

Federal Railroad Administration Office of Safety Headquarters Assigned Accident Investigation Report HQ-2006-11

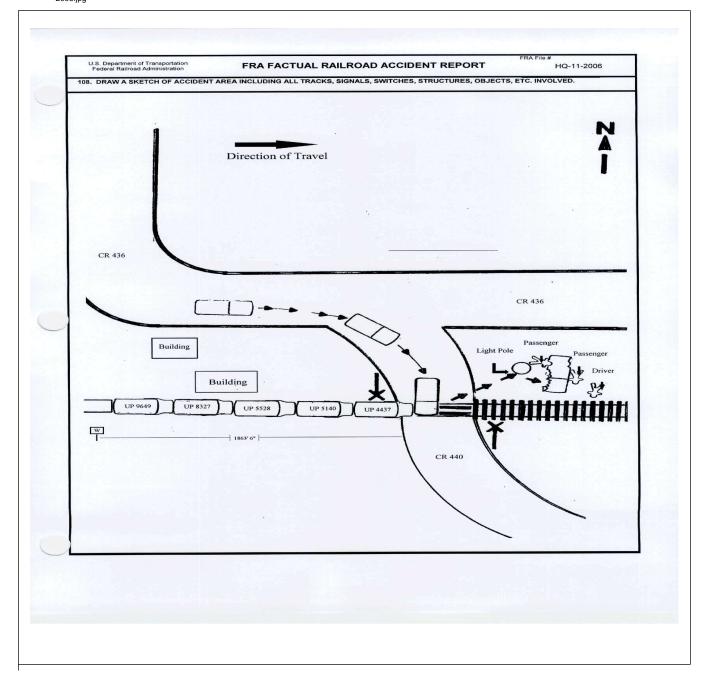
> Union Pacific (UP) Ranger, Texas February 11, 2006

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       FRA FACTUAL RAILROAD ACCIDENT REPORT       FRA File # HQ-2006-11         FEDERAL RAILROAD ADMINISTRATION       FRA FACTUAL RAILROAD ACCIDENT REPORT       FRA File # HQ-2006-11																			
1.Name of Railroad O	ru. ruphubette code					1b. 1	b. Railroad Accident/Incident No.												
Union Pacific RR C 2.Name of Railroad O	2a.	UP 2a. Alphabetic Code					0206FW021 2b. Railroad Accident/Incident												
N/A					N/A														
3.Name of Railroad Re	3a.	Alphabetic	3b. 1	3b. Railroad Accident/Incident No.															
N/A 4. U.S. DOT AAR Gr	5 5	Date of Acc	6 7		N/A	noid	ant												
	5. L	Date of Acc Month	0.1	5. Time of Accident/Incident															
<b>7 7 6 1 1 1</b>		1.5.1			839260P				02 16 2006					01:29: AM V PM					
<ol> <li>Type of Accident/In (single entry in cod)</li> </ol>		1. Derail 2. Head of		lision	4. Side collision sion 5. Raking collision				Hwy-rail o RR grade	-		detonation 13. Other rupture (describe in							
(single end) in cou	0000	3. Rear e			5. Ruking comston				9. Obstruction12. Other impa					narrative)					
8. Cars Carrying	rs						11. Pe				12. Division								
HAZMAT 10	ZMAT 10 Damaged/Deraile			ed	1 0 HAZMAT				0 Evacuated					0	Fort Worth			th	
13. Nearest City/Town						14. Mile	•			15. State	5. State Abbr Code			. County					
Olden							nearest te		347.3		N/A TX				EASTLAND				
17. Temperature (F) 18. Visibility				gle entry)	Code	19. W		ί U	e entry)	• • • •							Code		
	(specify if minus) 1. Dawn 87 F 2. Day				Dusk Dark	2		. Clea							Main 3. Siding Yard 4. Industry			1	
21. Track Name/Number						22. FRA	Track		Code	23. Ann	. Annual Track Density			24. Time Tab			ction	Code	
Single				le Mai	n	Class (1-9, X) (gross tons i millions)							1. North 3. East					3	
							OPER	ATI	NG TRA		,								
25. Type of Equipmen	nt 1	. Freight tra	ain	4. W	ork train 7.	Yard/swi			Spec. Mo		Code	26. Wa	s Equip	oment (	Code	27. 1	Frain Nu	nber/Symbol	
Consist (single en							ended?												
3. Commuter train       6. Cut of cars       9. Maint./inspect.car       1       1. Yes       2. No       1       ZLAM         28. Speed (recorded speed, if available)       Code       30. Method(s) of Operation       (enter code(s) that apply)       30a. Remotely Controlled Locomotive?																			
28. Speed (recorded speed, if available)       Code       30. Method(s) of Operation (enter code(s) that apply)       30a. Remotely Controlled Locor         R - Recorded       a. ATCS       g. Automatic block       m.Special instructions       0 = Not a2eShowthy do Westled												mouve:							
E - Estimated 55 MPH R b. Auto train control h. Curren										n. Other				1 = Remo	ote cont	rol po	ortable		
29. Trailing Tons			rain orders nt control		2 = Remote control tower 3 = Remote control														
excluding power	. Traffic	k. Direct traffic con				- (Specify in narrative)					transmitter - more than one								
		412	1	f	. Interlocking	g 1.	Yard lin	nits		e 1	N/A N	I/A N/A	N/A	remote	control	transi	mitter	0	
31. Principal Car/Unit		a. Initial	and N	umber	b. Positio	on in Trair	n c. l	Loade	ed(yes/no)					ed for drug	-	l use	,		
(1) First involved (derailed, struck, etc) N/A					1				N/A enter the numb the appropriate					positive i	n	F	Alcohol	Drugs	
(2) Causing (if mec		N/A				N/A 33. Was this consist					ing passen	gers? (	/N)	N/A	N/A				
cause reported)		N/A Aid Train Rear E			۲					1	Loade   ]			Empty					
34. Locomotive Units			ь. м	Mid ' anual	Frain c. Remote			mote	35. Cars	8		a.	Lo Freight		c. Frei	-	oty d. Pass.	e. Caboose	
(1) Total in Train	(1) Total in Train				0 0		0		(1) Total	in Equip	n Equipment Consist		88	0	0		0	0	
(2) Total Derailed	1	0		0	0	0	0		(2) Total	Derailed			0	0	0		0	0	
	6. Equipment Damage		 		ack, Signal, V		0		38. Primary Cause								-	0	
This Consist		Structure Da			Code	2	39. Contributing Cause Code N/A												
Number of Crew Members									Length of Time on Duty										
40. Engineer/ Operators	Operators			42. C	42. Conductors 43. Brakeme				44. Engineer/Operator					45. Con	onductor Hrs 3 Mi			Mi 29	
N/A					N/A							3 Mi 29							
Casualties to:	46. Railı	road Emplo	oyees	47. Tra	7. Train Passengers 48. Other				49. EOT	l	50. Was EOT Device Properly Armed? 1. Yes 2. No 1								
Fatal		0			0		0		1. Yes         2. No           51. Caboose Occupied by 0					1.105 2.100					
Nonfatal		N/A			0		0		1. Yes			ciew.	2. No					N/A	
OPERATING TRAIN #2																			
52. Type of Equipment 1. Freight train 4. Work train 7. Yard/switching A. Spec. MoW Equip. Code 53. Was Equipment Code 54. Train Number/Symbol																			
Consist (single entry) 2. Passenger train 3. Commuter train					5				1				ended?					A	
55. Speed (recorded s	3. Commuter train     6. Cut of cars     9. Maint./inspect.car     N/A     1. Yes     2. No     N/A       55. Speed (recorded speed, if available)     Code     57. Method(s) of Operation (enter code(s) that apply)     57a. Remotely Controlled Locomotive?																		
R - Recorded a. ATCS g. Aut									tic block m.Special instructions $0 = Not$						a remotely controlled				
E - EstimatedMPHN/AN/Ag. Automate blockn. Other than main trackIB. Auto train controlh. Current of trafficn. Other than main track1 = Remote control portable																			

DEPARTMEN FEDERAL RAI					FRA FA	ACTUAI	LRAILR	OAD AC	CIE	DENT I	REPO	ORT	F	RA File #	<u>HQ-200</u>	<u>5-11</u>	
56. Trailing Tons (gross tonnage, excluding power units)					. Auto trair . Cab . Traffic	ain orders o. Positive train control t control p. Other (Specify in narrative) c control					2 = Remo 3 = Remo transmit remote c						
N/A					Interlocking	,	ard limits		N/A	N/A N	N/A	N/A N/A	Temote e	N/A			
58. Principal Car/Unit a. Initial and Nu						on in Train	c. Load	led(yes/no)	59. If railroad employee(s) tested for drug/alcoh- enter the number that were positive in						e, Alcohol	D	
(1) First involved (derailed, struck, etc) 0						N/A		N/A		the appro			positive	Drugs N/A			
(2) Causing (if mechanical 0						N/A		N/A	the appropriate box.         N/A           60. Was this consist transporting passengers? (Y/N)         60.							N/A	
cause reported)     61. Locomotive Units     a. Head				Train		r End	62. Cars										
(1) Total in Tr	rain			Manual 0	1anual c. Remote		c. Remote	(1) Total in Equipment Consist			a. Freight	b. Pass.	c. Freight	d. Pass.	e. Caboose		
(2) Total Dera	ailed		0		0	0	0	(2) Total I		verailed		0	0	0	0	0	
					ack, Signal,		0	65. Primar Code	y Cau	ise	N//	\	66. Contr Code	ibuting Ca	use	N/A	
This Consist 0 & Structure Dama Number of Crew Members								Code N/A Code N/A Length of Time on Duty									
67. Engineer/		Firemen		69. Co	onductors	70. Bra	kemen	71. Engineer/Operator 72. Conductor									
Operators N	7	N/A			N/A	1	N/A		Hrs	0	Mi	0		Hrs	0	Mi 0	
Casualties to:	73. Ra	ailroad E	Employee	s 74. Tra	in Passenger	rs 75. Othe	er	76. EOT Device? 1. Yes 2. No   N/A					77. Was 1	Armed?			
Fatal		0			0		0	78. Caboo					1.	N/A			
Nonfatal		0			0		0		1. Yes 2. No								
				Rail Equipment Involved													
79. Type C. Truck-Trailer. F. Bus J. Other Motor Vehicle								Code 83. Equipment 3.Train (standing) 6.Light Loco(s) (moving)								Code	
A. Auto D. Pick B. Truck E. Van	narrative)	1.Train(units pulling)         4.Car(s)(moving)         7.Light(s) (standing)           D         2.Train(units pushing)         5.Car(s)(standing)         8.Other (specify in narrative)								1							
80. Vehicle Speed	cal)	Code	Code 84. Position of Car Unit in Train														
(est. MPH at	4.West	2	1														
82. Position	Crossing	Code 85. Circumstance 1. Rail Equipment Struck Highway User									Code						
1.Stalled on Crossing 2.Stopped on Crossing 3.Moving Over Crossin 4. Trapped							3				-	ighway Use	er			1	
86a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?							Code	86b. Was t	here a	a hazardo	us mat	erials releas	e by			Code	
In the Impact 1. Highway Use		4. Neither		2	1. High	way U	Jser 2.	Rail E	quipment	3. Both	4. Neither	r	4				
86c. State here the						leased, if a											
87. Type of 1.0	Gates		.Wig Wa		7.Cross	hualra 10	N/A		00 0	ionalad C	<b>Incodin</b>	a Wannin a	Cada	90 Whia	tla Dan	Cada	
Crossing 2.0		Flagged by Other (spec			-		g Warning for codes)	Code	89. Whis 1. Ye	s	Code						
Warning 3.Standard FLS 6.Audible					9.Watch		None						1	2. No 3. Un	known		
	07	N/A		//A	N/A Code	N/A	N/A	N/A Interconnected Code 92. Crossing Illuminated by Street						2			
<ol> <li>90. Location of Wa 1. Both Sides</li> </ol>		ig warning Tighway Sig		Code		Lights or Sp		-		Code							
2. Side of Veh		Yes No		T			1. Yes 2. No										
3. Opposite Side of Vehicle Approach					1	3.			2		3. Unkn	nown					
93. Driver's 94 Age	Gender	Code		iver Drove H d Struck or v								e Gate 2	Code				
Age 1. Male 2. Female 1						3. Unknown									4		
97. Driver Passed Standing Code 98. View of Track Obscured by						cured by (	(primary obstruction)									Code	
Highway Vehicle         1. Permanent Structure         3. Passing Train         5. Vegetation           1. Yes         2. No         3. Unknown         2         2. Standing Railroad Equipment         4. Topography         6. Highway Vetation												. Other (s . Not obstru	pecify in n	arrative)		8	
101. Casulties to Highway-Rail 99. Dri															Code		
Crossing Users Killed					Injured		2.Injured 3.	-	-							1	
							hway Vehicle Property Damage dollar damage) 1500 103. Total Number of Highway-Rail C (include driver) 4							Rail Cross 4	ng Users		
104. Locomotive A	Auxiliary I	_ights?		I		(u	Code		notive	e Auxilia	ry Ligł	nts Operatio	nal?		•	Code	
1. Yes	T		2. No				1		Yes			2. No	40			1	
106. Locomotive Headlight Illuminated? 1. Yes 2. No							Code 1	107. Locomotive Audible Warning Sounded?							Code		
1. 1 es			2. INU				1	1.	1. Yes 2. No							1	

108. DRAW A SKETCH OF ACCIDENT AREA INCLUDING ALL TRACKS, SIGNALS, SWITCHES, STRUCTURES, OBJECTS, ETC., INVOLVED. HQ-11-2006.jpg



## 109. SYNOPSIS OF THE ACCIDENT

Eastbound UP freight train ZLAMN3-15 struck an extended cab pickup truck at a highway-rail grade crossing, on February 16, 2006, at 1:29 pm. The accident occurred in Olden, Texas, UP Milepost 347.3, on the Baird Subdivision.

The pick-up truck driver and all three passengers were killed. The Pick-up truck was completely destroyed. There were no injuries to the train crew. The lead locomotive UP 4437 sustained minor front end damage totaling about \$1500, and no derailment occurred.

At the time of the accident it was daylight and clear, the temperature was 87°F.

The accident was caused by the driver's failure to yield the right of way to the train. Per Texas §545.251(c).

#### 110. NARRATIVE

#### Circumstances Prior to the Accident

The crew of train ZLAMN3-15 included a locomotive engineer, and a conductor. They first went on duty at 10:00 a.m., CST, February 16, 2006, at the UP Sweetwater Siding in Sweetwater, Texas. This was a crew change terminal for all crew members, and all received more than the statutory off duty period, prior to reporting for duty.

Their assigned freight train consisted of five locomotives, 40 loaded, and 0 empty cars made up of various articulated and non-articulated type cars that consisted of 88 loaded units. It was 6,376 feet long, and weighed 4,121 tons. The train was scheduled to travel to Marion, Arkansas, with no cars to be added or removed en route. No train air brake test was required at the location where the crew went on duty.

As the eastbound train approached the accident area, the locomotive engineer was seated at the controls on the south side of the leading locomotive. The conductor was seated on the north side of the leading locomotive.

In this area of the railroad it is tangent for about 6864 feet to the point of the accident, and a 1 degree curve to the left 528 feet beyond. There is a .33 percent descending grade to level track approaching the point of the accident. In this area county road (CR) 436 runs north and south. From the north there is a curve to the left of about 600 feet prior to the crossing, followed by a second sweeping curve to the right about 125 feet to the crossing.

Traveling north to south on CR 436 the grade is nearly level with a slight descending grade on the south side of the crossing.

The railroad timetable direction of the train was east. The geographic direction was northeast.

Timetable directions are used throughout this report.

#### The Accident

#### Train ZLAMN3-15 East:

The train was being operated at 55 mph approaching the accident area. The train crew's view of the crossing was unobstructed. The engineer and conductor said they became aware of the impending collision and braced themselves for impact. The engineer simultaneously initiated an emergency train air brake application. The train had slowed to 54 mph when the collision occurred. Both speeds were recorded by the event recorder of the controlling locomotive. The maximum authorized speed for this train was 55 mph, as designated in the current UP Timetable.

The lead locomotive was equipped with a camera pack that recorded the events leading up to and during the impact.

The video revealed that UP train ZLAMN3-15 was traveling eastward approaching Olden, TX. The surrounding area was were unobstructed and provided a clear line of sight in all directions. As the train approached the crossing the crew sounded the train horn as required by the whistle board. Looking to the left you could see what appeared to be a vehicle traveling southward on CR 436, a dirt road that runs north and south. As the train moved closer to the crossing it became apparent that the vehicle was a pickup truck traveling southward and was not making any attempt to stop for the oncoming train. The pickup truck entered the crossing then stopped with the front tires in the center of the crossing approximately 4 to 5 seconds prior to impact.

#### Highway Vehicle:

# FRA FACTUAL RAILROAD ACCIDENT REPORT

The pick-up truck was traveling north to south on CR 436. According to the locomotive engineer and conductor, the driver made no attempt to stop prior to entering the crossing. A report, filed by Texas DPS officer Orsini, indicated that the driver had been drinking and also had a medical condition that constricted his ability to turn his head from side to side. The posted speed limit on CR436 is 60 mph.

The train struck the right side of the pick-up truck about midpoint of the right front fender. The pick-up truck was carried east, along the track, for about 75 feet striking a light pole before coming to rest about 85 feet east of the impact point on the northeast side of the track. The driver and two of the three passengers were not wearing seat belts and were ejected from the pick up truck. The train came to a stop about 2,050 feet east of this point.

After the train stopped, the locomotive engineer stayed on the locomotive and made radio contact with the train dispatcher. The conductor disembarked the train and began walking the north side of the train to determine if the accident had caused the train to detail.

An Eastland County, Texas, State Trooper (DPS) and EMS, Medic 1 (ambulance) were notified and dispatched at 1:35 p.m. and arrived on scene at 1:40 p.m. Harris Hospital, Fort Worth, Texas, air Medivac unit was dispatched at 1:38 and arrived on scene at 2:30 p.m. After they coordinated the emergency response, Medic 1 members began medical response for the passengers of the pick-up truck and assessment of the train crew members. It was determined by EMS personnel that the train crew was not in need of medical attention.

All train crew members were interview by Eastland DPS officer Orsini.

Bob Hestes, Manager of Operating Practices (MOP), Union Pacific Railroad Company, was dispatched to the scene from Fort Worth and arrived about 3:15 p.m. He assessed the condition of the train and track structure. There was no hazardous materials involvement and only minor structural damage to the lead locomotive. The train and crew were released and continued the trip to Fort Worth.

The driver and 1 passenger in the pick-up truck were pronounced dead on scene, one passenger was transported to Eastland Memorial Hospital where he was pronounced dead on arrival the forth passenger was transported via air Medivac unit to Harris Hospital, Fort Worth and died several hours after arrival.

Analysis and Conclusions

### Analysis

The driver was a 56 year old male. The other three passengers of the pick-up truck were adult males ages 46, 54 and 63. The Eastland County, Texas, Coroner performed toxicological testing on the remains of the driver, and the results were a blood alcohol concentration (BAC) of .05. As per Texas penal code 49.01(2)(A) intoxication is defined as: " not having the normal use of mental or physical facilities by reason of introduction of alcohol, a controlled substance, a drug, a dangerous drug, a combination of two or more of these substances, or any other substance into the body" or (B) "having an alcohol concentration of .08 or more."

The highway-rail crossing at grade is equipped with crossbucks only.

There is an advance warning sign posted about 200 feet from the crossing.

The railroad has a whistle post in place about 1,863 feet 6 inches west of the crossing. Both the engineer and conductor stated that the locomotive whistle was sounded when the train neared this post.

This was later validated by analysis of the event recorder data as well as the video camera pack.

The leading locomotive was equipped with a headlight, the auxiliary lights, and the audible warning device required by Federal regulations.

The devices were tested at Fort Worth, Diesel shop at 1:47 p.m., on the follow day, in the presence of this FRA motive power and equipment inspector. The devices were in full compliance with Federal requirements.

The locomotive was also equipped with a speed indicator, and an event recorder as required as well as a video recording device (camera pack). The relevant event recorder data was downloaded by Mr. Hestes, MOP, at the accident site, and analyzed at Fort Worth as well as UP headquarters in Omaha, NE. The analysis disclosed that the locomotive engineer was in compliance with all applicable railroad operating and train handling requirements. FRA reviewed the results of this analysis, and concurred with the conclusions.

#### Conclusions

The railroad was in full compliance with their own, and all applicable Federal standards. The train crew members were the only witnesses to the accident, and they had no information that could be used to determine why the pick-up truck failed to stop at the crossing. The driver was a disabled veteran that had a medical condition that constricted his ability to turn his head from side to side; he had also been consuming alcohol as indicated by the results of the BAC. Based on the evidence available, DPS officer, Orsini surmised that the drivers failure to yield to the train in combination with his medical condition and consumption of alcohol were predominant factors.

#### Probable Cause & Contributing Factors

The accident occurred because the driver of the pick-up truck failed to stop at the highway-rail crossing at grade, as required by Texas §545.251(c). Driver's medical condition and consumption of alcohol may have been a contributing factor.