

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT NO. 3729  
SOUTHERN PACIFIC COMPANY  
IN RE ACCIDENT  
NEAR BRAY, CALIF., ON  
DECEMBER 26, 1956

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## SUMMARY

Date: December 26, 1956

Railroad: Southern Pacific

Location: Bray, Calif.

Kind of accident: Head-end collision

Equipment involved: Track motor-car : Passenger train  
SPM 4242

Train number: : 20

Locomotive number: : Diesel-electric  
units 6460, 8303,  
and 5381

Consist: : 17 cars

Speeds: Undetermined : 35 m. p. h.

Operation: Timetable, train orders, and automatic  
block-signal system

Track: Single; 4° curve; 0.8 percent ascending  
grade westward

Weather: Clear

Time: 10:58 a. m.

Casualties: 1 killed; 5 injured

Cause: Failure to take required precautions in  
operation of track motor-car

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3729

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

SOUTHERN PACIFIC COMPANY

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February 1, 1957

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Accident near Bray, Calif., on December 26, 1956, caused  
by failure to take required precautions in the opera-  
tion of a track motor-car.

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REPORT OF THE COMMISSION<sup>1</sup>

TUGGLE, Commissioner:

On December 26, 1956, there was a head-end collision  
between a track motor-car and a passenger train on the line  
of the Southern Pacific Company near Bray, Calif., which  
resulted in the death of one maintenance-of-way employee,  
and the injury of five maintenance-of-way employees.

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



### Location of Accident and Method of Operation

This accident occurred on that part of the Shasta Division extending between Klamath Falls, Oreg., and Dunsmuir, Calif., 107.0 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable, train orders, and an automatic block-signal system. The accident occurred on the main track at a point 47.1 miles west of Klamath Falls and 2,792 feet east of the station at Bray, Calif. From the east there is a tangent 1,552 feet in length and a 4° curve to the right 1,430 feet to the point of accident and 1,176 feet westward. From the west there is a tangent 1.99 miles in length and the curve on which the accident occurred. The grade is 0.8 percent ascending westward at the point of accident.

In the vicinity of the point of accident the track is laid in a rock cut. The north wall of the cut is 13 feet north of the center-line of the track and rises to a height of 26 feet above the level of the track. Because of curvature of the track the range of vision between opposing movements is restricted to a distance of about 350 feet.

Automatic signal 3822, governing east-bound movements, is located 1,365 feet west of the point of accident.

There are seven block indicators for the information of maintenance-of-way employees and the operators of track motor-cars between Kegg, Calif., 4.1 miles east of Bray, and Bray. These indicators are located, respectively, 3.14 miles east, 2.38 miles east, 1.66 miles east, 1.01 miles east, 2,896 feet east, 1,056 feet east, and 1,365 feet west of the point of accident. They consist of small lower-quadrant semaphores enclosed in cases so located that they are visible from the track. The two indicators immediately east of the point of accident indicate Block-occupied if the main track is occupied throughout a distance of 5.24 miles immediately west of the point of accident.

This carrier's rules for the operation of track motor-cars read in part as follows:

1101. Track cars must be kept clear of main track for all trains unless line-up provides sufficient time on all trains to permit safe movement, or in an emergency adequate flag protection is provided.

In block system limits, when block signal or track occupancy indicator indicates approach of a train, track car must be immediately stopped and removed from track and kept off track unless it can be seen or is known that it is safe to proceed.

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1104. \* \* \* whenever possible, a line-up of trains should be obtained before starting on a run, and approximately each two hours thereafter. \* \* \*

In the vicinity of the point of accident the maximum authorized speeds are 50 miles per hour for the train involved and 15 miles per hour for the track motor-car.

#### Description of Accident

On the day of the accident a section force consisting of a foreman and five sectionmen reported for duty at Kegg at 8 a. m. After performing service at Kegg for some time, these employees departed west-bound on track motor-car SPM 4242. The car passed the first four block indicators west of Kegg, each of which indicated Block-clear, and was stopped and set off the track at the fifth block indicator, which indicated Block-occupied. About 5 minutes later it was replaced on the track. It then proceeded westward, passed the sixth block indicator, which indicated Block-occupied, and while moving at an undetermined speed it collided with No. 20. The accident occurred 2,792 feet east of the station at Bray.

No. 20, an east-bound first-class passenger train, consisted of Diesel-electric units 6460, 8303, and 5381, coupled in multiple-unit control, 10 baggage cars, 1 mail car, 4 sleeping cars, 1 dining car, and 1 baggage-dormitory car, in the order named. This train departed from Grass Lake, 13.4 miles west of Bray and the last open office, at 10:37 a. m., 2 hours 16 minutes late. It passed signal 3822, which indicated Proceed, and while moving at a speed of 35 miles per hour, as indicated by the tape of the speed-recording device, it collided with track motor-car SPM 4242.

No. 20 stopped with the front of the locomotive 1,541 feet east of the point of accident. The front of the locomotive was slightly damaged. The track motor-car, which was not derailed, was badly damaged.

The section foreman was killed. The five sectionmen who were on the track motor-car were injured.

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The weather was clear at the time of the accident, which occurred at 10:58 a. m.

Track motor-car SPM 4242 was of the belt-drive type. It was powered by an 8 to 13 horsepower engine and was equipped with four-wheel brakes. It weighed 1,300 pounds and had seating capacity for eight persons. Track motor-cars cannot be depended upon to shunt the track circuits of an automatic block-signal system, and the car involved was insulated so that it would not shunt a track circuit at any time.

During the 30-day period preceding the day of the accident the average daily movement in the vicinity of the point of accident was 20.6 trains.

### Discussion

The surviving members of the section force said that when they reached the fifth block indicator west of Kegg they saw that it indicated Block-occupied, and they stopped the car and removed it from the track at a motor-car set-off. After waiting a period of about 5 minutes the foremen instructed the other members of the force to replace the car on the track. One of the sectionmen reminded the foreman that No. 20 had not passed and told him he thought the indicator was actuated by this train. The foreman replied that the indicator was actuated by a west-bound train which had passed some time previously. The foreman repeated the instructions to place the car on the track, and the members of the force then complied. They boarded the car, and the foreman started it westward. He passed the next block indicator, which indicated Block-occupied, and continued westward at a speed which the sectionmen thought was between 10 and 15 miles per hour. The sectionmen first saw No. 20 at a distance which they thought was about 350 feet. There was then insufficient time to stop the car before the collision occurred.

As No. 20 was approaching the point where the accident occurred the enginemen were maintaining a lookout ahead from the control compartment at the front of the locomotive. The members of the train crew were in the cars of the train. The headlight was lighted brightly. The enginemen said they first saw the track motor-car at a distance which they thought was about 150 feet. The train had stopped at Bray, and at the time the enginemen saw the car the speed was approximately 35 miles per hour. The engineer immediately made an emergency application of the brakes, but the collision occurred before the speed of the train had been appreciably reduced.

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The rules of this carrier provide that track motor-cars must be kept clear of main track for all trains unless a line-up indicates that there is sufficient time to permit safe movement or unless adequate flag protection is provided. They also provide that when a block indicator indicates the approach of a train, track motor-cars must be removed from the track immediately and kept off the track unless it can be seen or is known that it is safe to proceed. In the instant case there was no record that the section foreman had received a line-up on the day of the accident. He was killed in the accident, and his reason for replacing the car on the track while the block indicator continued to indicate Block-occupied is not known. Apparently when he stopped at the indicator he thought that it was actuated by an east-bound train. It appears possible that he then decided that he had waited a sufficient length of time for an east-bound train to move over the section of track in which it actuates the indicator, and that the indicator continued to indicate Block-occupied because the preceding west-bound train had not cleared that section of track.

During the past 10 years the Commission has investigated 68 collisions, including the present case, in which track motor-cars were involved. These accidents resulted in the death of 95 persons and the injury of 197 persons.

#### Cause

This accident was caused by failure to take required precautions in the operation of a track motor-car.

Dated at Washington, D. C., this first day of February, 1957.

By the Commission, Commissioner Tuggle.

(SEAL)

HAROLD D. McCOY,

Secretary.