

SUMMARY FOR FE-18-06
SELECTED AND POSSIBLE CONTRIBUTING FACTORS

SELECTED FACTORS

Railroad: Union Pacific Railroad (UP)
Location: Watsonville, California
Region: 7

Month: October
Date: Oct. 13, 2006
Time: 9:17 a.m., PST

Data for Fatally Injured Employee(s)

Brakeman
49 years old
2 years, 8 months of service
Last rules training: Dec. 7, 2005
Last safety training: Aug. 8, 2005
Last physical: Feb. 12, 2004
Last relevant efficiency test: Aug. 4, 2006

Data for All Employees (Craft, Positions, Activity)

Craft: Transportation and Engine

Positions:

Train Crew LRQ42-R (Remote Control Operation)

Brakeman
Conductor

Watsonville Yard Office staff

Activity

Switching

EVENT

A Brakeman was fatally injured when struck and run over
by rolling rail equipment during a switching operation.

SUMMARY FOR FE-18-06 CONTINUED

POSSIBLE CONTRIBUTING FACTORS

PCF No. 1

Investigators concluded that the Brakeman was struck by rolling equipment after he slipped, fell, or stumbled into the path of rolling equipment. As there were no witnesses, the investigators could not say definitely whether the fall occurred because the Brakeman attempted to get on or off the equipment in motion.

PCF No. 2

The event recorder indicated that the Conductor's speed at the time of the incident exceeded 3 mph, the maximum allowed. The RCL locomotive was operated at speeds of nearly 9 mph just prior to the incident. Had the Conductor followed the speed limit, he may have been able to spot the Brakeman and stop in time to avoid the incident.

PCF No. 3

During Federal post-accident toxicological testing, barbiturates (Butalbital) were detected in the blood and urine of the Brakeman at a therapeutic, but nevertheless potentially impairing level. FRA investigation could not determine if the Brakeman had a prescription for the Butalbital or whether he was in compliance with Part 219.103 in using the drug.

REPORT: FE-18-2006

RAILROAD: Union Pacific Railroad (UP)

LOCATION: Watsonville, California

DATE & TIME: Oct. 13, 2006; 9:17 a.m., PST

EVENT¹: A Brakeman was fatally injured when struck and run over by rolling rail equipment during a switching operation.

EMPLOYEE:

Craft:	Transportation and Engine
Occupation:	Brakeman
Age:	49
Length of Service:	2 years, 8 months
Last Rules Training:	Dec. 7, 2005
Last Safety Training:	Aug. 8, 2005
Last Physical:	Feb. 12, 2004
Last Relevant Efficiency Test:	Aug. 4, 2006

CIRCUMSTANCES PRIOR TO THE ACCIDENT

At 6 a.m. on Oct. 13, 2006, two operating crew members, a Conductor and Brakeman, reported for duty at UP's Watsonville Yard in Pajaro, Monterey County, California. The two employees were assigned to operate Train LRQ42-R (Remote Control Operation - RCL) with Locomotive UP 791. The two crew members' duties were to make up the local trains that originated out of the Watsonville Yard. The LRQ42-R was the crew's regular assignment, which normally was worked Monday through Friday, beginning at 5 a.m. Monday and 6 a.m. the rest of the week.

The Watsonville Yard is a typical ladder yard with leads on both ends and nine tracks currently in service. It is located between mileposts 95 and 97.5, on the Coast Subdivision, UP's Roseville Service Unit (RSU). The Coast Subdivision was designated as a north-south route, as stated in the RSU timetable. The track where the incident occurred was tangent, 90-lb. rail, with wood ties and spike fasteners. The grade was relatively flat and level. The track was designated as Federal Railroad Administration (FRA) "EXCEPTED." There used to be 12 tracks in the yard; however, Tracks 03, 09, and 10 had been removed over the years. The rail and ties had been removed and the ground leveled on the three tracks. The space remaining was used for vehicle access for maintenance and equipment crews. The yard had several lights mounted on poles, but

¹ "Event" is defined as "occurrence that immediately precedes and directly results in the fatality." Possible contributing factors are identified in the following report and attached summary.

this light was not enough to illuminate the entire yard. No remote video cameras were stationed at the Watsonville Yard.

The weather was cloudy and cool; the temperature was approximately 59° F.

The crew's first activity of the day was an FRA random drug test, which was conducted when the crew first reported on duty. Because Amtrak 14 had a critical accident to the north that delayed the arrival of the train bringing their cars, the crew member did not start switching until 8:15 a.m. Following their job briefing, the crew members of the RCL left the yard office, located on the south end of the yard. They went to the north end of the yard, down Track No. 04, to help in the arrival of Train LRQ83, which was carrying the cars necessary for their work. After the southbound train entered Yard Track No. 01, the LRQ42-R crew members lined the switches back and returned via Track No. 04 to the south end to begin making up the local trains. For these moves, the Brakeman was in control of the RCL.

THE ACCIDENT

After returning to the south end on Track No. 04, the Conductor took over control of the RCL. Several moves were made by the LRQ42-R, including placing or kicking cars on several tracks from the south lead. Of approximately 60 cars, several cuts were placed on several tracks, a 21-car cut was set to Track No. 04, and an 18-car cut was set to another track. A lumber car was kicked down the lead and stopped on top of Switch 06. There were 11 other cars that still needed to be switched. At that point, a radio job briefing was held concerning the remaining moves. The crew would pull up to the No. 14 track and spot three cars, then kick the last three onto the No. 4 track, completing the make-up of the Salinas local. That was the last communication between the Conductor and Brakeman. At this point, the Conductor controlled all movements, while the Switchman secured cars switched onto the various tracks.

The moves commenced as briefed with the Conductor standing on the lead on the side of the switches. The last three cars to be kicked onto Track No. 04 were SP 286 128, NOKL 524 015, and FBOX 502 280. The Conductor last saw the Brakeman between Tracks Nos. 02 and 04. Moments later, he saw the Brakeman rolling under the passing cars. The victim's control pack started the tilt warning, although the engine was stopped after the kick had been made.

When the Conductor realized that the incident had occurred, he contacted the Watsonville Yard Office via radio and asked for 911 assistance. Emergency response crews arrived on the site shortly after receiving the 911 call. Upon their arrival, the police and the coroner secured the area. Shortly after their investigation, the body was removed and taken to the Monterey County Coroner's Office in Salinas, California. The victim's control pack was also taken with the body and was held as evidence pending the coroner's release.

POST-ACCIDENT INVESTIGATION

The Conductor was taken to the maintenance-of-way office on the other end of the yard where conference calls and interviews were conducted by officials of UP, FRA, the California Public Utilities Commission (CPUC), and the National Transportation Safety Board (NTSB). Statements were taken from the Conductor and all other Transportation and Engine employees in

the Watsonville Yard office. The Conductor and a local chairman both told interviewers that the deceased Brakeman was known as a careful and safe worker with a good attitude and good work habits.

Site inspections and a re-enactment followed immediately after police and fire officials left with the corpse and released the area. The Conductor's control pack also was tested for tilt and engine response and found to have no defects.

A debrief also was held with representatives of the NTSB, UP, FRA, CPUC, and two labor organizations, the United Transportation Union and the Brotherhood of Locomotive Engineers, during which information was exchanged.

Analysis and Conclusions

The post-accident investigation included a review of the Brakeman's rules training, efficiency training, discipline history, and work history. Rules and procedures governing switching operations at the Watsonville Yard were reviewed, and further interviews were conducted jointly with the NTSB.

A download of the event recorder for the RCL locomotive showed it was operated at speeds between 7 and 9 mph immediately prior to the incident. As the event recorder indicated that the speed at the time of the incident exceeded 3 mph, the maximum allowed, the Conductor was required to attend one week of general operating rules training before returning to work.

Following the incident, the three cars last kicked to Tracks Nos. 04, SP 286128, NOKL 524015, and FBOX 502280 were inspected by UP mechanical officials, and no defects were noted that might have contributed to the incident.

An FRA track inspector examined the track at the accident site ("Excepted Track") and found no exceptions.

Based on the records and interviews of UP officers, the matter of crews getting on and off moving equipment had been an issue since the UP developed a rule in 2003 to prohibit it. The investigation revealed a culture among trainmen in Watsonville to continue this practice, however. UP records showed observations of crews were made on an average of once a month. Managers said they noted crews getting on and off moving equipment and handled these infractions verbally. Although the problem of getting on and off moving equipment was well known, there was neither evidence UP had mounted an extensive educational program in Watsonville Yard nor that the UP had enforced this rule through discipline. The Brakeman was tested by three UP officers on nine occasions between Feb. 8, 2005 and June 7, 2006 for rules concerning getting off and on equipment. No failures were taken on any of those tests.

During Federal post-accident toxicological testing, barbiturates (Butalbital) were detected in the blood and urine of the Brakeman at a therapeutic, but nevertheless potentially impairing level. FRA investigation could not determine if the Brakeman had a prescription for the Butalbital or whether he was in compliance with Part 219.103 in using the drug.

UP failed to conduct the required timely post-accident toxicological test on the Conductor. Although the incident occurred at 9:17 a.m. on Oct. 13, 2006, UP did not perform the post-accident test until 6:21 p.m. Therefore, a recommendation for civil monetary penalty was forwarded to FRA's Chief Counsel.

Following the investigation, UP issued MTO Circular 15 on Oct. 18, 2006, prohibiting kicking or pinning of cars at Watsonville, Salinas, and South San Francisco. UP also issued UP Coast Subdivision General Order 19 on the same date, raising the 5 mph speed restriction in the Watsonville Yard to 10 mph.

Investigators concluded that the probable cause of the employee's fatality was that the Brakeman slipped, fell, or stumbled into the path of rolling equipment. As there were no witnesses, the investigators could not say definitively whether the fall occurred because the Brakeman attempted to get on or off the equipment in motion.

The cause of death was as a result of traumatic amputation of the upper legs.

APPLICABLE RULES

Manager of Operations, San Jose, California,
Circular No. 2, effective Jan. 3, 2006

"To all concerned: At South San Francisco, San Jose, Watsonville, and Salinas, there will be no kicking on any job for any reason. Pinning off while on the lead is allowed so long as speed does not exceed 3 mph. Violations of this circular will result in discipline."