Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2005-107

Amtrak (ATK)/Union Pacific (UP)
Cisco, Utah
December 14, 2005

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-2005-107

1.Name of Railroad Operating Train #1: Amtrak [ATK]	1a. Alphabetic Code: ATK	1b. Railroad Accident/Incident No.: 089230
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.: 1205DV014
4. U.S. DOT_AAR Grade Crossing Identification Number: 255176R	5. Date of Accident/Incident: Month 12 / Day 14 / Year 2005	6. Time of Accident/Incident: 11:08: ☑ 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	Denver

13. Nearest City/Town	14. Milepost *(to nearest tenth)*	15. State Abbr	15. State Code	16. County
Cisco	508.3	N/A	UT	GRAND

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
37 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
Main Track		4	10		3

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
	2	1. Yes	1	Amtrak 6

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?
70 MPH	E	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)*	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)*: N/A

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

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	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): Y

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	1	0	0	0	0

35. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	2	9	0	0	0
(2) Total Derailed	0	0	0	0	0

36. Equipment Damage This Consist	37. Track, Signal, Way, & Structure Damage	38. Primary Cause Code	39. Contributing Cause Code
60000	8312	M302	N/A

Number of Crew Members				Length of Time on Duty	
40. Engineer/ Operators	41. Firemen	42. Conductors	43. Brakemen	44. Engineer/Operator	45. Conductor
1	N/A	2	N/A	Hrs 2 Mi 02	Hrs 8 Mi 10

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: N/A

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	1. Yes	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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FRA File # HQ-2005-107

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)*
(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	Loaded a. Freight	Loaded 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: C

80. Vehicle Speed *(est. MPH at impact)*: 10

81. Direction *(geographical)* 1.North 2.South 3.East 4.West — Code: 2

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

84. Position of Car Unit in Train: 1

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

Code(s)	07	N/A	N/A	N/A	N/A	N/A	N/A

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

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

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: 2

93. Driver's Age: 26

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

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

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: 3

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

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: 8

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

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

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

102. Highway Vehicle Property Damage *(est. dollar damage)*: 60000

103. Total Number of Highway-Rail Crossing Users *(include driver)*: 1

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

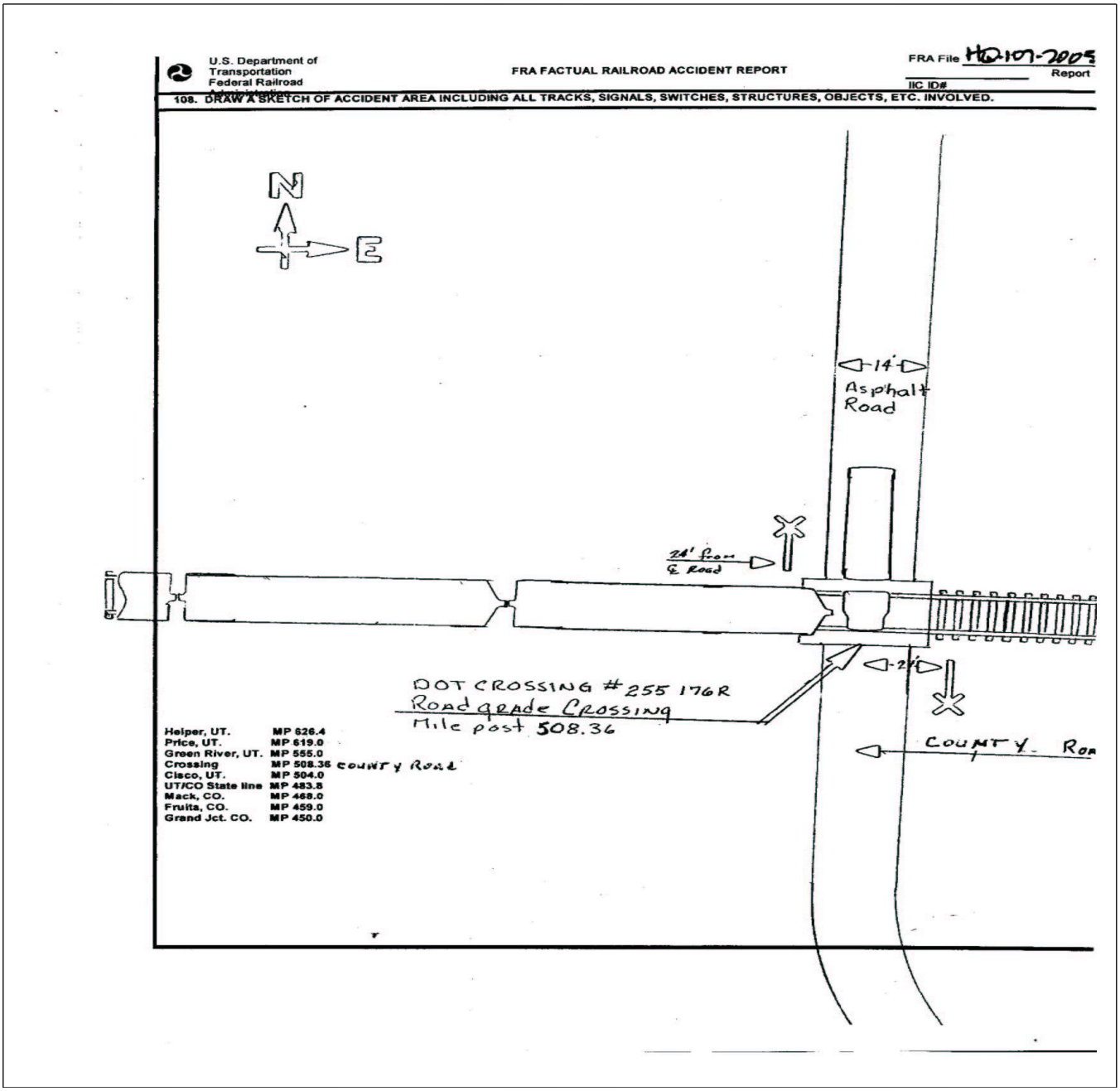
105. Locomotive Auxiliary Lights Operational? 1. Yes 2. No — Code: 1

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

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

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

HQ-107-2005.jpg



109. SYNOPSIS OF THE ACCIDENT

An eastbound Amtrak (ATK) passenger train struck a tractor/semi-trailer at a highway-rail grade crossing on December 14, 2005, at approximately 11:08 a.m. MST, fatally injuring the motor vehicle driver. The accident occurred at the County Road grade crossing, DOT inventory number 255176R, near Cisco, Utah, Grand County, milepost 508.3, on the Union Pacific (UP) Railroad, Denver Division, Green River Subdivision.
The motor vehicle driver was killed instantly. The tractor/semi-trailer sustained $60,000 in damages. Five passengers and one ATK employee were injured, received first aid at the scene and remained on the train to their destination. The collision derailed the front wheels of the lead locomotive and it sustained approximately $60,000 in damages. UP reported track damage was $8,312. The semi-trailer was carrying garbage/refuse. No hazardous materials were involved.
At the time of the accident it was daylight and clear and the temperature was 37 degrees F.
The accident was caused by the failure of the motor vehicle driver to yield to the train at the crossing.

110. NARRATIVE

The following information was obtained from an investigation that was conducted by the FRA.
Circumstances Prior to the Accident
The operating crew of eastbound Amtrak Train No. 6 consisted of an engineer and conductor. The conductor first went on duty at 3:00 a.m. MST, December 14, 2005, in Salt Lake City, UT, en route to Denver, CO. The train stopped at Helper, UT, for an engineer crew change. This engineer went on duty at 9:06 a.m. MST. The crew members received more than the statutory off duty period prior to reporting for duty.
Their assigned train consisted of two locomotives, nine passenger cars and two express/freight cars and carried 119 passengers. The trip was uneventful from Helper to the area of the accident site. The engineer was seated at the controls on the right side of the locomotive; the conductor was seated on the left side.
The UP railroad track at the accident site is single main tangent track with a slight grade. The rail is continuous welded rail (CWR), 136 lbs. The track is designated as FRA Class 4 and operated under Centralized Traffic Control (CTC) by a Union Pacific Railroad train dispatcher in Omaha, Nebraska. The maximum authorized speeds are 70 mph for passenger and 60 mph for freight trains. The track was last inspected by the UPRR track inspector on December 13, 2005. No deviations were noted in these inspections. An FRA track inspection and measurements found the trackage was within prescribed limits for Class 4 track.
County Road is a straight asphalt road, 14' in width, and is perpendicular to the track at the crossing. The grade crossing is made of concrete, 20' in length, and is equipped with cross buck warning signs. The crossing has good visibility in both directions.
The railroad timetable and geographic direction of the train are east.
The Accident
The train was being operated at an estimated speed of 70mph approaching the accident area. The train crew's view of the crossing was unobstructed. The crew stated the driver of the tractor/semi-trailer was observed traveling at a slow rate of speed south on County Road, approaching the crossing. The engineer sounded the horn to warn the driver but it did not stop. The tractor was struck by the train, splitting the tractor in two and killing the driver instantly. The train continued eastbound and for approximately one-half mile before coming to rest, derailing the front wheels on the lead locomotive.

The Grand County Sheriff's Department, Moab City Fire Department and an ambulance responded to the crash site. The tractor driver was pronounced dead at the scene and the fire department removed the body to Moab. Five passengers were injured, treated at the scene and released to continue to their destinations. One Amtrak on-board service employee was injured but refused treatment at the scene. She completed the trip to Chicago where she sought medical treatment and was away from work 11 days.

UP crews removed part of the tractor that was carried down the track. The locomotive was re-railed and the train moved to a siding in Cisco where the lead locomotive was set out due to the damaged wheels. The train continued east after a 5 1/2 hour delay.

Analysis and Conclusions

Analysis

The vehicle operator was a 26-year old male with a valid Class A Commercial Drivers License (CDL). He was a relatively experienced driver with no known medical problems.

The railroad has a whistle post approximately one-quarter of a mile west of the crossing. Cross bucks are located 24' from the centerline of the road on the southbound side and 21' from the centerline of the road on the northbound side.

The locomotive sustained approximately $60,000 in damages. Track damage was reported at $8,312. The tractor/semi-trailer was destroyed; damage was also estimated at $60,000. There was no FRA post-accident toxicological tests taken on the crew. Post-accident toxicological tests of the decedent are unknown.

There were no mechanical defects on the lead locomotive's headlights, auxiliary lights, whistle or bell.

There were no defects in train handling, mechanical or track that played a contributing role in the accident.

Conclusions

The railroad was in full compliance with its own and all applicable Federal standards. There was no eyewitness information that contradicted the statements of the crew and no other information was available to determine why the motor vehicle failed to stop at the crossing.

Probable Cause

The accident was caused by the failure of the motor vehicle driver to yield to the train at the crossing.