



***Federal Railroad Administration  
Office of Safety  
Headquarters Assigned  
Accident Investigation Report  
HQ-2005-63***

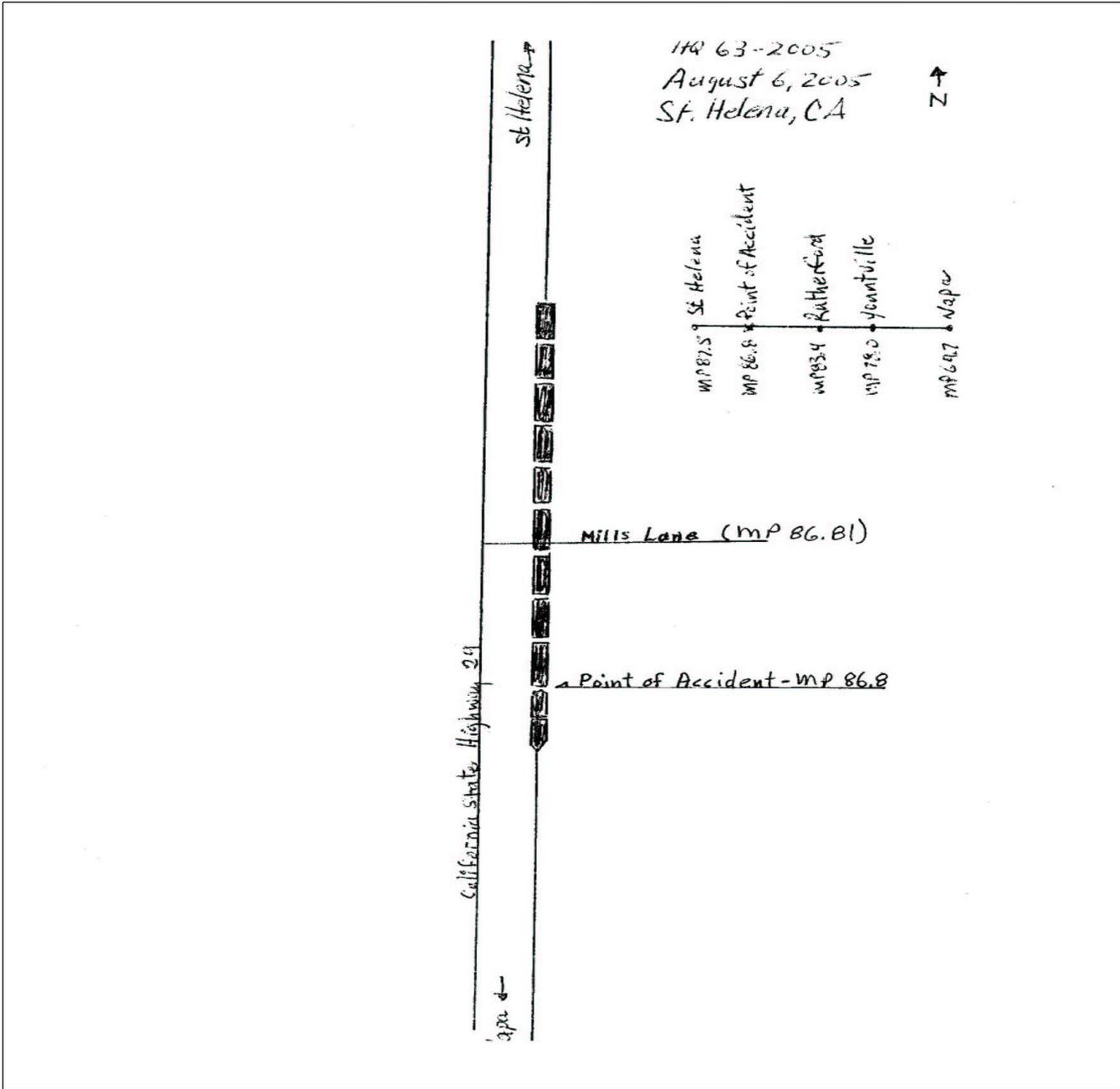
***Napa Valley Railroad (NVR)***  
***St. Helena, California***  
***August 6, 2005***

***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.***

1. Name of Railroad Operating Train #1 Napa Valley RR [NVRR]			1a. Alphabetic Code NVRR			1b. Railroad Accident/Incident No. AXRR080605			
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: Napa Valley RR [NVRR]			3a. Alphabetic Code NVRR			3b. Railroad Accident/Incident No. AXRR080605			
4. U.S. DOT_AAR Grade Crossing Identification Number			5. Date of Accident/Incident Month: 08 Day: 05 Year: 2005			6. Time of Accident/Incident 08:15: <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM			
7. Type of Accident/Incident (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)			06			
8. Cars Carrying HAZMAT 0		9. HAZMAT Cars Damaged/Derailed 0		10. Cars Releasing HAZMAT 0		11. People Evacuated 0		12. Division System	
13. Nearest City/Town St Helena			14. Milepost (to nearest tenth) 86.8		15. State Abbr Code N/A CA		16. County NAPA		
17. Temperature (F) (specify if minus) 75 F		18. Visibility (single entry) Code 1. Dawn 3. Dusk 2. Day 4. Dark 3		19. Weather (single entry) Code 1. Clear 3. Rain 5. Sleet 2. Cloudy 4. Fog 6. Snow 1		20. Type of Track Code 1. Main 3. Siding 2. Yard 4. Industry 1			
21. Track Name/Number Main Track			22. FRA Track Code Class (1-9, X) 1		23. Annual Track Density (gross tons in millions) 1		24. Time Table Direction Code 1. North 3. East 2		
<b>OPERATING TRAIN #1</b>									
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 2		26. Was Equipment Attended? 1. Yes 2. No 1	
								27. Train Number/Symbol NVRR 70	
28. Speed (recorded speed, if available) Code R - Recorded E - Estimated 11 MPH R			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			
29. Trailing Tons (gross tonnage, excluding power units) 800						m. Special instructions n. Other than main track o. Positive train control p. Other (Specify in narrative) Code(s)			
						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)	32. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.				
(1) First involved (derailed, struck, etc)		N/A	2	N/A	Alcohol		Drugs		
(2) Causing (if mechanical cause reported)		N/A	N/A	N/A	N/A		N/A		
					33. Was this consist transporting passengers? (Y/N) N/A				
34. Locomotive Units		a. Head End	b. Mid Train	c. Rear End	35. Cars		a. Freight	b. Pass.	
		d. Manual	e. Remote				c. Freight	d. Pass.	
(1) Total in Train		2	0	0	(1) Total in Equipment Consist		0	9	
(2) Total Derailed		0	0	0	(2) Total Derailed		0	0	
		0	0	0			0	0	
36. Equipment Damage This Consist		1000	37. Track, Signal, Way, & Structure Damage		0		38. Primary Cause Code H310		
							39. Contributing Cause Code N/A		
Number of Crew Members					Length of Time on Duty				
40. Engineer/Operators N/A		41. Firemen N/A	42. Conductors 1	43. Brakemen N/A	44. Engineer/Operator Hrs 7 Mi 15			45. Conductor Hrs 7 Mi 15	
Casualties to:		46. Railroad Employees	47. Train Passengers	48. Other	49. EOT Device? 1. Yes 2. No 2			50. Was EOT Device Properly Armed? 1. Yes 2. No N/A	
Fatal		0	0	0					
Nonfatal		N/A	0	0	51. Caboose Occupied by Crew? 1. Yes 2. No			N/A	
<b>OPERATING TRAIN #2</b>									
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 N/A		53. Was Equipment Attended? 1. Yes 2. No N/A	
								54. Train Number/Symbol N/A	
55. Speed (recorded speed, if available) Code R - Recorded E - Estimated N/A MPH 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			

56. 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)		2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter		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)		N/A		N/A		N/A				N/A		N/A	
(2) Causing (if mechanical cause reported)		N/A		N/A		N/A		60. Was this consist transporting passengers? (Y/N)				N/A	
61. Locomotive Units		a. Head End		Mid Train		Rear End		62. Cars		Loade		Empty	
				b. Manual c. Remote		d. Manual c. Remote				a. Freight b. Pass.		c. Freight d. Pass.	
(1) Total in Train		N/A		N/A		N/A		(1) Total in Equipment Consist		N/A		N/A	
(2) Total Derailed		N/A		N/A		N/A		(2) Total Derailed		N/A		N/A	
63. Equipment Damage This Consist		N/A		64. Track, Signal, Way, & Structure Damage		N/A		65. Primary Cause Code		N/A		66. Contributing Cause Code	
												N/A	
67. Engineer/Operators		68. Firemen		69. Conductors		70. Brakemen		71. Engineer/Operator		72. Conductor			
N/A		N/A		N/A		N/A		Hrs N/A Mi N/A		Hrs N/A Mi N/A			
Casualties to:		73. Railroad Employees		74. Train Passengers		75. Other		76. EOT Device?		77. Was EOT Device Properly Armed?			
Fatal		N/A		N/A		N/A		1. Yes 2. No N/A		1. Yes 2. No N/A			
Nonfatal		N/A		N/A		N/A		78. Caboose Occupied by Crew?				N/A	
								1. Yes 2. No					
Highway User Involved						Rail Equipment Involved							
79. Type						83. Equipment							
C. Truck-Trailer. F. Bus J. Other Motor Vehicle Code						3. Train (standing) 6. Light Loco(s) (moving) Code							
A. Auto D. Pick-Up Truck G. School Bus K. Pedestrian						1. Train(units pulling) 4. Car(s)(moving) 7. Light(s) (standing)							
B. Truck E. Van H. Motorcycle M. Other (spec. in narrative) N/A						2. Train(units pushing) 5. Car(s)(standing) 8. Other (specify in narrative) N/A							
80. Vehicle Speed (est. MPH at impact) N/A						84. Position of Car Unit in Train							
81. Direction geographical) Code						N/A							
1. North 2. South 3. East 4. West N/A													
82. Position Code						85. Circumstance Code							
1. Stalled on Crossing 2. Stopped on Crossing 3. Moving Over Crossing						1. Rail Equipment Struck Highway User							
4. Trapped N/A						2. Rail Equipment Struck by Highway User N/A							
86a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? Code						86b. Was there a hazardous materials release by Code							
1. Highway User 2. Rail Equipment 3. Both 4. Neither N/A						1. Highway User 2. Rail Equipment 3. Both 4. Neither N/A							
86c. State here the name and quantity of the hazardous materials released, if any.													
N/A													
87. Type of Crossing		1. Gates		4. Wig Wags		7. Crossbucks		10. Flagged by crew		88. Signaled Crossing Warning Code		89. Whistle Ban Code	
		2. Cantilever FLS		5. Hwy. traffic signals		8. Stop signs		11. Other (spec. in narr.)		(See instructions for codes)		1. Yes	
		3. Standard FLS		6. Audible		9. Watchman		12. None				2. No	
Code(s)		N/A		N/A		N/A		N/A		N/A		3. Unknown N/A	
90. Location of Warning Code				91. Crossing Warning Interconnected with Highway Signals Code				92. Crossing Illuminated by Street Lights or Special Lights Code					
1. Both Sides				1. Yes				1. Yes					
2. Side of Vehicle Approach				2. No				2. No					
3. Opposite Side of Vehicle Approach N/A				3. Unknown				3. Unknown					
93. Driver's Age		94. Driver's Gender Code		95. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train Code		96. Driver Code		97. Driver Passed Standing Highway Vehicle Code		98. View of Track Obscured by (primary obstruction) Code			
N/A		1. Male N/A		1. Yes 2. No 3. Unknown N/A		1. Drove around or thru the Gate 4. Stopped on Crossing		1. Yes 2. No 3. Unknown N/A		2. Standing Railroad Equipment 4. Topography 6. Highway Vehicle 8. Not obstructed		5. Other (specify in narrative) N/A	
		2. Female N/A				2. Stopped and then Proceeded							
						3. Did not Stop							
97. Driver Passed Standing Highway Vehicle Code		98. View of Track Obscured by (primary obstruction) Code		99. Driver Was Code		100. Was Driver in the Vehicle? Code		101. Casualties to Highway-Rail Crossing Users		102. Highway Vehicle Property Damage (est. dollar damage) Code		103. Total Number of Highway-Rail Crossing Users (include driver) Code	
1. Yes 2. No 3. Unknown N/A		1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify in narrative) N/A		1. Killed 2. Injured 3. Uninjured N/A		1. Yes 2. No N/A		N/A		N/A		N/A	
		2. Standing Railroad Equipment 4. Topography 6. Highway Vehicle 8. Not obstructed											
104. Locomotive Auxiliary Lights?		105. Locomotive Auxiliary Lights Operational?		106. Locomotive Headlight Illuminated?		107. Locomotive Audible Warning Sounded?							
1. Yes 2. No N/A		1. Yes 2. No N/A		1. Yes 2. No N/A		1. Yes 2. No N/A							

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

On Saturday, August 6, 2005, at 8:15 p.m. PDT, an NVRP passenger/dinner train became uncoupled while southbound from St. Helena, CA. The train became uncoupled between the trailing locomotive and the leading passenger car. The air brakes applied in emergency, the locomotives stopped suddenly, and were struck by the following cars and the train re-coupled.

The accident involved southbound NVRP train # 70, with locomotives 70, 72, and 9 passenger cars traveling at a recorded speed of 11 mph. The train was traversing the Mills Lane highway-rail grade crossing at the time of the accident.

NVRP train 70 originated as train 72 at Napa, CA departing at 6:30 p.m. and traveled north to St. Helena, CA where it stopped. The locomotives were run around the train and coupled to the south end of the train for the return trip to Napa, CA at 8:15 p.m.

The accident occurred at dusk and the weather conditions were clear skies, calm wind, with the temperature about 75 Fahrenheit.

There were 199 passengers 2 train crew and 30 onboard service staff on the train when the accident occurred. Seven injuries were reported involving seven onboard service employees. The most serious was a broken finger. Two passengers were transported to a local hospital for observation and released. Subsequent to the accident, none of the passengers provided NVRP with documentation of the extent of their injuries.

After all the injured persons were removed from the train by ambulances, the train resumed the southbound trip at 10:17 p.m. and arrived in Napa at 11:41 p.m.

Damage totaled \$1,000 for repairs to the deck plates between two passenger cars.

Probable cause: Failure of the crew to properly couple and stretch the train prior to the return from St. Helena.

#### 110. NARRATIVE

The following information was obtained from an investigation the was conducted by the Federal Railroad Administration.

On Saturday, August 6, 2005, at 8:15 p.m. PDT, an NVRP passenger/dinner train became uncoupled while southbound from St. Helena, CA. The train became uncoupled between the trailing locomotive and the leading passenger car. The air brakes applied in emergency, the locomotives stopped suddenly, were struck by the following cars and the train re-coupled.

The accident involved southbound NVRP train # 70, which departed St. Helena, with locomotives 70, 72, and 9 passenger cars traveling at a recorded speed of 11 mph. The train was traversing the Mills Lane highway-rail grade crossing (milepost 86.81) at the time of the accident.

NVRP train 72 originated as train 70 at Napa, CA departing at 6:30 p.m. and traveled north to St. Helena, CA where it stopped. The locomotives were run around the train and coupled to the south end of the train for the return trip to Napa, CA at 8:15 p.m. Lead passenger car NVRP 1018 was coupled to locomotive NVRP 72.

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##### Analysis and Conclusion:

The two crew members of NVRP 70 were interviewed. They described their action immediately prior to the accident. As described, the crew followed the proper operating procedure by testing the coupling between the locomotive consist and the lead passenger car prior to departing St. Helena, CA. They said a standing air test was performed before departing St. Helena and a running air test was made shortly after departing.

Observation of the same crew members during a re-enactment while recoupling locomotives to the train for a return from St. Helena was conducted. FRA observed the conductor having difficulty coupling trailing locomotive NVRP 72 and passenger car NVRP 1018. The draw bar of the locomotive was out of line with the draw bar of the car. After repeated attempts to re-couple, assistance of a supervisor at the scene was required to complete the task. Following the re-coupling, a FRA inspector rode the leading car, NVRP1018 to observe buff and draft action of the train. He did not observe anything unusual and the return trip from St. Helena to Napa was uneventful.

Departing St. Helena, the track is on a slight descending grade of .01 percent. As the train departed St. Helena, the train draft gear was in buff (compressed). At the point where the train came uncoupled, the track is level. At this point FRA observed the slack change from buff to draft (stretched) which would have caused the train to come uncoupled if one of the coupler pins was not locked.

A mechanical inspection by FRA and CPUC was conducted of the couplers and draft gear of the lead car, NVRR 1018 and trailing locomotive NVRR 72. Normal wear of the coupler parts was found, but no defects were discovered.

The effects of the uncoupling of the train and subsequent run-in of the train against the stopped locomotives could have been reduced if the locomotive engineer had released the locomotive brakes following the emergency air brake application. This action would have allowed the locomotives to continue to roll away from the train and probably would have averted the injuries and damages to the train. FRA recommended NVRR conduct train handling technics training with all locomotive engineers.

FRA recommended NVRR provide training to operating employees on proper train and air brake handling as proper coupling of locomotives and cars. NVRR conducted training of locomotive engineers on proper train handling under the conditions of this accident and provided additional instruction to conductors and locomotive engineers for assuring that couplings are secure between equipment before proceeding.

A review of NVRR Operational Testing records from July 2004 through July 2005 which showed all observations were made at Napa, California. There were no recorded failures of NVRR operating rules FRA strongly recommended that operational testing be conducted at various locations on the system and not at only one location. NVRR management has conducted operation testing observations of crew members coupling locomotives to trains at Napa and at St. Helena, California.

The same locomotives and cars have continued in everyday service on NVRR without further incident.

Post accident toxicological testing was conducted with negative results.

Based on the FRA post accident investigation of FRA and CPUC, it has been concluded that despite the statements by the NVRR crew, the crew did not follow the proper procedures in testing the coupling between the trailing locomotive and the lead passenger car at St. Helena on the day of the accident. As a result the coupler lock pin was not the proper lock position and allowed the coupler to open while the train was underway.