

RAILROAD ACCIDENT INVESTIGATION

Report No 3782

SPOKANE, PORTLAND AND SEATTLE RAILWAY COMPANY

LEVEY WASH

SEPTEMBER 18, 1957

INTERSTATE COMMERCE COMMISSION

Washington

SUMMARY

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DATE	September 18, 1957	
RAILROAD	Spokane, Portland and Seattle	
LOCATION	Levey, Wash	
KIND OF ACCIDENT	Head-end collision	
EQUIPMENT INVOLVED	Track-motor cars with trailers	Freight train
TRAIN NUMBER		Work Extra 150
LOCOMOTIVE NUMBER		Diesel-electric unit 150
CONSIST		Caboose
ESTIMATED SPEEDS	Undetermined	41 m p h
OPERATION	Timetable, train orders, and automatic block-signal system	
TRACK	Single, 1° curve, level	
WEATHER	Clear	
TIME	8 00 a m	
CASUALTIES	3 killed, 22 injured	
CAUSE	Failure to provide adequate protection for movement of track motor-car	

INTERSTATE COMMERCE COMMISSION

REPORT NO 3782

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

SPOKANE, PORTLAND AND SEATTLE RAILWAY COMPANY

March 21, 1958

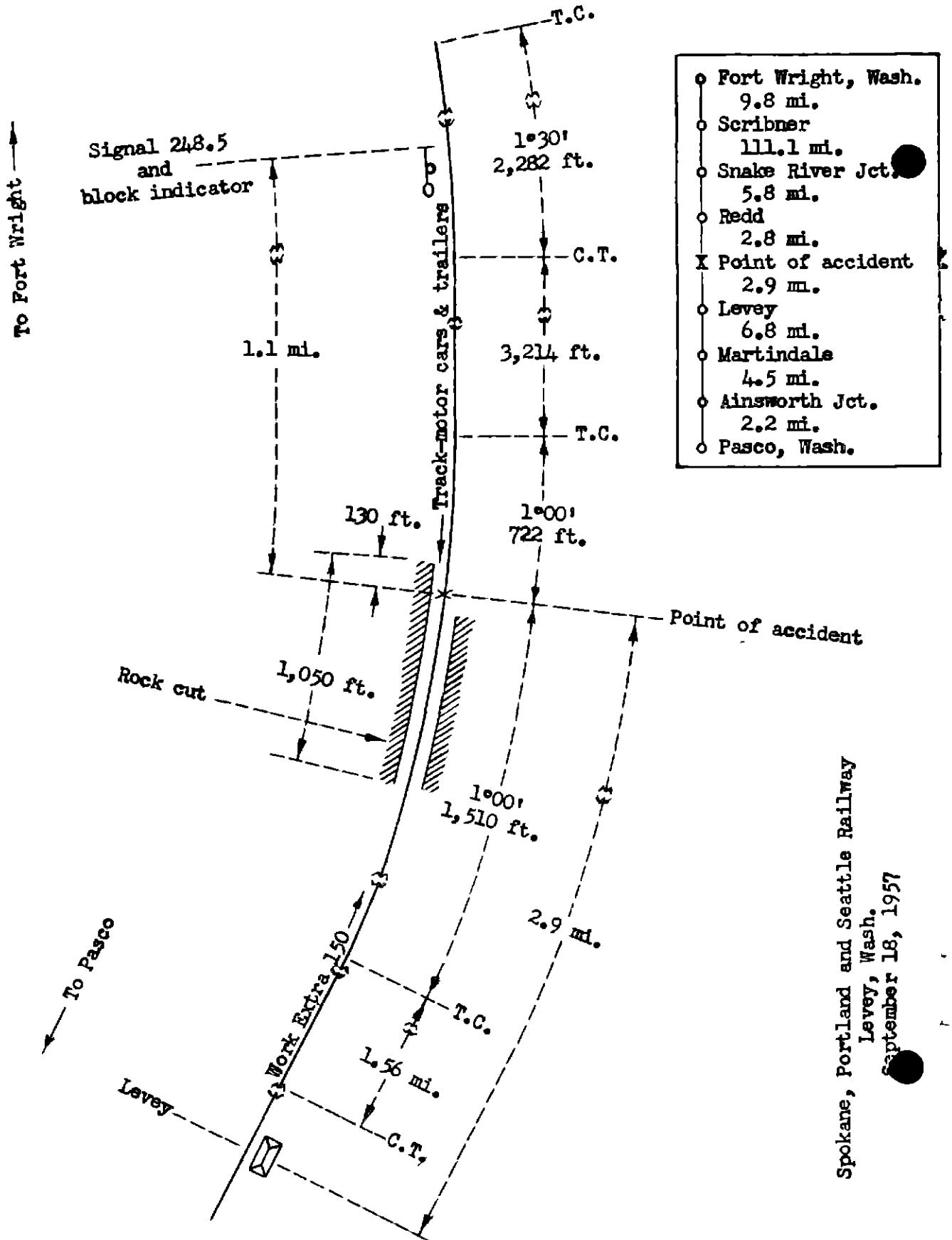
Accident near Levey, Wash , on September 18, 1957, caused by failure to provide adequate protection for the movement of a track-motor car

REPORT OF THE COMMISSION¹

TUGGLE, Commissioner

On September 18, 1957, there was a head-end collision between a track-motor car with trailing units and a freight train on the Spokane, Portland and Seattle Railway near Levey, Wash , which resulted in the death of 3 maintenance-of way employees, and the injury of 22 maintenance-of-way employees. This accident was investigated in conjunction with a representative of the Washington Public Service Commission.

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



Spokane, Portland and Seattle Railway
 Levey, Wash.
 September 18, 1957

Location of Accident and Method of Operation

This accident occurred on that part of the Vancouver Division extending between Fort Wright and Pasco, Wash., 145.9 miles, 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 129.5 miles west of Fort Wright and 2.9 miles east of the station at Levey. From the east there are, in succession, a 1°30' curve to the right 2,282 feet in length, a tangent 3,214 feet, a 1° curve to the right 722 feet to the point of accident and 1,510 feet westward. From the west there is a tangent 1.56 miles in length and the curve on which the accident occurred. The grade is level in the vicinity of the point of accident.

In the vicinity of the point of accident the track is laid in a rock cut extending westward from a point 130 feet east of the point of accident throughout a distance of 1,050 feet. The north wall of the cut is 13 feet north of the centerline of the track and rises to a height of about 16 feet. The range of vision is materially restricted in the vicinity of the point of accident because of the rock cut and curvature of the track.

Automatic signal No. 248.5 governing westbound movements is located 1.1 miles east of the point of accident. This signal is of the searchlight type and is continuously lighted. It displays three aspects.

A block indicator for the information of maintenance-of-way employees and the operators of track motor-cars is attached to the mast of signal No. 248.5. This indicator is enclosed in a case and is visible from the track. It is arranged to display a horizontal row of three black dots on a white background when block is occupied and a vertical row when block is clear. The indicator indicates block occupied if the main track is occupied at any point throughout a distance of 10.2 miles immediately west of signal 248.5.

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

MOTOR CARS -- LINE-UPS

2330 The following instructions govern the handling of Form 1087, Foreman's Train Location:

- (a) The purpose of train line-ups is to inform foreman, track car operators and others of the location of trains so that accidents will be avoided.
- (b) Track cars shall not be placed or moved on main tracks without a line-up Form 1087 if it can be obtained. * * * The line-up shall be read by the car operator to all persons who will ride the car.

* * *

2346 Operation of track cars on obscured curves, * * * must be properly protected by flag, unless the line is known to be clear of trains, * * * Remember these cars do not set automatic block signals.

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 track-motor cars with trailers.

Description of Accident

About 7 30 a m , a track motor-car pulling a trailer, a track motor-car, and a trailer, in the order named, occupied by a foreman, a ballaster operator, and 23 laborers of an extra maintenance-of-way force departed westbound from the station at Redd. The first track motor-car was operated by the foreman and was occupied by a ballaster operator and five laborers. The other members of the force occupied the other track motor-car and trailers. This equipment passed signal No. 248 5 which indicated Proceed and the track motor-car indicator which indicated block-occupied and while moving at an undetermined speed collided with Work Extra 150. The accident occurred 2 9 miles east of the station at Levey.

Work Extra 150 consisted of diesel-electric unit 150 and a caboose. This train departed from East Pasco, 2 7 miles east of Pasco, where switching service had been performed, at 7 35 a m and while moving at an estimated speed of about 41 miles per hour collided with the track motor-car.

The track motor-cars and trailers were derailed and moved eastward a distance of 1,074 feet to the point at which the front end of the locomotive of Work Extra 150 stopped. The track motor-cars and the trailers were destroyed. The front end of the locomotive of Work Extra 150 was slightly damaged.

Three laborers on the track motor-cars and trailers were killed. The foreman, the ballaster operator, and 20 laborers on this equipment were injured.

The weather was clear at the time of the accident, which occurred about 8 00 a m.

The track motor-cars involved were of the 4-speed gear-transmission type, powered by a 4-cylinder, 31 5 horsepower engine and equipped with 4-wheel brakes. Each car was provided with a metal front and glass windshield. Each car weighed approximately 1,925 pounds and had seating capacity for eight persons. The trailers were constructed with a wooden deck on a metal frame mounted on two pairs of wheels. One was equipped with detachable seats and steps. The trailers weighed 1,140 pounds and 840 pounds.

During the 30-day period preceding the day of the accident the average daily movement in the vicinity of the point of accident was 11 67 trains.

Discussion

On the day of the accident members of an extra maintenance force reported for duty at Redd, 126 7 miles west of Fort Wright, at 7 a m. Soon afterward the timekeeper of this force communicated by telephone with the operator at Scribner, 116 9 miles east of Redd, and obtained a line-up which had been issued by the train dispatcher at 6 37 a m , reading in part as follows:

BETWEEN AINSWORTH JCT AND FORT WRIGHT UNTIL 11 30 A M * * * INFEC-
TION CAR 8 LEAVE PASCO 7 30 A M FOR SPOKANE * * * WORK EXTRA 150
AINS WORTH JCT AND SNAKE RIVER MAY RUN OTHER TRAINS AT ANY TIME

Ainsworth Jct and Snake River are located, respectively, 17 miles west and 5 8 miles east of Redd. The timekeeper copied the line-up and repeated it to the operator about 7 05 a m , and then delivered copies to the foreman of the maintenance-of-way force and the operator of a ballaster, who was regularly assigned with this force. The timekeeper said that these employees

then discussed the line-up with him with specific reference to each train listed. Flag protection was provided in each direction before the track motor-cars and trailers were placed on the main track. After these units had been coupled together and the flagman had returned from the east, the equipment departed westbound about 7:35 a. m. and en route picked up the flagman who had been stationed west of Redd. The foreman was operating the first track motor-car and the other equipment was being towed. The operator of the ballaster was seated immediately behind the foreman and the other members of the force were in various locations on the equipment. The foreman planned to have his force perform service at a point approximately 4.7 miles west of Redd. He said that he understood from the line-up that Work Extra 150 was authorized to move between Ainsworth Jct. and Snake River at any time. The equipment was stopped in the vicinity of signal 248.5. The foreman said that he was unfamiliar with the block indicator but he thought it indicated that the track was unoccupied. He observed that a green aspect was displayed by the block signal. He said that the ballaster operator informed him that the train probably was in the vicinity of Martindale, 10.2 miles west of the signal, and he decided to proceed. The ballaster operator said that he told the foreman the block indicator was actuated when a train was east of Martindale or setting off cars at that point. He said that he had received this information from a section foreman during the movement of his ballaster to Redd or the previous day. As the track motor-car and equipment was approaching the point where the accident occurred the speed was about 15 miles per hour as estimated by the foreman. The foreman said that when he saw the locomotive of the approaching train he immediately called a warning and applied the brakes of the track motor-car. He then alighted before the collision occurred.

As Work Extra 150 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 conductor and brakemen were in the caboose. The headlight was lighted. The brakes of the train had been tested and had functioned properly when used en route. The engineer said that the speed of the train was about 50 miles per hour and as he approached the curve where the accident occurred he reduced the speed to about 45 miles per hour. The fireman said he first saw the track motor-cars and trailers at a distance of approximately 800 feet and called a warning to the engineer. The engineer immediately made an emergency application of the brakes and sounded a warning on the horn. He estimated that the speed had been reduced to about 41 miles per hour when the collision occurred.

The investigation disclosed that a block indicator, which indicated track occupancy by a train throughout a distance of 10.2 miles west of signal 248.5 had been installed at that signal in December 1956. The general roadmaster said that because few block indicators were in use on this railroad no instructions or rules with respect to these devices had been issued. As a result no specific action is prescribed when block indicator indicates approach of a train. The foreman involved had not been instructed as to the aspects or indications of the block indicator and none was in service on that portion of the railroad where he had worked previous to the day of the accident. The ballast operator had been informed orally as to the actuation of the block indicator by another maintenance-of-way employee on the previous day. It is evident that the carrier should immediately formulate and issue such instructions as may be necessary for the guidance of all employees who are to use block indicators as supplemental protection in the operation of track motor-cars, or other maintenance-of-way equipment.

The rules of this carrier provide that line-ups are to be issued to inform foreman, track motor-car operators and others of the location of trains. Track motor-cars shall not be placed or moved on main tracks without a line-up if it can be obtained. Operation of track motor-cars on

obscured curves must be properly protected by flag unless the line is known to be clear of trains. The foreman understood these requirements. In the instant case the foreman said that the green aspect displayed by signal 248 5 indicated to him that there was no train closely approaching and, under these circumstances, he did not consider it necessary to provide flag protection on the curve on which the accident occurred.

During the past 10 years the Commission has investigated 67 collisions, including the present case, in which track motor-cars were involved. These accidents resulted in the death of 90 persons and the injury of 216 persons.

Cause

This accident was caused by failure to provide adequate protection for the movement of a track motor-car.

Dated at Washington, D C , this twenty-first
day of March, 1958

By the Commission, Commissioner Tuggle

(SEAL)

HAROLD D McCOY,
Secretary