

**RAILROAD ACCIDENT INVESTIGATION**

**Report No 3842**

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UNION PACIFIC RAILROAD COMPANY

OLYMPIA, WASH

MARCH 13, 1959

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**INTERSTATE COMMERCE COMMISSION**

**Washington**

**SUMMARY**

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<b>DATE</b>	<b>March 13, 1959</b>
<b>RAILROAD</b>	<b>Union Pacific</b>
<b>LOCATION</b>	<b>Olympia, Wash</b>
<b>KIND OF ACCIDENT</b>	<b>Derailment</b>
<b>EQUIPMENT INVOLVED</b>	<b>Cut of freight cars</b>
<b>CONSIST</b>	<b>15 cars</b>
<b>SPEED</b>	<b>25 - 30 m p h</b>
<b>OPERATION</b>	<b>Timetable special instructions</b>
<b>TRACK</b>	<b>Single, tangent, level</b>
<b>WEATHER</b>	<b>Cloudy</b>
<b>TIME</b>	<b>5 44 p m</b>
<b>CASUALTIES</b>	<b>1 killed, 29 injured</b>
<b>CAUSE</b>	<b>Cut of cars moving out of control on a descending grade as a result of failure to apply hand brakes</b>

## INTERSTATE COMMERCE COMMISSION

REPORT NO 3842

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

UNION PACIFIC RAILROAD COMPANY

August 7, 1959

Accident at Olympia, Wash , on March 13, 1959, caused by a cut of cars moving out of control on a descending grade as a result of failure to apply hand brakes

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

*FREAS, Commissioner*

On March 13, 1959, at Olympia, Wash , there was a derailment of a cut of freight cars on the Union Pacific Railroad which resulted in the death of 1 telegrapher-clerk, and the injury of 3 freight station clerks and 26 other persons. This accident was investigated in conjunction with representatives of the Washington Public Service Commission

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

1.7 mi to  
Track No. 3  
at industrial plant

Out of cars  
and/or 10 cars on

P S

P S

2,498 ft.

Main track

Passing track  
1,102 ft

Scale track  
1,125 ft

P.S.

2,231 ft

P.S.

1,196 ft

P S

1,106 ft.

House track  
737 ft

755 ft.

Main track

Union Pacific Railroad  
Olympia, Wash  
March 13, 1959

Station

10 ft.

30' X 108'

45' X 90'

Bumper

18 ft

Point of derailment  
Station

Business  
establishments

10 ft

4th Avenue

40 ft

o East Olympia, Wash  
7 4 mi  
X Olympia, Wash  
(Point of derailment)

### Location of Accident and Method of Operation

This accident occurred on that part of the Oregon Division extending between Olympia and East Olympia, Wash., 7.4 miles, a single-track line over which trains are operated by timetable special instructions. At Olympia, a stub-end house track 737 feet in length parallels the main track on the north, and its west end is provided with a bumper located about 18 feet east of the station. The switch of the house track is 755 feet east of the station and is facing point for westbound movements on the main track. East of the house track, a passing track 1,102 feet in length parallels the main track on the south. The west end of the passing track connects with the main track at a point 1,196 feet east of the station. A crossover connects the east end of the passing track with the main track. The east switch of the crossover is facing point for westbound movements on the main track and is 2,498 feet east of the station. A scale track 1,125 feet in length parallels the passing track on the south. The west end of the scale track is connected to the main track at a point 1,106 feet east of the station, and the east end is connected to the passing track at a point 2,231 feet east of the station. East of the yard tracks at Olympia, 4 auxiliary tracks diverge from the main track to the south and enter the property of an adjacent industrial plant. The switch of auxiliary track No. 3 at the industrial plant is facing-point for eastbound movements on the main track and is 2.21 miles east of the station at Olympia.

The derailment occurred at the west end of the house track after the cut of cars had moved over a series of curves, a crossover, the turnouts at the ends of the scale track, and a No. 7 turnout at the east end of the house track. The maximum curvature over which the cut of cars moved is at the turnout of the house track and is  $16^{\circ}43'$ . Between the switch of track No. 3 at the industrial plant and a point about 200 feet westward, the grade is slightly descending. Beginning at the latter point, the average grade is 0.81 percent descending westward about 2 miles to the house track. The grade of the house track is practically level.

The station at Olympia is of brick construction, having dimensions as shown in the sketch. Its west side faces Fourth Avenue. A portion of its east side is directly west of, and at right angles to, the house track. The centerline of the house track is about 48 feet north of the south side of the station.

Fourth Avenue is paved with bituminous material to a width of 40 feet. A sidewalk, 10 feet in width, is on each side. Seven business establishments are located on the west side of the street, and five of them are opposite the station.

This carrier's operating rules read in part as follows:

807 When doing work at stations where the grade is such that cars will start if brakes are released, a trainman must be left in charge of the train while work is being done unless slack is bunched and train secured by hand brakes.

Before engines are detached from a train on a grade, either on main track or siding, a sufficient number of hand brakes must be applied on the low end of train to hold train, the air brakes must be released and the slack closed in against cars on which the hand brakes are applied.

Train must not be left standing unattended on a grade, unless air brakes are released, slack is bunched and the train properly secured by hand brakes.

816 Trains must not leave terminals nor start from points where train line has been disconnected or an angle cock closed or crews changed \* \* \* until after the prescribed tests of the brakes have been made

This carrier's rules and instructions governing operation of Air Brakes, \* \* \* read in part as follows

1043(C) When all locomotives are to be detached from a train while standing on a grade, a sufficient number of hand brakes must be applied on low end to hold train, air brakes released, retaining valve handles turned down if in use, and slack closed in against cars on which hand brakes are applied \* \* \*

1043(I) Transfer train and yard train movements not exceeding 20 miles, must have air brake hoses coupled between all cars, and after brake system is charged to not less than 60 pounds, a 15 pound brake pipe reduction must be made to determine that brakes are applied on each car before releasing and proceeding

### Description of Accident

An eastbound train, consisting of switcher-type diesel-electric unit 1064, and 18 cars, departed from Olympia about 5 15 p m About 10 minutes later it stopped on the main track at a point 2 22 miles east of Olympia, where the locomotive and the first 3 cars were detached and moved eastward into the yard of the industrial plant While the members of the crew were engaged in switching operations the 15 unattended cars which had been left standing on the main track, moved westward toward the station at Olympia This cut of cars moved over the main track, crossed over to the passing track, moved onto the scale track, reentered the main track, and then entered the house track While moving at an estimated speed of 25 to 30 miles per hour, the cut of cars struck and demolished the bumper at the west end of the house track, and continued moving westward The leading 8 cars derailed and struck the station

The first 6 derailed cars passed through the station The 1st and 2nd cars crossed Fourth Avenue and stopped inside two of the business establishments located opposite the station The 3rd and 4th cars stopped on, and about parallel to, Fourth Avenue, with their south ends inside two other business establishments The 5th and 6th cars stopped on Fourth Avenue at angles of about 30 and 45 degrees, respectively, to the street The 7th and 8th cars stopped inside the station and about in line with the house track Three of the derailed cars were destroyed, 3 were heavily damaged, 1 was somewhat damaged, and 1 was slightly damaged The station and 4 of the business establishments along the west side of Fourth Avenue were heavily damaged

The weather was cloudy at the time of the accident, which occurred at 5 44 p m

### Discussion

The members of the crew involved went on duty at 2 00 p m and assembled 16 cars on the scale track at Olympia After the brake systems of these cars were charged from the locomotive for about 10 minutes, the locomotive and the 1st car at the east end were detached from the cut of cars without closure of the angle cock at the east end of the 2nd car, resulting in an emergency application of the brakes on the 15 cars The locomotive with the 1st car then engaged in further switching operations, while a car inspector inspected the brakes of the cars left standing on the scale track About 5 10 p m, after the car inspector went off duty, the locomotive with 3 cars returned to the scale track and was coupled to the 15 standing cars The air-brake systems of the cars were then charged until approximately 5 15 p m, at which time the locomotive with the 18 cars departed from the scale track, entered the main track at the crossover and proceeded eastward enroute to East Olympia at an estimated speed of 8 to 10 miles per hour The 2nd and 3rd cars were destined for the industrial plant located about 2 3 miles east of the station at Olympia

As the train was approaching the industrial plant, all the members of the crew were in the control compartment of the locomotive. The fireman, a qualified engineer, was operating the locomotive. About 5:25 p. m., when the train was about 40 feet west of the switch of track No. 3 at the industrial plant, the fireman initiated a service application of the brakes. The rear brakeman alighted from the locomotive as the train was being stopped so that he would be in a position to uncouple the locomotive and the first 3 cars. The movement stopped with the locomotive about 85 feet east of the switch of track No. 3, and the front brakeman alighted at this point so that he would be in a position to relay hand signals given by the rear brakeman. The conductor also alighted from the locomotive and proceeded to the yard of the industrial plant to determine what switching operations were required. The fireman said that the brake-pipe exhaust continued after the train stopped, and that after a 15-pound brake-pipe reduction had been made he placed the brake valve handle in lap position. The rear brakeman said that when the train stopped he immediately walked about 20 feet to the rear of the 3rd car and closed the angle cocks on the 3rd and 4th cars. He then signalled for slack so that he could operate the uncoupling lever. The fireman said that after receiving the signal he placed the handle of the brake valve in release position, provided slack, and that after being uncoupled from the train the locomotive and the first 3 cars proceeded into the yard of the industrial plant. Hand brakes were not applied on the cut of unattended cars left standing on the main track. After performing switching operations for about 20 minutes in the yard of the industrial plant, all the members of the crew returned to the main track with the locomotive and one car. As they approached the main track they observed that the cut of cars left standing on the main track apparently had moved westward. They immediately proceeded westward on the main track with the locomotive and one car in an unsuccessful attempt to overtake the cut of cars.

An inspection of the undamaged cars after the accident occurred disclosed that the hand brakes of these cars operated properly.

All members of the crew of the train were familiar with the work to be performed at the industrial plant. They said that they had assumed the air brakes were fully applied on the cut of cars left standing on the main track and had not believed it was necessary to secure the cut of cars by use of hand brakes. In the instant case, it is apparent that the angle cock on the east end of the 4th car was closed by the rear brakeman before the service application of the brakes was completed, resulting in an insufficient application of the air brakes on the cars left standing on the main track. The rules of the carrier provide that before engines are detached from a train on a grade, a sufficient number of hand brakes must be applied on the low end of the train to hold the train, and that the air brakes must be released and the slack closed in against cars on which the hand brakes are applied. It is evident that the accident would not have occurred had hand brakes been applied on the cut of cars left standing on the main track as required by the carrier's rules.

#### Cause

This accident was caused by a cut of cars moving out of control on a descending grade as a result of failure to apply hand brakes.

Dated at Washington, D. C., this seventh day of August, 1959

By the Commission, Commissioner Freas

(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**