in no case may either end or either side be overloaded.

1503. Immediately after starting track car, brakes must be tested to insure that they are in proper working condition. One man must be in charge of brakes and must give warning when they are to be applied.

1504. Track cars must be run with caution at all times and must never be used when to do so would involve risk of accident.

The speed shown below must not be exceeded and must be as much slower as necessary to insure safety:

* * *

Power-propelled gang cars-----20 M.P.H.
Power-propelled cars * * * trailers
attached-----15 M.P.H.

* * *

At night, speed must be as much slower as conditions require.

* * *

Speed on curves must be such that track car can be stopped in less than one-half the distance track is seen to be clear.

* * *

When necessary to use track car at night or during storms or fogs, a white light must be displayed to front and a red light to rear.

* * *

1516. * * *

Only insulated track cars may be used where there are track circuits.

In the vicinity of the point of accident an automatic track-occupancy indicator system for the operation of track cars is in service. The indicators are normally energized 25-watt, clear-bulb, electric lamps mounted in pairs on signal masts about 10 feet above the tops of the rails. One lamp is located on the east side and one on the west side of the signal mast, and indicate, respectively, track occupancy by trains east and west of the signal. The absence of a light indicates the approach of a train. The track cars involved were insulated and did not affect the track-occupancy indicator system.

Description of Accident

Track motor-car 580, occupied by a section foreman and two workmen, departed westward from Cascade Locks, 4.3 miles east of Bonneville, about 5:15 p. m., and while moving at an undetermined speed it collided with track motor-car 623 at a point about 2 miles east of Bonneville.

Track motor-car 623, with a trailer in tow and occupied by a foreman and 13 workmen, departed eastward from Bonneville about 5:20 p. m., and while moving at an estimated speed of 15 miles per hour it collided with motor-car 580.

The track motor-cars were not derailed. The front of each motor-car was somewhat damaged.

The employees killed were the three maintenance-of-way employees who were on track motor-car 580. The employees injured were maintenance-of-way employees who were either on track motor-car 623 or on the trailer.

The weather was clear and it was dark at the time of the accident, which occurred about 5:30 p. m.

According to data furnished by the railroad, motor-car 580 was of the four-wheel type, and was equipped with four-wheel brakes. It weighed 950 pounds, and was powered by a one-cylinder 13-horse-power gasoline engine. Motor-car 623 was of the four-wheel type, and was equipped with four-wheel brakes. It weighed 1,800 pounds, and was powered by a four-cylinder 22-horse-power gasoline engine. The trailer was equipped with four-wheel brakes, full width safety railings at the front and rear, and folding foot-boards.

Discussion

The investigation disclosed that on the day of the accident a maintenance-of-way force consisting of a foreman and 13 workmen went on duty at Cascade Locks at 7:30 a. m. After this crew obtained a line-up of train movements from the dispatcher, it departed on a track motor-car and trailer westward from Cascade Locks at 8:15 a. m., and proceeded to Bridal Veil, 16.4 miles west of Cascade Locks. Throughout the day various duties were performed at Oneonta, Dodson and Bonneville. Oneonta and Dodson are, respectively, 7.6 miles and 4.8 miles west of Bonneville. About 4:30 p. m. this crew completed their work at Dodson and soon afterward proceeded eastward to Bonneville, where the main track was cleared. Shortly after 5 p. m. the foreman entered the office at Bonneville and requested a line-up of train movements from the operator. This line-up contained only the information that No. 263, a west-bound freight train, would arrive at Cascade Locks about 5:55 p. m. A few minutes later, when instructed by the dispatcher, the operator changed the arriving time of No. 263 at Cascade Locks to 5:45 p. m. The foreman left the office at Bonneville about 5:15 p. m., and the track motor-car and trailer departed eastward about 5:20 p. m. At that time it was becoming dark but a headlight was not provided at the front of the track motor-car, as required by the rules. However, an oil lantern, not lighted, was secured to the safety rail at the front end. As the track motor-car was approaching the point where the accident occurred the speed was about 15 miles per hour. The brakes of both the track motor-car and the trailer were in good mechanical condition and were functioning properly. The foreman, who was operating the track motor-car, saw the opposing track motor-car a short distance ahead and immediately applied the brakes, but the collision occurred before the speed had been materially reduced. The brakes on the trailer were not applied.

The regularly assigned section force at Bonneville, which consisted of a foreman and three workmen, went on duty at that station at 8 a. m. This section extends between the east siding-switch at Cascade Locks and the west siding-switch at Oneonta, about 12 miles. Throughout the day this crew performed various maintenance work between Cascade Locks and Oneonta and arrived at Bonneville from the west about 4:25 p. m. At Bonneville the operator informed the foreman that a defective switch-frog at Cascade Locks had been reported. Without obtaining a line-up of train movements, this crew departed on the track motor-car for Cascade Locks, where necessary repairs were made. After their work was completed at that point, the track motor-car was turned for westward movement. One member of the crew remained at Cascade Locks. The foreman and the other two members of the crew then departed westward from Cascade Locks. A few minutes later their track motor-car collided with the opposing track motor-car. Since all of these employees were killed, it could not be determined at what speed their track motor-car was moving or when they discovered that the opposing car was occupying the main track. The employee who remained at Cascade Locks said that before his track motor-car departed eastward from Bonneville, the foreman went to his home, located a short distance from the station, and obtained a portable electric headlight, which was placed on the platform of the car. He said that the foreman, before departing westward from Cascade Locks, consulted a line-up of train movements which he had obtained before noon of that day. No line-up of train movements had been obtained since that time. When this car departed westward, an unlighted oil lantern was secured to the safety rail at the front of the car, and the electric headlight was not being used.

In this territory, operators of track motor-cars are given line-ups, either written or oral. A line-up contains only information concerning the actual or anticipated movements of trains. It does not contain information concerning the movements of track motor-cars. A line-up neither confers right over trains or other track motor-cars nor relieves the operator of the track motor-car of responsibility for collision. When track motor-car operators have line-ups they are required to provide the same protection against trains and other track motor-cars as when they do not have them. During the assigned working hours of these crews lights are not needed, but at the time this accident occurred, one of the crews was on duty 1 hour 30 minutes after its assigned hours and the other crew was on duty 1 hour after its assigned hours. At that time it

was dark, but a light was not displayed either on the front or on the rear of either car. The operator of each car had not obtained and had not attempted to obtain any information concerning the movements of other track motor-cars, nor were they required to inform anyone of their movements on the main track. The motor-car indicators, with which this railroad was equipped to warn motor-car operators of the approach of trains, were not operated by insulated motor-cars and consequently provided no warning in this case which involved the movement of two opposing motor-cars.

During the past five years the Commission has investigated nineteen collisions involving track motor-cars, including the instant case. These accidents resulted in the death of 42 persons and in the injury of 81 persons, and were caused by failure to provide adequate protection for the movement of track motor-cars. If adequate block or train-order protection had been provided on this line for the operation of track motor-cars, the opposing movements in the present case would not have been permitted.

Cause

It is found that this accident was caused by failure to provide adequate protection for the movement of track motor-cars.

Recommendation

It is recommended that the Union Pacific Railroad Company provide adequate block-signal or train-order protection for the movement of track motor-cars on its line.

Dated at Washington, D. C., this sixteenth day of February, 1949.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.