Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2006-13

Union Pacific (UP)
Yukon, Oklahoma
March 7, 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-2006-13

1.Name of Railroad Operating Train #1: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 0306WH005
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: N/A	3a. Alphabetic Code: UP	3b. Railroad Accident/Incident No.: N/A
4. U.S. DOT_AAR Grade Crossing Identification Number: 596844H	5. Date of Accident/Incident: Month 03 / Day 07 / Year 2006	6. Time of Accident/Incident: 09:47: ☑ 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): 07

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

13. Nearest City/Town	14. Milepost (to nearest tenth)	15. State Abbr	15. State Code	16. County
Yukon	503.7	N/A	OK	CANADIAN

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
68 F		2		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		4	5.00		3

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	RCKL C07

28. Speed (recorded speed, if available) R - Recorded / E - Estimated: 47 MPH — Code: R

29. Trailing Tons (gross tonnage, excluding power units): 5948

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)				
j	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	1	no
(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
(1) Total in Train	2	0	0	0	0
(2) Total Derailed	2	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	48	0	0	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
1625060	329010	M303	N/A

Number of Crew Members

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

Length of Time on Duty

44. Engineer/Operator	45. Conductor
Hrs 3 Mi 17	Hrs 3 Mi 17

Casualties to:	46. Railroad Employees	47. Train Passengers	48. Other
Fatal	0	0	1
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)	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	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
N/A			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	N/A	N/A		N/A	N/A
(2) Causing (if mechanical cause reported)	0	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	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
N/A	N/A	N/A	N/A	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? (1. Yes 2. No)	77. Was EOT Device Properly Armed? (1. Yes 2. No)	78. Caboose Occupied by Crew? (1. Yes 2. No)
N/A	N/A	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)	B

80. Vehicle Speed (est. MPH at impact)	81. Direction geographical) 1.North 2.South 3.East 4.West	Code
20		2

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

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
	4

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)	1

84. Position of Car Unit in Train
1

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

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

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)	88. Signaled Crossing Warning (See instructions for codes) Code	89. Whistle Ban (1. Yes 2. No 3. Unknown) Code
Code(s): 07 N/A N/A N/A N/A N/A N/A	N/A	2

90. Location of Warning (1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach)	Code	91. Crossing Warning Interconnected with Highway Signals (1. Yes 2. No 3. Unknown)	Code	92. Crossing Illuminated by Street Lights or Special Lights (1. Yes 2. No 3. Unknown)	Code
	1		2		2

93. Driver's Age	94. Driver's Gender (1. Male 2. Female) Code	95. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train (1. Yes 2. No 3. Unknown) Code	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
50	1	2	3

97. Driver Passed Standing Highway Vehicle (1. Yes 2. No 3. Unknown)	Code	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
	2		8

101. Casulties to Highway-Rail Crossing Users	Killed	Injured
	1	0

99. Driver Was (1. Killed 2.Injured 3. Uninjured)	Code	100. Was Driver in the Vehicle? (1. Yes 2. No)	Code
	1		1

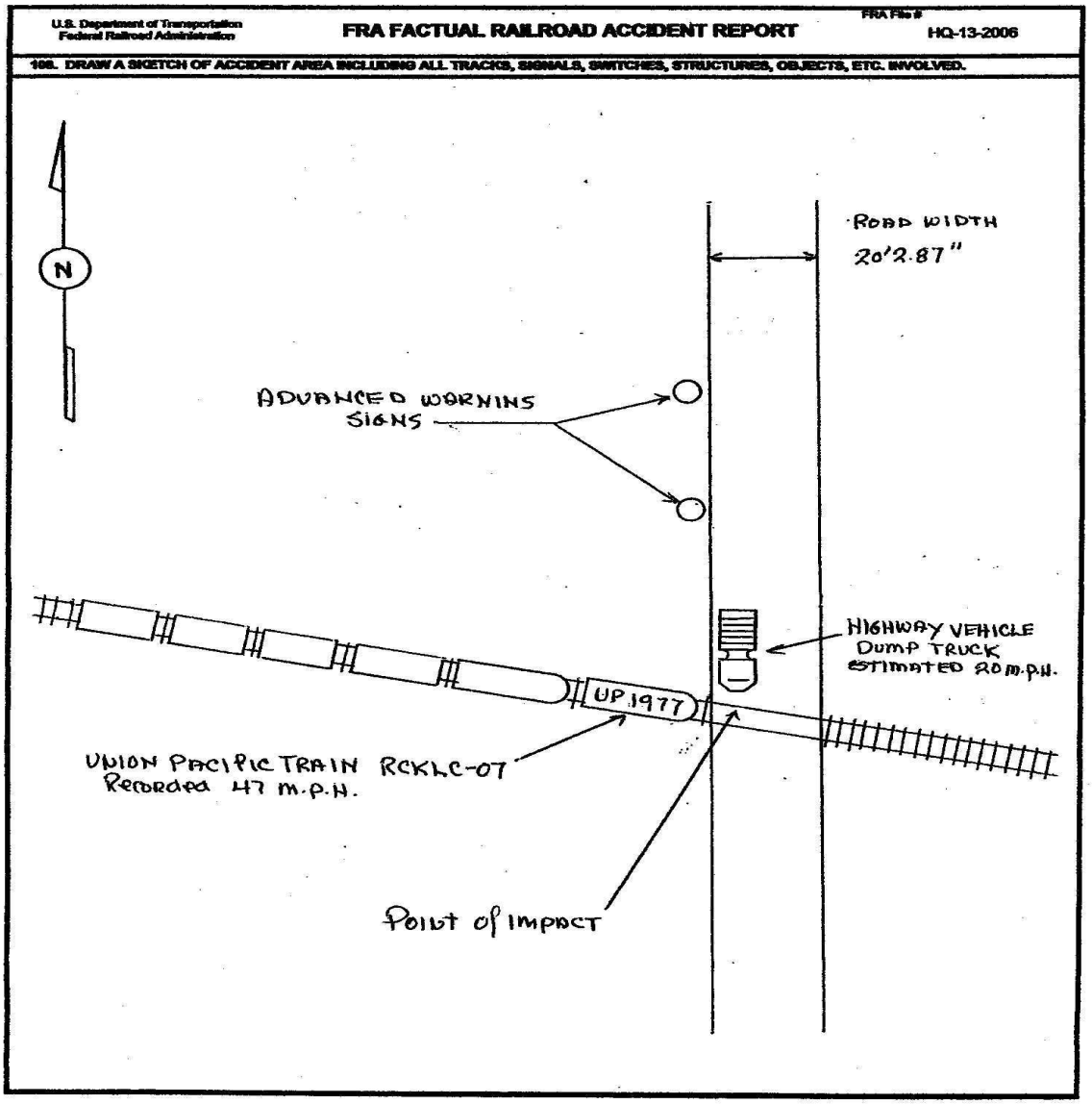
102. Highway Vehicle Property Damage (est. dollar damage)	103. Total Number of Highway-Rail Crossing Users (include driver)
25000	1

104. Locomotive Auxiliary Lights? (1. Yes 2. No)	Code	105. Locomotive Auxiliary Lights Operational? (1. Yes 2. No)	Code
	1		1

106. Locomotive Headlight Illuminated? (1. Yes 2. No)	Code	107. Locomotive Audible Warning Sounded? (1. Yes 2. No)	Code
	1		2

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

HQ-13-2006.jpg



109. SYNOPSIS OF THE ACCIDENT

An eastbound Union Pacific freight train, collided with a loaded sand truck, at a rail/highway grade crossing, on March 7, 2006, at 09:47 a.m. The accident occurred within the City of Yukon, Oklahoma, at mile post 503.7, on the Oklahoma City Subdivision, of the Dallas / Ft. Worth Area, Wichita Service Unit.

The site of the accident is located within the city limits of Yukon, Oklahoma.

The driver of the highway vehicle was fatally injured. The loaded sand truck, was completely destroyed. The three crewmen of Union Pacific Train, RKCLC07, received multiple injuries, none of them life threatening. Both of the lead and pulling locomotives were up-ended, derailed and destroyed. The head thirty one cars were also derailed.

At the time of the accident, it was daylight and clear, with strong winds out of the South at approximately 23 miles per hour. The temperature was 68 degrees fahrenheit.

The accident was caused by failure of the highway vehicle, to yield to a train, at a rail/highway crossing. According to the Oklahoma Department of Public Safety, the driver of the highway vehicle, was in violation of statute; 11-702a, of the Oklahoma Vehicle Laws, Failure to properly stop at a railroad crossing.

Total estimated monetary damages were, $1,828,085.00

Investigations and inquiries, revealed that there was not a camera, nor any related photographic equipment located on either of the locomotives for purposes filming events, of which the locomotive and or train, was involved in.

110. NARRATIVE

Circumstances Prior to the Accident

Union Pacific Train RCKLC-07

The crew, consisting of a Locomotive Engineer, Conductor and Brakeman, were called for duty at Chickasha, Oklahoma, on March 7th 2006, for 06:30 a.m., CDT. Their assignment was; Union Pacific (UP) train RCKLC-07. All crew members had received their required off duty time prior to reporting for this duty period.

Union Pacific train RCKLC-07, consisted of two locomotives, and forty eight loads of limestone rock, no empties, with 5948 trailing tons. The required air brake tests and inspections had been conducted on their train, prior to departure.

The crew received their required documentation and departed Chickasha, Oklahoma at 6:32 a.m., en route to Oklahoma City.

The entire crew was positioned on the lead and controlling Locomotive. UP 1977. The Engineer was seated on the right side of the locomotive, at the controls, operating the train. The Conductor was seated in the rear of two seats, on the left side of the locomotive, the Brakeman was seated in the front seat, also on the left side.

The train was traveling geographically eastward, on tangent and level track. The weather was clear, and windy, with good visibility. The trip had been uneventful. There are no visible sight restrictions, as would be seen from a locomotive, approaching Richland Road rail/highway crossing near Yukon, Oklahoma.

Highway Vehicle - 2002 International Dump Truck

The highway vehicle was a 2002 International dump truck, license number X90186. The gross vehicle weight was 54,000 pounds. There was one passenger in the vehicle, the driver. The vehicle was traveling geographically south, at an estimated speed of 20 mph, just prior to impact. There had been no visual confirmation that the driver attempted to stop before occupying the rail/highway crossing.

Richland road is tangent, level and has two designated directional lanes, running north and south, with a fully blacktopped surface. The rail/highway crossing is in excellent condition and is also composed of blacktop skirting, with a concrete center and rail approaches. It is equipped with crossbucks only There are double advance warning signs for the crossing, in both directions. The posted speed on Richland Road at this location is 40 mph. Approaching the crossing from the north, the view is unrestricted in either direction.

The Accident

Union Pacific Train RCKLC-07

Traveling geographically eastward and approaching mile post 503.82, the Engineer began blowing the locomotive horn, in anticipation of transversing the highway crossing at Richland Road. The speed of the train was recorded at 47 miles per hour, recorded.

As the train approached the crossing, the engineer observed the highway vehicle approaching from the North, and continued to blow the locomotive horn and ring the bell.

Approximately four seconds prior to impact, it became apparent to the Engineer, that the highway vehicle was not going to stop. Approximately 216 feet prior to occupying the crossing, the engineer applied an emergency application of the train brakes, still continuing to sound the horn and bell. The highway vehicle continued southward, occupied the crossing and was struck by Union Pacific train RCKLC-07, at 9:47a.m.

This action fatally injured the 50 year old driver of the highway vehicle, Both locomotives, and the following thirty one loaded rock cars in the train derailed, resulting in non-fatal injuries to the train crewmen.

The Engineer was medi-flighted to OU Medical Center, where he underwent extensive back surgery. The Conductor and Brakeman were also taken to OU Medical center for treatment of minor injuries and observations.

Highway Vehicle - 2002 International Dump Truck

The highway vehicle was loaded with sand, at Schwarz Redi-Mix, 1115 feet north of the rail/highway crossing. The vehicle then left the quarry, and proceeded South on Richland road. It entered the rail/highway crossing, did not yield to the on-coming Union Pacific Train RCKLC-07.

Analysis

Due to the damage to both locomotives, the only tests conducted were wheel measurements taken in conjunction with WRE Recorder Data Analysis Systems on the lead and controlling locomotive, UP 1977.

Information gleaned from this data, reflects that the crew of Union Pacific train RCKLC-07 were within the posted speed for this location and had followed required protocols and procedures prior to and at the time of impacting the highway vehicle.

There are no active warning devices at this crossing. Also, due to the fact that this is dark territory, there is not an active track signal system, The last whistle board approaching from the west is 1,320 feet from the crossing. Two southbound advanced warning signs are located at 521 and 368 feet respectively, north of the rail/highway crossing

Adequate crossing protection in Canadian County, is the responsibility of the cities and municipalities, who have geographical jurisdiction, at that location. The Union Pacific Railroad had recently petitioned the City of Yukon, to install stop signs at the rail/highway crossing, on Richland Road. The City of Yukon had not acted on the request.

The Office of the Chief Medical Examiner, Board of Medicolegal Investigations, Oklahoma City, Oklahoma, conducted post accident toxicological examinations and tests on the remains of the driver of the highway vehicle. The results were negative.

Conclusion

It is therefore concluded, that the accident, derailment and subsequent fatal injury to the driver of the highway vehicle, was caused by the driver not stopping, but occupying a rail/highway crossing and being struck by an oncoming train.

Probable Cause

The probable cause was a failure of the driver of the highway vehicle to yield to on oncoming freight train.

Contributing Factors

There were no contributing factors

Report Discrepancies HQ-13-2006

Wherein the Union Pacific's FRA Form F 6180.54, states in item number 17, the temperature was 60+ degrees ferinheight, the officially documented temperature at that location, at 09:53 a.m., was 68 degrees fahrenheit.

Therefore FRA's Factual Accident Report, should be deemed correct.