Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2006-68

Central Oregon & Pacific Railroad, Inc.
Roseburg, OR
July 27, 2006

Note that 49 U.S.C. §20903 provides that no part of an accident or incident report made by the Secretary of Transportation/Federal Railroad Administration under 49 U.S.C. §20902 may be used in a civil action for damages resulting from a matter mentioned in the report.

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

FRA FACTUAL RAILROAD ACCIDENT REPORT

FRA File # HQ-2006-68

1.Name of Railroad Operating Train #1: Central Oregon & Pacific RR, Inc. [CORP]	1a. Alphabetic Code: CORP	1b. Railroad Accident/Incident No.: ID06450
2.Name of Railroad Operating Train #2: N/A	2a. Alphabetic Code: N/A	2b. Railroad Accident/Incident: N/A
3.Name of Railroad Responsible for Track Maintenance: Central Oregon & Pacific RR, Inc. [CORP]	3a. Alphabetic Code: CORP	3b. Railroad Accident/Incident No.: ID06450
4. U.S. DOT_AAR Grade Crossing Identification Number	5. Date of Accident/Incident: Month 07 / Day 27 / Year 2006	6. Time of Accident/Incident: 02:45: ☐ AM ☑ PM

7. Type of Accident/Indicent (single entry in code box): 1. Derailment; 2. Head on collision; 3. Rear end collision; 4. Side collision; 5. Raking collision; 6. Broken Train collision; 7. Hwy-rail crossing; 8. RR grade crossing; 9. Obstruction; 10. Explosion-detonation; 11. Fire/violent rupture; 12. Other impacts; 13. Other (describe in narrative): 01

8. Cars Carrying HAZMAT	9. HAZMAT Cars Damaged/Derailed	10. Cars Releasing HAZMAT	11. People Evacuated	12. Division
1	1	0	0	System

13. Nearest City/Town	14. Milepost (to nearest tenth)	15. State Abbr	15. State Code	16. County
Roseburg	571.8	N/A	OR	DOUGLAS

17. Temperature (F) (specify if minus)	18. Visibility (single entry) 1. Dawn 2. Day 3.Dusk 4.Dark	Code	19. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5.Sleet 6.Snow	Code	20. Type of Track 1. Main 2. Yard 3. Siding 4. Industry	Code
92 F		2		1		2

21. Track Name/Number	22. FRA Track Class (1-9, X)	Code	23. Annual Track Density (gross tons in millions)	24. Time Table Direction 1. North 3. East	Code
T6101		1	0		2

OPERATING TRAIN #1

25. Type of Equipment Consist (single entry) 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect.car	A. Spec. MoW Equip. Code	26. Was Equipment Attended? 1. Yes 2. No	Code	27. Train Number/Symbol
	1	1		501

28. Speed (recorded speed, if available) R - Recorded E - Estimated	Code	30. Method(s) of Operation (enter code(s) that apply)	30a. Remotely Controlled Locomotive?
7 MPH	R	a. ATCS; b. Auto train control; c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; g. Automatic block; h. Current of traffic; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; m.Special instructions; n. Other than main track; o. Positive train control; p. Other (Specify in narrative) Code(s): i, j, l, n, N/A	0 = Not a remotely controlled; 1 = Remote control portable; 2 = Remote control tower; 3 = Remote control transmitter - more than one remote control transmitter: 0

29. Trailing Tons (gross tonnage, excluding power units): 6367

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	N/A	22	yes
(2) Causing (if mechanical cause reported)	N/A	N/A	N/A

32. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
N/A	N/A

33. Was this consist transporting passengers? (Y/N): N

34. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote	35. Cars	Loade a. Freight	Loade b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Train	5	0	0	0	0	(1) Total in Equipment Consist	35	0	65	0	0
(2) Total Derailed	0	0	0	0	0	(2) Total Derailed	6	0	19	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
132000	20000	T110	N/A

Number of Crew Members

40. Engineer/ Operators	41. Firemen	42. Conductors	43. Brakemen
N/A	0	2	0

Length of Time on Duty

44. Engineer/Operator	45. Conductor
Hrs 2 Mi 45	Hrs 6 Mi 45

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Other
Fatal	0	0	0
Nonfatal	N/A	0	0

49. EOT Device? 1. Yes 2. No	50. Was EOT Device Properly Armed? 1. Yes 2. No
1	1

51. Caboose Occupied by Crew? 1. Yes 2. No: 2

OPERATING TRAIN #2

52. Type of Equipment Consist (single entry) 1. Freight train 2. Passenger train 3. Commuter train 4. Work train 5. Single car 6. Cut of cars 7. Yard/switching 8. Light loco(s). 9. Maint./inspect.car	A. Spec. MoW Equip. Code	53. Was Equipment Attended? 1. Yes 2. No	Code	54. Train Number/Symbol
	N/A	N/A	N/A	N/A

55. Speed (recorded speed, if available) R - Recorded E - Estimated	Code	57. Method(s) of Operation (enter code(s) that apply)	57a. Remotely Controlled Locomotive?
0 MPH	N/A	a. ATCS; b. Auto train control; g. Automatic block; h. Current of traffic; m.Special instructions; n. Other than main track	0 = Not a remotely controlled; 1 = Remote control portable

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56. Trailing Tons (gross tonnage, excluding power units): N/A

c. Auto train stop; d. Cab; e. Traffic; f. Interlocking; i. Time table/train orders; j.Track warrant control; k. Direct traffic control; l.Yard limits; o. Positive train control; p. Other (Specify in narrative)

Code(s): N/A | N/A | N/A | N/A | N/A

2 = Remote control tower
3 = Remote control transmitter - more than one remote control transmitter: N/A

58. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	0	N/A	N/A
(2) Causing (if mechanical cause reported)	0	N/A	N/A

59. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.

Alcohol	Drugs
N/A	N/A

60. Was this consist transporting passengers? (Y/N): N/A

61. Locomotive Units	a. Head End	Mid Train b. Manual	Mid Train c. Remote	Rear End d. Manual	Rear End c. Remote
(1) Total in Train	0	0	0	0	0
(2) Total Derailed	0	0	0	0	0

62. Cars	Loade a. Freight	Loade b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	0	0	0	0	0
(2) Total Derailed	0	0	0	0	0

63. Equipment Damage This Consist: 0

64. Track, Signal, Way, & Structure Damage: 0

65. Primary Cause Code: N/A

66. Contributing Cause Code: N/A

Number of Crew Members

67. Engineer/ Operators	68. Firemen	69. Conductors	70. Brakemen
N/A	N/A	N/A	N/A

Length of Time on Duty

71. Engineer/Operator: Hrs 0 Mi 0

72. Conductor: Hrs 0 Mi 0

Casualties to:	73. Railroad Employees	74. Train Passengers	75. Other
Fatal	0	0	0
Nonfatal	0	0	0

76. EOT Device? 1. Yes 2. No: N/A

77. Was EOT Device Properly Armed? 1. Yes 2. No: N/A

78. Caboose Occupied by Crew? 1. Yes 2. No: N/A

Highway User Involved

79. Type: A. Auto; B. Truck; C. Truck-Trailer.; D. Pick-Up Truck; E. Van; F. Bus; G. School Bus; H. Motorcycle; J. Other Motor Vehicle; K. Pedestrian; M. Other (spec. in narrative) — Code: N/A

80. Vehicle Speed (est. MPH at impact): N/A

81. Direction geographical) 1.North 2.South 3.East 4.West — Code: N/A

82. Position: 1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossing 4. Trapped — Code: N/A

86a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither — Code: N/A

Rail Equipment Involved

83. Equipment: 1.Train(units pulling); 2.Train(units pushing); 3.Train (standing); 4.Car(s) (moving); 5.Car(s) (standing); 6.Light Loco(s) (moving); 7.Light(s) (standing); 8.Other (specify in narrative) — Code: N/A

84. Position of Car Unit in Train: N/A

85. Circumstance: 1. Rail Equipment Struck Highway User; 2. Rail Equipment Struck by Highway User — Code: N/A

86b. Was there a hazardous materials release by 1. Highway User 2. Rail Equipment 3. Both 4. Neither — Code: N/A

86c. State here the name and quantity of the hazardous materials released, if any.: N/A

87. Type of Crossing Warning: 1.Gates; 2.Cantilever FLS; 3.Standard FLS; 4.Wig Wags; 5.Hwy. traffic signals; 6.Audible; 7.Crossbucks; 8.Stop signs; 9.Watchman; 10.Flagged by crew; 11.Other (spec. in narr.); 12.None

Code(s)							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

88. Signaled Crossing Warning (See instructions for codes) — Code: N/A

89. Whistle Ban 1. Yes 2. No 3. Unknown — Code: N/A

90. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach — Code: N/A

91. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown — Code: N/A

92. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown — Code: N/A

93. Driver's Age: N/A

94. Driver's Gender 1. Male 2. Female — Code: N/A

95. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown — Code: N/A

96. Driver 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop 4. Stopped on Crossing 5. Other (specify in narrative) — Code: N/A

97. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown — Code: N/A

98. View of Track Obscured by (primary obstruction) 1. Permanent Structure 2. Standing Railroad Equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicle 7. Other (specify in narrative) 8. Not obstructed — Code: N/A

101. Casulties to Highway-Rail Crossing Users	Killed	Injured
	N/A	N/A

99. Driver Was 1. Killed 2.Injured 3. Uninjured — Code: N/A

100. Was Driver in the Vehicle? 1. Yes 2. No — Code: N/A

102. Highway Vehicle Property Damage (est. dollar damage): N/A

103. Total Number of Highway-Rail Crossing Users (include driver): N/A

104. Locomotive Auxiliary Lights? 1. Yes 2. No — Code: N/A

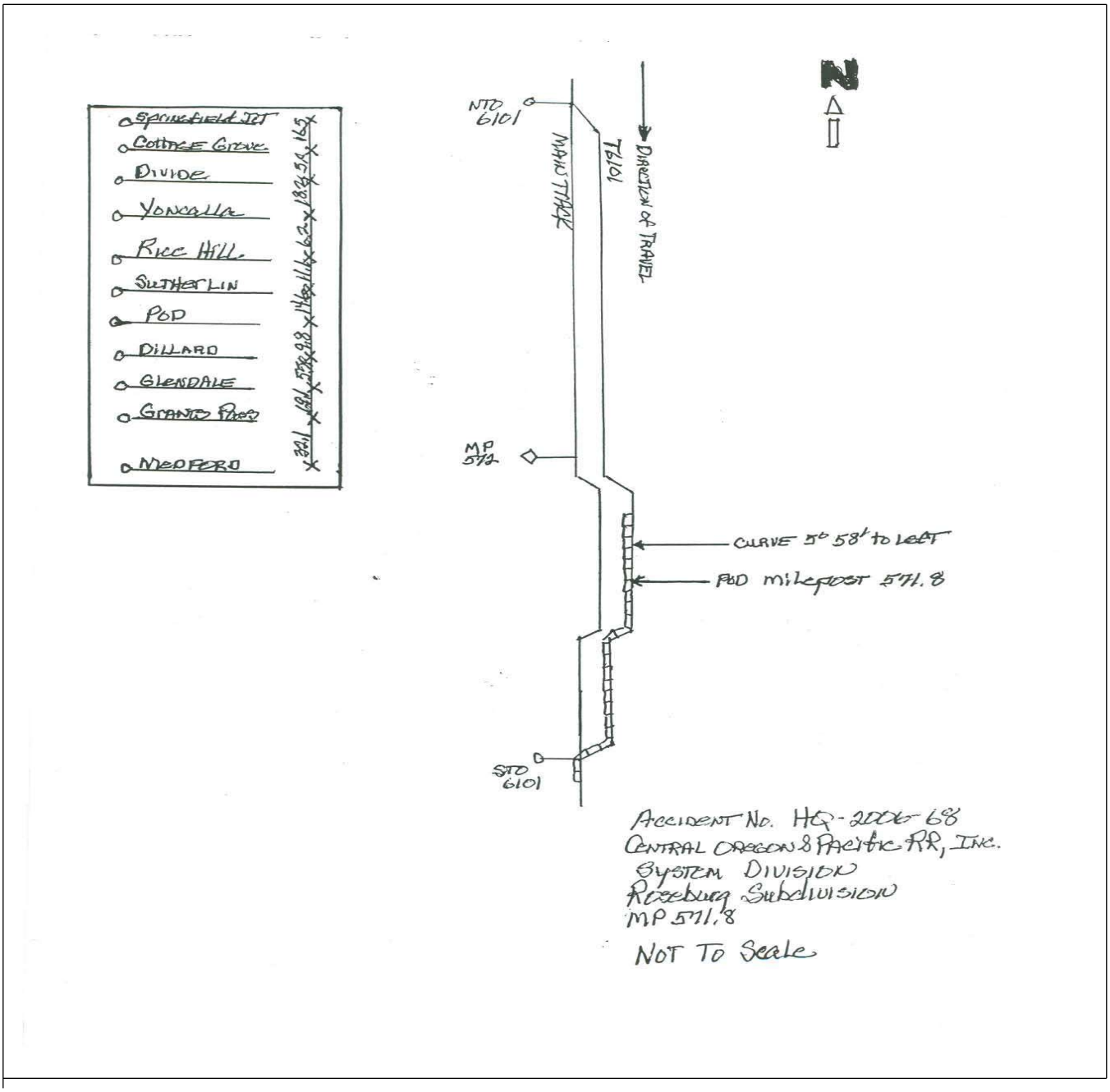
105. Locomotive Auxiliary Lights Operational? 1. Yes 2. No — Code: N/A

106. Locomotive Headlight Illuminated? 1. Yes 2. No — Code: N/A

107. Locomotive Audible Warning Sounded? 1. Yes 2. No — Code: N/A

108. DRAW A SKETCH OF ACCIDENT AREA INCLUDING ALL TRACKS, SIGNALS, SWITCHES, STRUCTURES, OBJECTS, ETC., INVOLVED.

HQ-68-2006-sketch.jpg



109. SYNOPSIS OF THE ACCIDENT

On July 27, 2006, at 2:45 p.m. (PDT), a Central Oregon & Pacific Railroad Inc.(CORP) freight train (501) derailed on the Roseburg Subdivision, Roseburg, Oregon, at milepost 571.8. The train was traveling south on yard track No.6101 at a recorded speed of 7 mph. The maximum authorized timetable track speed in the area of the accident is 10 mph.

The train consisted of five locomotives, 100 rail cars of mixed freight, 6,367 trailing tons and was 6,645 feet in length. A total of 25 cars (17 th through the 41st) derailed. There were no injuries and no release of hazardous materials. Damages reported was $152,000 ($132,000 equipment and $20,000 track).

At the time of the derailment it was daylight ,clear, and the temperature was 92° F.

The probable cause of the accident was wide gage (due to defective or missing crossties) T110.

110. NARRATIVE

Circumstances Prior to the Accident

A Central Oregon & Pacific Railroad Inc. (CORP) crew consisting of an engineer, a conductor, and a helper conductor went on duty at their home terminals on July 27, 2006. The conductor reported at Medford, Oregon, at 8:00 a.m., and operated his private vehicle to Roseburg, arriving at 11:30 a.m (PDT). The helper conductor (helper) went on duty at Roseburg at 11:15 a.m. ,and the engineer went on duty at 12 noon. All three had received more than the statutory off duty time prior to reporting for duty. The crew was assigned to operate CORP train symbol 501, from Oakland to Roseburg, Oregon, a distance of 19 miles. After arriving at Roseburg they were to place the train in the Roseburg yard on tracks T6101, T6102, T6103 and T6104.

The train consisted of five locomotives, 100 railcars (35 loads and 65 empties), 6,367 trailing tons, and was 6,645 feet in length. The train originated at Eugene, Oregon, and was operated to Oakland by a previous train crew. According to the engineer, the train had received a Class 1 air brake inspection by the previous train crew prior to departing Eugene. The conductor transported the engineer by company vehicle to Oakland milepost 589.1. The engineer boarded the train and departed Oakland at 12:50 p.m. The conductor returned to Roseburg via the company vehicle. The helper remained in Roseburg awaiting the arrival of the train.

The train approached the derailment area traveling geographically and timetable south. Timetable directions will be used throughout the report. The engineer was seated at the controls on the right (west) side of the leading locomotive. The conductor was sitting in a company vehicle at the north switch to yard track T6101, milepost 572.4. The helper was standing at the south switch to track T6104 at milepost 571.9. Both were located on the west side of the train. Upon arrival at Roseburg, the engineer operated the train onto yard track T6101.

On the trackage of the accident, trains operate on yard tracks under Yard Limit authority. The maximum authorized speed for freight trains is 10 mph as designated in the current CORP Timetable No. 10.

Approaching the accident site from the north on yard track T6101 at milepost 572.4, there is in session tangent track 795 feet in length, a curve 5-degree 58-minute to the left 208 feet to point of derailment and 1,583 feet beyond to the south turnout of 6101 onto the main track. The grade at the accident area is 0.11 percent ascending.

According to the crew, as the train approached the accident area, the trip was uneventful and the weather was daylight, clear and hot.

The Accident

As the train approached the accident site and at the time the accident occurred, the train was being operated at 7 mph. The speed was recorded by the event recorder of the second locomotive UP 5007. The engineer stated as the train was pulling through yard track 6101 and onto the main track, he suddenly felt the train pulling hard. He applied a full air brake application and the train came to a stop in about seven car lengths. When stopped, the locomotive and 18 cars were on the main track at the south end of the yard. The engineer told the conductor and the helper via radio to walk the train. The helper on the south end of the yard discovered the derailed cars in the train and advised the engineer by radio of the derailment. The engineer immediately contacted the dispatcher, and advised that the train was stopped and derailed. The crew discovered a total of 25 cars (17 th through the 41st) had derailed. The train had traveled approximately 1,583 feet after derailing before coming to a stop.

Analysis and Conclusions

This accident did not meet the criteria for 49 CFR Part 219 Subpart C Post Accident Toxicological testing and the crew was not tested.

The railroad reported damages of $152,000 ($132,000 equipment and $20,000 track).

Car JTTX 90110 was identified as the first car to derail.

Wheel flange marks on the inside base of the east rail at milepost 571.8 indicates the point of derailment.

The L-3 wheel on both the JTTX 90110 and JTTX 90047 had derailed and re-railed at the heel of the guard rail at the south turnout switch of T6101.

Lateral rail/tie plate abrasion (Tie plate movement laterally) on the crossties indicates a wide gauge rail condition.

Missing fasteners (spikes) in the area of the derailment allowed for lateral movement of tie plates.

Crosstie condition in the derailment area were impaired to the extent the crossties would not hold spikes or rail fasteners and were so deteriorated that the tie plate or base of rail could move laterally more than ½ inch relative to the crossties.

On June 30, 2006 (accident occurred on July 27), a CORP track inspector conducted a walking track inspection between milepost 569.5 to milepost 575.0. Four switch non-compliance defects were documented in the accident area. No exceptions were taken for missing fasteners, tie plate abrasion condition, or crosstie deterioration.

Geometry car and rail detector car surveys had not been conducted on the Roseburg yard tracks.

Conclusions

A CORP track inspector walked this track on June 30, 2006, but did not see or document defective crossties, missing rail fasteners or lateral rail/tie plate abrasion on track 6101 at milepost 571.8. The railroad assessed discipline to the inspector, and also sent him to training as part of their remedial action.

Missing fasteners along with lateral Rail/tie plate abrasion due to defective crossties indicate the wheel of car JTTX 90110 dropped into the inside of the rail due to wide gauge.

Probable Cause

FRA determined the probable cause to be a wide gage due to defective or missing crossties (T110).