

**REPORT:** FE-32-97

**RAILROAD:** Montana Rail Link (MRL)

**LOCATION:** Laurel, Montana

**DATE, TIME:** Oct. 16, 1997, 10:20 p.m., MST

**PROBABLE CAUSE:**

The Switchman unexpectedly fell from the end of the car onto the track structure while applying a handbrake during a shoving movement.

<b>EMPLOYEE:</b>	<b>Craft.....</b>	<b>Transportation</b>
	Activity.....	Switching
	Occupation.....	Switchman
	Age.....	22 years
	Length of Service.....	10 months
	Last Rules Training.....	April 15, 1997
	Last Safety Training.....	Sept. 19, 1997
	Last Physical Exam.....	April 15, 1997

**Circumstances Prior to the Accident**

Following a required off-duty period, a Switch Crew consisting of a Locomotive Engineer, Switch Foreman, and Switchman reported for duty at the Montana Rail Link (MRL) Yard office, in the Laurel, Montana train yard at 4 p.m. on Oct. 16, 1997. The Switch Crew was assigned to perform switching duties in the yard. The Switchman was observed by fellow employees to be fit for duty.

The method of operation for Laurel Yard was other than main track. In the accident area, traveling east, the track gradient descended at 0.3 percent. The train traversed a left-hand number nine turnout onto Track No. 212, which, when later inspected, was found to be free of defects such as track mis-alignment, excessive crosslevel, and broken rails. The Laurel train yard was lighted by high intensity flood lights mounted on poles.

The sky was dark, and the weather was clear and windy, with 17 mph winds out of the southwest. The temperature was 63° F.

**The Accident**

At approximately 10:20 p.m., the Switch Crew, using Locomotive MRL 13, was making switching moves within the Laurel Yard. The locomotive was shoving 41 cars east onto Track No. 212. The Switch Foreman and Switchman were located on the south side of the cars so as to be located on the same side and in view of the Engineer operating the locomotive.

As the locomotive neared the clearance point of the switch located at the west end of Track No. 212, the Switch Foreman boarded the second car from the locomotive, and the Switchman was observed by the Switch Foreman boarding the car directly next to the locomotive, a covered hopper car (CNIS 368784). They were to apply handbrakes on both cars. The locomotive continued to shove the cars east, moving at an estimated speed of 1 to 2 mph. After applying the handbrake, the Switch Foreman dismounted the second car to the south side and walked west toward the locomotive. He did not see the Switchman dismount the first car. However, as he was walking toward the locomotive, he saw movement between the first and second car and believed he saw the leading wheels of the first car pass over the Switchman. The Switch Foreman signaled the Engineer to stop, and the locomotive and cars stopped within one car length. The Switchman was found lying on the north rail between the end of the first car and the locomotive. It was determined that both ends of the first car had passed over the Switchman.

The Switch Foreman called for an ambulance and attempted to resuscitate the Switchman until the emergency response personnel arrived. Laurel Police and the Yellowstone County Deputy Coroner arrived at approximately 10:50 p.m. and pronounced the Switchman dead at 10:53 p.m.

### **Post-Accident Investigation**

The deceased Switchman, Engineer, and Switch Foreman received toxicological testing under the authority of 49 CFR Part 219, Subpart C. Results were negative.

The autopsy report stated that death was caused by severe blunt force injuries sustained in a railroad accident. The footwear the Switchman was wearing was examined, and nothing was found that could have caused or contributed to the cause of the accident.

The car on which the Switchman was riding was inspected by FRA and MRL mechanical department personnel. The handbrake on the car was found to be in proper operating condition and had been fully applied by the Switchman.

FRA inspectors took exception to the brake step on the handbrake (B) end of the car. Proper measurement for this brake step was 63 inches in length and 8 inches in width. This brake step was measured and found to be 63 inches in length; however, the width of the brake step was found to have a graduating bend inward up to 2 inches in the area directly below the handbrake assembly. The graduated bend area extended for approximately 30 inches. This condition would have caused the surface area of the platform to have a decreased area for footing directly beneath the handbrake. Since no one actually observed the Switchman fall from the end of the car, it is unknown if the condition of the platform caused the Switchman to fall.

The MRL did not charge the deceased employee with any safety rule violation.