

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2732
THE SOUTHERN PACIFIC COMPANY
REPORT IN RE ACCIDENT
NEAR JUNCTION CITY, ORIG., ON
OCTOBER 8, 1943

SUMMARY

Railroad: Southern Pacific
Date: October 8, 1943
Location: Junction City, Oreg.
Kind of accident: Rear-end collision
Trains involved: Freight : Passenger
Train numbers: Second 665 : 329
Engine numbers: 3910 : 4344
Consist: 84 cars, caboose : 14 cars
Estimated speed: Standing : 35 m. p. h.
Operation: Timetable, train orders and
automatic block-signal system
Track: Single; 2° curve; level
Weather: Clear
Time: 11:30 p. m.
Casualties: 2 killed; 11 injured
Cause: Failure to operate following
train in accordance with
signal indications

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2732

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

THE SOUTHERN PACIFIC COMPANY

November 23, 1943.

Accident near Junction City, Oreg., on October 8, 1943,
caused by failure to operate the following train in
accordance with signal indications.

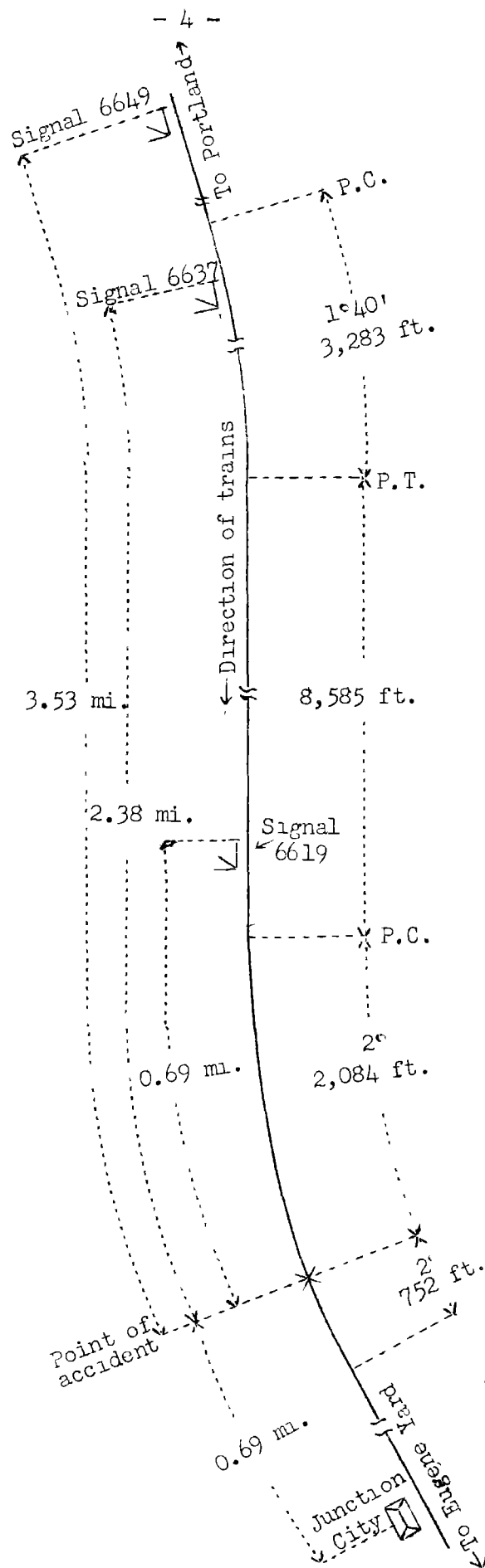
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner.

On October 8, 1943, there was a rear-end collision between a freight train and a passenger train on the line of the Southern Pacific Company near Junction City, Oreg., which resulted in the death of 2 employees, and the injury of 10 passengers and 1 employee. This accident was investigated in conjunction with a representative of the Public Utilities Commission of Oregon.

¹Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.

o	Portland, Oreg.
	86.40 mi.
o	Tangent
	10.80 mi.
o	Halsey
	8.70 mi.
o	Harrisburg
	3.81 mi.
X	Point of accident
	0.69 mi.
o	Junction City
	11.40 mi.
o	Eugene Yard, Oreg.



Inv. No. 2732
 Southern Pacific Company
 Junction City, Oreg.
 October 8, 1943

Location of Accident and Method of Operation

This accident occurred on that part of the Portland Division designated as the Brooklyn Subdivision and extending between Portland and Eugene Yard, Oreg., 121.8 miles. In the vicinity of the point of accident this was a single-track line over which trains were operated by timetable, train orders and an automatic block-signal system. The accident occurred 0.69 mile east of the station at Junction City. From the east there were, in succession, a 1°40' curve to the right 3,283 feet in length, a tangent 3,585 feet and a 2° curve to the left 2,084 feet to this point and 752 feet beyond. The grade was level.

The automatic block-signal system was arranged on the overlap principle and consisted of double-location home signals at sidings, distant signals in approach of home signals, and intermediate home signals between stations. Home signal 6649, intermediate home signal 6637 and distant signal 6619, governing west-bound movements, were located, respectively, 3.53 miles, 2.38 miles and 0.69 mile east of the point of accident. These signals were of the one-arm, two-position, lower-quadrant, semaphore type, and were approach lighted. The involved night aspects and corresponding indications of these signals were as follows:

	<u>Aspect</u>	<u>Indication</u>
Signal 6649	Red	Stop
	Green	Proceed
Signal 6637	Red	Stop
Signal 6619	Yellow	Proceed with caution

The controlling track circuits were so arranged that, when a west-bound train occupied the main track between signals 6649 and 6637, signal 6649 would display stop; when the track between signals 6637 and 6619 was occupied, signals 6649 and 6637 would display stop; when the track between signal 6619 and a point 1,123 feet west thereof was occupied, signals 6649 and 6637 would display stop and signal 6619 proceed-with-caution; and when the track between a point 1,123 feet west of signal 6619 and the next westward signal was occupied, signal 6649 would display proceed, signal 6637 stop and signal 6619 proceed-with-caution.

DEFINITIONS

* * *

With Caution - To run at reduced speed, according to conditions, prepared to stop short of a train, engine, car, misplaced switch, derail, or other obstruction, or before reaching a stop signal. Where circumstances require, train must be preceded by a flagman.

Operating rules read in part as follows:

15. The explosion of one torpedo is a signal to stop. When an unattended torpedo is exploded, train, after stopping, may then proceed with caution to a point not less than three-fourths mile from point where torpedo was exploded.

The explosion of two torpedoes is a signal to proceed with caution for not less than three-fourths mile.

* * *

35. The following signals must be used by flagman:

* * *

Night signals - A red light,
a white light,
torpedoes and
fuses.

99. * * *

When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure protection.

* * *

If not recalled, one-fourth mile from rear of train he must place one torpedo on the rail; three-fourths mile from rear of train, or when recalled, if one-fourth mile or more from rear of train, he must place two torpedoes on the rail three rail-lengths apart. If conditions, such as curves, * * *, require, he must continue back a greater distance, placing two additional torpedoes.

When a train is seen or heard approaching * * * before he has reached required flagging distance, he must immediately place one torpedo on the rail, and go toward the approaching train, displaying stop signals. Lighted fuses must be displayed when conditions warrant.

* * *

FORMS OF TRAIN ORDERS

* * *

B.

Directing a Train to Pass or Run Ahead of Another Train.

* * *

(2) EXTRA 594 EAST RUN AHEAD OF NO 6 M TO B

The first-named train will run ahead of the second-named train between the points designated.

* * *

509 (F). When an automatic block signal indicates "stop", train, after stopping, may proceed with caution, not exceeding twelve miles per hour, under the following conditions:

- (g) On single track, when a preceding train is seen in the block, and the intervening track is seen to be clear.
- (h) On single track, when view of track is clear to the end of block; or view of track is clear to a distant signal and such distant signal indicates "proceed".

* * *

509 (J). Except as provided in Rule * * * 509 (F), when an automatic block signal indicates "stop", train must stop and send a flagman ahead immediately, wait at least five minutes after he has started, and then follow, keeping at least one-fourth mile behind him until flagman reaches viewpoint as described in paragraph (g) or (h) of Rule 509 (F).

The maximum authorized speed for the passenger train was 65 miles per hour.

Description of Accident

Second 665, a west-bound second-class freight train, consisted of engine 3910, 84 cars and a caboose. At Tangent, 24 miles east of Junction City, the crew received copies of two train orders, of which one was train order No. 307 reading as follows:

Second 665 run ahead of No
329 Tangent to Eugene Yard

Second 665 departed from Tangent at 10:18 p. m., 8 hours 36 minutes late, passed Halsey, 13.2 miles east of Junction City and the last open office east of Junction City, at 10:42 p. m., 8 hours 45 minutes late, and stopped about 11:25 p. m. with the rear end standing 0.69 mile east of the station at Junction City. About 3 to 5 minutes later the rear end was struck by No. 329.

No. 329, a west-bound first-class passenger train, consisted of engine 4344, 7 baggage cars, 1 coach, 1 buffet car, 1 coach, 2 Pullman sleeping cars, 1 Pullman tourist car and 1 coach, in the order named. The cars were of steel construction. At Tangent the crew received copies of train order No. 307. This train passed Tangent at 11 p. m., 14 minutes late, passed Halsey at 11:10 p. m., 11 minutes late, and stopped at signal 6649, which displayed stop. Soon afterward the indication of signal 6649 changed to proceed, and No. 329 departed. It passed signal 6637, which displayed stop, passed signal 6619, which displayed proceed-with-caution, and while moving at an estimated speed of 35 miles per hour it collided with the rear end of Second 665.

From the left side of a west-bound engine the view of the point where the accident occurred was restricted to about 550 feet, because of vegetation adjacent to the track and track curvature.

The caboose and the rear nine cars of Second 665 were derailed and badly damaged. The engine and the first car of No. 329 were derailed and considerably damaged. The engine stopped on its left side south of the track, with its front end about 240 feet west of the point of collision. The tender stopped upright, across the track, behind the engine and at right angles to it. The first car stopped upright, north of the track and at an angle of about 45 degrees to it.

It was clear at the time of the accident, which occurred at 11:30 p. m.

The engineer and the fireman of No. 329 were killed, and the front brakeman of No. 329 was injured.

Discussion

The rules governing operation on this line provide that when a train stops under circumstances in which it may be overtaken by another train the flagman must go back immediately a sufficient distance to insure full protection. At a point 1/4 mile to the rear, the flagman must place one torpedo on the rail, and 3/4 mile to the rear, must place two torpedoes on the rail three rail lengths apart. If conditions require, he must continue back a greater distance and place two additional torpedoes. If a train is seen or heard approaching before the flagman has reached the required flagging distance he must immediately place one torpedo on the rail and proceed toward the approaching train, display stop signals and, when necessary, display lighted fusees. Under the rules governing operation in automatic block-signal territory, a stop indication requires a train to stop at the signal, then, if a preceding train is seen in the block and the intervening track is seen to be clear, or if the view of the track ahead is clear to the end of the block, or if the view of the track is clear to a distant signal and the distant signal is displaying proceed, the train may proceed at a speed not exceeding 12 miles per hour. When conditions require, a flagman must be sent ahead immediately and, after an interval of 5 minutes has elapsed, the train may follow the flagman but must keep at least 1/4 mile behind him until he reaches a point where the next signal in advance can be seen. When a distant signal displays proceed-with-caution a train must be operated at reduced speed and be prepared to stop short of a train, an obstruction, or a signal displaying stop.

Second 665 stopped about 11:25 p. m. with the caboose standing 3,687 feet west of signal 6619. Members of the crew of this train estimated that it was 3 to 5 minutes later when the rear end was struck by No. 329. The flagman of Second 665 said that signal 6637 displayed stop and signal 6619 displayed proceed-with-caution when the rear of his train passed these signals. When Second 665 stopped west of signal 6619, the conductor, the swing brakeman and the flagman were in the caboose. The flagman said that when his train stopped he immediately went back to provide flag protection and had reached a point about 630 feet east of the rear of his train when he saw the reflection of the headlight of a train approaching from the east. He immediately displayed a lighted fusee and was giving stop signals when the engine of No. 329 passed him. He did not place a torpedo on the rail. He said he did not

drop off a lighted fusee when the speed was reduced to stop at Junction City because it was very dry and he thought a fire might be started.

The surviving members of the crew of No. 329 said that immediately after their train stopped at signal 6649, the indication of this signal changed to proceed, and the train departed. Soon afterward a speed of about 45 miles per hour was attained and this speed was maintained until the brakes became applied in emergency just prior to the occurrence of the accident. The controlling track circuits of signals 6649, 6637 and 6619 were arranged so that signals 6649 and 6637 displayed stop for No. 329 until Second 665 passed a point 1,123 feet west of signal 6619. After Second 665 passed that point, signal 6649 displayed proceed, but signal 6637 continued to display stop, and signal 6619 displayed proceed-with-caution. Under the rules, No. 329 was required to stop at signal 6637, then, if conditions permitted, it could proceed at a speed not exceeding 12 miles per hour. If conditions did not permit, No. 329 was required to be preceded by a flagman until a view could be had of the intervening track to signal 6619. It could not be determined why No. 329 was not operated in accordance with the stop indication displayed by signal 6637 and the proceed-with-caution indication displayed by signal 6619, as the enginemen were killed in the accident.

Cause

It is found that this accident was caused by failure to operate the following train in accordance with signal indications.

Dated at Washington, D. C., this twenty-third day of November, 1943.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.