RAILROAD ACCIDENT INVESTIGATION

Report No 3845

SOUTHERN PACIFIC COMPANY

SERRANO, CALIF

MAY 10, 1959

INTERSTATE COMMERCE COMMISSION

Washington

SUMMARY

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DATE	May 10, 1959	
RAILROAD	Southern Pacific	
LOCATION	Serrano, Calif	
KIND OF ACCIDENT	Side collision	
TRAINS INVOLVED	Passenger	Passenger
TRAIN NUMBERS	First 76	75
LOCOMOTIVE NUMBERS	Diesel-electric units 6050, 5923, 6038, 6066	Diesel-electric units 6049, 5916, 5908, 6048
CONSISTS	13 cars	14 cars
SPEEDS	26 m p h	25 m p h
OPERATION	Signal indications	
TRACK	Single, 0°35' curve, 2 3 percent ascending grade westward	
WEATHER	Clear	
TIME	1 40 a m	
CASUALTIES	17 injured	
CAUSE	Failure to operate westbound train in accordance with signal indications	

INTERSTATE COMMERCE COMMISSION

REPORT NO 3845

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

SOUTHERN PACIFIC COMPANY

August 21, 1959

Accident at Serrano, Calif , on May 10, 1959, caused by failure to operate a westbound passenger train in accordance with signal indications

REPORT OF THE COMMISSION[1]

WALRATH, Commissioner

On May 10, 1959, at Serrano, Calif , there was a side collision between 2 passenger trains on a line of the Southern Pacific Company, which resulted in the injury of 13 passengers and 4 Pullman Company employees This accident was investigated in conjunction with representatives of the Public Utilities Commission of California

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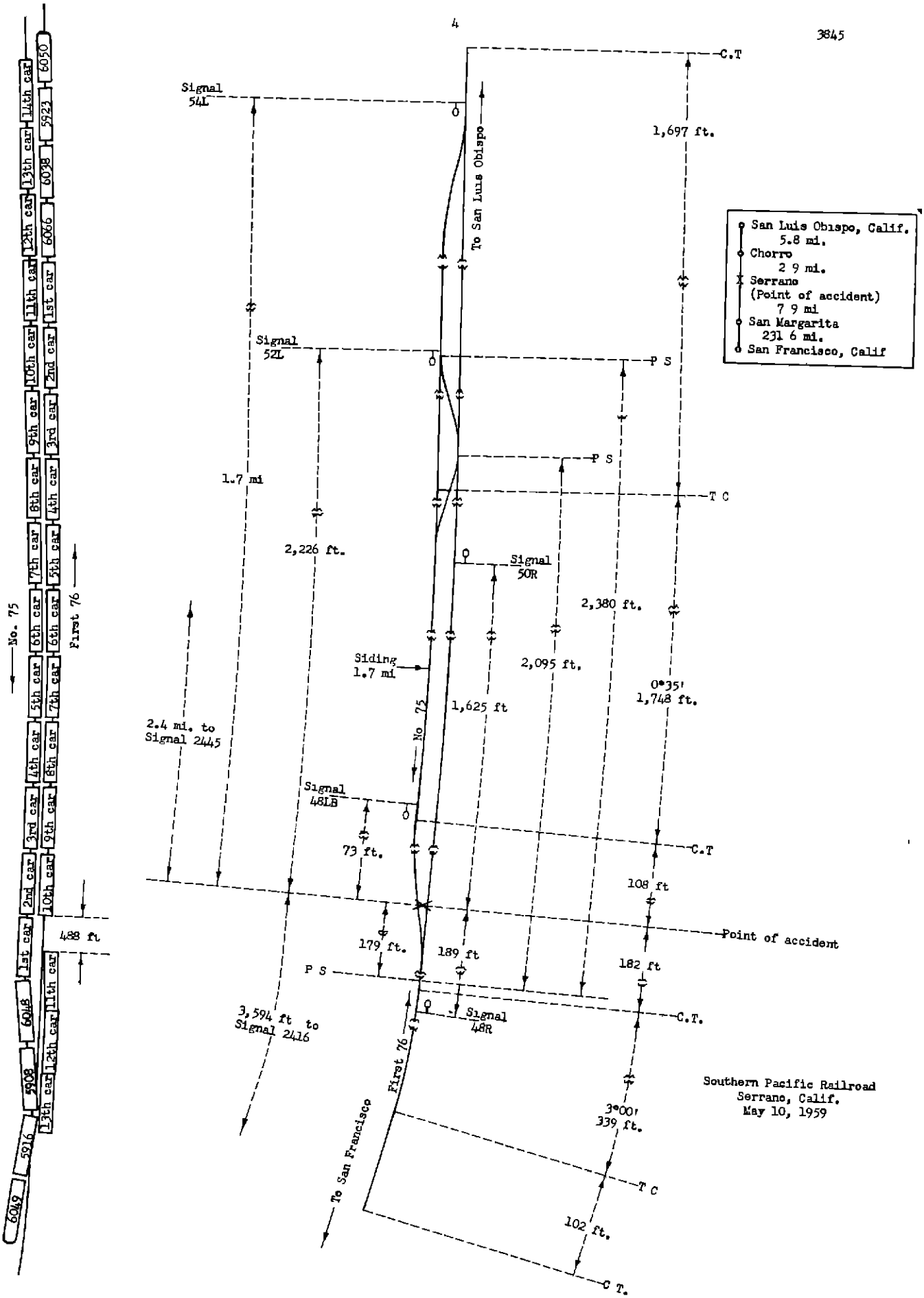
[1] Under authority of section 17 (2) of the *Interstate Commerce Act* the above-entitled proceeding was referred by the Commission to Commissioner Walrath for consideration and disposition



Southern Pacific Railroad
Serrano, Calif.
May 10, 1959

Location of Accident and Method of Operation

This accident occurred on that part of the Coast Division extending between San Francisco and San Luis Obispo, Calif , 248 2 miles In the vicinity of the point of accident this is a single-track line over which trains are operated by signal indications At Serrano, 8 7 miles west of San Luis Obispo, a siding 1 7 miles in length parallels the main track on the north Two crossovers connect the siding with the main track The east switch of the eastern crossover is facing-point for westbound movements on the siding and is about 2,380 feet east of the west switch of the siding The east switch of the western crossover is trailing-point for eastbound movements on the main track and is about 2,095 feet east of the west switch of the siding The switches of the siding and the crossovers are power-operated and are controlled from San Francisco Fouling-point signs are located north of the siding at points, respectively, 500 feet and 1,000 feet east of the clearance point at the west end of the siding

The accident occurred at the fouling point of the siding and the main track, 179 feet east of the west switch of the siding at Serrano From the west there are, in succession, a 10° curve to the right 539 feet in length, a tangent 102 feet, a 3° curve to the left 339 feet, a tangent 182 feet to the point of accident and 108 feet eastward From the east on the siding there are, in succession, a tangent 1,697 feet in length, a 0°35′ curve to the right 1,748 feet, and the tangent on which the accident occurred The grade for westbound trains is 2 3 percent ascending westward at the point of accident

Automatic signal 2445 and controlled signal 54L governing westbound movements on the main track, and controlled signals 52L and 48LB governing westbound movements on the siding, are located, respectively, 2 4 miles, 1 7 miles, 2,226 feet, and 73 feet east of the point of accident Automatic signal 2416, and controlled signals 48R and 50R, governing eastbound movements on the main track, are located, respectively, 3,594 feet west, 189 feet west, and 1,625 feet east of the point of accident These signals are of the color-light type and are approach lighted The names and aspects applicable to this investigation and the corresponding indications are as follows

Signal	Aspect	Indication	Name
2445	Yellow-over-green	REDUCE TO MEDIUM SPEED AND PROCFED NEXT SIGNAL INDICATES "PROCEED ON DIVERGING ROUTE "	BLOCK SIGNAL YELLOW OVER GREEN
54L	Red-over-green	PROCEED ON DIVERGING ROUTE	BLOCK SIGNAL GREEN FOR DIVERGING ROUTE
52L	Yellow	PROCEED NOT EXCEEDING MEDIUM SPEED, PREPARED TO STOP SHORT OF NEXT HOME SIGNAL	APPROACH SIGNAL YELLOW
48LB	Red	STOP	HOME SIGNAL RED
2416 48R 50R	Green	PROCEED	BLOCK SIGNAL GREEN

These signals form part of a traffic-control system which extends between San Luis Obispo and Santa Margarita, 16 6 miles west of San Luis Obispo The control machine is located at San Francisco The controlling circuits are so arranged that a controlled signal will not indicate proceed when any signal governing movements over a conflicting route is displaying other than its most restrictive aspect, when the block between adjacent controlled points is occupied by an opposing train, or when a switch within the route governed by the signal is not in proper position and locked When the route is lined for an eastbound movement on the main track, signal 48LB will indicate "STOP" and signal 48R will indicate "PROCEED "

This carrier's operating rules read in part as follows

34 Each member of engine crew must, and each member of train crew must when practicable, identify by name each signal affecting the movement of his train as soon as it becomes visible or audible to him and, in addition, communicate the aspect of each automatic block, interlocking, absolute and train-order signal

769 The main track or a controlled siding must not be fouled unless authorized by absolute signal indication or by permission from train dispatcher

* * *

All movements on controlled sidings must be made with caution

Speeds

Medium speed A speed not exceeding forty miles per hour

With caution To run at reduced speed, according to conditions, prepared to stop short of a train, * * *, or before reaching a stop signal

In the vicinity of the point of accident the maximum authorized speed for passenger trains is 25 miles per hour All trains are required to be operated through sidings with caution, not exceeding a speed of 15 miles per hour

Description of Accident

First 76, an eastbound first-class passenger train, consisted of diesel-electric units 6050, 5923, 6038, and 6066, coupled in multiple-unit control, 1 baggage car, 1 mail car, 2 chair cars, 1 coffee shop car, 2 sleeping cars, 1 kitchen car, 1 dining car, 1 lounge car, 2 sleeping cars, and 1 observation car, in the order named The cars were of all-steel construction The 3rd to 13th cars, inclusive, were equipped with tightlock couplers This train departed from San Francisco at 8 00 p m , on time, departed from Santa Margarita, the last open office, at 1 24 a m , 4 minutes late, passed signals 2416 and 48R which indicated "PROCEED," and while moving at a speed of about 26 miles per hour as indicated by the tape of the speed-recording device, the 10th car was struck by No 75 while the car was passing the fouling point of the main track and the west end of the siding at Serrano

No 75, a westbound first-class passenger train, consisted of diesel-electric units 6049, 5916, 5908, and 6048, coupled in multiple-unit control, 1 baggage car, 1 mail car, 2 chair cars, 1 coffee-shop car, 3 sleeping cars, 1 kitchen car, 1 dining car, 1 lounge car, 2 sleeping cars, and 1 observation car, in the order named The cars were of all-steel construction The 2nd to 14th cars, inclusive, were equipped with tightlock couplers This train departed from San Luis Obispo, the last open office, at 1 15 a m , on time, passed signal 2445 which displayed a yellow-over-green aspect, passed signal 54L which indicated "PROCEED ON DIVERGING ROUTE," entered the siding at Serrano, passed signal 52L which displayed a yellow aspect, passed signal 48LB which indicated "STOP," and at 1 40 a m , while moving at a speed of about 25 miles per hour, as indicated by the tape of the speed-recording device, it passed the clearance point at the west end of the siding and struck First 76

The 10th to 13th cars, inclusive, of First 76 were derailed and stopped upright in positions as shown in the sketch A separation occurred between the 10th and 11th cars The 10th car was somewhat damaged and the 11th to 13th cars, inclusive, were considerably damaged

No 75 stopped with the front end approximately 260 feet west of the point of accident and about 15 feet north of the main track The four diesel-electric units were derailed and stopped upright in positions as shown in the sketch The 1st diesel-electric unit was considerably damaged, and the other three units were somewhat damaged

The weather was clear at the time of the accident, which occurred at 1 40 a m

A safety-control feature actuated by a foot valve pedal was provided at the engineer's position in the control compartment of the first diesel-electric unit of the locomotive of No 75

Discussion

About 1 30 a m , the train dispatcher lined the route for No 75 to enter the siding at Serrano and to proceed beyond the crossovers to signal 48LB About 1 36 a m , immediately after No 75 entered the siding and cleared the main track, the train dispatcher lined the route for the movement of First 76 eastward on the main track

As First 76 was approaching the point where the accident occurred the enginemen were in the control compartment at the front of the locomotive, and the other members of the train crew were at various locations in the cars of the train The headlight was lighted The brakes of this train had been tested and had functioned properly when used en route The enginemen said that signals 2416, 48R and 50R indicated "PROCEED," and that as the train was passing the siding at Serrano they saw No 75 moving westward on the siding at what appeared to be a greater than usual rate of speed The fireman said he observed that power was applied on the locomotive of No 75 as it passed Immediately after passing the locomotive of No 75, the brakes of First 76 became applied in emergency as a result of the collision

As No 75 was approaching Serrano, the enginemen were in the control compartment at the front of the locomotive and the other members of the crew were at various locations in the cars of the train The brakes of this train had been tested and had functioned properly when used en route The headlight was lighted brightly and the oscillating headlight was operating As the train approached signal 2445, both enginemen observed that the signal displayed a yellow-over-green aspect, indicating that signal 54L indicated "PROCEED ON DIVERGING ROUTE " As the train was moving in the block of signal 2445 both enginemen observed that signal 54L was indicating "PROCEED ON DIVERGING ROUTE " The fireman said that he called the signal indication and the engineer responded Soon afterward, the fireman left the control compartment and proceeded to the third diesel-electric unit, in response to a warning bell which was actuated as a result of a defective steam generator The engineer said that after passing signal 54L and entering the siding at Serrano, he observed signal 52L displaying a yellow aspect, and that he also saw the reflection of the headlight of First 76 as that train emerged from a tunnel and approached the west end of the siding He said that he then lost consciousness and could remember nothing more until after the collision occurred and he became aware the locomotive was derailed The fireman was returning to the control compartment and was in the second diesel-electric unit at the time of the collision He said that he went to the engineer's assistance after the accident occurred, and that the engineer at this time apparently was dazed and did not seem aware that No 75 had collided with First 76

An analysis of the tape of the speed-recording device disclosed that No 75 had entered the the siding at a speed of about 15 miles per hour As the train moved on the siding the speed was increased and varied between 22 and 26 miles per hour and it was 25 miles per hour at the time of the collision

After the accident occurred, an examination of the controls of the leading diesel-electric unit of No 75 disclosed that the independent and automatic brake valve handles were in running position The independent brake valve had a small wooden plug under the bail to hold the brake valve in release position A flag staff with the flag furled around it was found wedged beneath the feed valve and across the safety-control foot valve pedal, to hold it in depressed position The throttle was in emergency-stop position The window on the engineer's side of the control compartment was open about six inches

The investigation disclosed that on the day before the accident occurred the engineer of No 75 had arrived at San Luis Obispo on an eastbound first-class passenger train at 9 15 a m and he went off duty at that point at 9 35 a m He said that except for a period of several hours in the afternoon during which he went to dinner he had slept most of the time and that he was asleep when the crew caller came to his room and called him at 11 55 p m , 1 hour before he was to report for duty on No 75 No 75 departed from San Luis Obispo at 1 15 a m , on time The engineer said that because holding the pedal of the safety-control device in depressed position for long periods of time caused his foot to become numb, he had blocked the pedal in depressed position with a flag-staff after the train passed Chorro, 5 8 miles west of San Luis Obispo, and wedged a plug in the bail of the independent brake valve to prevent the locomotive brakes from applying while making station stops with the automatic brake valve The fireman and the conductor of No 75 said that the engineer appeared to be in normal condition before their train departed from San Luis Obispo The enginemen who arrived at that point on No 75 said that the engineer was waiting to relieve them on arrival and that he appeared to be in normal condition except that he seemed fatigued From the position in which the locomotive controls were found after the accident occurred and the indications that the speed was increased from 15 miles per hour after the train entered the siding to about 25 miles per hour at the point of collision, it is apparent that the engineer took no action to control the speed of this train as it approached the west end of the siding where it was required to be stopped short of the stop signal east of the clearance point The fireman said that he was not aware that the engineer had placed a flagstaff in position to depress the foot valve pedal of the safety-control device

The engineer of No 75 was born July 6, 1894 and he was 64 years of age at the time the accident occurred He entered the service of the carrier as a locomotive fireman in October 1917, after previous service in a clerical capacity He was promoted to locomotive engineer in October 1927 In accordance with instructions of the chief surgeon of the carrier he was restricted to yard service because of a cardiac condition from April 1949 to June 1950, at which time his physical condition was such that all previous restrictions were removed He was hospitalized for a period of 17 days after the accident occurred During this period he underwent extensive examination with multiple consultations The only positive finding was evidenced in the electric cardiogram which indicated the presence of a heart condition of a type which could possibly have caused the engineer to lose consciousness just before the accident occurred

Cause

This accident was caused by failure to operate the westbound train in accordance with signal indications

Dated at Washington, D C , this twenty-first day of August, 1959

By the Commission, Commissioner Walrath

(SEAL)

HAROLD D McCOY,
Secretary

Interstate Commerce Commission
Washington 25, D C

OFFICIAL BUSINESS

RETURN AFTER FIVE DAYS

POSTAGE AND FEES PAID
INTERSTATE COMMERCE COMMISSION