



***Federal Railroad Administration
Office of Railroad Safety
Accident and Analysis Branch***

***Accident Investigation Report
HQ-2013-22***

***Union Pacific Railroad Company (UP)
Fowler, CA
August 19, 2013***

Note that 49 U.S.C. §20903 provides that no part of an accident or incident report, including this one, 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.

TRAIN SUMMARY

1. Name of Railroad Operating Train #1 Union Pacific Railroad Company	1a. Alphabetic Code UP	1b. Railroad Accident/Incident No. 0813RS013
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GENERAL INFORMATION

1. Name of Railroad or Other Entity Responsible for Track Maintenance Union Pacific Railroad Company	1a. Alphabetic Code UP	1b. Railroad Accident/Incident No. 0813RS013
2. U.S. DOT Grade Crossing Identification Number 756877N	3. Date of Accident/Incident 8/19/2013	4. Time of Accident/Incident 1:51 AM
5. Type of Accident/Incident Hwy-Rail Crossing		
6. Cars Carrying HAZMAT 0	7. HAZMAT Cars Damaged/Derailed 0	8. Cars Releasing HAZMAT 0
		9. People Evacuated 0
10. Subdivision Fresno		
11. Nearest City/Town Fowler	12. Milepost (to nearest tenth) 212.5	13. State Abbr. CA
		14. County FRESNO
15. Temperature (F) 75 °F	16. Visibility Dark	17. Weather Cloudy
18. Type of Track Main		
19. Track Name/Number Main Track	20. FRA Track Class Freight Trains-80, Passenger Trains-90	21. Annual Track Density (gross tons in millions) 52.68
		22. Time Table Direction North

OPERATING TRAIN #1

1. Type of Equipment Consist: Freight Train				2. Was Equipment Attended? Yes		3. Train Number/Symbol GSGHCW-18								
4. Speed (recorded speed, if available) R - Recorded E - Estimated		Code R	5. Trailing Tons (gross excluding power units) 3320		6a. Remotely Controlled Locomotive? 0 = Not a remotely controlled operation 1 = Remote control portable transmitter 2 = Remote control tower operation 3 = Remote control portable transmitter - more than one remote control transmitter			Code 0						
6. Type of Territory Signalization: <u>Signaled</u> Method of Operation/Authority for Movement: <u>Signal Indication</u> Supplemental/Adjunct Codes: <u>Q, N/A</u>														
7. Principal Car/Unit (1) First Involved (derailed, struck, etc.)		a. Initial and Number UP7778	b. Position in Train 1	c. Loaded (yes/no) no	8. If railroad employee(s) tested for drug/ alcohol use, enter the number that were positive in the appropriate box.		Alcohol 0	Drugs 0						
(2) Causing (if mechanical, cause reported)		0	0	no	9. Was this consist transporting passengers?			No						
10. Locomotive Units (Exclude EMU, DMU, and Cab Car Locomotives.)		a. Head End	Mid Train		Rear End		11. Cars (Include EMU, DMU, and Cab Car Locomotives.)		Loaded		Empty			
			b. Manual	c. Remote	d. Manual	e. Remote			a. Freight	b. Pass.	c. Freight	d. Pass.	e. Caboose	
(1) Total in Train		3	0	0	0	0	(1) Total in Equipment Consist		0	0	103	0	0	
(2) Total Derailed		0	0	0	0	0	(2) Total Derailed		0	0	0	0	0	
12. Equipment Damage This Consist 174			13. Track, Signal, Way & Structure Damage 0											
14. Primary Cause Code M302 - Highway user inattentiveness														
15. Contributing Cause Code M302 - Highway user inattentiveness														
Number of Crew Members							Length of Time on Duty							
16. Engineers/Operators		17. Firemen		18. Conductors		19. Brakemen		20. Engineer/Operator			21. Conductor			
1		0		1		0		Hrs: 7 Mins: 36			Hrs: 7 Mins: 36			
Casualties to:		22. Railroad Employees		23. Train Passengers		24. Others		25. EOT Device?			26. Was EOT Device Properly Armed?			
Fatal		0		0		4		Yes			Yes			
Nonfatal		0		0		1		27. Caboose Occupied by Crew?			No			
28. Latitude 36.656329000				29. Longitude -119.710216000										

CROSSING INFORMATION

Highway User Involved				Rail Equipment Involved			
1. Type Auto				5. Equipment Train (Units Pulling)			
2. Vehicle Speed (<i>est. mph at impact</i>) 5		3. Direction (<i>geographical</i>) West		6. Position of Car Unit in Train 1			
4. Position of Involved Highway User Moved over Crossing				7. Circumstance Rail Equipment Struck Highway User			
8a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? Neither				8b. Was there a hazardous materials release by Neither			
8c. State here the name and quantity of the hazardous material released, if any. N/A							
9. Type of Crossing Warning 1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew 2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (<i>spec. in narr.</i>) 3. Standard FLS 6. Audible 9. Watchman 12. None N/A				10. Signaled Crossing Warning		11. Roadway Conditions N/A	
12. Location of Warning Both Sides			13. Crossing Warning Interconnected with Highway Signals No			14. Crossing Illuminated by Street Lights or Special Lights No	
15. Highway User's Age 19		16. Highway User's Gender Female		17. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train No		18. Highway User Stopped and then proceeded	
19. Driver Passed Standing Highway Vehicle No			20. View of Track Obscured by (<i>primary obstruction</i>) Not Obstructed				
Casualties to:		Killed	Injured	21. Driver was Killed		22. Was Driver in the Vehicle? Yes	
23. Highway-Rail Crossing Users		4	1	24. Highway Vehicle Property Damage (<i>est. dollar damage</i>) 10000		25. Total Number of Vehicle Occupants (<i>including driver</i>) 5	
26. Locomotive Auxiliary Lights? Yes				27. Locomotive Auxiliary Lights Operational? Yes			
28. Locomotive Headlight Illuminated? Yes				29. Locomotive Audible Warning Sounded? Yes			

10. Signaled Crossing Warning

- 1 - Provided minimum 20-second warning
- 2 - Alleged warning time greater than 60 seconds
- 3 - Alleged warning time less than 20 seconds
- 4 - Alleged no warning
- 5 - Confirmed warning time greater than 60 seconds
- 6 - Confirmed warning time less than 20 seconds
- 7 - Confirmed no warning
- N/A - N/A

Explanation Code

- A - Insulated rail vehicle
- B - Storm/lightning damage
- C - Vandalism
- D - No power/batteries dead
- E - Devices down for repair
- F - Devices out of service
- G - Warning time greater than 60 seconds attributed to accident-involved train stopping short of the crossing, but within track circuit limits, while warning devices remain continuously active with no other in-motion train present
- H - Warning time greater than 60 seconds attributed to track circuit failure (e.g., insulated rail joint or rail bonding failure, track or ballast fouled)
- J - Warning time greater than 60 seconds attributed to other train/equipment within track circuit limits
- K - Warning time less than 20 seconds attributed to signals timing out before train's arrival at the crossing/island circuit
- L - Warning time less than 20 seconds attributed to train operating counter to track circuit design direction
- M - Warning time less than 20 seconds attributed to train speed in excess of track circuit's design speed
- N - Warning time less than 20 seconds attributed to signal system's failure to detect train approach
- O - Warning time less than 20 seconds attributed to violation of special train operating instructions
- P - No warning attributed to signal systems failure to detect the train
- R - Other cause(s). Explain in Narrative Description

SYNOPSIS

At approximately 1:51 a.m. PDT on August 19, 2013, a Union Pacific Railroad (UP) freight, grain shuttle train, GSGHCW-18, traveling northbound at a recorded speed of 46 mph on main line track, struck a motor vehicle at a private highway-rail grade crossing at E. Jefferson Avenue, DOT/AAR Inventory Number 756877N, in the town of Fowler, California. Fowler is located approximately 10 miles south of Fresno. As a result of the collision, four occupants of the motor vehicle were killed; three were killed instantly, and one passed away either on the way to or at the hospital. Another passenger was injured but survived. The UP train crew was not injured; there was no derailment and no hazardous materials were involved.

The accident occurred on single main track at Milepost 212.5 in UP's Fresno Subdivision. Movements on this part of the railroad are under centralized traffic control by a dispatcher located in Omaha, Nebraska. The train consisted of three head-end locomotives and 103 empty grain cars. Equipment damage was estimated at \$174.00; there was no damage to the track or signal structures. The E. Jefferson Avenue crossing is guarded only with stop signs and rectangular signs depicting crossbucks but is not illuminated by streetlights. Visibility on either side of the right-of-way was unobstructed. Weather at the time of the accident was dark and cloudy with a temperature of approximately 75 degrees Fahrenheit.

The probable cause of the accident was inattentiveness on the part of the motor vehicle operator.

NARRATIVE

CIRCUMSTANCES PRIOR TO THE ACCIDENT

The crew of Union Pacific Railroad (UP) Train GSGHCW-18, a locomotive engineer and conductor, went on duty at 6:15 p.m. PDT on August 18, 2013, at Bakersfield, California, their home terminal. Both employees received more than their statutorily required off-duty time. Their train consisted of three locomotives operating lite to the grain mill in Goshen, California, where they picked up 103 empty grain cars, conducted a Class 1 air brake test, and began traveling to Calwa Yard in Fresno, California, for a crew change. They described the trip as uneventful. The engineer was seated on the east side of the lead locomotive, and the conductor was seated in the conductor's seat on the west side.

According to the crew's statements, the train was proceeding northbound operating on an advance approach signal indication with a signal sequence that would bring the train to a stop at CPSP 209, Calwa Crossing, in Fresno. The train was operating at the maximum authorized speed of 50 miles per hour (mph). As the train approached the private road crossing at grade at E. Jefferson Avenue, the locomotive engineer began a proper train horn signal sequence at a point 1,484 feet in advance of the grade crossing. The crew stated they observed a light colored 4-door motor vehicle approaching the crossing in a westward direction. They stated that as the vehicle approached the crossing, the driver of the vehicle appeared to decelerate before the crossing, and then started and stopped several times as it approached.

For the purpose of this report, railroad timetable and geographical directions are the same. Directions will be expressed per railroad timetable.

THE ACCIDENT

The locomotive engineer placed the train into a full emergency application of the train air brakes at a point 1,386 feet in advance of the grade crossing. The crew began sounding the train horn and bell as the train approached the crossing. The motor vehicle finally attempted to traverse the crossing just as the train arrived but was unable to clear the crossing. The train impacted the motor vehicle on the driver's side at a recorded speed of 46 mph.

The motor vehicle came to rest at a point 107 feet north on the west side of the main line, just off the right-of-way. Police and emergency services began to arrive immediately after the accident. Four occupants, two males and two females, suffered fatal injuries. According to a police statement, one of the occupants, possibly the female driver, survived the impact but succumbed either on the way to or at the hospital. A fifth passenger, a female, was seriously injured but survived and was taken to a local hospital.

The train crew was not injured, and there was no derailment. The locomotive sustained only minor damage, and there was no damage to the track or signal structures. The crew was relieved of duty at the scene and transported back by motor vehicle to Bakersfield. The results of post-accident toxicology testing on the crew were negative.

POST-ACCIDENT INVESTIGATION

The Federal Railroad Administration (FRA) and California Public Utilities Commission inspectors arrived at the scene within hours to begin the investigation, obtain statements, take photographs, and inspect the locomotive and track. E. Jefferson Avenue intersects the main track at a 90-degree angle and the crossing is within approximately 40 feet of the divided multi-lane S. Golden State Boulevard in a north-south direction that parallels the main track to the west. The investigators observed and photographic evidence confirms that the crossing at E. Jefferson Avenue and the intersection with S. Golden State Boulevard is without streetlight illumination. Visibility to the north and south of the crossing is open and unencumbered by trees or vegetation. The crossing is guarded by a stop sign and a white, rectangular crossbuck/private crossing/no trespassing sign in both directions. Standard white highway pavement markings with the word "STOP" is also seen on both sides of the crossing.

An inspection of UP's lead locomotive revealed no mechanical defects and only minor damage to the left front from the collision. A review of all records of tests and inspections of the track in the area of the accident showed no defects that would have contributed to the accident. An analysis of the event recorder download substantiates the crew's statements, confirms their timeline of the events, and reveals no issues with train handling and their reaction to the unfolding events approaching the collision site.

PROBABLE CAUSE AND CONTRIBUTING FACTORS

FRA has concluded that the probable cause of the accident was inattentiveness on the part of the motor vehicle operator.