Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2008-36

Union Pacific Railroad Company (UP)
Encinal, TX
March 27, 2008

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-2008-36

1.Name of Railroad Operating Train #1: Union Pacific RR Co. [UP]	1a. Alphabetic Code: UP	1b. Railroad Accident/Incident No.: 0308SA019
2.Name of Railroad Operating Train #2: N/A	2a. Alphabetic Code: N/A	2b. Railroad Accident/Incident No.: N/A
3.Name of Railroad Operating Train #3: N/A	3a. Alphabetic Code: N/A	3b. Railroad Accident/Incident No.: N/A
4.Name of Railroad Responsible for Track Maintenance: Union Pacific RR Co. [UP]	4a. Alphabetic Code: UP	4b. Railroad Accident/Incident No.: 0308SA019
5. U.S. DOT_AAR Grade Crossing Identification Number: 446675K	6. Date of Accident/Incident: Month 03 Day 27 Year 2008	7. Time of Accident/Incident: 03:47: ☐ AM ☑ PM

8. 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)* — Code: 07

9. Cars Carrying HAZMAT	10. HAZMAT Cars Damaged/Derailed	11. Cars Releasing HAZMAT	12. People Evacuated	13. Division
0	N/A	N/A	0	San Antonio

14. Nearest City/Town	15. Milepost *(to nearest tenth)*	16. State Abbr	16. State Code	17. County
Encinal	380.65	N/A	TX	WEBB

18. Temperature (F) *(specify if minus)*	19. Visibility *(single entry)* 1. Dawn 2. Day 3.Dusk 4.Dark — Code	20. Weather (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5.Sleet 6.Snow — Code	21. Type of Track 1. Main 2. Yard 3. Siding 4. Industry — Code
95 F	2	1	1

22. Track Name/Number	23. FRA Track Class (1-9, X) — Code	24. Annual Track Density *(gross tons in millions)*	25. Time Table Direction 1. North 2. South 3. East 4. West — Code
Single Main Track	4	35	1

OPERATING TRAIN #1

26. 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	27. Was Equipment Attended? 1. Yes 2. No — Code	28. Train Number/Symbol
1	1	AMXASB27N

29. Speed *(recorded speed, if available)* R - Recorded; E - Estimated: 49 MPH — Code: R

30. Trailing Tons *(gross tonnage, excluding power units)*: 4059

31. 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

31a. 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

32. Principal Car/Unit	a. Initial and Number	b. Position in Train	c. Loaded *(yes/no)*
(1) First involved *(derailed, struck, etc)*	CN5750	0	N/A
(2) Causing *(if mechanical cause reported)*	0	0	N/A

33. 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

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

35. 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

36. Cars	Loaded a. Freight	Loaded b. Pass.	Empty c. Freight	Empty d. Pass.	e. Caboose
(1) Total in Equipment Consist	50	0	11	0	0
(2) Total Derailed	0	0	0	0	0

37. Equipment Damage — This Consist: $400.00

38. Track, Signal, Way, & Structure Damage: $0.00

39. Primary Cause Code: M302

40. Contributing Cause Code: N/A

Number of Crew Members

41. Engineer/ Operators	42. Firemen	43. Conductors	44. Brakemen
1	0	1	0

Length of Time on Duty

45. Engineer/Operator: Hrs 3 Mi 17

46. Conductor: Hrs 3 Mi 17

Casualties to:	47. Railroad Employees	48. Train Passengers	49. Other
Fatal	0	0	1
Nonfatal	0	0	1

50. EOT Device? 1. Yes 2. No: 1

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

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

OPERATING TRAIN #2

53. 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	54. Was Equipment Attended? 1. Yes 2. No — Code	55. Train Number/Symbol
N/A	N/A	N/A

56. Speed *(recorded speed, if available)* R - Recorded; E - Estimated: 0 MPH — Code: N/A

58. 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

58a. Remotely Controlled Locomotive? 0 = Not a remotely controlled; 1 = Remote control portable

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57. 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

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

60. 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

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

62. 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

63. 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

64. Equipment Damage This Consist: $0.00

65. Track, Signal, Way, & Structure Damage: $0.00

66. Primary Cause Code: N/A

67. Contributing Cause Code: N/A

Number of Crew Members

68. Engineer/ Operators	69. Firemen	70. Conductors	71. Brakemen
0	0	0	0

Length of Time on Duty

72. Engineer/Operator Hrs 0 Mi 0

73. Conductor Hrs 0 Mi 0

Casualties to:	74. Railroad Employees	75. Train Passengers	76. Other
Fatal	0	0	0
Nonfatal	0	0	0

77. EOT Device? 1. Yes 2. No N/A

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

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

OPERATING TRAIN #3

80. 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: N/A

81. Was Equipment Attended? 1. Yes 2. No Code: N/A

82. Train Number/Symbol: N/A

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

84. Trailing Tons *(gross tonnage, excluding power units)* N/A

85. 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): N/A N/A N/A N/A N/A

85a. 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: N/A

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

87. 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

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

89. 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

90. 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

91. Equipment Damage This Consist: $0.00

92. Track, Signal, Way, & Structure Damage: $0.00

93. Primary Cause Code: N/A

94. Contributing Cause Code: N/A

Number of Crew Members

95. Engineer/ Operators	96. Firemen	97. Conductors	98. Brakemen
0	0	0	0

Length of Time on Duty

99. Engineer/Operator Hrs 0 Mi 0

100. Conductor Hrs 0 Mi 0

Casualties to:	101. Railroad Employees	102. Train	103. Other
Fatal	0	0	0
Nonfatal	0	0	0

104. EOT 1. Yes 2. No N/A

105. Was EOT Device Properly 1. Yes 2. No N/A

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

Highway User Involved

107. 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: J

108. Vehicle Speed *(est. MPH at impact)* 3

109. *geographical)* 1.North 2.South 3.East 4.West Code: 3

Rail Equipment Involved

111. 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

112. Position of Car Unit in 1

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110. Position	Code	113. Circumstance	Code
1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossing 4. Trapped	3	1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User	1
114a. 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	4	114b. Was there a hazardous materials release 1. Highway User 2. Rail Equipment 3. Both 4. Neither	4

114c. State here the name and quantity of the hazardous materials released, if any.
N/A

115. Type 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	116. Signaled Crossing Code *(See instructions for codes)*	117. Whistle Code 1. Yes 2. No 3. Unknown
Code(s)	08 N/A N/A N/A N/A N/A N/A				N/A	2

118. Location of Warning Code 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach	119. Crossing Warning with Highway Signals Code 1. Yes 2. No 3. Unknown	120. Crossing Illuminated by Street Lights or Special Lights Code 1. Yes 2. No 3. Unknown
1	2	2

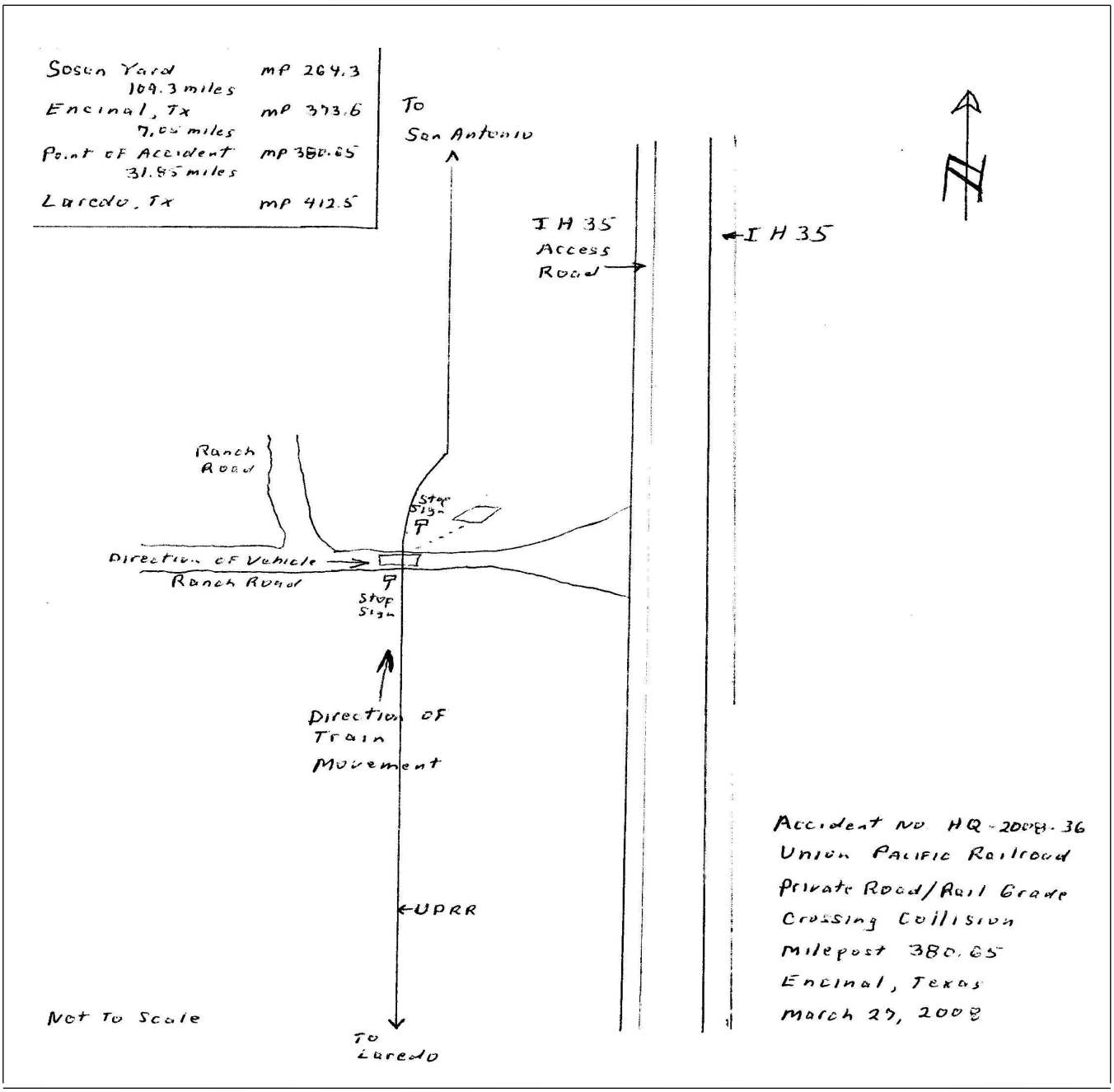
121. Age	122. Driver's Gender Code 1. Male 2. Female	123. Driver Drove Behind or in Front of and Struck or was Struck by Second Train Code 1. Yes 2. No 3. Unknown	124. Driver Code 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop 4. Stopped on Crossing 5. Other *(specify in narrative)*
31	2	2	3

125. Driver Passed Highway Vehicle Code 1. Yes 2. No 3. Unknown	126. 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
2	8

Casualties to:	Killed	Injured	127. Driver Code 1. Killed 2.Injured 3. Uninjured	128. Was Driver in the Vehicle? Code 1. Yes 2. No
			2	1
129. Highway-Rail Crossing Users	1	1	130. Highway Vehicle Property Damage *(est. dollar damage)* 9000	131. Total Number of Highway-Rail Crossing Users *(include driver)* 2

132. Locomotive Auxiliary Lights? Code 1. Yes 2. No	133. Locomotive Auxiliary Lights Operational? Code 1. Yes 2. No
1	1
134. Locomotive Headlight Illuminated? Code 1. Yes 2. No	135. Locomotive Audible Warning Sounded? Code 1. Yes 2. No
1	1

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



137. SYNOPSIS OF THE ACCIDENT

A northbound UP freight train collided with a sports utility vehicle at a private road-rail grade crossing on March 27, 2008, at 3:47 p.m., CDT. The accident occurred near Encinal, Texas at UP milepost 380.65 on the San Antonio Service Unit, Laredo Subdivision.

The passenger was killed and the driver was seriously injured. There were no injuries to the train crew. The leading locomotive sustained minor damages of about $ 400.00, and there was no derailment.

At the time of the accident it was daylight, sunny and clear. The temperature was 95 degrees F.

The accident was caused by failure of the motor vehicle driver to yield to the train. According to the Texas Department of Public Safety, the driver failed to stop for the train.

138. NARRATIVE

CIRCUMSTANCES PRIOR TO THE ACCIDENT

The crew of UP Freight Train AMXASB-21 north included a locomotive engineer and a conductor. The crew went on duty at 12:30 p.m. CDT on March 27, 2008 in Laredo, Texas. This was the away from home terminal for both crew members and both received more than the required statutory off duty rest period prior to reporting for duty.

The assigned train consisted of two locomotives, 50 loaded and two empty rail cars. It was 5,509 feet long, and weighed 4,059 tons. The train was scheduled to travel from Laredo to San Antonio, Texas. The train crew performed an initial terminal train air brake test and departed the R.G. Run-around Track in Laredo, TX at about 1:30 p.m.

As the northbound freight train approached the accident area, the locomotive engineer was seated at the controls on the east side of the leading locomotive and the conductor was seated on the west side of the same locomotive.

The vehicle was a 2007 Dodge Durango with a female driver and an adult male passenger. They approached the highway-rail grade crossing from the west at an estimated 2-3 mph.

In this area of the railroad there is tangent track for 3 3/4 miles to the point of the accident, a 30 minute curve to the right for 450 feet and tangent track for 13 miles beyond. From the south there is a 0.29 percent ascending grade at the accident location. On the west side of the railroad a portion of the private road goes straight for approximately one mile and another portion of the road makes an almost ninety degrees turn to the right just west of the railroad crossing. The vehicle was traveling east from the straight side portion of the private road. The grade is practically level.

The railroad timetable and the geographical direction of the train are north.

THE ACCIDENT

UP TRAIN AMXASB-21:

UP Freight Train AMXASB-21 was being operated NORTHWARD at 49 mph approaching the accident area. The train crew first observed the vehicle about 1000 feet in advance of the crossing. The train crew saw that the vehicle was advancing from west to east at a slow speed and thought the vehicle was going to stop. When the engineer saw the vehicle continue rolling, he continued sounding the train horn and as he became aware of the impending collision, he initiated an emergency train air brake application.

The maximum authorized speed for freight trains on this portion of the railroad is 50 mph as designated in the current Union Pacific Timetable No. 3 for the San Antonio Area.

HIGHWAY VEHICLE:

The vehicle was a 2007 Dodge Durango Sports Utility Vehicle. It was traveling west to east on the private road from San Roman Ranch toward Interstate Highway 35. According to the locomotive engineer, conductor, and a border patrol agent who witnessed the collision, the vehicle was rolling slowly and did not stop before entering the crossing.

The train struck the passenger side of the vehicle near the rear door. The vehicle flipped over as a result of the impact and came to a rest 16 feet east of the track and 90 feet north of the crossing. The train came to a stop about 2,300 feet north of the crossing. The vehicle passenger was ejected from the vehicle however the driver was still restrained in the vehicle driver's seat.

After the train stopped, the engineer stayed in the locomotive and the conductor walked back to the crossing to render assistance and await the arrival of emergency response personnel.

A U.S. Border Patrol vehicle was traveling on a ranch road from east to west on the east side of Interstate Highway 35. The vehicle was occupied by two Border Patrol agents who reportedly witnessed the accident. As soon as they saw the collision, they turned on their emergency lights and crossed highway 1-35 to the accident site. One of the agents contacted his dispatcher to report the accident and to request emergency medical assistance. Both Border Patrol agents stayed at the accident site and rendered help.

The Laredo Fire Department arrived at the scene at 4:15 p.m. The Texas Department of Public Safety Officer arrived at the scene at 4:26 p.m. and a medical examiner arrived at the scene at 4:32 p.m. The vehicle driver was taken to Doctor's Hospital in Laredo with incapacitating injuries and the vehicle passenger who was ejected, was pronounced dead at the scene and transported to the Webb County Morgue in Laredo.

A UP Manager of Train Operations (MTO) arrived at the scene at about 4:30 p.m. after the driver had already been removed from the vehicle and was en route to the hospital. He ascertained the condition of the train and the track structure. There was no derailment, no hazardous materials involved, and there was only minor damage to the lead locomotive. The uninjured engineer and the conductor were relieved from duty and another train crew was called to operate the train onto San Antonio. The train departed from the accident scene at approximately 8:00 p.m.

ANALYSIS AND CONCLUSIONS:

ANALYSIS - TOXICOLOGICAL TEST:

The driver of the vehicle was a 31-year-old female. There was no alcohol or drug specimen taken from the driver. There was no evidence of intoxication at the accident site. There were no toxicological tests performed on the train crew.

CONCLUSION:

There was no evidence that intoxication was a factor.

ANALYSIS - HIGHWAY-RAIL GRADE CROSSING:

The highway-rail crossing at grade is a private road that goes to the San Roman Ranch. The crossing is equipped with stop signs on both sides of the crossing. This private road diverges from an access road on the west side of Interstate Highway 35. The railroad crossing is a sixteen-foot wide timber crossing that is located 66 feet west of the access road. There are no advance warning signs on this road. After the ranch road crosses the railroad it splits. One portion of the road takes a 90-degree turn to the right and the other portion continues practically straight after it crosses the railroad. There is a gate and a cattle guard located on the straight side portion of the road located 45 feet west of the railroad crossing. The stop signs located on each side of the crossing are both visible. When stopped at the stop sign a vehicle driver has a clear view of an approaching train.

The train crew's engineer and conductor both stated that the engineer began sounding the train horn when the train crew first observed the vehicle approaching the crossing. They estimated the train was about 1000 feet from the crossing. Both U.S. Border Patrol agents said they heard the train sounding the horn for a considerable distance prior to the collision.

CONCLUSION:

The crossing is in relatively good condition and has stop signs which are clearly visible. The view of an approaching train is visible and unrestrictive when a vehicle is stopped at the stop sign.

ANALYSIS - LOCOMOTIVE SAFETY DEVICES:

The leading locomotive was equipped with a headlight, the auxiliary lights, and the audible warning device required by Federal regulations. Post accident testing performed by the railroad at the accident site showed these devices functioned as intended. The auxiliary lights were damaged on impact.

CONCLUSION:

The locomotive safety devices were in full compliance with Federal requirements.

ANALYSIS - LOCOMOTIVE ENGINEER OPERATING PERFORMANCE:

The leading locomotive was equipped with a speed indicator and an event recorder, as required. The relevant event recorder data was downloaded by the UP MTO on the second locomotive at the accident site after UP railroad officials were unable to download the event recorder data from the lead locomotive because it was a Canadian National (CN) locomotive and the software was not compatible with UP equipment. The event recorder data from the lead locomotive was downloaded on April 3 at Sosan Yard in San Antonio in presence of UP managers after a representative from the CN railroad was flown to San Antonio to perform the download.

CONCLUSION:

The locomotive engineer was in compliance with all applicable railroad operating and train handling requirements and FRA regulations.

ANALYSIS:

FRA obtained fatigue related information for the 10-day period preceding this incident including the 10-day work history (on duty/off duty cycles) for all of the UP employees involved.

CONCLUSION:

Upon analysis of that information FRA concluded that fatigue was not probable for any of the employees.

OVERALL CONCLUSIONS

The railroad was in full compliance with its own rules and all applicable Federal standards. The two train crew members and the two U.S. Border Patrol agents were witnesses to the accident and they had no information

that could be used to determine why the vehicle failed to stop at the crossing.

PROBABLE CAUSE AND CONTRIBUTING FACTORS

The accident occurred because the driver of the vehicle failed to stop at the private highway-rail grade crossing and yield to the oncoming freight train.