Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2006-100

Union Pacific
Marlin, TX
December 15, 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-2006-100

1.Name of Railroad Operating Train #1: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 1206FW018
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: Union Pacific RR Co. [UP]	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: 1206FW018
4. U.S. DOT_AAR Grade Crossing Identification Number	5. Date of Accident/Incident: Month 12 / Day 15 / Year 2006	6. Time of Accident/Incident: 07:30: ☐ 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
0	N/A	N/A	0	Fort Worth

13. Nearest City/Town	14. Milepost (to nearest tenth)	15. State Abbr	15. State Code	16. County
Marlin	131.2	N/A	TX	FALLS

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
66 F		4		1		1

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
Single Main Track		4	26		1

OPERATING TRAIN #1

25. Type of Equipment Consist (single entry)	A. Spec. MoW Equip.	Code	26. Was Equipment Attended? 1. Yes 2. No	Code	27. Train Number/Symbol
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		1	1	1	RDTF WC-15

28. Speed (recorded speed, if available) R - Recorded E - Estimated: 50 MPH | Code: R

29. Trailing Tons (gross tonnage, excluding power units): 4834

30. Method(s) of Operation (enter code(s) that apply): 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): e | N/A | N/A | N/A | N/A

30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled; 1 = Remote control portable; 2 = Remote control tower; 3 = Remote control transmitter - more than one remote control transmitter: 0

31. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)
(1) First involved (derailed, struck, etc)	N/A	6	yes
(2) Causing (if mechanical cause reported)	0	0	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
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	0	0	0	0	0

35. Cars	Loade a. Freight	Loade b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	36	0	4	0	0
(2) Total Derailed	31	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
1680119	242360	T101	N/A

Number of Crew Members

40. Engineer/ Operators	41. Firemen	42. Conductors	43. Brakemen
N/A	0	1	0

Length of Time on Duty

44. Engineer/Operator	45. Conductor
Hrs 2 Mi 30	Hrs 2 Mi 30

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: 1

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

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

OPERATING TRAIN #2

52. Type of Equipment Consist (single entry)	A. Spec. MoW Equip.	Code	53. Was Equipment Attended? 1. Yes 2. No	Code	54. Train Number/Symbol
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		N/A		N/A	N/A

55. Speed (recorded speed, if available) R - Recorded E - Estimated: 0 MPH | Code: N/A

57. Method(s) of Operation (enter code(s) that apply): a. ATCS; b. Auto train control; g. Automatic block; h. Current of traffic; m.Special instructions; n. Other than main track

57a. Remotely Controlled Locomotive? 0 = Not a remotely controlled; 1 = Remote control portable

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56. Trailing Tons (gross tonnage, excluding power units)	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)	2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter
0			N/A N/A N/A N/A N/A	N/A

58. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded (yes/no)	59. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	Alcohol	Drugs
(1) First involved (derailed, struck, etc)	0	0	N/A		N/A	N/A
(2) Causing (if mechanical cause reported)	0	0	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	62. Cars	Loade a. Freight	Loade b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Train	0	0	0	0	0	(1) Total in Equipment Consist	0	0	0	0	0
(2) Total Derailed	0	0	0	0	0	(2) Total Derailed	0	0	0	0	0

63. Equipment Damage This Consist	64. Track, Signal, Way, & Structure Damage	65. Primary Cause Code	66. Contributing Cause Code
0	0	N/A	N/A

Number of Crew Members				Length of Time on Duty	
67. Engineer/ Operators	68. Firemen	69. Conductors	70. Brakemen	71. Engineer/Operator	72. Conductor
0	0	0	0	Hrs 0 Mi 0	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?	77. Was EOT Device Properly Armed?	78. Caboose Occupied by Crew?
1. Yes 2. No N/A	1. Yes 2. No N/A	1. Yes 2. No N/A

Highway User Involved

79. Type	Code
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)	N/A

80. Vehicle Speed (est. MPH at impact)	81. Direction geographical)	Code
N/A	1.North 2.South 3.East 4.West	N/A

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

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

Rail Equipment Involved

83. Equipment	Code
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)	N/A

84. Position of Car Unit in Train
N/A

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

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

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

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

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

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

93. Driver's Age	94. Driver's Gender	Code
0	1. Male 2. Female	N/A

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

96. Driver	Code
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)	N/A

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

98. View of Track Obscured by (primary obstruction)	Code
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	N/A

101. Casulties to Highway-Rail Crossing Users	Killed	Injured
	0	0

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

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

102. Highway Vehicle Property Damage (est. dollar damage)	103. Total Number of Highway-Rail Crossing Users (include driver)
0	0

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

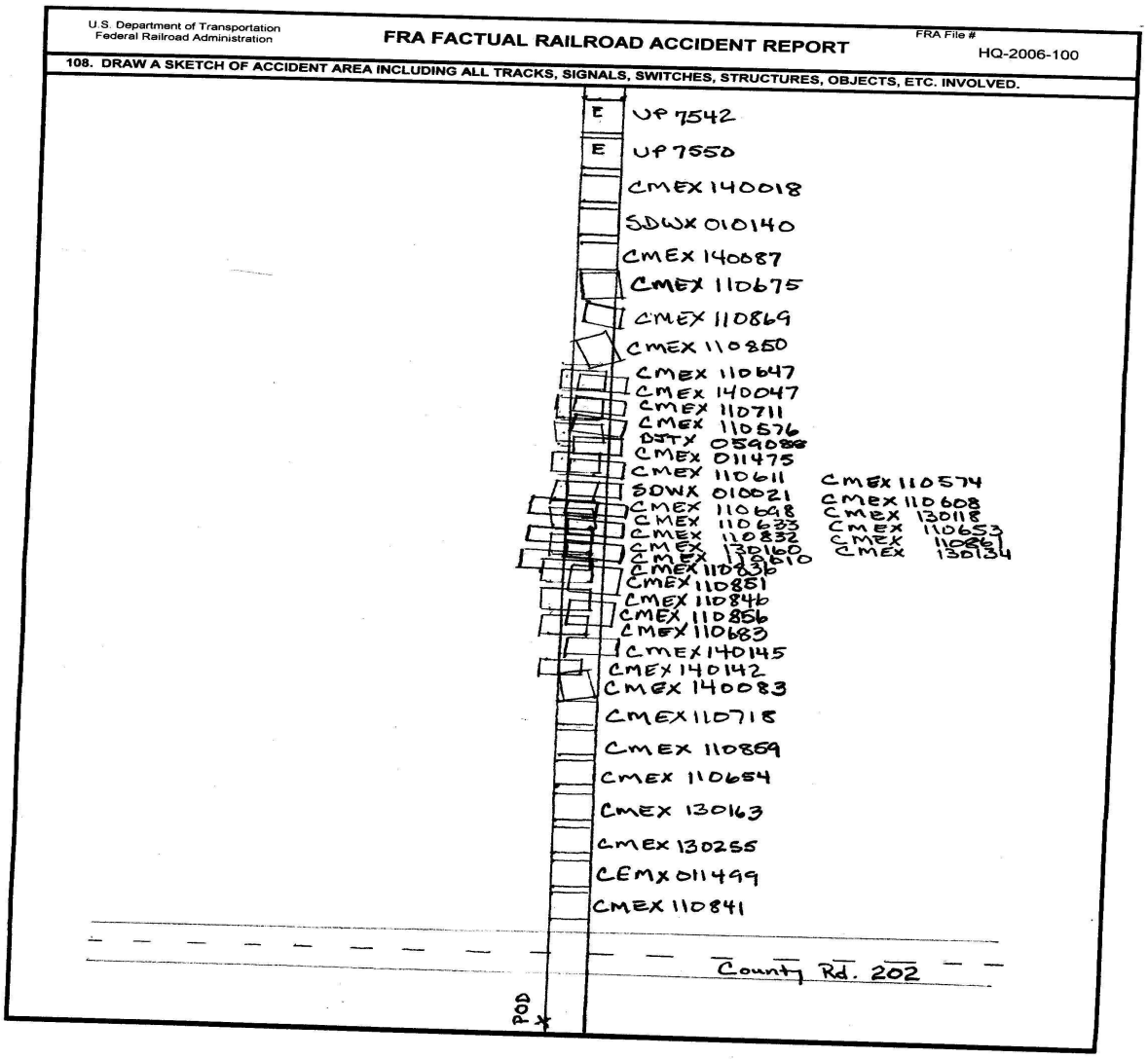
105. Locomotive Auxiliary Lights Operational?	Code
1. Yes 2. No	N/A

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

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

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

HQ-100-2006.jpg



109. SYNOPSIS OF THE ACCIDENT

On December 15, 2006, at 7:30 p.m. (CST), a northbound UP freight train, RDTFWC-15, derailed at mile post 131.2, on the main track. This location is approximately 5 mi. south of Marlin, Texas on the Fort Worth Sub-division of the Fort Worth Service Unit.

The fourth thru thirty-fourth freight cars of the forty car train behind two locomotives derailed. The thirty one cars that derailed were all hopper cars loaded with dry cement. There were no casualties, no release hazardous materials, nor were there any evacuations in the rural area. Monetary damages are estimated to be $1,922,479. Monetary cost of lading totaled $183,063. Total costs amounted to $2,105,542.

The temperature, visibility, and weather at 7:30 p.m., 0n December 15, 2006 was 66 degrees Fahrenheit, dark, with clear skies.

The cause of the derailment was irregular cross level at joints. These joints were located just south of the road crossing at milepost 131.23 . Measurements taken during the post accident investigation confirmed this cause. The track in this area is CWR and wood ties, but repair rail had been cut in at a previous date, allowing this condition to exist.

110. NARRATIVE

The crew of train RDTFWC-15, was a two person train crew and consisted of a locomotive engineer and conductor. The crew went on duty at 5 p.m.(CST), on December 15, 2006 at Hearne, Texas and got on RDTFWC-15 at Valley Jct. Both crew members had received more than the statutory off duty period prior to reporting for duty.

The RDTFWC-15, an unit powdered cement train, consisted of two locomotives, 36 loaded and four empty hopper cars. The train was 1832 feet in length and was pulling 4834 trailing tons.

As the train approached the derailment area from the south, the train was traveling 50 mph (recorded).The maximum authorized speed for freight trains is 60 mph, as designated in the current Union Pacific Railroad Timetable No. 2. The engineer was seated on the seat provided near the control stand on the east side of the lead and controlling locomotive. The conductor of the train was seated on the seat provided on the west side and directly across from the locomotive engineer. The engineer stated that he felt a rough spot, put the engine in dynamic braking mode and the train went into emergency.

In this area of the railroad, the track is 119 lb. CWR and installed in 1965. The track is tangent and the grade is level.

The railroad timetable direction of train symbol RDTFWC-15, was north. The geographic direction was northwest.
Timetable directions are used throughout this report.