**Title and Subtitle**
Railroad Accident Report: Brief Format, Issue Number 1, 1985

**Author(s)**

**Performing Organization Name and Address**
National Transportation Safety Board
Bureau of Field Operations
Washington, D.C. 20594

**Sponsoring Agency Name and Address**
NATIONAL TRANSPORTATION SAFETY BOARD
Washington, D.C. 20594

**Abstract**
This publication contains briefs of selected railroad accidents occurring in U.S. Railroad operations. The brief format presents basic facts, conditions, circumstances, and probable cause(s) in each instance. Additional statistical information is tabulated by types of accidents and casualties related to types of accidents, carriers involved, and causal factors.

Sequence numbers:

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**Key Words**

**Distribution Statement**
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NTSB Form 1765.2 (Rev. 9/74)
FOREWORD

The National Transportation Safety Board is an independent Federal agency that serves as the overseer of safety in railroad, highway, pipeline, marine, and civil aviation transportation. The Safety Board was created by the Transportation Acts of 1966 at which time it functioned as an autonomous agency under the Department of Transportation. In 1974, Congress enacted the Independent Safety Board Act which established the Safety Board as a totally independent agency of the Federal Government and broadened the Board’s investigative role in the surface modes of transportation.

Under the Independent Safety Board Act, the Board has the authority to investigate, determine the facts, conditions, circumstances, and probable cause(s) of accidents, issue safety recommendations, conduct special studies on transportation safety, assess techniques of accident investigation, evaluate effectiveness of other government agencies with respect to transportation safety, and evaluate the adequacy of safeguards and procedures for transporting hazardous materials.

In accordance with the provisions of the Independent Safety Board Act of 1974, the NTSB has determined the probable cause of the accidents reported herein.

This publication contains the reports of 51 U.S. railroad accidents arranged in alphabetical order by railroad company name and tabulations of selected accident information including (1) types of accidents by carrier, (2) types of accidents by state, (3) casualties by types of accident and classes of persons, and (4) causal factors arranged by categories, types and numbers of accidents. These brief format reports are published quarterly on a calendar year basis and mostly include summaries of field investigations conducted by the Board’s six railroad field offices. (See figure 1.) The briefs also contain data extracted from reports of investigations of major accidents which may be distinguished from the field investigations by the reference to the published National Transportation Safety Board major accident report under the probable cause section.

Care should be taken in interpreting the data contained in the four tables as they reflect only a six-month period and thus do not reflect an accurate long-term statistical distribution. At the end of each calendar year, an annual review of railroad accident data is published which contains tables and graphs compiled from that year’s accident data.

These Briefs are summaries of reports of the National Transportation Safety Board and are thereby subject to the limitation of 49 USC 1903(c):

No part of any report or reports of the Board, relating to any accident or the investigation thereof, shall be admitted as evidence or used in any suit or action for damages growing out of any matter mentioned in such report or reports.
For those readers who wish more detailed information, the original factual reports for both field and major accidents are on file in the Washington, D.C., office of the National Transportation Safety Board and may be examined. These reports will be reproduced for a fee covering reproduction cost and postage. Orders for material also are subject to a user charge by the Board for special services, and such charge will be included in the bill.

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Washington, D.C. 20594
National Transportation Safety Board

Railroad Field Offices

Effective June 1, 1984
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EXPLANATORY NOTES

Scope

The accidents included herein are those occurrences incidental to railroad operations which fall within the scope of Section 304 of the Independent Safety Board Act of 1974. As provided in that Section, the Board investigates and determines facts, conditions, circumstances, and probable cause of any railroad accident in which there is a fatality or substantial property damage, or which involves a passenger train. The following definitions, as set forth in Part 840 of the National Transportation Safety Board's regulations (49 CFR 840), effective April 1, 1976, and as amended August 14, 1980, are applicable.

Railroad - 840.2(a)

"Railroad" means any system of surface transportation of persons or property over rails. It includes, but is not limited to, line-haul freight and passenger-carrying railroads, and rapid transit, commuter, scenic, subway and elevated railways.

Accident - 840.2(b)

"Accident" means any collision, derailment, or explosion involving railroad trains, locomotives, and cars; or any other loss-causing event involving the operation of such railroad equipment that results in a fatality or the emergency evacuation of persons.

Joint Operations - 840.2(c)

"Joint Operations" means rail operations conducted on a track used jointly or in common by two or more railroads subject to this part, or operation of a train, locomotive, or car by one railroad over the track of another railroad.

Fatality - 840.2(d)

"Fatality" means the death of a person either at the time an accident occurs or within 24 hours thereafter.

Substantial Damage - 840.3

"Substantial Damage" in nonfatal railroad accidents is defined as follows:

1. Damage of $150,000 or more to railroad and nonrailroad property; or
2. All accidents involving passenger trains.
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<th>COLLISION</th>
<th>DERAILMENT</th>
<th>EMPLOYEE PAT.</th>
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(9) Not included in TOTAL RAILROAD ACCIDENTS/INCIDENTS INVESTIGATED
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Note: "GENERAL PUBLIC" consists of all persons who are neither railroad employees nor passengers, including but not limited to persons on official business on the railroad, emergency forces, and members of the public not on railroad property.
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<td>CAUSAL FACTOR: BY MAJOR CATEGORY AND ACCIDENT TYPE</td>
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<td>(FIGURES BELOW REPRESENT A 6 MONTH PERIOD)</td>
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<td>TRACK AND STRUCTURE DEFECTS</td>
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<td>EQUIPMENT FAILURES</td>
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<td>OPERATING PRACTICES</td>
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<td>TOTAL</td>
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(1) NOT INCLUDED IN TOTAL RAILROAD ACCIDENTS/INCIDENTS INVESTIGATED

(2) "OTHER" INCLUDES HUMAN FAILURE, DAMAGE FROM NATURAL FORCES, VANDALISM, SABOTAGE, SYSTEM DESIGN INADEQUACIES, FAILURE OF RADIO AND RADIO COMPONENTS, AND FAILURE OF CARGO AND CARGO TIEDOWN AND/OR BLOCKING

---------------------------- PROBABLE CAUSES ----------------------------

1. HUMAN FAILURE - CONDUCTOR WALKED TOO CLOSE TO TRACK

---------------------------- CASUALTIES -----------------------------

FATALITIES INJURIES

EMPLOYEES ON DUTY

--- PROPERTY LOSSES ---

--- 0 ---

---------------------------- PROBABLE CAUSES OF CASUALTIES -----------------------------

1. STRUCK BY TRAIN
REPORTED BY:
ATCHISON TOPEKA AND SANTA FE RY CO.

-----------------LOCATION-----------------
-----------------TIME-----------DATE--------WEATHER-----VISIBILITY------
SCHOLLE, NEW MEXICO
2220 NDT 07/09/84 CLEAR DARK/1500 FT

TRAIN ------------RAILROAD------------CLASS------DIRECTION------OPERATING PHASE-----TRUCK/NO-----
1 ATCHISON TOPEKA AND SANTA FE RY CO. FREIGHT WEST EN ROUTE MAIN 001

________________________________________ ACCIDENT DESCRIPTION _______________________________


____________________________________ PROBABLE CAUSES __________________________________

1. DAMAGE TO SPIKES AND RAIL FASTENERS FROM EXCESSIVE TRAIN BUFF FORCES
2. LACK OF INSTRUCTIONS FOR DISTRIBUTION OF LOADED AND EMPTY CARS IN TRAIN CONSIST

_________________________ CASUALTIES __________________________

FATALITIES INJURIES
EMPLOYEES ON DUTY 0 1


_________________________ PROBABLE CAUSES OF CASUALTIES __________________________

1. TOXIC REACTION
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #FTUBSR004

REPORTED BY:
ATCHISON TOPEKA AND SANTA FE RY CO.

---------------------LOCATION---------------------
CAPRON, OKLAHOMA

--TIME-- --DATE-- WEATHER -----VISIBILITY-----
0935 CST 01/03/95 CLEAR DAY/5000 FT

TRAIN ---------------RAILROAD-------------------
1 ATCHISON TOPEKA AND SANTA FE RY CO.

-------------CLASS------------- DIRECTION -----OPERATING PHASE----- ---TRACK/NO---
FREIGHT EAST IN ROUTE MAIN 001

************************************************************************************ ACCIDENT DESCRIPTION ********************************************************************************

EASTBOUND FREIGHT TRAIN 1001-3, CONSISTING OF 3 LOCOMOTIVE UNITS AND 27 CARS, HAD 23 LOADED PIGGYBACK CARS DERRAIL AT A FACING POINT SWITCH WHILE MOVING AT 68 MPH. THERE WAS CONSIDERABLE PROPERTY DAMAGE. A SCALE HOUSE AT A McCLOY GRAIN ELEVATOR WAS DESTROYED BY DERAILED CARS, AND THE DAMAGE TO LADY12 IN THE PIGGYBACK TRAILER/CONTAINERS WAS OVER $600,000. THE TRAIN WAS MOVING OVER THE SWITCH WHEN THE SWITCH ROD BROKE AND THE SWITCH OPENED UNDER THE 9TH CAR.

INVESTIGATION OF THE BROKEN SWITCH ROD FRAGMENT SURFACE REVEALED A 90% JI BREAK.

---------------------------------------------------------------------------------- PROBABLE CAUSES -----------------------------------------------

1. FAILURE OF SWITCH ROD DUE TO NORMAL DETERIORATION/YEAR
2. FAILURE OF SWITCH ROD - BROKEN ROD LET SWITCH OPEN UNDER MOVING TRAIN

---------------------------------------------------------------------------------- CASUALTIES -----------------------------------------------

NONE

---------------------------------------------------------------------------------- PROPERTY LOSSES -----------------------------------------------

-------- RAILROAD NON-RAILROAD

$ 1,563,000 $ 40,000
**NATIONAL TRANSPORTATION SAFETY BOARD**
**WASHINGTON, D.C. 20594**

**BRIEF OF RAILROAD ACCIDENT**

**REPORTED BY:**
**ATCHISON TOPEKA AND SANTA FE RY CO.**

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<td>MAIN 001</td>
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<tr>
<td>2 ATCHISON TOPEKA AND SANTA FE RY CO.</td>
<td>LOCAL FREIGHT</td>
<td>EAST</td>
<td>UNATTENDED/STORAGE</td>
<td>MAIN 001</td>
<td></td>
</tr>
</tbody>
</table>

**ACCIDENT DESCRIPTION**

FREIGHT TRAIN NO. EXTRA 3027 EAST, MOVING 25 MPH, STRUCK THE REAR OF FREIGHT TRAIN NO. EXTRA 3636 EAST STANDING ON THE MAIN TRACK. FOUR LOCOMOTIVE UNITS AND 12 CARS OF NO. 3027 AND 9 CARS OF NO. 3636 WERE DERAILED. THE ENGINEER ABOARD LEAD LOCOMOTIVE 3027 WAS INJURED AND 3 OF HIS CREW MEMBERS RECEIVED MINOR INJURIES. THERE WAS NO CABOOSE ON EITHER TRAIN. THE END-OF-TRAIN MARKER ON NO. 3636 HAD GONE OUT DUE TO DEAD BATTERIES. POST ACCIDENT TESTS REVEALED THAT THE MARKER, ALTHOUGH NOT FUNCTIONING, WAS STILL VISIBLE OVER 2,000 FEET AWAY. NINE TANK CARS OF FUEL DERAILED AND SOME OIL LEAKED INTO A DRAINAGE DITCH. BOTH TRAINS WERE WITHIN YARD LIMITS. NO. 3027 SHOULD HAVE BEEN MOVING AT RESTRICTED SPEED. NO. 3636 HAD BEEN LEFT STANDING UNATTENDED AT THE TIME AND THE CREW OF NO. 3027 WAS UNAWARE OF ITS PRESENCE.

**PROBABLE CAUSES**

1. HUMAN FAILURE - ENGINEER OPERATED TRAIN OVER RESTRICTED SPEED
2. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE 6113
3. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE 693

<table>
<thead>
<tr>
<th>CASUALTIES</th>
<th>PROPERTY LOSSES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RAILROAD</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>EMPLOYEES</td>
<td>$1,070,000</td>
</tr>
</tbody>
</table>

**PROBABLE CAUSES OF CASUALTIES**

1. THROWN FROM SEAT/POSITION IN COLLISION/DERAILMENT
REPORTED BY:
ATCHISON TOPEKA AND SANTA FE RY CO.

-------------------LOCATION------------------
MEDICINE LODGE, KANSAS

-------------------TIME---------------------
2310 CST

-------------------DATE---------------------
01/30/85

-------------------WEATHER-------------------
SNOW

-------------------VISIBILITY------------------
DARK/0070 FT

TRAIN -------------------RAILROAD------------------
1 ATCHISON TOPEKA AND SANTA FE RY CO.

-------------------CLASS---------------------
LOCAL FREIGHT

-------------------DIRECTION------------------
EAST

-------------------OPERATING PHASE------------------
MOVEMENT IN YARD

-------------------TRACK/NO------------------
INDUSTRIAL 025

*************** ACCIDENT DESCRIPTION ***************

A BRAKEMAN WAS FATALLY INJURED WHEN HE FELL UNDER A CAR DURING A SWITCHING Move. THE CREW WAS SWITCHING CARS IN AND OUT OF INDUSTRIAL SIDDIES USING 2 LOCOMOTIVE UNITS. THEY WERE PULLING 7 CARS OUT OF A SIDETRACK WHEN THE BRAKEMAN FELL FROM A CAR AND WAS RUN OVER BY THE LAST CAR. HE HAD PREVIOUSLY BEEN GIVEN A DISCIPLINARY LETTER WARNING HIM THAT HIS LACK OF CONCERN FOR SAFETY COULD RESULT IN A SERIOUS ACCIDENT.

------------------- PROBABLE CAUSES -------------------

1. HUMAN FAILURE - EMPLOYEE FELL UNDER THE WHEEL OF MOVING CAR

------------------- CASUALTIES -------------------

-------------------FATALITIES-------------------

-------------------INJURIES-------------------

-------------------PROPERTY LOSSES-------------------

-------------------EMPLOYEES ON DUTY-------------------

-------------------NONE-------------------

------------------- 1 -------------------

------------------- PROBABLE CAUSES OF CASUALTIES -------------------

1. FALLING/TRIPPING
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT \#LAXESFR007

REPORTED BY:
ATCHISON TOPEKA AND SANTA FE RY CO.

-------------------LOCATION-------------------
FLAGSTAFF, ARIZONA

-------------------TIME--DATE--WEATHER--VISIBILITY-------------------
2043 HST 02/24/85 CLEAR DARK/0200 FT

TRAIN -------------------RAILROAD-------------------
1 ATCHISON TOPEKA AND SANTA FE RY CO.

-------------------CLASS--DIRECTION--OPERATING PHASE--TRACK/NO-------------------
FREIGHT EAST EN ROUTE MAIN 001

************************************ ACCIDENT DESCRIPTION *******************************

FREIGHT TRAIN \#804-23 HAD 17 CARS DERAIL WHILE MOVING OVER A DOUBLE TRACK CROSSOVER AT 55 MPH.
The train consisted of 4 Locomotive Units and 85 cars. THE 26TH CAR HAD A FRAMED OFF PLAIN BEARING
AXLE JOURNAL. THE TRAIN HAD PASSED A HOT BOX DETECTOR 13 MILES BEFORE THE ACCIDENT SITE AND THE
FAILED BEARING MEASURED 9 ON THE SCANNER, BUT THE SCANNER WAS SET TO TRIP ONLY WHEN A READING OF 10
WAS DETECTED. THE CAR WITH THE FAILED BEARING AND JOURNAL WAS LOADED WITH 79 TONS OF CEMENT.

******************************** PROBABLE CAUSES ********************************

1. OVER HEATED AXLE JOURNAL
2. OVER HEATED PLAIN BEARING
3. FAILURE OF PLAIN BEARING FROM UNKNOWN CAUSES

******************************** CASUALTIES ********************************

NONE

------------- PROPERTY LOSSES -------------

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NHM</th>
<th>RAILROAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>288,000</td>
<td>9</td>
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</table>
REPORTER BY:
Baltimore & Ohio RR Co.

-------------LOCATION------------- --TIME-- --DATE-- WEATHER -----VISIBILITY-----
Pleasonton, West Virginia 0420 EST 01/30/85 CLEAR DARK/1000 FT

TRAIN --------------------------- RAILROAD--------------------- -----CLASS----- DIRECTION -----OPERATING PHASE----- --TRACK/WO-----
1 Baltimore & Ohio RR Co. Freight EAST REOUT/PICKUP NOT IN YARD MAIN 001

++++++++++++++++++++++++++++ ACCIDENT DESCRIPTION ++++++++++++++++++++++
Westbound freight train no 99, consisting of 4 locomotive units and 50 cars, stopped en route to switch cars in a sidetrack. After the switching move and while backing to couple with the rear portion of the train, the head brakeman slipped off the end of the car he was riding and the train backed over him. He was fatally injured. Evidence indicated he had been standing on the center sill at the end of the car and had stepped onto the uncoupling rod when he fell off. Safety Rule 90 requires that employees not step on uncoupling rods or levers.

----------------------------- PROBABLE CAUSES -----------------------------
1. Failure to perform procedure prescribed by RR train crew safety rule 990
2. Human failure - brakeman rode on uncoupling rod and fell off car

----------------------------- CASUALTIES -----------------------------
FATALITIES INJURIES
Employee on duty 1 0

----------------------------- PROBABLE CAUSES OF CASUALTIES -----------------------------
1. Struck by train
| NATIONAL TRANSPORTATION SAFETY BOARD |
| WASHINGTON, D.C. 20594 |

| BRIEF OF RAILROAD ACCIDENT NTSBFRG010 |

| REPORTED BY | BALTIMORE & OHIO RR CO. |
| LOCATION | SPROCK, PENNSYLVANIA |
| TIME | 0230 EST |
| DATE | 02/03/05 |
| WEATHER | CLEAR |
| VISIBILITY | DARK/0050 FT |
| TRAIN | BALTIMORE & OHIO RR CO. |
| RAILROAD | BALTIMORE & OHIO RR CO. |
| CLASS | FREIGHT |
| DIRECTION | EAST |
| OPERATING PHASE | EN ROUTE |
| TRACK/NO | MAIN 001 |

*************** ACCIDENT DESCRIPTION ***************

A FREIGHT TRAIN DESIGNATED AS GRAIN EXTRA EAST HAD 18 CARS DERAIL while traveling about 25 MPH through a tunnel. The train consisted of 4 locomotive units on the head end, 123 loaded grain cars, and 3 helper locomotive units on the rear end. The derailed cars had been moving through a series of 8-degree curves. The outside curve rails in the area of derailment showed a high degree of head wear in the rail joints.

----------- PROBABLE CAUSES -----------

1. FAILURE OF RAIL - WHEEL CLimbed WORN RAIL HEAD IN 8-DEGREE CURVES

----------- CASUALTIES -----------

NONE

----------- PROPERTY LOSSES -----------

| RAILROAD | NON-RAILROAD |
| | |
| $403,000 | $0 |
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #CHIBSFR018

REPORTED BY:
BALTIMORE & OHIO RR CO.

-----------------LOCATION-----------------  ---TIME---  ---DATE---  WEATHER  ----VISIBILITY-----
EAST MONROE, OHIO  0025 EST  04/25/85  CLEAR  DARK/0100 FT

TRAIN  ------------RAILROAD---------------  ------CLASS------  DIRECTION  -----OPERATING PHASE-----  ---TRACK/NO---
1 BALTIMORE & OHIO RR CO.  FREIGHT  WEST  SETOUT/PICKUP NOT IN YARD  MAIN  001

************************************ ACCIDENT DESCRIPTION ************************************

FREIGHT TRAIN 435, consisting of 3 locomotive units and 113 cars, was making a switching
move in a siding when the brakeman slipped from the side of a car and fell under the train, receiving
several fatal injuries. The units and seven cars were rolling into the siding at the time, with the
remainder of the train standing on the main track. The conductor heard the brakeman call for help,
rushed to him, and saw the train had run over his right leg. The brakeman said, "I slipped"; then
became unconscious. A volunteer emergency medical team arrived within 30 minutes, but he died on the
way to the hospital. Autopsy tests for alcohol were negative.

--------------------------------- PROBABLE CAUSES ---------------------------------
1. HUMAN FAILURE - BRAKEMAN FELL FROM CAR DURING SWITCHING
2. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR TRAIN
CREW SAFETY RULE 735

--------------------------------- CASUALTIES ---------------------------------

FATALITIES  INJURIES

EMPLOYEES ON DUTY  1  0

--------------------------------- PROBABLE CAUSES OF CASUALTIES ---------------------------------
1. FALLING/TRIPPING
REPORTED BY:
BOSTON & MAINE CORP.

---------------------- LOCATION ----------------------
GREENFIELD, MASSACHUSETTS

--TIME-- --DATE-- WEATHER --------VISIBILITY--------
1140 EST 03/29/85 CLEAR DAY/UNKNOWN

TRAIN ------------------ RAILROAD ------------------
-------CLASS------- DIRECTION ------OPERATING PHASE------ ----TRACK/NO----
1 BOSTON & MAINE CORP. FREIGHT SOUTH EN ROUTE MAIN 001

++++++++++++++++++++++++++++++++++++ ACCIDENT DESCRIPTION ++++++++++++++++++++++


-------------------------- PROBABLE CAUSES --------------------------

1. FAILURE OF CAR/LOCO CENTER PIN FROM UNKNOWN CAUSES

-------------------------- CASUALTIES --------------------------

NONE

-------------------------- PROPERTY LOSSES --------------------------

<table>
<thead>
<tr>
<th>RAILROAD</th>
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</tr>
</thead>
<tbody>
<tr>
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REPORTED BY: BURLINGTON NORTHERN INC.

<table>
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<tr>
<td>0755</td>
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<td>CLOUDY</td>
<td>DAY/3000 FT</td>
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<th>DIRECTION</th>
<th>OPERATING PHASE</th>
<th>TRACK/NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BURLINGTON NORTHERN INC.</td>
<td>FREIGHT</td>
<td>EAST</td>
<td>EN ROUTE</td>
<td>MAIN 001</td>
</tr>
<tr>
<td>2</td>
<td>BURLINGTON NORTHERN INC.</td>
<td>FREIGHT</td>
<td>WEST</td>
<td>EN ROUTE</td>
<td>MAIN 001</td>
</tr>
</tbody>
</table>

*************** ACCIDENT DESCRIPTION ***************

FREIGHT TRAIN EXTRA 279M EAST AND FREIGHT TRAIN EXTRA 2231 WEST COLLIDED HEAD-ON ABOUT 9 MILES SOUTH OF SHELBY, MONTANA. THE TRAIN DISPATCHER HAD ARRANGED BY TRAIN ORDER FOR THE TRAINS TO MEET AT NAISMITH SIDING WITH TRAIN 2231 TO ENTER THE SIDERING. TRAIN 2231 HAD STOPPED ON THE MAIN TRACK TO WAIT FOR TRAIN 2208 TO ENTER THE SIDERING. THE CREW OF TRAIN 2208 DID NOT COMPLY WITH THE TRAIN ORDER AND THEY CONTINUED ON THE MAIN TRACK, COLLIDING WITH THE STANDING TRAIN AT A SPEED OF ABOUT 25 MPH. THERE WERE NO CASUALTIES, AS BOTH CREWS WERE AWARE OF THE IMPENDING COLLISION AND JUMPED FROM THE TRAINS. A TOTAL OF 6 LOCOMOTIVE UNITS AND 7 CARS WERE DETAERED.

PROBABLE CAUSES:

1. HUMAN FAILURE - CREW DID NOT COMPLY WITH ORDER TO ENTER SIDING
2. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE 884-2

CASUALTIES:

NONE

PROPERTY LOSSES:

<table>
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<th>RAILROAD</th>
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<td>$ 308,000</td>
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NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT NTSB/POR/013

REPORTED BY:
BURLINGTON NORTHERN INC.

------------------------LOCATION------------------------

CHILDRESS, TEXAS

--------TIME-------- DATE-------- WEATHER --------VISIBILITY--------
0045 GMT 05/02/95 CLEAR DARK/0900 #1

TRAIN ----------------RAILROAD---------------------

1 BURLINGTON NORTHERN INC.

--------CLASS-------- DIRECTION --------OPERATING PHASE-------- ---TRACK/NO---
FREIGHT EAST EN ROUTE MAIN 001

*******************************************************************************
ACCIDENT DESCRIPTION*******************************************************************************

FREIGHT TRAIN "Q-195-01", CONSISTING OF 6 LOCOMOTIVE UNITS AND 72 CARS, HAD 5 CARS DERAILED WHILE MOVING ABOUT 25 MPH. ONE OF THE CARS WAS A TANK CAR CONTAINING HYDROGEN PEROXIDE. THE CAR TURNED OVER AND ABOUT 750 GALLONS OF HYDROGEN PEROXIDE LEAKED FROM THE VENT VALVE UNTIL A WRECKING CREW COULD TURN THE C/R UPRIGHT. ABOUT 300 PERSONS WERE EVACUATED FROM A 1/4 MILE RADIUS OF THE SITE FOR ABOUT 6 HOURS. INVESTIGATION REVEALED LOW RAIL JOINTS AND BATTERED RAIL HEADS ON THE JOINTED RAIL FOR ABOUT 1,000 FEET DISTANCE THROUGH THE DERAILMENT AREA.

*******************************************************************************

PROBABLE CAUSE:

1. FAILURE OF TRACK CROSS ELEVATION - IRREGULAR CROSS ELEVATION AND LOW RAIL JOINTS

CASUALTIES ------------------
NONE

PROPERTY LOSSES ------------------

<table>
<thead>
<tr>
<th>RAILROAD</th>
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</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$64,000</td>
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</table>
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT 90CA84MR013

REPORTED BY:
CENTRAL VERMONT RY INC.

-----------------LOCATION-----------------
ESSEX JUNCTION, VERMONT

--TIME-- --DATE--  WEATHER  VISIBILITY
0450 EDT    07/07/84  CLOUDBY       DAWN OR DUSK/1000 FT

TRAIN -----------------RAILROAD-----------------
CLASS       DIRECTION  OPERATING PHASE  TRACK/NO.
PASSENGER  NORTH  EN ROUTE  MAIN 001

******************************************************************************


******************************************************************************

PROBABLE CAUSES

1. DAMAGE BY NATURAL FORCES - SEE NTSB REPORT RAH-85-14 FOR PROBABLE CAUSE

CASUALTIES

FATALITIES INJURIES

EMPLOYEES ON DUTY 2 3
PASSENGERS 3 26

PROPERTY LOSS

RAILROAD  $6,896,000
NON-RAILROAD  

PROBABLE CAUSES OF CASUALTIES

1. THROWN FROM TRAIN
2. COLLAPSE OF STRUCTURE (TRAIN)
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #84-0125

REPORTED BY:
CHESSAPEAKE AND OHIO RY CO. (THE)

-------------------LOCATION-------------------
OREGON, OHIO

----------TIME---------- --DATE-- WEATHER ------VISIBILITY------
0405 EST 07/23/84 CLOUDY DARK BUT LIGHTED/1000 FT

TRAIN ------------------RAILROAD-----------------
1 CHESSAPEAKE AND OHIO RY CO. (THE)

-------------------CLASS----------- DIRECTION ------OPERATING PHASE---- ---TRACK/HO---
YARD/SWITCHING SOUTH MOVEMENT IN YARD YARD 003

++++++++++++++++++++++++++++++++++++++++ ACCIDENT DESCRIPTION ++++++++++++++++++++++++++++++++++++++++,

A SWITCHMAN WAS FATALLY INJURED IN THE TOLEDO Docks Lake Front Yard When he was caught in the close clearance of
the corner of the car he was riding and the corner of a locomotive standing on an adjacent track. The Yard Train of 9
cars was being shoved through a crossover to the track that the standing locomotive was on. The locomotive was not
clear of the crossover. The engineer of the standing locomotive witnessed the accident and said the switchman was not
looking forward toward the locomotive. The engineer shouted to the switchman but could not get his attention.

----------------------- PROBABLE CAUSES ------------------ OTHER FACTORS ------------------
1. HUMAN FAILURE - SWITCHMAN DID NOT LOOK TOWARD FOULED CROSSOVER
2. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR TRAIN CREW SAFETY RULE 604
3. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR TRAIN CREW SAFETY RULE 604
4. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE 8103K

------------------------ CASUALTIES ------------------ 

FATALITIES: INJURIES

EMPLOYEES ON DUTY
1 0

------------------------ PROBABLE CAUSES OF CASUALTIES ------------------ 
1. STRUCK TRAIN

------ PROPERTY LOSSES ------
RAILROAD NON-RAILROAD
$ 1,000  $ 0
National Railroad Passenger Corporation (Amtrak) eastbound passenger train No. 440, The Capital Limited, while traveling 38 m.p.h. entered a 4 degree 30 minute curve. As the train proceeded around the curve, the engineer and fireman saw that there was a washout ahead, but before the engineer could apply the train brakes, the locomotive plunged into the washed out section of track. Two locomotives and seven cars derailed.

Probable Cause:
1. Failure of Chessie System to keep drainage culverts free of obstructions.
2. Failure of Chessie System to have a surface observation system to monitor the effects of weather on operating conditions

Other Factors:
1. Heavy water run off from unusual heavy rainfall
2. 

Fatalities: 
<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Injuries</th>
<th>Number</th>
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</tr>
<tr>
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<td></td>
<td>20</td>
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</tbody>
</table>

Probable Cause of Casualty:
1. Striking injurious environment (seats, baggage, protuberances)
2. Falling
### Accident Description:

Freight train No. FRRBB 151, consisting of 3 locomotive units and 108 cars, had cars 70 through 95 derail while moving about 38 m.p.h. The derailed cars struck and derailed 6 empty box cars standing on an adjacent track. A tank car of sodium hydroxide was punctured and all cargo was lost. The rails at the site had been manufactured in 1936 and were found to contain non-metallic inclusions. A broken rail contained a transverse fissure with several recent growth rings. This type of rail was made before methods of controlled cooling and rolling were used in the steel making process.

### Probable Cause:


### Other Factors:

1. 

### Fatalities:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Injuries</th>
<th>Number</th>
<th>Description</th>
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### Property Losses:

<table>
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<th>Non-Fried</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railroad: $472,000</td>
<td>Non-Railroad: -0-</td>
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REPORTED BY:
CHICAGO TRANSIT AUTHORITY

-------------LOCATION-------------  ---TIME---  ---DATE---  WEATHER  --------VISIBILITY--------
CHICAGO, ILLINOIS  1700 CDT  08/17/84  CLEAR  DAY/1000 FT

TRAIN -----------------RAILROAD------------------  ------CLASS------  DIRECTION  ------OPERATING PHASE------  ----TRACK/NO-----
1  CHICAGO TRANSIT AUTHORITY  PASSENGER TRANSIT  SOUTH  EN ROUTE  MAIN  002
2  CHICAGO TRANSIT AUTHORITY  PASSENGER TRANSIT  SOUTH  EN ROUTE  MAIN  002

******************************************************************************
ACCIDENT DESCRIPTION******************************************************************************


------------------------------- PROBABLE CAUSES -------------------------------

1. HUMAN FAILURE - SEE NTSB REPORT RAR-83-11 FOR PROBABLE CAUSE

---------------------- CASUALTIES ----------------------

------- PROPERTY LOSSES -------

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>FATALITIES</td>
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<td>0</td>
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<tr>
<td>INJURIES</td>
<td>3</td>
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</table>

------------------------------- PROBABLE CAUSES OF CASUALTIES -------------------------------

1. THROWN FROM SEAT/POSITION IN COLLISION/DERAILMENT
2. COLLAPSE OF STRUCTURE (TRAIN)
REPORTED BY:
DELAMAR AND HUDSON RY CO.

--------------------------- LOCATION ---------------------------
SANITARIO SPRINGS, NEW YORK

--- TIME ---   --- DATE ---   WEATHER   --- VISIBILITY ---
2010 EST  03/22/85  CLOUDY  DARK/0500 FT

TRAIN -------------- RAILROAD --------------
------------- CLASS -------------- DIRECTION -------------- OPERATING PHASE -------------- --- TRACK/NO ---
1  DELAMAR AND HUDSON RY CO.  FREIGHT  SOUTH  EN ROUTE  MAIN  001

---------------------------------- ACCIDENT DESCRIPTION ----------------------------------


---------------------------------- PROBABLE CAUSES ----------------------------------
1. HUMAN FAILURE - TO PROPERLY CONTROL TRAIN BRAKES ON GRADE
2. INADEQUATE TRAINING IN PERFORMING NECESSARY TRAIN OPERATION PROCEDURE
3. FAILURE TO CONTROL SPEED OF TRAIN

---------------------------------- CASUALTIES ----------------------------------
NONE

---------------------------------- PROPERTY LOSSES ----------------------------------
Railroad Non-Railroad
$1,650,000  $0
Amtrak Passenger Train No. 6, the California Zephyr, traveling on the Denver & Rio Grande Western Railroad Company, Colorado Division main track, derailed at Mile Post 70.3, 5 1/2 miles east of Granby, Colorado. The deraiment resulted when two locomotives and the first 4 coaches of a 12-coach train derailed at a 20 foot deep and 180 foot long roadway embankment slide. The two locomotive units and four coaches were heavily damaged when the first two coaches (baggage cars) landed on top of the locomotive units. In addition, 420 feet of the main track structure was destroyed and approximately 3,300 cubic yards of sub-grade and ballast were washed away by the Fraser River.

Probable Cause:
1. Track embankment slide because of excessive soil saturation from rapid snow melt, underground water and diverted water from a plugged under track culvert.

Other Factors:
1. 
2. 

Fatalities:
- Number: 
- Description: 

Injuries:
- Number: 14
- Description: Passengers
- Number: 2
- Description: Crew members

Probable Cause of Casualties:
1. Striking injurious environment (seats, baggage, protuberances)
2. Thrown from seat in deraiment

Property Losses:
- Railroad: $2,920,000
- Non-Railroad: 

- Reported by: Denver and Rio Grande Western Railroad
- Brief of Railroad No.: DCR-83-R-90005
- Location: Granby, Colorado
- Time: 1925 MST
- Date: April 16, 1985
- Weather: Clear
- Visibility: Dark/1,000 feet
- Class: Passenger
- Railroads:
  1. Amtrak
  2. 
- Operating Phase: Enroute
- Track No.: Main
REPORTED BY: KANSAS CITY SOUTHERN RY CO.

-----------------LOCATION-----------------

KACHAHC, TEXAS

-------------TIME--DATE--WEATHER-----VISIBILITY-----

0045 CST 01/23/85 CLEAR  DARK/2000 FT

TRAIN ---------------RAILROAD----------------- CLASS----------DIRECTION-----OPERATING PHASE-----TRACK/NO-----

1 KANSAS CITY SOUTHERN RY CO. FREIGHT UNIT TRAY WEST EN ROUTE MAIN 000

================================================================================ ACCIDENT DESCRIPTION =================================================================================

FREIGHT TRAIN NO. KCM-12-11, CONSISTING OF 5 LOCOMOTIVE UNITS AND 112 CARS, HAD 21 CARS DERAILED WHILE MOVING 32 MPH. THE TRAIN HAD JUST GOTT TO THE BOTTOM OF A LONG DESCENDING GRADE. INVESTIGATION REVEALED A TRANSVERSE BREAK THROUGH THE WELD OF A WELDED RAIL JOINT. A RAILROAD OFFICIAL STATED THEY HAD SEVERAL BROKEN RAILS AND BROKEN JOINT BARS IN THE AREA OVER THE PREVIOUS 4 MONTHS. SOME OF THE RAILS IN THE WELDED RAIL STRINGS HAD BEEN MANUFACTURED IN 1929.

-------------------------------- PROBABLE CAUSES --------------------------------

1. BROKEN RAIL
2. FAILURE OF RAIL - RAIL BROKE AT FAULTY WELDED JOINT

--------------------------------- CASUALTIES ---------------------------------

NONE

--------------------------------- PROPERTY LOSSES ---------------------------------

<table>
<thead>
<tr>
<th>RAILROAD</th>
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</tr>
</thead>
<tbody>
<tr>
<td>$ 772,000</td>
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COMUTER TRAIN NO. 3075, CONSISTING OF 4 SELF-PROPELLED COMMUTER PASSENGER CARS, HAD THE REAR CAR DERAIL JUST AFTER IT DEPARTED FAR ROCKAWAY TERMINAL. THE TRAIN WAS PASSING OVER A FACING POINT SWITCH AT THE TIME. THE REAR CAR STRUCK STANDING CARS IN THE SIDETRACK AND DERAILED THEN. ABOUT 45 MINUTES BEFORE THE ACCIDENT, ANOTHER TRAIN HAD PASSED OVER THE SWITCH WITH NO PROBLEMS. INVESTIGATION REVEALED THE THROW ARM OF THE SWITCH HAD BEEN LEFT UNSECURED.

PROBABLE CAUSES

1. HUMAN FAILURE - SWITCH NOT PROPERLY SECURED, OPENED UNDER TRAIN

CASUALTIES

NONE

PROPERTY LOSSES

<table>
<thead>
<tr>
<th>Railroad</th>
<th>Non-Railroad</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
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</table>
### Accident Description

Accident Description: Northbound light engine No. 804 struck the rear of standing deadhead equipment train No. 2017 on main track No. 1 on the Hudson Line 1.21 miles north of Glenwood Interlocking. Two cars on train No. 2017 were derailed. Six crewmembers on the two trains were treated for minor injuries and released. The three member crew on engine 804 departed Wootton Interlocking with the long hood forward. The crew passed a stop and proceed signal at 30 mph. The engineer attempted to stop the engine by applications of the independent and automatic brakes, however, the engine failed to stop before striking the rear of train No. 2017.

### Probable Cause

1. **Failure of engineer of 804 to comply with signals and control speed of his train accordingly.**

### Other Factors

1. **Failure of conductor of 804 to monitor train operation.**

### Fatalties & Injuries

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Injuries</th>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

### Probable Cause of Casualty:

1. 

2. 

### Property Losses

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railroad</td>
<td>$65,000</td>
</tr>
<tr>
<td>Non-Railroad</td>
<td></td>
</tr>
</tbody>
</table>
NATIONAL TRANSPORTATION SAFETY BOARD  
Washington, D.C. 20594  
84-154

Reported by: Metro-North Commuter Railroad  
Brief of Railroad No.: NYC-85-MB001

Location:  Stamford, Connecticut  
Time:  0430 EDT  
Date:  10/17/84  
Weather:  Cloudy  
Visibility:  Dark/1,000 ft.

Train:  1  Amtrak  
       2  Consolidated Rail Corp.
       3  
Railroad:  
Class:  Work  
Direction:  Rear  
Operating Phase:  En route  
Track No.:  2

Accident Description: An Amtrak work train, No. NW-2, struck the rear end of a standing local freight train, Conrail No. WNGH-4. Two locomotive units of NW-2 and the caboose of WNGH-4 were derailed. NW-2 consisted of 2 electric locomotive units, 18 maintenance of way cars, and a caboose. WNGH-4 consisted of one locomotive unit, 9 freight cars, and a caboose. Three Amtrak crewmembers and 4 Conrail crewmembers were injured, most with minor injuries. WNGH-4 had stopped to get instructions for handling a car that had an excess dimension load. NW-2 was moving on the same track at a speed of 40 mph, but should have been moving at restricted speed (not to exceed 15 mph). The engineer saw WNGH-4 on the track in front of him and made an emergency brake application. The caboose of WNGH-4 was destroyed in the collision, but no crewmembers were in it at the moment of impact. The engineer of NW-2 had gone for over 20 hours without sleep at the time of the accident.

Probable Cause:  
1. Failure of the engineer due to possible fatigue, and of the conductor due to unfamiliarity with riding on the head end, to operate train NW-2 at the speed required by signal indication.

Other Factors:  
1. 

Fatalities:  
Number:  5  
Description:  
Injuries:  Number:  7  
Description:  Employers on duty  
          (All minor except one)

Probable Cause of Casualty:  
1. Thrown from position by collision  
2. 

Property Losses:  
Railroad:  $215,000  
Non-Railroad:  0
BRIEF OF RAILROAD ACCIDENT 

REPORTED BY: METRO-NORTH COMMUTER RAILROAD

-----------------LOCATION-----------------
SOUTH NORWALK, CONNECTICUT

--------------TIME-------------- DATE--------- WEATHER ---------VISIBILITY--------
1600 EST 11/18/84 CLOUDY BAY/1000 FT

TRAINT ----------RAILROAD------------- CLASS--------- DIRECTION ------------ OPERATING PHASE----- TRACK/NO--

1 AMTRAK passenger EAST EX ROUTE MAIN 004

---------------------------------------------------------------------------------------------------------------------
AMTRAK PASSENGER TRAIN NO. 296, CONSISTING OF AN AEM-7 ELECTRIC LOCOMOTIVE AND 9 PASSENGER CARS, MADE THE
LOCOMOTIVE AND 4 CARS DERAIL ON THE WALK-MOVABLE BRIDGE ON THE METRO-NORTH COMMUTER RAILROAD, NEW
HAVEN LINE. TRACK MAINTENANCE WAS ON DUTY AT THE BRIDGE. DURING THIS TIME, THE BRIDGE WAS SWING OPEN
FOR ROYAL TRAFFIC. HIS DUTIES INCLUDED CHECKING THE NITRE RAILS WHEN THE BRIDGE WAS CLOSED TO BE
SURE ALL RAILS WERE LINED UP AND IN PLACE BEFORE TRAINS RESUMED CROSSING THE BRIDGE. SHORTLY BEFORE
THE ACCIDENT, THE BRIDGE HAD BEEN OPENED TO ALLOW A RAILROAD TO PASS THROUGH. THE BRIDGE WAS THEN
CLOSED AND THE BRIDGE OPERATOR REPORTED TO THE TOWER THAT IT WAS ALL RIGHT TO RUN
TRAINS ACROSS THE BRIDGE. ONE OF THE NITRE RAILS ON THE BRIDGE WAS NOT PROPERLY IN PLACE, BUT WITH THE SIGNAL
MAINTENANCE WORK THE BRIDGE OPERATOR SAID IT UNTIL THEY HEARD THE TRAIN DERRAIL. THE SPEED OF THE TRAIN WAS 24 MPH.

---------------------------------------------------------------------------------------------------------------------

PROBABLE CAUSES

1. HUMAN FAILURE - PROTECTION NOT PROVIDED FOR INTERLOCKING REPAIRS
2. INADEQUATE SUPERVISION OF TRAIN OPERATION PROCEDURES
3. FAILURE TO SUPERVISE PERFORMANCE OF FED. REGULATIONS FOR INSPECTION & MAINTENANCE OF SYSTEMS; DEVICES AND APPLIANCES 236
4. FAILURE TO PERFORM FED. REGULATIONS FOR INSPECTION & MAINTENANCE OF SYSTEMS; DEVICES AND APPLIANCES 236

-------------------------------------------------------------
CASUALTIES

NONE

-------------------------------------------------------------
PROPERTY LOSSES

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 114,000</td>
<td>0</td>
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</tbody>
</table>
REPORTED BY:
METROPOLITAN DADE COUNTY TRANSIT AGENCY

-------------------LOCATION-------------------
MIAMl, FLORIDA

----------TIME---------- DATE---------- WEATHER ----------VISIBILITY---------
2335 EDT 06/26/85 CLEAR DARK/0480 FT

TRAIN ---------------RAILROAD---------------
1 ANGELA DADE COUNTY TRANSIT AGENCY PASSENGER TRANSIT NORTH EN ROUTE MAIN 001
2 ANGELA DADE COUNTY TRANSIT AGENCY PASSENGER TRANSIT NORTH EN ROUTE MAIN 001

************************************************ ACCIDENT DESCRIPTION ************************************************
METRO-DADE TRANSPORTATION ADMINISTRATION (MDTA) NONREVENUE TEST TRAIN NO. 172-171 STRUCK THE
RFR OF MDTA REVENUE TRAIN, NO. 141-142, WHICH WAS STOPPED ON TRACK 2 ABOUT 1,027 FEET SOUTH OF THE
NORTHSIDE STATION INTERLOCKING IN MIAMI, FLORIDA. NEITHER TRAIN WAS DERAILED. TEST TRAIN NO. 172-171
WAS RETURNING NORTHBOUND AFTER COMPLETING A SOUTHBOUND TEST RUN. TWELVE PASSENGERS AND 4 MDTA
EMPLOYEES WERE TAKEN TO NEARBY HOSPITALS WHERE THEY WERE TREATED AND RELEASED. NO. 172-171 WAS BEING
OPERATED WITH THE AUTOMATIC TRAIN PROTECTION SYSTEM IN ACTIVITY. THE TRAIN HAD KNOWN EQUIPMENT DEFECTS
AND WAS BEING TESTED ON THE SAME TRACK WITH REVENUE PASSENGER TRAINS. LABORATORY TESTS TAKEN 15
HOURS AFTER THE ACCIDENT REVEALED THE PRESENCE OF COCAINE, MARIJUANA, AND VALIUM IN THE TRAIN
OPERATOR, BUT THE TIME BETWEEN THE ACCIDENT AND THE TAKING OF BLOOD AND URINE SAMPLES COMPROMISES THE
INTERPRETATION OF THE RESULTS.

*************** PROBABLE CAUSES ***************
1. HUMAN FAILURE - SEE NTSB REPORT RA-86-3 FOR PROBABLE CAUSE
2. USE OF DRUGS

********************** CASUALTIES **********************

<table>
<thead>
<tr>
<th></th>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>FATALITIES</td>
<td>INJURIES</td>
<td>RAILROAD</td>
</tr>
<tr>
<td>EMPLOYEES ON DUTY</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PASSENGERS</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>PERSONS</td>
<td>0</td>
<td>2</td>
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</table>

*************** PROBABLE CAUSES OF CASUALTIES ***************
1. STRIKING INJURIOUS ENVIRONMENT
**REPORTED BY:**
MISMOIIPACIFIC RR CO.

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>TIME</th>
<th>DATE</th>
<th>WEATHER</th>
<th>VISIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>KANSAS CITY, KANSAS</td>
<td>0145 CST</td>
<td>04/30/85</td>
<td>CLOUDBY</td>
<td>DARK/0300 FT</td>
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</tbody>
</table>

**TRAIN**
MISMOIIPACIFIC RR CO.
CUT OF CARS WEST MAKEUP/BREAKUP YARD 018

**ACCIDENT DESCRIPTION**

**PROBABLE CAUSES**
1. INDIVIDUAL UNDERTOOK RISKS; PROCEDURAL DEVIATIONS CONWYBE MANAGER IT
2. HUMAN FAILURE - FELL WHILE SETTING HANDRAIL ON MOVING CAR

**CASUALTIES**

<table>
<thead>
<tr>
<th>FATALITIES</th>
<th>INJURIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

**PROPERTY LOSSES**
NONE

**PROBABLE CAUSES OF CASUALTIES**
1. STRUCK BY TRAIN
REPORTED BY: MISSOURI PACIFIC RR CO.

------------------------------- LOCATION -------------------------------

EASTLAND, TEXAS

------------------------------- TIME -------------------------------

1000 CDT

------------------------------- DATE -------------------------------

05/24/85

------------------------------- WEATHER -------------------------------

CLEAR

------------------------------- VISIBILITY -------------------------------

DAY/5000 FT

TRAIN ------------------------------ RAILROAD -------------------------------

FREIGHT

CLASS ------------------------------ DIRECTION -------------------------------

EAST

OPERATING PHASE ------------------------------ TRACK/NO -------------------------------

EN ROUTE

001

------------------------------- ACCIDENT DESCRIPTION -------------------------------


------------------------------- PROBABLE CAUSES -------------------------------

1. HUMAN FAILURE—DRIVER IGNORED WARNING LIGHTS. TRAIN INAUDIBLE

------------------------------- OTHER FACTORS -------------------------------

1. FAILURE OF PERSONNEL TO DETECT SIGNAL
2. FAILURE OF MOTORIST TO STOP AT PROTECTED GRADE CROSSING

------------------------------- CASUALTIES -------------------------------

FATALITIES INJURIES

EMPLOYEES ON DUTY 0 2
PUBLIC NOT ON RR PROPERTY 0 4
PERSONS 0 1

------------------------------- PROPERTY LOSSES -------------------------------

RAILROAD NON-RAILROAD

$2,334,000 $100,000

------------------------------- PROBABLE CAUSES OF CASUALTIES -------------------------------

1. STRUCK TRAIN
2. EXPLOSION/DETONATION
NATIONAL TRANSPORTATION SAFETY BOARD
Washington, D.C. 20594

Reported by: New York City Transit Authority

Location: New York City, New York
Time: 0950 EST

Brief of Railroad No.: NYC-84-F-0019

Date: 04/06/84
Weather: N/A

Train: 1 New York City Transit Authority
Class: Passenger transit
Direction: North

Operating Phase: En route
Track No.: 1

Visibility: Tunnel/400 ft.

Accident Description: The train operator of a subway train on the IRT line reported by telephone to the dispatcher that he saw an ARC and heard a loud noise in the tunnel north of the Brooklyn Bridge Station. The dispatcher cut off the third rail power, which stalled 2 trains in the tunnel. About 500 passengers were evacuated via an emergency exit to the street when smoke filled the tunnel area due to a burning third rail feeder cable.

Probable Cause:

1. Mud splashed onto cable connector, resulting in short circuit

Other Factors:

1. Fouled ballast

Fatalities:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Injuries:</th>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>21</td>
<td></td>
<td>Employees on duty (minor)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18</td>
<td></td>
<td>Passengers (minor)</td>
</tr>
</tbody>
</table>

Probable Cause of Casualty:

1. Smoke inhalation

Property Losses:

Railroad: $1,000

Non-Railroad:
Reported by: New York City Transit Authority

Location: Queens, New York

Time: 0325 EST

Date: 04/17/84

Weather: Clear

Visibility: Dark/1,000 ft.

Train:
1. New York City Transit Authority
2.
3.

Class: Passenger Transit

Direction: North

Operating Phase: Loading/Unloading

Track No.: 4

Accident Description: A fire started under the seats on the fifth car of an eight car subway train on the "A" line at Rockaway Boulevard Station. The interior of the car was destroyed. There was no fire extinguisher on the train. No passengers were in the car at the time, but 4 youths had got off the train at Broad Channel Station shortly before the fire was discovered.

Probable Cause:
1. Vandalism
2.
3.

Other Factors:
1.
2.
3.

Fatalities:
- 0

Injuries:
- 1

Description:
- Firefighter

Probable Causes of Casualty:
1. Smoke Inhalation
2.
3.
NATIONAL TRANSPORTATION SAFETY BOARD
Washington, D.C.  20594

Reported by:  New York City Transit Authority          Brief of Railroad No.: NYC-84-F-0025

Location:                  Time:                  Date:                  Weather:     Visibility:
    New York City, New York    1319 EDT    06/10/84      N/A         Tunnel

Train:                      Class:                   Direction:                Operating Phase:         Track No.:
    1  New York City Transit Authority       Passenger Transit     North        On route       2
    2
    3

Accident Description:  Subway train No. 3 (7th Avenue Express), consisting of 10 subway cars, was moving north on the IRT line in Manhattan and had just departed the 96th Street Station when a fire broke out under the 4th car. The third rail power was cut off, stranding the train and another train in the tunnel. About 180 passengers were evacuated from the 2 trains through an emergency exit to the street above. Thick smoke in the tunnel made evacuation and firefighting difficult.

Probable Causes:
1. Failure of ground switch box generated high temperatures
2. 
3. 

Other Factors:
1. 
2. 
3. 

Fatality: Number: Description: Injuries: Number: Description:
0: _______________ 12: Employees on duty (minor)

Injuries:

Probable Cause of Casualty:
1. Smoke Inhalation
2. _______________
3. _______________
REPORTED BY:
NEW YORK CITY TRANSIT AUTHORITY

LOCATION----------------- --TIME-- --DATE-- WEATHER ------VISIBILITY------
NEW YORK CITY, NEW YORK 0250 EST 04/23/85 R/A TUNNEL/0100 FT

TRAI: ---------------------RAILROAD------------------------ CLASS------- DIRECTION ------OPERATING PHASE------ ---TRACK/HO-----
1 NEW YORK CITY TRANSIT AUTHORITY PASSENGER TRANSIT SOUTH EN ROUTE MAIN 003

++++++++++++++++++++++++++++ Accident Description +++++++++++++++++++++++++++++

A SOUTHWIND "D" SUBWAY TRAIN, CONSISTING OF 10 CARS, STRUCK AND FATALY INJURED A SIGNALMAN SOUTHERN OF THE 167TH STREET STATION. THE SIGNALMAN WAS SITTING BY THE TRACK AND THE ENGINEER SAID HE "SAW FEET ON THE HILLLED AHEAD, AND PUT THE TRAIN BRAKES INTO EMERGENCY." THE SIGNALMAN WAS PART OF A TWO-MAN SIGNAL MAINTENANCE TEAM WORKING WITH A TRACK TEAM THAT WAS REPLACING 3 SIGNAL RAILS IN THE SUBWAY TUNNEL. THE SIGNALMAN WASH TIEING DOWN SIGNAL ARMS DUE TO A SIGNAL PROBLEM JUST PRIOR TO THE ACCIDENT.

-------------------------------- PROBABLE CAUSES --------------------------------

1. FAILURE OF PERSON TO RECOGNIZE POSITION ON TRACK STRUCTURE/RIGHT-OF-WAY AS HAZARDOUS
2. HUMAN FAILURE - SIGNALMAN SAT TOO CLOSE TO TRACK

------------------------------------ Casualties ------------------------------------

FATALITIES INJURIES

EMPLOYEES ON DUTY
1 0

-------------------------------- PROBABLE CAUSES OF CASUALTIES --------------------------------

1. STRUCK BY TRAIN
REPORTED BY:
NORFOLK AND WESTERN RY CO.

---------------LOCATION---------------
NEW LEXO, ILLINOIS

----------TIME----------
0115 CST

----------DATE----------
01/26/85

----------WEATHER----------
CLEAR

----------VISIBILITY----------
DARK/1000 FT

TRAIN ---------------RAILROAD---------------

----------CLASS----------
FREIGHT

----------DIRECTION----------
SOUTH

----------OPERATING PHASE----------
EN ROUTE

----------TRACK/HD----------
RAIN 001

Freight train SLE-17, consisting of 8 locomotive units and 29 cars, had 16 cars derail in a curve while moving 30 mph. Three tank cars were derailed but did not lose any contents. During the clearing operation, 250 residents were evacuated from the area for 48 hours as a precautionary measure. Derailed equipment struck and destroyed a 97-foot girdler bridge. Some nearby buildings were also damaged or destroyed. Evidence in rail joints indicated joint bars had worked loose or were missing.

------------------------ PROBABLE CAUSES ------------------------

1. Failure of joint bar - joint bars either loose or missing

------------------------ CASUALTIES ------------------------
NONE

------------------------ PROPERTY LOBSES ------------------------

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
</tr>
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<tbody>
<tr>
<td>$ 623,000</td>
<td>$ 40,000</td>
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</table>
REPORTED BY: SEABOARD "DASY LINE RR

---------------LOCATION---------------  ---TIME---  ---DATE---  ---WEATHER---  ---VISIBILITY---
GREENVILLE, SOUTH CAROLINA  1555 EST  01/09/95  CLEAR  DAY/2000 FT

TRAIN ---------------RAILROAD-------------  -----CLASS-----  DIRECTION  ----OPERATING PHASE----  ---TRACK/NO---
1 SEABOARD COAST LINE RR  FREIGHT  EAST  EN ROUTE  MAIN  001

----------------------------------------ACCIDENT DESCRIPTION----------------------------------------


----------------------------------------PROBABLE CAUSES----------------------------------------

1. HUMAN FAILURE - BUS DRIVER STOPPED ON GRADE CROSSING

----------------------------------------CASUALTIES----------------------------------------

FATALITIES  INJURIES
PUBLIC ON RR PROPERTY  0  3

----------------------------------------PROPERTY LOSSES----------------------------------------

RAILROAD  NON-RAILROAD
$  4,000  $  40,000

----------------------------------------PROBABLE CAUSES OF CASUALTIES----------------------------------------

DATA NOT AVAILABLE
REPORTED BY: SEABOARD COAST LINE RR

LOCATION: JACKSON, SOUTH CAROLINA

--- TIME --- DATE --- WEATHER --- VISIBILITY ---
0715 EST 02/23/85 CLEAR DAY OR DUSK/1000 FT

TRAIN --- RAILROAD --- CLASS --- DIRECTION --- OPERATING PHASE --- TRACK/NO ---
1 SEABOARD COAST LINE RR FREIGHT WEST LN ROUTE MAIN 001

---------------------------------------------------------------------
ACCIDENT DESCRIPTION ---------------------------------------------------------------------

FREIGHT TRAIN F-600, CONSISTING OF 5 LOCOMOTIVE UNITS AND 149 CARS, DERAILED WHILE TRAVELING
ABOUT 53 MPH. THE TRAIN STRUCK A CUSHION UNIT THAT had DROPPED FROM A CUSHION-UNDERFRAME BOXCAR IN A
TRAIN WHICH HAD PASSED THROUGH JACKSON ABOUT 5 HOURS EARLIER. EIGHT OF THE 27 DERAILED TANK
CARS LADED WITH CYCLODEXTRINE. THE TANK CARS DID NOT HAVE HEAD SHIELD PROTECTION. CYCLODEXTRINE WAS
RELEASED THROUGH TANK HEAD PENETRATIONS AND WAS IGNITED IMMEDIATELY. ALTHOUGH NO FATALITIES OR
INJURIES RESULTED FROM THE ACCIDENT, RESIDENCES WITHIN A 1-MILE RADIUS OF THE SITE WERE EVACUATED.

PROBABLE CAUSES

1. HUMAN FAILURE - SEE NTSB REPORT RAR-85-12 FOR PROBABLE CAUSE

---------------------------------------------------------------------
CASUALTIES

NONE

---------------------------------------------------------------------
PROPERTY LOSSES

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 1,142,000</td>
<td>$ 150,000</td>
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</table>
REPORTED BY:
SEABOARD COAST LINE RR

---LOCATION---
ROBBINS, SOUTH CAROLINA

---TIME---
0750 EST

---DATE---
02/25/95

---WEATHER---
CLEAR

---VISIBILITY---
Dawn or Dusk/1330 FT

TRAIN

---RAILROAD---
SEABOARD COAST LINE RR

---CLASS---
FREIGHT

---DIRECTION---
WEST

---OPERATING PHASE---
EN ROUTE

---TRACK/HO---
MAIN 001

SETOUT/PICKUP NOT IN YARD

**********************************************************************
ACCIDENT DESCRIPTION
**********************************************************************

FREIGHT TRAIN F-481 STRUCK THE REAR OF STANDING CARS THAT WERE LEFT THERE FROM A TRAIN 2 DAYS
BEFORE BECAUSE OF THE MAIN TRACK BLOCKADE AT JACKSON, S.C. FROM AN EARLIER DERAILMENT. THREE
CREW MEMBERS JUMPED OFF THE TRAIN WHEN THEY REALIZED A COLLISION WAS IMMINENT AND RECEIVED SERIOUS
INJURIES. THEY HAD BEEN DISPATCHED THROUGH THE AREA, UNAWARE OF THE CARS LEFT STANDING ON THE MAIN
TRACK. NO. F-481 CONSISTED OF 2 LOCOMOTIVE UNITS AND 97 CARS. WHEN THE CREW FIRST SAW THE STANDING
CARS AND THEIR TRAIN WAS TRAVELING ABOUT 40 MPH AND THE ENGINEER PUT THE BRAKES INTO EMERGENCY
APPLICATION. THE LEAD LOCOMOTIVE UNIT DERAILED AND THE CABOOSE AND ONE CAR OF THE STANDING CARS
ALSO DERAILED.

---------------------------------------------------------------------
PROBABLE CAUSES
---------------------------------------------------------------------

1. HUMAN FAILURE - SEE NTSB REPORT RN-93-12 FOR PROBABLE CAUSE

---------------------------------------------------------------------
CASUALTIES
---------------------------------------------------------------------

FATALITIES
INJURIES

EMPLOYEES ON DUTY

0
3

---------------------------------------------------------------------
PROPERTY LOSSES
---------------------------------------------------------------------

RAILROAD

NON-RAILROAD

0
66,000

0
0

---------------------------------------------------------------------
PROBABLE CAUSES OF CASUALTIES
---------------------------------------------------------------------

1. JUMPED FROM TRAIN
REPORTED BY:
SEABOARD COAST LINE RR

---------- LOCATION ----------

DATE-- WEATHER ---------- VISIBILITY-------
0255 CST 04/23/85 CLOUDY DARK/0600 FT

TRAIN ----------- RAILROAD-----------

---------- CLASS---------- DIRECTION ----- OPERATING PHASE ----- --- TRACK/HO ---
1 SEABOARD COAST LINE RR FREIGHT SOUTH EN ROUTE MAIN 001

++++++++++++++++++++ ACCIDENT DESCRIPTION +++++++++++++++++++++

Freight train J-609-24, consisting of 9 locomotive units and 179 cars, had 20 cars derail while moving 45 mph. The third car in the train was a heavy pile driver car with a short wheelbase and had a speed restriction requirement of 25 mph. A train order was not issued to the train crew regarding it, so the crew was unaware of the car's restriction. The pile driver car was the first car to derail. It struck a bridge that carried Interstate 10 over the railroad and knocked down 6 bridge pilings. This required the eastbound lanes to be closed for several days for repairs.

---------------------------- PROBABLE CAUSES -----------------------------
1. HUMAN FAILURE - RECOMMENDED EQUIPMENT INSTALL WITHOUT 25 MPH
ORDER
2. INADEQUATE SUPERVISION OF TRAIN OPERATING PROCEDURE

---------------------------- CASUALTIES -----------------------------
NONE

---------------------------- PROPERTY LOSSES -----------------------------
RAILROAD NON-RAILROAD
$ 371,000 $ 100,000
A freight train consisting of 3 locomotive units and 57 piggy-back cars had the 14th car derail while moving at 70 mph. The train went about 3 1/2 more miles when it came to a stopping point switch. The derailed car struck the switch and 34 loaded piggy-back cars derailed. A burned off axle journal was found on the first car that derailed. A hot box detector had recorded a 6° rise gliding over 11 miles before the derailment, but the hot box detector was set to trigger at a reading of 8°. A laboratory analysis of the axle bearing revealed it had been improperly assembled.

------------ PROBABLE CAUSES ------------

1. Over heated axle journal
2. Failure of roller bearing - improperly re-manufactured

------------ CASUALTIES ------------

None

------------ PROPERTY LOSSES ------------

Railroad

$1,040,000

Non-Railroad

0
Passenger Train No. 881, consisting of 5 self-propelled cars, ran away unattended from a sidetrack, went through a switch onto the main track, and struck passenger train No. 360 that was standing at a signal 1300 ft. from where No. 881 had been standing. No. 881 had been standing on the sidetrack and the crew could not get the brakes to release on one of the cars. The crew got out and worked on a control box under the car. By tapping on the box, they got the brakes to release and the train then ran away with nobody aboard. The engineer of No. 360 saw No. 881 coming toward him and he ran into the passenger compartment where he warned the passengers to brace themselves. The speed of No. 881 was estimated at 20-30 mph.

Probable Cause:
1. Failure of engineer of Train No. 881 to properly secure train before leaving the train.
2. ...
3. ...

Other Factors:
1. ...
2. ...
3. ...

Fatalities: 0

Injuries: 6
- Passenger - hospitalized
- Passenger - minor
- Employees on duty - minor

Probable Cause of Casualty:
1. Thrown from seat/position to collision
2. ...
3. ...
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT 85-0080

REPORTED BY:
SE PENNSYLVANIA TRANSPORTATION AUTHORITY

---------------------- LOCATION ----------------------

PHILADELPHIA, PENNSYLVANIA

------------------- TIME --- DATE --- WEATHER --- VISIBILITY ---

1610 EDT 06/27/85 CLEAR DAY/1000 FT

TRAIN --------------- RAILROAD --------------- CLASS --- DIRECTION --- OPERATING PHASE --- TRACK/BRANCH ---

1 SE PENNSYLVANIA TRANSPORTATION AUTHORITY PASSENGER COMmutER NORTH EN ROUTE 001

---------------------------- ACCIDENT DESCRIPTION -----------------------------

THE CONDUCTOR ON A COMMUTER TRAIN WAS FATALY INJURED WHEN HE STRUCK A HIGH STATION PLATFORM AS
THE TRAIN WAS PASSING THE PLATFORM AT FOX CHASE STATION. VANDALS HAD PLACED STONES ON THE TRACK AND
WERE OBSERVED THROWING STONES AT THE TRAIN. THE CONDUCTOR WAS LEANING OUT OF THE STAIRWELL OF THE
SECOND CAR IN ORDER TO OBTAIN THE VANDALS WHEN HE STRUCK THE HIGH LEVEL PLATFORM. THE PLATFORM WAS
PUT THERE FOR BOARDING HANDICAPPED PASSENGERS. THE TRAIN CONSISTED OF 4 SELF-PROPELLED SILVERLINER
CARS. ON JUNE 28, 1984, A PASSENGER WAS KILLED AT THE SAME PLATFORM WHILE ATTEMPTING TO BOARD A
MOVING TRAIN.

---------------------------- PROBABLE CAUSES -----------------------------

1. HUMAN FAILURE - CONDUCTOR UNAWARE OF LACK OF PLATFORM CLEARANCE

------------------------- CASUALTIES -------------------------

FATALITIES INJURIES

EMPLOYEES ON DUTY 1 0

------------------------- PROBABLE CAUSES OF CASUALTIES -------------------------

1. THROWN FROM TRAIN
REPORTED BY:  
SE PENNSYLVANIA TRANSPORTATION AUTHORITY

LOCATION------------------  TIME--  DATE--  WEATHER  VISIBILITY----

PHILADELPHIA, PENNSYLVANIA  08:23 EDT  06/27/95  CLEAR  DAY/O100 FT

TRAIN ---------------------RAILROAD---------  CLASS--------  DIRECTION  OPERATING PHASE----  TRACK/HO---

1  SE PENNSYLVANIA TRANSPORTATION AUTHORITY  PASSENGER COMMUTER  WEST  EN ROUTE  MAIN  003
2  AMTRAK  PASSENGER  SOUTH  EN ROUTE  MAIN  004

*************************************************************************  ACCIDENT DESCRIPTION  *************************************************************************

SEPTA COMMUTER TRAIN NO. 545 STRUCK THE SIDE OF AMTRAK PASSENGER TRAIN NO. 600 WHILE CROSSING OVER FROM TRACK 3 TO TRACK 4 ON THE SORATTO VALIANCE. THE LEAD CAR OF EACH TRAIN WAS DERAILED. TWELVE PASSENGERS ON NO. 545 WERE TREATED FOR MINOR INJURIES. NO. 545 CONSISTED OF 4 SELF-PROPELLED ELECTRIC SILVERLINER CARS AND NO. 600 CONSISTED OF 6 SELF-PROPELLED ELECTRIC METROLINER CARS. NO. 600 HAD NO PASSENGERS ON BOARD AND HAD DEPARTED SORATTO STATION ON TRACK 4 ON ITS WAY TO A COACH YARD. THE TRAIN GTO A "STOP AND PROCEED" SIGNAL AT SIGNAL RN. AS THE ENGINEER PROCEEDED PAST THE SIGNAL, HE SAW THE SWITCH AHEAD OF THE TRAIN WAS REVERSED. HE PLACED THE TRAOLS IN EMERGENCY APPLICATION AND CAME TO A STOP FOULING THE SWITCH. MINUTES LATER, NO. 545 CAME AROUND A CURVE ON TRACK 3, NEXT TO NO. 600. THE ENGINEER OF NO. 545 WAS MOVING UNDER A SIGNAL INDICATING "RESTRICTED". HE ANTICIPATED BEING SWITCHED FROM TRACK 3 TO TRACK 4 BUT COULD NOT SEE UNTIL TOO LATE THAT NO. 600 WAS FOULING THE CROSSOVER. HE APPLIED THE BRAKES IN EMERGENCY, BUT THE TRAIN STRUCK THE SIDE OF NO. 545. TESTS REVEALED SIGNAL RN HAD IMPROPER CIRCUIT DESIGN TO CONTROL TRAIN MOVEMENT ON TRACK 4 AND HAD NOT BEEN PROPERLY TESTED.

*************************************************************************  PROBABLE CAUSES  *************************************************************************

1. INADEQUATE BASIC SYSTEM DESIGN
2. HUMAN FAILURE - IMPROPER SIGNAL CIRCUIT DESIGN WAS NOT TESTED

*************************************************************************  OTHER FACTORS  *************************************************************************

1. SYSTEM CHANNELED WITHOUT SYSTEM TEST
2. LACK OF INFORMATION ABOUT THE STATE OF THE SYSTEM
3. FAILURE TO PROVIDE "FAIL SAFE" NODES IN KNOWN FAILURE NODE

*************************************************************************  CASUALTIES  *************************************************************************

HOME

*************************************************************************  PROPERTY LOSSES  *************************************************************************

RAILROAD  NON-RAILROAD

$ 39,000  $ 0
REPORTED BY:
SOUTHERN PACIFIC TRANSP. CO.

-------------------LOCATION-------------------
ACOLITA, CALIFORNIA

--TIME-- --DATE-- WEATHER --------VISIBILITY-------
2250 PDT 01/16/85 CLEAR 500/0500 FT

TRAIN -----------------RAILROAD-----------------

---------CLASS-------- DIRECTION ------OPERATING PHASE----- ---TRACK/WG---
FREIGHT EAST EN ROUTE MAIN 001

_________________________________________ ACCIDENT DESCRIPTION ____________________________

FREIGHT TRAIN 01-LAUY-10, CONSISTING OF 3 LOCOMOTIVE UNITS AND 76 CARS, HAD 15 CARS DERAIL
WHILE MOVING ABOUT 30 MPH. THE TRAIN WAS APPROACHING THE YARD AT ACOLITA AND HIT ANOTHER FREIGHT
TRAIN STANDING ON AN ADJACENT SIDETRACK. THE CREW OF THE STANDING TRAIN SAW SPARKS COMING FROM UNDER
THE FIRST TRAIN AND NOTIFIED THE CREW OF THE SPARKS. THE ENGINEER MADE A BRAKE APPLICATION TO STOP
THE TRAIN AND THE DERAILMENT OCCURRED IMMEDIATELY. THE FIRST CAR TO DERAIL HAD A BURNT OFF AXLE
JOURNAL AND ROLLER BEARING. A LABORATORY EXAMINATION OF THE AXLE BEARING REVEALED THE OIL WAS
CONTAMINATED.

------------------- PROBABLE CAUSES -------------------

1. OVER HEATED AXLE JOURNAL.
2. FAILURE OF ROLLER BEARING - HUB BEARING HAD CONTAMINATED

GREASE

------------------------------- CASUALTIES -------------------------------

NONE

------------------------------- PROPERTY LOSSES -------------------------------

RAILROAD NON-RAILROAD

$ 1,229.000 0 0
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT PURESFRG10

REPORTED BY:
SOUTHERN PACIFIC TRANS. CO.

-----------------LOCATION-------------- --TIME-- --DATE-- WEATHER ------VISIBILITY------
LOS ANGELES, CALIFORNIA 1943 PST 04/06/83 CLEAR DARK/0300 FT

TRAIN --------------RAILROAD------------ ---CLASS-------- DIRECTION ---OPERATING PHASE----- ---TRACK/NO-----
1 SOUTHERN PACIFIC TRANS. CO. YARD/SWITCHING EAST SETOUT/PICKUP NOT IN YARD MAIN 062

+++++++++++++++++++++++++++++++ ACCIDENT DESCRIPTION +++++++++++++++++++++++++++++

YARD TRAIN NO. 751, CONSISTING OF 2 LOCOMOTIVE UNITS AND 56 CARS, HAD 6 CARS DERRAIL ON THE MAIN TRACK WHILE MOVING ABOUT 18 MPH. DERRAILED CARS STRUCK AND DAMAGED AN ELECTRIC POWER LINE TOWER, A GAS PIPELINE BY THE TRACK, AND DESTROYED A SIGNAL EQUIPMENT BUILDING. THE PIPELINE DAMAGE DID NOT RESULT IN ANY FIRE. INVESTIGATION REVEALED TRACK IRREGULARITIES IN A REVERSE CURVE AND IMPROPER MAINTAINED RAIL JOINTS.

--------------- PROBABLE CAUSES ---------------
1. FAILURE OF TRACK CROSS ELEVATION DUE TO NORMAL DETERIORATION/WEAR
2. FAILURE OF BALLAST DUE TO NORMAL DETERIORATION/WEAR
3. FAILURE OF BALLAST - EXTREME LOW JOINT CAUSED CAR TO ROCK OFF

-------------- CASUALTIES -------------
NONE

------------ PROPERTY LOSSES ------------

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
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REPORTED BY: SOUTHERN PACIFIC TRANSP. CO.

--------------------------LOCATION--------------------------

EL MONTE, CALIFORNIA

- TIME- DATE- WEATHER- VISIBILITY-

1722 PDT  05/09/85 CLOUDY  DAY/1000 FT

TRAIN ---------------RAILROAD-----------------------

1 SOUTHERN PACIFIC TRANSP. CO.

LOCAL FREIGHT  EAST  EN ROUTE  RAIN  001

++++++++++++++++++++++++++++++++++++++++++++++++++++ ACCIDENT DESCRIPTION ++++++++++++++++++++++++++++}


++++++++++++++++++++++++++++++++++++++++++++++++++++++++ PROBABLE CAUSES ++++++++++++++++++++++++++++}

1. HUMAN FAILURE - VAN WAS DRIVEN AROUND AUTOBY AND THROUGH GATES

++++++++++++++++++++++++++++++++++++++++++++++++++++++++ CASUALTIES ++++++++++++++++++++++++++++}

FATALITIES INJURIES

PUBLIC ON RR PROPERTY

3  2

++++++++++++++++++++++++++++++++++++++++++++++++++++++++ PROPERTY LOSSES ++++++++++++++++++++++++++++}

railroad  non-railroad

0  1,000  0  6,000

++++++++++++++++++++++++++++++++++++++++++++++++++++++++ PROBABLE CAUSES OF CASUALTIES ++++++++++++++++++++++++++++}

1. STRUCK BY TRAIN
REPORTED BY: SOUTHERN PACIFIC TRANSP. CO.

--TIME-- --DATE-- WEATHER -------VISIBILITY-------
1225 PST 06/06/85 CLEAR  DAY/7920 FT

COLTON, CALIFORNIA

TRAIN --------------RAILROAD-------------
1 SOUTHERN PACIFIC TRANSP. CO.

-----------CLASS-------- DIRECTION -----OPERATING PHASE----- ---TRACK/HO---
CUT OF CARS WEST MOVEMENT IN YARD YARD 904

********** ACCIDENT DESCRIPTION **********

A SWITCH CREW WAS MOVING A TRAIN OF 111 CARS FROM A RECEIVING YARD TOWARD THE CLASSIFICATION YARD HUMP WHEN A COUPLER KNuckle BROKE, ALLOWING 91 CARS TO ROLL FREE. WHEN THE BREACKAGE WAS DETECTED, THE ENGINEER STOPPED THE TRAIN AND A SECOND COUPLER BROKE, ALLOWING 20 MORE CARS TO RUN AWAY. THE FIRST RUNAWAY CUT OF CARS ROLLED FOR ABOUT ONE MILE BEFORE COLLIDING WITH A STANDING TRAIN AND DERAILED. THE SECOND RUNAWAY ROLLED INTO THE REAR OF THE FIRST ONE AND A SECOND DERAILMENT OCCURRED. A TANK CAR OF HYDROCHLORIC ACID TIPPED OVER AND BEGAN TO LEAK. IN THE SUBSEQUENT INEVITABLE CLEARING OPERATION, THE TANK CAR WAS DROPPED THREE TIMES AND FINALLY RUPTURED, RESULTING IN A SPILL OF ABOUT 6,000 GALLONS OF ACID. EMPLOYEES IN A NEARBY LOCOMOTIVE SHOP WERE BRIEFLY EVACUATED AFTER THE INITIAL DERAILMENT.

---------------------------- PROBABLE CAUSES ----------------------------
1. BROKEN COUPLER KNuckle
2. FAILURE OF COUPLER KNuckle - LET CUT OF CARS RUN AWAY THROUGH HUMP YARD

------------------------- CASUALTIES -------------------------
NONE

--------------------- PROPERTY LOSSES ---------------------

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REPORTED BY: SOUTHERN PACIFIC TRANSP. CO.

----------- LOCATION ----------   -- TIME --   -- DATE --   WEATHER   ----- VISIBILITY -----
MONTELLO, NEVADA  0215 PDT  06/22/85  CLEAR  DARK/4960 FT

TRAIN ------------- RAILROAD-------------  ------ CLASS ------  DIRECTION  ------ OPERATING PHASE ----  --- TRACK/NO ---
1 SOUTHERN PACIFIC TRANSP. CO.  FREIGHT UNIT TRAIN  WEST  EN ROUTE  MAIN  001
2 SOUTHERN PACIFIC TRANSP. CO.  FREIGHT  WEST  EN ROUTE  MAIN  001

================================ ACCIDENT DESCRIPTION ==================================


================================ PROBABLE CAUSES =====================================

1. HUMAN FAILURE - TRAIN OPERATED IN EXCESS OF RESTRICTED SPEED
2. INATTENTIVENESS TO DUTIES
3. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE 964

================================ CASUALTIES =========================================

FATALITIES INJURIES

EMPLOYEES ON DUTY
1 2

----- PROPERTY LOSSES -----  
RAILROAD  NON-RAILROAD
9 412,000  0

================================ PROBABLE CAUSES OF CASUALTIES =======================

1. Thrown from seat/position in collision/derailment
2. Collapse of structure (train)
REPORTED BY:
ST. LOUIS SOUTHWESTERN RY CO.

LOCATION: KANSAS CITY
TIME: 0025 CST
DATE: 04/27/95
WEATHER: RAIN
VISIBILITY: DARK/0400 FT

TRAIN: ST. LOUIS SOUTHWESTERN RY CO.
CLASS: FREIGHT
DIRECTION: EAST
OPERATING PHASE: EN ROUTE
TRACK/WS: MAIN 001

ACCIDENT DESCRIPTION:

A FREIGHT TRAIN 01-Casta-25, consisting of 3 locomotive units and 59 cars, had the 3 units and 41 cars derail while moving at 55 mph. Thunderstorms and heavy rainfall were occurring at the time, limiting visibility. The engineer saw debris on the track ahead and started to slow the train, but almost instantly the train derailed on track disturbed by high water. A nearby rancher heard the wreck and came to help. He had to wade through waist-deep water to get to the overturned locomotive. The engineer and head brakeman received minor injuries. The surrounding area had measured 2 to 3 inches of rain in the preceding 24 hours, and the immediate area of the accident had recorded 7 inches of rain in a 2-hour period. The safety board investigator suggested to the railroad that a larger diameter pipe under the track at this location would prevent water from going over the track. Later, the railroad installed a 60-inch diameter culvert pipe to replace a 36-inch pipe.

PROBABLE CAUSES:
1. Damage to ballast from natural forces
2. Roadbed washout
3. Damage by natural forces - seven inches of rain fell in two hours

CASUALTIES:

FATALITIES INJURIES
EMPLOYEES ON DUTY: 0 2

PROPERTY LOSSES:

RAILROAD $3,000,000
SHM-RAILROAD $5,000

PROBABLE CAUSES OF CASUALTIES:

1. Thrown from seat/position in collision/derailment
REPORTED BY:  
UNION PACIFIC RR

---------------------LOCATION---------------------  
BERING, NEBRASKA

---------------------TIME---------------------  
0325 CST

---------------------DATE---------------------  
01/02/85

---------------------WEATHER---------------------  
CLOUDY

---------------------VISIBILITY---------------------  
DAY/NIGHT 4200 FT

TRAIN --------------RAILROAD-------------  
1 UNION PACIFIC RR

FRIGHT UNIT TRAIN  
EAST

EN ROUTE  
YARD

004

+++++++++++++++++++++++++++++++++++ ACCIDENT DESCRIPTION ++++++++++++++++++++++++++++++++  


+++++++++++++++++++++++++++++++++++ PROBABLE CAUSES ++++++++++++++++++++++++++++  

1. FAILURE OF PERSONNEL TO RECOGNIZE IMPROPER OPERATING PROCEDURE AS HAZARDOUS
2. HUMAN FAILURE - BROKEN LEFT MAIN TRACK SWITCH INTO YARD OPEN
3. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE 913

+++++++++++++++++++++++++++++++++++ CASUALTIES ++++++++++++++++++++++++++++  

NONE

+++++++++++++++++++++++++++++++++++ PROPERTY LOSSES ++++++++++++++++++++++++++++  

RAILROAD NON-RAILROAD

0 221,000 0 0
REPORTED BY:  UNION PACIFIC RR

-------------LOCATION-------------  ---TIME---  ---DATE---  WEATHER  ---------VISIBILITY---------
DELTA, UTAH  0835 MST  02/22/85  CLEAR  DAY/7000 FT

TRAIN  -----------RAILROAD-------------  ------CLASS------  DIRECTION  -------OPERATING PHASE-----  ---TRACK/NO---
1  UNION PACIFIC RR  FREIGHT UNIT TRAIN  WEST  EN ROUTE  MAIN  001

=================================================================

ACCIDENT DESCRIPTION


=================================================================

PROBABLE CAUSES

1. FAILURE OF PERSONNEL TO RECOGNIZE COMPONENT MALFUNCTION AS HAZARDOUS
2. HUMAN FAILURE - LOCO SENT OUT WITH FAULTY TRACTION MOTOR
3. FAILURE OF TRACTION MOTOR COMMUTATOR END BEARING DUE TO UNUSUAL DETERIORATION/WEAR

=================================================================

CASUALTIES

NONE

PROPERTY LOSSES

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<tr>
<th>RAILROAD</th>
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NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

REPORTED BY:
UNION PACIFIC RR

-----------------LOCATION-----------------
ROSEDE, NEBRASKA

-----------------TIME----------------
1715 RDT

-----------------DATE----------------
05/19/85

-----------------WEATHER----------------
CLEAR

-----------------VISIBILITY----------------
DAY/1000 FT

-----------TRAIN-----------

-----------RAILROAD----------

-----------CLASS-----------

-----------DIRECTION----------
EAST

-----------OPERATING PHASE----------
EN ROUTE

-----------TRACK/NO----------
MAIN 001

+++++++++++++++++++++++++++++ ACCIDENT DESCRIPTION ++++++++++++++++++++++++++++++

FREIGHT TRAIN EXTRA 5707 EAST, CONSISTING OF 4 LOCOMOTIVE UNITS AND 138 CARS, HAD 40 CARS DERAILED
WHILE TRAVELING AT 35 MPH. SEVERAL STEEL DRUMS OF BORAX COMPANY WERE EJECTED OUT OF A ROUCAR,
BROKE OPEN AND SPILLED. JUST BEFORE THE DERRAILMENT, THE ENGINEER HAD MADE A THROTTLE REDUCTION FROM
POSITION NO. 6 TO NO. 4. THE FIRST CAR TO DERAIZE WAS AN Empty TANK CAR, AND THE TRUCK WAS TANGENT.

-----------------PROBABLE CAUSES-----------------

1. SYSTEM DESIGN INADEQUACY - BLACK RUN-IN LIFTED WHEEL ON
HUNTING TRUCK

-----------------CASUALTIES-----------------

NONE

-----------------PROPERTY LOSSES-----------------

- RAILROAD: 772,000
- NON-RAILROAD: 0
REPORTED BY:
UNION PACIFIC RR

---------------LOCATION--------------- --TIME-- --DATE-- WEATHER ------VISIBILITY------
KERSEY, COLORADO 1640 HST 06/14/95 CLEAR DAY/5000 FT

TRAIN ---------------RAILROAD------------- -----CLASS------ DIRECTION -----OPERATING PHASE----- ---TRACK/WG---
1 UNION PACIFIC RR FREIGHT UNIT TRAIN EAST EN ROUTE MAIN 001

++++++++++++++++++++++++++++++++++ ACCIDENT DESCRIPTION ++++++++++++++++++++++++++++++++++++++

----------------- PROBABLE CAUSES -----------------
1. HUMAN FAILURE - DRIVER IGNORED OVERSIZED LOAD AT OVERHEAD BRIDGE

----------------- CASUALTIES -----------------
NONE

----------------- OTHER FACTORS -----------------
1. VEHICLE OPERATOR'S ERROR IN JUDGEMENT DUE TO INATTENTIVENESS TO DUTIES
2. ACCIDENTAL DAMAGE OF FACILITY BY VEHICLE

----------------- PROPERTY LOSSES -----------------
$1,758,000 $6,000

----------------- RAILROAD ----------------- NON-RAILROAD

REPORTED BY:
UNION PACIFIC RR

LOCATION: WYOMING

TIME: 0300 HST
DATE: 06/25/85
WEATHER: CLEAR
VISIBILITY: DARK/6000 FT

TRAIN: UNION PACIFIC RR

RAILROAD: FREIGHT

CLAS: FREIGHT
DIRECTION: EAST
OPERATING PHASE: EN ROUTE
TRACK/NO: MAIN 001

ACCIDENT DESCRIPTION

FREIGHT TRAIN EXTRA 3593 EAST, consisting of 9 locomotive units and 46 cars, had 14 cars derail and destroy while moving 60 MPH. The train had passed a hot box detector 20 miles before the accident site with no indications of a hot box. An axle bearing had overheated on the 10th car, resulting in the axle breaking. The bearing, journal, and axle hub had burned off, fell into a large reservoir beside the track, and was not found. A Union Pacific laboratory report of the axle bearing revealed only half the required amount of grease was present, but also states failure was unusual compared to typical inadequate lubrication failure.

PROBABLE CAUSES

1. OVER HEATED AXLE JOURNAL
2. FAILURE OF ROLLER BEARING - DUE TO IMPROPER LUBRICATION

COURTIES

NONE

PROPERTY LOSSES

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<tr>
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