

PB87-917201



**NATIONAL
TRANSPORTATION
SAFETY
BOARD**

WASHINGTON, D.C. 20594

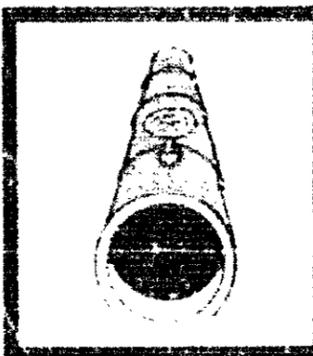
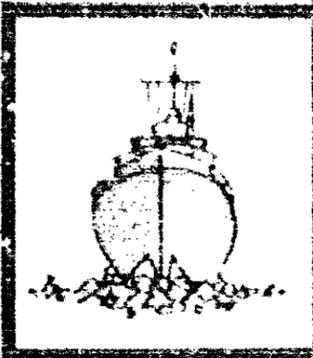
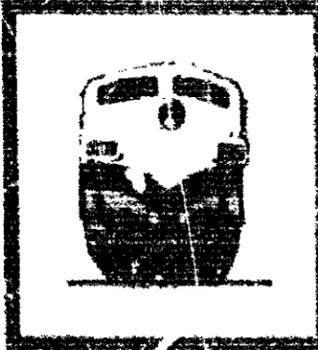
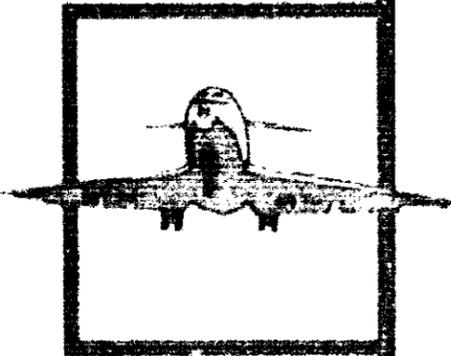
RAILROAD ACCIDENT REPORTS

**BRIEF FORMAT
ISSUE NUMBER 2 - - 1985**

NTSB/RAB-87/01

UNITED STATES GOVERNMENT

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|--|--------------------|---|--|--|-----------|-------|---------|-------|--------|-------|------------|--|------------|----------|--------|-------------------|------------|--------|--------------------|------------|--------|--------------------|------------|
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| | | | | 14. Sponsoring Agency Code | | | | | | | | | | | | | | | | | | | |
| 15. Supplementary Notes This report does not contain 1985 Amtrak Grade Crossing accidents, which were published separately. | | | | | | | | | | | | | | | | | | | | | | | |
| 16. 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: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">85-69</td> <td style="width: 50%;">85-A125</td> </tr> <tr> <td>85-76</td> <td>85-127</td> </tr> <tr> <td>85-81</td> <td>85-130,131</td> </tr> <tr> <td></td> <td>85-138,139</td> </tr> <tr> <td>85-93,94</td> <td>85-142</td> </tr> <tr> <td>85-97 through 110</td> <td>85-145,146</td> </tr> <tr> <td>85-112</td> <td>85-150 through 153</td> </tr> <tr> <td>85-116,117</td> <td>85-156</td> </tr> <tr> <td>85-127 through 124</td> <td>85-158,159</td> </tr> </table> | | | | | | 85-69 | 85-A125 | 85-76 | 85-127 | 85-81 | 85-130,131 | | 85-138,139 | 85-93,94 | 85-142 | 85-97 through 110 | 85-145,146 | 85-112 | 85-150 through 153 | 85-116,117 | 85-156 | 85-127 through 124 | 85-158,159 |
| 85-69 | 85-A125 | | | | | | | | | | | | | | | | | | | | | | |
| 85-76 | 85-127 | | | | | | | | | | | | | | | | | | | | | | |
| 85-81 | 85-130,131 | | | | | | | | | | | | | | | | | | | | | | |
| | 85-138,139 | | | | | | | | | | | | | | | | | | | | | | |
| 85-93,94 | 85-142 | | | | | | | | | | | | | | | | | | | | | | |
| 85-97 through 110 | 85-145,146 | | | | | | | | | | | | | | | | | | | | | | |
| 85-112 | 85-150 through 153 | | | | | | | | | | | | | | | | | | | | | | |
| 85-116,117 | 85-156 | | | | | | | | | | | | | | | | | | | | | | |
| 85-127 through 124 | 85-158,159 | | | | | | | | | | | | | | | | | | | | | | |
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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 Act 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 43 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 three-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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National Transportation Safety Board
Public Inquiries Section
Washington, D.C. 20594

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REPORT OF ACCIDENTS 5-47

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.

TABLE 1:
 ACCIDENTS BY REPORTING RAILROAD AND TYPE
 (FIGURES BELOW REPRESENT A 6 MONTH PERIOD)

| REPORTING RAILROAD | COLLISION | DERAILMENT | EMPLOYEE FATALITY | PERSONAL FATALITY | GRADE CROSSING | TOTAL | HAZ. MAT. (1) INVOLVED |
|--|-----------|------------|-------------------|-------------------|----------------|-------|------------------------|
| ATCHISON TOPEKA AND SANTA FE RY CO. | 1 | 3 | 1 | 0 | 0 | 5 | 2 |
| BALTIMORE & OHIO RR CO. | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| BURLINGTON NORTHERN INC. | 1 | 7 | 0 | 0 | 1 | 9 | 2 |
| CHESAPEAKE AND OHIO RY CO. (THE) | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| DENVER & RIO GRANDE WESTERN RR CO. | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| GRAND TRUNK WESTERN RR CO. | 0 | 2 | 0 | 0 | 0 | 2 | 1 |
| GREATER CLEVELAND REGIONAL TRANSIT AUTH. | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| METRO ATLANTA RAPID TRANSIT AUTHORITY | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| MISSOURI PACIFIC RR CO. | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| NORFOLK AND WESTERN RY CO. | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| SE PENNSYLVANIA TRANSPORTATION AUTHORITY | 1 | 1 | 0 | 0 | 0 | 2 | 0 |
| SEABOARD COAST LINE RR | 1 | 4 | 0 | 0 | 0 | 5 | 2 |
| SOO LINE RR CO. | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| SOUTHERN PACIFIC TRANSP. CO. | 0 | 3 | 0 | 0 | 1 | 4 | 1 |
| TRANSPORT OF NEW JERSEY | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| UNION PACIFIC RR | 0 | 3 | 0 | 0 | 0 | 3 | 0 |
| TOTAL | 5 | 30 | 2 | 0 | 3 | 40 | 8 |

(1) NOT INCLUDED IN TOTAL RAILROAD ACCIDENTS/INCIDENTS INVESTIGATED

TABLE 2:
 ACCIDENTS BY STATE AND TYPE
 (FIGURES BELOW REPRESENT A 6 MONTH PERIOD)

| STATE | COLLISION | DERAILMENT | EMPLOYEE FATALITY | PERSONAL FATALITY | GRADE CROSSING | TOTAL | HAZ. MAT. (1) INVOLVED |
|----------------|-----------|------------|-------------------|-------------------|----------------|-------|------------------------|
| ARIZONA | 0 | 3 | 0 | 0 | 0 | 3 | 2 |
| COLORADO | 1 | 0 | 0 | 0 | 1 | 2 | 1 |
| FLORIDA | 0 | 2 | 0 | 0 | 0 | 2 | 2 |
| GEORGIA | 2 | 0 | 0 | 0 | 0 | 2 | 0 |
| IDAHO | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| ILLINOIS | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| INDIANA | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| IOWA | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| KANSAS | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| LOUISIANA | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| MARYLAND | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| MICHIGAN | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| MISSOURI | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| MONTANA | 0 | 2 | 0 | 0 | 0 | 2 | 1 |
| NEW JERSEY | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| NEW MEXICO | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| NORTH CAROLINA | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| NORTH DAKOTA | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| OHIO | 0 | 2 | 0 | 0 | 1 | 2 | 1 |
| OREGON | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| PENNSYLVANIA | 1 | 1 | 0 | 0 | 0 | 2 | 1 |
| TENNESSEE | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| TEXAS | 0 | 1 | 2 | 0 | 1 | 4 | 1 |
| WASHINGTON | 0 | 2 | 0 | 0 | 0 | 2 | 0 |
| WYOMING | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| TOTAL | 5 | 30 | 2 | 0 | 3 | 40 | 8 |

(1) NOT INCLUDED IN TOTAL RAILROAD ACCIDENTS/INCIDENTS INVESTIGATED

TABLE: 3

CASUALTIES BY CLASS OF PERSON AND ACCIDENT TYPE
 (FIGURES BELOW REPRESENT A 6 MONTH PERIOD)

| | COLLISION | DERAILMENT | PERSONAL CASUALTY | GRADE CROSSING | TOTAL |
|---------------------------|-----------|------------|-------------------|----------------|-------|
| RAILROAD EMPLOYEES | | | | | |
| FATALITIES..... | 5 | 0 | 3 | 0 | 8 |
| INJURIES..... | 5 | 4 | 0 | 0 | 9 |
| PASSENGERS | | | | | |
| FATALITIES..... | 0 | 0 | 0 | 0 | 0 |
| INJURIES..... | 19 | 7 | 0 | 0 | 26 |
| GENERAL PUBLIC | | | | | |
| FATALITIES..... | 0 | 0 | 0 | 1 | 1 |
| INJURIES..... | 0 | 0 | 0 | 2 | 2 |

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

TABLE 4:
CAUSAL FACTORS BY MAJOR CATEGORY AND ACCIDENT TYPE
(FIGURES BELOW REPRESENT A 6 MONTH PERIOD)

| | COLLISION | DERAILMENT | EMPLOYEE FATALITY | PERSONAL FATALITY | GRADE CROSSING | TOTAL | HAZ. MAT. (1) INVOLVED |
|-----------------------------|-----------|------------|-------------------|-------------------|----------------|-------|------------------------|
| TRACK AND STRUCTURE DEFECTS | 0 | 12 | 0 | 0 | 0 | 12 | 3 |
| EQUIPMENT FAILURES | 0 | 8 | 0 | 0 | 0 | 8 | 0 |
| OPERATING PRACTICES | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER (2) | 5 | 10 | 2 | 0 | 3 | 20 | 5 |
| TOTAL | 5 | 30 | 2 | 0 | 3 | 40 | 8 |

- 4 -

(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

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

25 0097

BRIEF OF RAILROAD ACCIDENT #FTW85FR020

REPORTED BY:
 ATCHISON TOPEKA AND SANTA FE RY CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|-------------------------------------|-----------------|-----------|---------------------------|----------------------|-----|
| CLEBURNE, TEXAS | | 2130 CDT | 07/13/85 | CLEAR | DARK/1000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | ATCHISON TOPEKA AND SANTA FE RY CO. | CUT OF CARS | NORTH | MAKEUP/BREAKUP | YARD | 002 |

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

ABOUT 9:30 P.M. ON JULY 13, 1985, SWITCHING YARD JOB NUMBER 202, ASSIGNED TO SWITCHING CARS IN THE YARD IN CLEBURNE, TEXAS, RAN OVER ONE OF THE SWITCH CREW MEMBERS WHILE SWITCHING OPERATIONS WERE BEING PERFORMED. THE SWITCH CREW CONSISTED OF A FOREMAN, AN ENGINEER, A PIN PULLER AND A FIELDMAN. THE CREW WAS EQUIPPED WITH PORTABLE RADIOS FOR COMMUNICATION WHEN LONG CUTS OF CARS WERE HANDLED. MOST OF THE COMMUNICATIONS WERE ACCOMPLISHED WITH HAND SIGNALS. ALL OF THE CREWMEMBERS WERE EXPERIENCED AND FAMILIAR WITH THEIR DUTIES AND THE YARD LAY-OUT.

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

1. FAILURE OF PERSON TO DETECT APPROACHING TRAIN DUE TO INATTENTIVENESS TO DUTIES
2. HUMAN FAILURE - SWITCHMAN TURNED HIS BACK TOWARD ONCOMING CARS

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-------------------|------------|----------|
| EMPLOYEES ON DUTY | 1 | 0 |

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

NONE

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

1. STRUCK BY TRAIN

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0102

BRIEF OF RAILROAD ACCIDENT #FTW85FR021

REPORTED BY:
ATCHISON TOPEKA AND SANTA FE RY CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|--|----------|----------|---------|----------------------|--|
| JOFFRE, NEW MEXICO | | 0810 MDT | 07/31/85 | CLEAR | DAY/3000 FT | |

| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
|-------|-------------------------------------|-----------------|-----------|---------------------------|----------------|-----|
| 1 | ATCHISON TOPEKA AND SANTA FE RY CO. | FREIGHT | EAST | EN ROUTE | MAIN | 002 |
| 2 | ATCHISON TOPEKA AND SANTA FE RY CO. | FREIGHT | WEST | EN ROUTE | MAIN | 002 |

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

EASTBOUND FREIGHT TRAIN 1-971-30 STRUCK THE SIDE OF WESTBOUND FREIGHT TRAIN 1-198-30 AT A SWITCH WHERE 2-TRACK TERRITORY CONVERGED TO A SINGLE TRACK MAIN LINE. THE WESTBOUND TRAIN WAS MOVING FROM THE SINGLE TRACK ONTO THE NORTH TRACK. THE EASTBOUND WAS ON THE SOUTH TRACK AND WAS SUPPOSED TO STOP BEFORE ENTERING ONTO THE SINGLE TRACK MAIN AT THE SWITCH. THE EASTBOUND CONSISTED OF 5 LOCOMOTIVE UNITS AND 59 CARS, MOVING AT 13 MPH. THE WESTBOUND CONSISTED OF 4 LOCOMOTIVE UNITS AND 48 CARS, MOVING AT 50 MPH. THE COLLISION DERAILED ALL 5 UNITS OF THE EASTBOUND AND 5 CARS OF THE WESTBOUND TRAIN. THE EASTBOUND HAD GONE PAST A YELLOW-APPROACH SIGNAL AT 72 MPH AND WENT ON FOR 1.8 MILES BEFORE MAKING A TRAIN AIR BRAKE APPLICATION, THEN WENT PAST A RED SIGNAL BEFORE STRIKING THE WESTBOUND. THE TRAIN SPEED SHOULD HAVE BEEN REDUCED TO 40 MPH AFTER PASSING THE YELLOW SIGNAL.

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

- HUMAN FAILURE - DID NOT SLOW TRAIN SPEED PER SIGNAL INDICATION
- FAILURE TO PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE #285

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

- FAILURE OF PERSONNEL TO RECOGNIZE IMPROPER OPERATING PROCEDURE AS HAZARDOUS DUE TO ERROR IN JUDGEMENT

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 1,364,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0106

BRIEF OF RAILROAD ACCIDENT #LAX85FR024

REPORTED BY:
ATCHISON TOPEKA AND SANTA FE RY CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|-------------------------------------|-----------------|-----------|---------------------------|----------------------|-----|
| VALENTINE, ARIZONA | | 0445 MST | 08/12/85 | CLEAR | DAWN OR DUSK/1000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | ATCHISON TOPEKA AND SANTA FE RY CO. | FREIGHT | WEST | EN ROUTE | MAIN | 001 |

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

UNIT FREIGHT TRAIN EXTRA 5368 WEST, CONSISTING OF 4 LOCOMOTIVE UNITS AND 70 CARS, HAD 30 CARS DERAIL WHILE MOVING 25 MPH. SIXTY-NINE OF THE CARS IN THE TRAIN WERE LOADED FLAT CARS CARRYING TRAILERS AND/OR CONTAINERS. THREE OF THE DERAILED CARS CARRIED VARIOUS TYPES OF HAZARDOUS MATERIALS. FOUR MILES BEFORE THE GENERAL DERAILMENT, 1 OF THE CARS HAD DERAILED IN AN 8 DEGREE CURVE IN A DESCENDING GRADE WHILE THE TRAIN SPEED WAS BEING REDUCED FROM 50 MPH TO 20 MPH. AFTER THE GENERAL PILE-UP, A FIRE BROKE OUT IN THE WRECKAGE. ABOUT 30 DIFFERENT HAZARDOUS MATERIALS BURNED IN THE FIRE. AN AREA 20 MILES WIDE WAS EVACUATED, INVOLVING 3 SMALL TOWNS OF ABOUT 200 PEOPLE AND THE CLOSING OF U.S. HIGHWAY 66. CONSIDERABLE CONFUSION IN THE EMERGENCY RESPONSE RESULTED FROM ERRONEOUS INFORMATION BEING RELEASED BY COUNTY OFFICIALS REGARDING THE HAZARDOUS MATERIALS.

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

1. FAILURE OF TRACK CROSS ELEVATION - L/V FORCES IN SLACK RUN-IN CAUSED WHEEL CLIMB

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 4,462,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #LAX85FR025

85-0107

REPORTED BY:
ATCHISON TOPEKA AND SANTA FE RY CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|-------------------------------------|-----------------|-----------|---------------------------|----------------------|-----|
| CONGRESS, ARIZONA | | 1715 MST | 08/13/85 | CLEAR | DAY/5280 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | ATCHISON TOPEKA AND SANTA FE RY CO. | FREIGHT | WEST | EN ROUTE | BRANCH | 001 |

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

ABOUT 5:15 P.M. ON AUGUST 13, 1985, FREIGHT TRAIN EXTRA 5985 WEST, CONSISTING OF 5 LOCOMOTIVE UNITS AND 76 CARS, HAD 16 CARS DERAIL WHILE MOVING AT 39 MPH. THREE OF THE CARS CONTAINED HAZARDOUS MATERIALS. ONE OF THE CARS WAS PARTIALLY OVERTURNED DURING THE WRECKAGE REMOVAL PROCESS AND SOME SPILLAGE OCCURRED THROUGH THE DOME. THERE WERE NO INJURIES OR FIRES AND THERE WAS NO EVACUATION. THE TRAIN WAS OPERATING OVER A BRANCH LINE IN ORDER TO DETOUR AROUND A DERAILMENT THAT HAD OCCURRED THE PREVIOUS DAY. THE INVESTIGATION REVEALED THE TRACK GAUGE WAS TIGHT AND THE TRAIN WAS BEING OPERATED AT A SPEED GREATER THAN ALLOWABLE.

| ----- PROBABLE CAUSES ----- | ----- OTHER FACTORS ----- |
|---|---------------------------|
| 1. HUMAN FAILURE - OPERATED TRAIN AT EXCESS SPEED IN SHARP CURVES | 1. TIGHT TRACK ALIGNMENT |

| ----- CASUALTIES ----- | ----- PROPERTY LOSSES ----- | |
|------------------------|-----------------------------|--------------|
| NONE | RAILROAD | NON-RAILROAD |
| | \$ 846,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

R5-0138

BRIEF OF RAILROAD ACCIDENT #FTW86FK004

REPORTED BY:
 ATCHISON TOPEKA AND SANTA FE RY CO.

| | | | | | | |
|--------------------|-------------------------------------|--------------------|-----------|---------------------------|----------------|-----|
| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | | |
| EDGERTON, KANSAS | 2330 CST | 10/31/85 | CLOUDY | DARK/1200 FT | | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | ATCHISON TOPEKA AND SANTA FE RY CO. | FREIGHT UNIT TRAIN | EAST | EN ROUTE | MAIN | 001 |

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

ABOUT 11:30 P.M. ON OCTOBER 31, 1985, FREIGHT TRAIN 951-29, CONSISTING OF 4 LOCOMOTIVE UNITS AND 80 CARS, HAD 31 CARS DERAIL WHILE MOVING ABOUT 65 MPH. ABOUT 1 1/2 MILES BEFORE THE DERAILMENT WAS A HOTBOX DETECTOR. AS THE TRAIN PASSED OVER THE DETECTOR, A WARNING LIGHT BY THE TRACK ALERTED THE TRAIN CREW THAT THEY HAD A HOTBOX IN THE TRAIN. THE ENGINEER STARTED REDUCING THE THROTTLE, BUT THE TRAIN DERAILED BEFORE HE COULD STOP IT. INVESTIGATION REVEALED A BURNED-OFF AXLE JOURNAL ON THE 24TH CAR.

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

1. OVER HEATED AXLE JOURNAL
2. FAILURE OF ROLLER BEARING

----- CASUALTIES -----

NONE

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

| | |
|--------------|--------------|
| RAILROAD | NON-RAILROAD |
| \$ 1,663,000 | \$ 5,000 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #CHI35FR027

85-0100

REPORTED BY:
BALTIMORE & OHIO RR CO.

| -----LOCATION----- | | ---TIME--- | ---DATE--- | WEATHER | -----VISIBILITY----- |
|--------------------|-------------------------|-----------------|------------|---------------------------|----------------------|
| REPUBLIC, OHIO | | 1530 EDT | 07/27/85 | CLEAR | DAY/5000 FT |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
| 1 | BALTIMORE & OHIO RR CO. | FREIGHT | WEST | EN ROUTE | MAIN 001 |

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

FREIGHT TRAIN EXTRA 3002 WEST, CONSISTING OF 3 LOCOMOTIVE UNITS AND 114 CARS, HAD THE 61ST THROUGH 84TH CARS DERAIL WHILE MOVING ON TANGENT TRACK ON A DESCENDING GRADE AT 50 MPH. THE FIRST CAR TO DERAIL WAS A 55 FOOT BOX CAR LOADED WITH BRICKS. AND IT WAS IN THE MIDDLE OF 22 TRI-LEVEL AUTO CARRIER CARS, EACH 94 FEET LONG. THE ENGINEER REPORTED THE LOCOMOTIVE HAD BEEN SURGING JUST PRIOR TO THE DERAILMENT.

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

1. SYSTEM DESIGN INADEQUACY - EXCESSIVE BUFF FORCES FROM LOCOMOTIVE SURGING

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 1,932,000 | \$ 10,000 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0123

BRIEF OF RAILROAD ACCIDENT #NYC85FR021

REPORTED BY:
BALTIMORE & OHIO RR CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|----------------------|--|----------|----------|---------|----------------------|--|
| CUMBERLAND, MARYLAND | | 0537 EDT | 09/25/85 | CLOUDY | DARK/0300 FT | |

| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- | |
|-------|-------------------------|-----------------|-----------|---------------------------|--|----------------|-----|
| 1 | BALTIMORE & OHIO RR CO. | FREIGHT | EAST | EN ROUTE | | YARD | 002 |
| 2 | BALTIMORE & OHIO RR CO. | FREIGHT | WEST | EN ROUTE | | MAIN | 001 |

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

ABOUT 5:37 A.M. ON SEPTEMBER 25, 1985, EASTBOUND FREIGHT TRAIN NO. BACL HAD AN EMERGENCY BRAKE APPLICATION MADE WHEN THE ENGINEER SAW THE SIGNAL AHEAD OF HIM TURN RED UNEXPECTEDLY. THE 36TH CAR IN THE TRAIN DERAILED AND FOULED THE ADJACENT WESTBOUND MAIN TRACK. AT THAT MOMENT, WESTBOUND FREIGHT TRAIN NO. SLTT WAS PASSING BY ON THE FOULED TRACK. THE TRAIN STRUCK THE DERAILED CAR AND HAD THE 3 LEAD LOCOMOTIVE UNITS AND 2 CARS DERAIL. THREE CARS OF NO. BACL WERE OVERTURNED. INVESTIGATION OF A SWITCH REVEALED THAT THE SWITCH POINT LUG BOLTS WERE LOOSE, ALLOWING THE SWITCH POINTS TO MOVE AWAY FROM THE STOCK RAIL, WHICH THEN MADE THE SIGNAL DISPLAY A RED ASPECT INDICATING AN ABSOLUTE STOP.

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

1. LOOSELY SECURED SWITCH POINTS
2. FAILURE OF SWITCH POINTS - GAVE RED SIGNAL; EMERGENCY APP. DERAILED CARS

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-------------------|------------|----------|
| EMPLOYEES ON DUTY | 0 | 1 |

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 1,079,000 | \$ 0 |

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

1. THROWN FROM SEAT/POSITION IN COLLISION/DERAILMENT

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #FTW85F 018

85-0081

REPORTED BY:
BURLINGTON NORTHERN INC.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|--------------------------|-----------------|-----------|---------------------------|----------------------|-----|
| CACHE, OKLAHOMA | | 1534 CDT | 06/20/85 | CLEAR | DAY/0700 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | BURLINGTON NORTHERN INC. | LOCAL FREIGHT | EAST | EN ROUTE | MAIN | 001 |

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

ABOUT 3:34 P.M. ON JUNE 20, 1985, FREIGHT TRAIN EXTRA 3019 EAST, CONSISTING OF 8 LOCOMOTIVE UNITS AND 45 FREIGHT CARS, COLLIDED WITH A LOADED GRAIN TRUCK AT A RURAL GRADE CROSSING. THE CROSSING WAS PROTECTED BY A STANDARD CROSSBUCK SIGN AND A ROADWAY STOP SIGN. THE DRIVER OF THE VEHICLE WAS FATALLY INJURED DURING THE COLLISION. NONE OF THE 4 CREWMEMBERS WERE HURT. THE LOCOMOTIVE HEADLIGHT WAS ILLUMINATED AND THE WHISTLE WAS BEING SOUNDED. THE 8 LOCOMOTIVE UNITS AND 6 CARS WERE DERAILED.

- 12 -

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

1. FAILURE OF PERSON TO DETECT APPROACHING TRAIN DUE TO INATTENTIVENESS TO DUTIES
2. FAILURE OF MOTORIST TO STOP AT UNPROTECTED GRADE CROSSING DUE TO INATTENTIVENESS TO DUTIES

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-----------------------|------------|----------|
| PUBLIC ON RR PROPERTY | 1 | 0 |

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

| | RAILROAD | NON-RAILROAD |
|--|------------|--------------|
| | \$ 293,000 | \$ 12,000 |

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

1. STRUCK BY TRAIN

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0094

BRIEF OF RAILROAD ACCIDENT #LAX85FF022

REPORTED BY:
BURLINGTON NORTHERN INC.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|--------------------|-----------------|-----------|---------------------------|----------------------|----------------|
| ELMIRA, IDAHO | | 0230 PDT | 07/07/85 | CLEAR | DARK/1000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- |
| 1 | AMTRAK | PASSENGER | EAST | EN ROUTE | | MAIN 001 |

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

AT ABOUT 2:30 A.M. PDT, ON JULY 7, 1985, AMTRAK TRAIN NUMBER 8 (THE EMPIRE BUILDER), WITH 277 PERSONS ON BOARD, DERAILED NEAR ELMIRA, IDAHO, WHILE TRAVELING ABOUT 79 MILES PER HOUR. THE TRAIN WAS EASTBOUND ON THE SINGLE MAIN TRACK WHEN IT PASSED OVER A SECTION OF JOINTED RAIL THAT HAD BEEN LAID IN JANUARY 1985, ON A TEMPORARY BASIS DUE TO A DERAILMENT. THE TERRITORY IS LAID WITH CONTINUOUS WELDED RAIL (CWR). THE JOINTED RAIL WAS 115 POUND AND THE CONTINUOUS WELDED RAIL WAS 132 POUND. THE RAILS WERE JOINED TOGETHER BY COMPROMISE JOINT BARS. THE COMPROMISE JOINT BARS ON THE EAST RAIL WERE DISCOVERED BROKEN IN THE WRECKAGE, STILL ATTACHED TO THE ENDS OF THE RAILS.

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

1. BROKEN COMPROMISE JOINT BAR

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-------------------|------------|----------|
| EMPLOYEES ON DUTY | 0 | 2 |
| PASSENGERS | 0 | 7 |

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 757,000 | \$ 0 |

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

1. THROWN FROM SEAT/POSITION IN COLLISION/DERAILMENT
2. STRUCK BY LOOSE FLYING OBJECTS IN TRAIN
3. STRIKING INJURIOUS ENVIRONMENT

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #1AX85FR023

85-0099

REPORTED BY:
 BURLINGTON NORTHERN INC.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|--------------------------|-----------------|-----------|---------------------------|----------------------|----------------|
| BEARMOUTH, MONTANA | | 1051 NDT | 07/24/85 | CLEAR | DAY/7920 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- |
| 1 | BURLINGTON NORTHERN INC. | FREIGHT | EAST | EN ROUTE | | MAIN 001 |

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

FREIGHT TRAIN EXTRA 7040 EAST, CONSISTING OF 3 LOCOMOTIVE UNITS AND 80 CARS, HAD 21 CARS DERAIL WHILE MOVING 43 MILES PER HOUR. THE TRAIN WAS MOVING THROUGH A FACING POINT SWITCH AT THE TIME OF DERAILMENT. THE SWITCH WENT INTO AN ABANDONED SIDING, AND ON THE DAY OF DERAILMENT, THE SWITCH WAS SCHEDULED TO BE REMOVED FROM THE MAIN TRACK. THE SWITCH POINT HAD BEEN SPIKED IN A CLOSED POSITION, BUT THE SPIKES HAD BEEN REMOVED ENOUGH TIMES THAT THE TIE HAD WORN. THE AREA OF THE SPIKE HOLE HAD BECOME POROUS, ALLOWING THE SWITCH POINTS TO MOVE FREELY FOR ABOUT 1/2 INCH.

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

1. LOOSELY SECURED SWITCH POINTS
2. FAILURE OF CROSSTIES - STOCK RAIL AND SWITCH POINTS WORKED LOOSE

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

1. INADEQUATE PERFORMANCE OF PROCEDURE PRESCRIBED BY FEDERAL TRACK SAFETY STANDARDS 213.135

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 437,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0105

BRIEF OF RAILROAD ACCIDENT #DCASMR010

REPORTED BY:
BURLINGTON NORTHERN INC.

| -----LOCATION----- | | ---TIME--- | ---DATE--- | WEATHER | -----VISIBILITY----- | |
|-----------------------|--|-------------------------------|--------------|---------------------------|----------------------|----------------|
| WESTMINSTER, COLORADO | | 1950 MDT | 08/02/85 | CLEAR | DAWN OR DUSK/0450 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- |
| | 1 BURLINGTON NORTHERN INC. 2 BURLINGTON NORTHERN INC. | FREIGHT UNIT TRAIN FREIGHT | EAST WEST | EN ROUTE EN ROUTE | MAIN MAIN | 001 001 |

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

ABOUT 7:50 P.M. ON AUGUST 2, 1985, MIXED FREIGHT TRAIN EXTRA 6311 WEST COLLIDED HEAD-ON WITH UNIT GRAVEL TRAIN EXTRA 6575 EAST NEAR WESTMINSTER, COLORADO. EXTRA 6311 WEST WAS TRAVELING ABOUT 52 MPH, AND EXTRA 6575 EAST WAS TRAVELING ABOUT 48 MPH. THE TRAINS COLLIDED ON THE SINGLE MAIN TRACK DURING DAYLIGHT HOURS IN A 2 DEGREE 41 MINUTES LEFT CURVE IN A WESTERLY DIRECTION ABOUT 50 FEET WEST OF A DUAL-LANE BRIDGE ON U.S. HIGHWAY NUMBER 36. THE BRIDGE WAS DESTROYED BY DERAILED CARS WHICH STRUCK STRUCTURAL SUPPORT MEMBERS AND BY FIRE WHICH ERUPTED FOLLOWING THE COLLISION. THREE CREWMEMBERS OF EXTRA 6311 WEST AND TWO CREWMEMBERS OF EXTRA 6575 EAST WERE KILLED.

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

1. HUMAN FAILURE - SEE NTSB REPORT RAR-85-0 FOR PROBABLE CAUSE

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-------------------|------------|----------|
| EMPLOYEES ON DUTY | 5 | 0 |

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 2,252,000 | \$ 1,500,000 |

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

1. THROWN FROM SEAT/POSITION IN COLLISION/DERAILMENT

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #LAX85FR026

85-0109

REPORTED BY:
BURLINGTON NORTHERN INC.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|--------------------------|-----------------|-----------|---------------------------|----------------------|----------------|
| MALAGA, WASHINGTON | | 0200 PDT | 08/20/85 | CLEAR | DARK/0300 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- |
| 1 | BURLINGTON NORTHERN INC. | FREIGHT | EAST | EN ROUTE | | MAIN 601 |

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

ABOUT 2:00 A.M. ON AUGUST 20, 1985, FREIGHT TRAIN EXTRA 7120 EAST, CONSISTING OF 4 LOCOMOTIVE UNITS AND 37 CARS, HAD 15 CARS DERAIL WHILE MOVING ON A 7 DEGREE 32 MINUTE COMPOUND CURVE AT 23 M.P.H.. SOME OF THE DERAILED CARS WERE THE ARTICULATED DOUBLE STACK TYPE CARS. THE OUTSIDE RAIL OF THE CURVE WAS ROLLED OVER AROUND THE CURVE AND ACROSS THE COLUMBIA RIVER BRIDGE. SPARKS FROM THE DERAILEMENT IGNITED THE BRIDGE DECK AND WIND GUSTING AS HIGH AS 25 MPH MADE IT DIFFICULT TO CONTAIN THE FIRE. THE INVESTIGATION REVEALED LACK OF LUBRICATION IN THE TRUCK CENTER BOWLS AND TIGHT SIDE BEARING CLEARANCE ON THE ARTICULATED CARS.

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----- PROBABLE CAUSES ----- OTHER FACTORS -----

1. MISSING TRUCK CENTER PLATE LUBRICATION
2. TIGHT TRUCK CENTER PLATE

1. DAMAGE TO RAIL FROM EXCESSIVE TRAIN BUFF FORCES

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 1,462,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0110

BRIEF OF RAILROAD ACCIDENT #LAX85FR027

REPORTED BY:
BURLINGTON NORTHERN INC.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|--------------------------|-----------------|----------|-----------|---------------------------|----------------|
| CROSSPORT, IDAHO | | 2325 PDT | 08/24/85 | CLEAR | DARK/0300 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
| 1 | BURLINGTON NORTHERN INC. | FREIGHT | | WEST | EN ROUTE | MAIN 001 |

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

ABOUT 11:25 P.M. ON AUGUST 24, 1985, FREIGHT TRAIN EXTRA 310N WEST, CONSISTING OF 4 LOCOMOTIVE UNITS AND 86 CARS, HAD 23 CARS DERAIL WHILE MOVING AT 28 MPH. THE TRAIN WAS MOVING ON A 4 DEGREE CURVE AND A DESCENDING GRADE. THE TRACK PARALLELS THE KOOTENAI RIVER AND HAS MANY CURVES. THE INVESTIGATION REVEALED A BRAKE BEAM DROPPED DOWN AND WAS DRAGGING IN THE MIDDLE OF THE TRACK. EVIDENCE REVEALED THAT THE DRAGGING BRAKE BEAM EXERTED PRESSURE ON THE HIGH SIDE RAIL OF THE CURVE AS THE TRAIN MOVED ON THE CURVED TRACK. THE RAIL TILTED OUTWARD AND ALLOWED THE WHEEL TO DROP INSIDE THE RAILS.

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

1. BROKEN BRAKE BEAM
2. FAILURE OF BRAKE RIGGING - BRAKE RIGGING DRAGGING TILTED RAIL IN CURVE

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

1. DAMAGE TO RAIL FROM DRAGGING EQUIPMENT

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 426,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0112

BRIEF OF RAILROAD ACCIDENT #LAX85FR028

REPORTED BY:
BURLINGTON NORTHERN INC.

| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|----------------------|----------|----------|---------|----------------------|
| BOWDON, NORTH DAKOTA | 1625 CDT | 08/27/85 | CLEAR | DAY/6000 FT |

| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
|-------|--------------------------|-----------------|-----------|---------------------------|----------------|
| 1 | BURLINGTON NORTHERN INC. | LOCAL FREIGHT | WEST | EN ROUTE | BRANCH 001 |

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

ABOUT 4:25 P.M. ON AUGUST 27, 1985, FREIGHT TRAIN EXTRA 1909 WEST, CONSISTING OF 2 LOCOMOTIVE UNITS AND 7 CARS, WAS STRUCK IN THE SIDE OF THE LEAD LOCOMOTIVE UNIT BY A TRUCK TRACTOR/SEMI-TRAILER AT A GRADE CROSSING NEAR BOWDON, NORTH DAKOTA. THE TRAIN WAS MOVING AT 8 MPH AND THE TRUCK WAS ESTIMATED TO BE MOVING AT 55 MPH WHEN THE TRUCK HIT THE TRAIN. THE TWO LOCOMOTIVE UNITS DERAILED AT IMPACT AND THE FRONT OF THE SEMI-TRAILER BROKE OPEN SPILLING SOME OF ITS CARGO. THE SEMI-TRAILER WAS LOADED WITH 53 DRUMS OF LOW-GRADE URANIUM OXIDE. THE TRUCK DRIVER WAS FATALLY INJURED DURING THE COLLISION. THE CROSSING WAS PROTECTED ONLY WITH STANDARD CROSSBUCK SIGNS. THE TRAIN WHISTLE WAS BLOWING AND A WITNESS STATED THE TRUCK DRIVER MADE NO ATTEMPT TO STOP AT THE GRADE CROSSING. THE TRUCK DRIVER WAS EMPLOYED BY A CANADIAN COMPANY AND WAS A RESIDENT OF CANADA, WHICH HAS DIFFERENT TRUCK REGULATIONS. U.S. VEHICLE OPERATING RULES AND REGULATIONS REQUIRE ALL VEHICLES TRANSPORTING RADIO ACTIVE MATERIALS TO STOP AT ALL RAILROAD CROSSINGS AND ASCERTAIN THAT IT IS SAFE TO CROSS.

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

- HUMAN FAILURE - RADIOACTIVE LOAD TRUCK DID NOT STOP AT CROSSING
- FAILURE OF MOTORIST TO STOP AT PROTECTED GRADE CROSSING DUE TO INATTENTIVENESS TO DUTIES

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-----------------------|------------|----------|
| PUBLIC ON RR PROPERTY | 1 | 0 |

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 120,000 | \$ 2,118,000 |

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

- STRUCK TRAIN

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0130

BRIEF OF RAILROAD ACCIDENT #DEN86FR001

REPORTED BY:
BURLINGTON NORTHERN INC.

| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|--------------------|----------|----------|---------|----------------------|
| THAYER, IOWA | 2055 CDT | 10/17/85 | CLOUDY | DARK/1000 FT |

| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
|-------|--------------------------|-----------------|-----------|---------------------------|----------------|
| 1 | BURLINGTON NORTHERN INC. | FREIGHT | EAST | EN ROUTE | MAIN 001 |
| 2 | AMTRAK | PASSENGER | WEST | EN ROUTE | MAIN 002 |

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

ABOUT 8:55 P.M. ON OCTOBER 17, 1985, FREIGHT TRAIN EXTRA 8066 EAST, CONSISTING OF 4 LOCOMOTIVE UNITS AND 47 CARS, HAD THE 31ST CAR DERAIL. THE TRAIN WAS MOVING AT 58 MPH ON THE EASTBOUND MAIN TRACK OF A DOUBLE TRACK RAILROAD. THE TOP CORNER OF THE DERAILED CAR RAKED THE SIDE OF AMTRAK PASSENGER TRAIN NUMBER 5 THAT WAS MOVING AT 78 MPH ON THE WESTBOUND MAIN TRACK. THE PASSENGER TRAIN CONSISTED OF 2 LOCOMOTIVE UNITS AND 13 COACHES. NONE OF THE AMTRAK EQUIPMENT DERAILED; HOWEVER, BOTH TRAINS HAD TRAIN SEPARATIONS. THE DERAILED CAR DIVERGED TOWARD THE PASSENGER TRAIN, INTERMITTENTLY STRIKING THE PASSENGER CARS AT THE LEVEL OF THE TOP WINDOWS. THERE WERE 61 PASSENGERS, 14 AMTRAK EMPLOYEES AND 2 CREWMEMBERS WHO WERE INJURED. THE INJURIES CONSISTED OF CUTS AND ABRASIONS RELATED TO THE DYSINTEGRATION OF THE WINDOWS ON THE PASSENGER EQUIPMENT. ALL INJURIES WERE MINOR EXCEPT 11 PASSENGERS WHO WERE ADMITTED TO HOSPITALS. THE FREIGHT TRAIN HAD PASSED A SEGMENT OF 10 MPH RESTRICTED TRACK 4 MILES PRIOR TO THE DERAILMENT. THE INVESTIGATION REVEALED THAT THE SPEED OF THE TRAIN THROUGH THE RESTRICTED TRACK WAS CONTROLLED BY USE OF A COMBINATION OF DYNAMIC AND AUTOMATIC TRAIN BRAKE APPLICATIONS. THE PULSE RECORDING DEVICE INDICATED THE SPEED OF THE FREIGHT TRAIN WAS ABRUPTLY REDUCED FROM 60 TO 10 MPH..

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

1. HUMAN FAILURE - TRAIN HANDLING CAUSED SEVERE SLACK RUN-IN
2. IMPROPER TRAIN HANDLING ON UNDULATING GRADE

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

1. FAILURE TO PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE #500B
2. MANUFACTURING/CONSTRUCTION DEFECT IN CAR/LOCO WINDOWS
3. ERRONEOUS PROCEDURE USED IN MFG/CONSTRUCTION CAR/LOCO WINDOWS

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|------------|------------|----------|
| PASSENGERS | 0 | 11 |

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

| | RAILROAD | NON-RAILROAD |
|--|------------|--------------|
| | \$ 589,000 | \$ 0 |

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

1. BROKEN GLASS

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

85-0152

BRIEF OF RAILROAD ACCIDENT #DENB6FR004

REPORTED BY:
 BURLINGTON NORTHERN INC.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|--------------------------|-----------------|-----------|---------------------------|----------------------|-----|
| LOMBARD, MONTANA | | 0445 MST | 12/14/85 | SNOW | DARK/0500 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | BURLINGTON NORTHERN INC. | FREIGHT | WEST | EN ROUTE | MAIN | 001 |

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

ABOUT 4:45 A.M. ON DECEMBER 14, 1985, FREIGHT TRAIN EXTRA 7923 WEST, CONSISTING OF 3 LOCOMOTIVE UNITS AND 72 CARS, DERAILED ON THE MAIN TRACK WHILE MOVING AT A RECORDED SPEED OF 26 MPH. THE TRAIN POWER HAD BEEN REDUCED, WHEN THE AUTOMATIC AIR BRAKES APPLIED IN EMERGENCY APPLICATION. A TANK CAR CONTAINING ACETONE WAS DAMAGED AND LEAKAGE OCCURRED FROM THE TOP UNLOADING VALVES. THE ACETONE SPILLED ONTO THE ICE COVERING THE MISSOURI RIVER. THE INVESTIGATION REVEALED A TRANSVERSE BREAK THROUGH THE WELD OF A WELDED RAIL JOINT IN A 6 DEGREE AND 30 MINUTE CURVE. A MAGNETIC-TYPE RAIL DETECTOR HAD TESTED THE RAILS IN THE AREA 16 DAYS BEFORE THE DERAILMENT, BUT FOUND NO DEFECTS.

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

1. FAILURE OF RAIL - MANUFACTURING DEFECT IN FIELD WELD
2. BROKEN RAIL

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 230,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

85-0153

BRIEF OF RAILROAD ACCIDENT #CH186FR007

REPORTED BY:
 BURLINGTON NORTHERN INC.

| | | | | | |
|----------------------------|-----------------|-----------|---------------------------|----------------------|--|
| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
| COLMAR, ILLINOIS | 0645 CST | 12/15/85 | CLEAR | DAWN OR DUSK/2000 FT | |
| TRAIN -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| : BURLINGTON NORTHERN INC. | FREIGHT | WEST | EN ROUTE | MAIN 001 | |

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

ABOUT 6:45 A.M. ON DECEMBER 15, 1985, FREIGHT TRAIN NUMBER 01-144-14, CONSISTING OF 3 LOCOMOTIVE UNITS AND 91 CARS, HAD 48 CARS DERAIL WHILE MOVING AT ABOUT 60 MPH. THE TRAIN HAD BEEN OPERATING WITHOUT PROBLEMS WHEN AN UNDESIRED EMERGENCY BRAKE APPLICATION OCCURRED. THE ENGINEER SAW THE TRAIN DERAILING AND PILING UP BEHIND HIM, SO HE KEPT THE LOCOMOTIVE UNDER POWER TO MOVE AWAY FROM THE DERAILING CARS. INVESTIGATION LATER REVEALED A BROKEN WHEEL ON THE 7TH CAR. THE WHEEL HAD A 19 INCH PIECE BROKEN OUT OF IT. MARKS ON THE CROSSTIES INDICATED THE BROKEN WHEEL HAD DRAGGED ON THE GROUND FOR ABOUT 1/2 MILE BEFORE THE DERAILMENT SITE.

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

1. BROKEN WHEEL
2. FAILURE OF WHEEL - FRACTURE AT AXLE SEAT WENT OUT AND AROUND PLATE

----- CASUALTIES -----

NONE

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

| | |
|------------|--------------|
| RAILROAD | NON-RAILROAD |
| \$ 636,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

85-0131

BRIEF OF RAILROAD ACCIDENT #NYC86FR001

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

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|---------------------|----------------------------------|-----------------|-----------|---------------------------|----------------------|-----|
| ELK MILLS, MARYLAND | | 0305 EDT | 10/21/85 | RAIN | DARK/1000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | CHESAPEAKE AND OHIO RY CO. (THE) | LOCAL FREIGHT | EAST | EN ROUTE | MAIN | 001 |

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

ABOUT 3:05 A.M. ON OCTOBER 21, 1985, FREIGHT TRAIN NUMBER 396, CONSISTING OF 1 LOCOMOTIVE UNIT AND 29 CARS, HAD THE LOCOMOTIVE AND 22 CARS DERAIL WHILE MOVING OVER A SWITCH NEAR A BRIDGE. A CARLOAD OF PLASTIC AUTO PARTS IGNITED AND BURNED SOME CROSSTIES ON THE BRIDGE AND THE CONTENTS OF 2 FREIGHT CARS. AT THE POINT OF DERAILMENT WAS A TRAILING POINT SWITCH TO A SIDING. A SWITCH POINT AND CLOSURE RAIL WERE BADLY BATTERED, JOINT BARS WERE BROKEN AND SPIKES WERE MISSING.

| ----- PROBABLE CAUSES ----- | ----- OTHER FACTORS ----- |
|----------------------------------|---|
| 1. LOOSELY SECURED SWITCH POINTS | 1. INADEQUATE SUPERVISION OF MAINTENANCE OF WAY PROCEDURE |

| ----- CASUALTIES ----- | ----- PROPERTY LOSSES ----- | |
|------------------------|-----------------------------|--------------|
| | RAILROAD | NON-RAILROAD |
| NONE | \$ 62,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #DEN85FR022

85-0116

REPORTED BY:
DENVER AND RIO GRANDE WESTERN RR CO.

| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|--------------------|----------|----------|---------|----------------------|
| SHERIDAN, COLORADO | 1515 MDT | 09/06/85 | CLEAR | DAY/5280 FT |

| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
|-------|--------------------------|--------------------|-----------|---------------------------|----------------|
| 1 | BURLINGTON NORTHERN INC. | FREIGHT UNIT TRAIN | SOUTH | EN ROUTE | MAIN 001 |

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

ABOUT 3:15 P.M. ON SEPTEMBER 6, 1985. FREIGHT TRAIN EXTRA 5569 SOUTH, CONSISTING OF 5 LOCOMOTIVE UNITS, 115 CARS AND 2 HELPER UNITS AT THE REAR OF THE TRAIN, STRUCK A TRUCK TRACTOR/SEMI-TRAILER AT A GRADE CROSSING IN THE CITY OF SHERIDAN, COLORADO. THE TRAIN WAS MOVING AT 35 MPH AND THE TRUCK WAS ESTIMATED TO BE MOVING AT 3-5 MPH WHEN THE FRONT OF THE LEAD LOCOMOTIVE UNIT STRUCK THE TRAILER BROADSIDE. THREE OF THE LOCOMOTIVE UNITS OF THE 5 UNIT CONSIST AND THE LADING ON 9 CARS WERE HEAVILY DAMAGED BY FIRE, WHICH RESULTED WHEN THE FULL TANK ON THE TRUCK WAS RUPTURED AND THE FUEL WAS IGNITED. THE BURNING WRECKAGE OF THE TRUCK SPREAD THE FIRE TO A LUMBER COMPANY ADJACENT TO THE RAILROAD TRACKS AS THE TRUCK WAS DRAGGED ALONG. THE LUMBER COMPANY WAS COMPLETELY DESTROYED IN THE ENSUING FIRE AS WAS THE TRUCK TRACTOR/SEMI-TRAILER. DAMAGES TO THE LUMBER COMPANY WERE ESTIMATED AT 1.5 MILLION DOLLARS. THE CROSSING WAS PROTECTED BY A HIGHWAY TRAFFIC SIGNAL, FLASHING LIGHTS AND BELLS, AND THE TRAIN WHISTLE WAS BLOWING. THE TWO OCCUPANTS IN THE VEHICLE WERE SERIOUSLY INJURED.

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

1. FAILURE OF PERSON TO DETECT APPROACHING TRAIN
2. FAILURE OF PERSON TO VACATE POSITION ON TRACK STRUCTURE DUE TO VEHICLE OPERATOR'S ERROR IN JUDGEMENT
3. HUMAN FAILURE - DRIVER STOPPED TRUCK-TRAILER ON GRADE CROSSING

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-----------------------|------------|----------|
| PUBLIC ON RR PROPERTY | 0 | 2 |

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 320,000 | \$ 1,531,000 |

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

1. FIRE

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #CH185FR026

85-0101

REPORTED BY:
GRAND TRUNK WESTERN RR CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|----------------------|----------------------------|-----------------|----------|-----------|---------------------------|----------------|
| BIRMINGHAM, MICHIGAN | | 1440 EDT | 07/28/85 | CLEAR | DAY/5000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
| 1 | GRAND TRUNK WESTERN RR CO. | FREIGHT | | EAST | EN ROUTE | MAIN 002 |

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

FREIGHT TRAIN NUMBER 450, CONSISTING OF 2 LOCOMOTIVE UNITS AND 73 CARS, HAD 25 CARS DERAIL WHILE MOVING AT 47 MPH. SOME OF THE CARS CARRIED NEW AUTOMOBILES. DUE TO RECENT LABOR TROUBLES IN THE AUTO HAULEKS INDUSTRY, THE FEDERAL BUREAU OF INVESTIGATION INITIALLY BECAME INVOLVED IN THE INVESTIGATION, BUT SABOTAGE WAS LATER RULED OUT. INVESTIGATION REVEALED THAT AIR BRAKE HOSES BETWEEN THE 40TH AND 41ST CARS WERE HANGING BELOW THE TOPS OF THE RAILS. AT MILEPOST 17.9, THE TRAIN PASSED OVER A SWITCH AND THE LOW HOSES STRUCK THE SWITCH CLOSURE RAIL, BREAKING THE HOSES APART. THE TRAIN BRAKES APPLIED IN EMERGENCY, THE TRAIN PULLED APART, THEN RAN TOGETHER.

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

1. LOOSELY SECURED AIR BRAKE HOSE
2. FAILURE OF AIR BRAKE HOSE - HOSES STRUCK TRACK, TRAIN PARTED, RAN TOGETHER

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 576,000 | \$ 25,000 |

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #CHI85FR028

85-0104

REPORTED BY:
 GRAND TRUNK WESTERN RR CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|----------------------------|-----------------|-----------|---------------------------|----------------------|----------------|
| HASKELLS, INDIANA | | 0720 CDT | 08/01/85 | CLEAR | DAY/3000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- |
| 1 | GRAND TRUNK WESTERN RR CO. | FREIGHT | WEST | EN ROUTE | | MAIN 001 |

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

FREIGHT TRAIN NUMBER 371, CONSISTING OF 2 LOCOMOTIVE UNITS AND 93 CARS, HAD 18 CARS DERAIL WHILE MOVING ABOUT 35 MPH. THE ENGINEER WAS NOT AWARE OF ANY PROBLEMS UNTIL THE TRAIN BRAKES WENT INTO AN EMERGENCY APPLICATION. SOME OF THE DERAILED CARS CONTAINED NEW AUTOMOBILES, RESULTING IN CONSIDERABLE LADING DAMAGES. INVESTIGATION REVEALED A BURNED OFF AXLE JOURNAL ON THE 21ST CAR.

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

1. OVER HEATED ROLLER BEARING
2. FAILURE OF ROLLER BEARING - AXLE JOURNAL BURNED OFF

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 216,000 | \$ 237,000 |

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #ATLB6FR003

85-0142

REPORTED BY:
 GREATER CLEVELAND REGIONAL TRANSIT AUTH.

| | | | | | | |
|--------------------|--|-------------------|-----------|---------------------------|----------------------|-----|
| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
| CLEVELAND, OHIO | | 1030 CST | 11/04/85 | RAIN | DAY/2000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | GREATER CLEVELAND REGIONAL TRANSIT AUTH. | PASSENGER TRANSIT | WEST | EN ROUTE | MAIN | 002 |

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

ABOUT 10:30 A.M. ON NOVEMBER 4, 1985, GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY WESTBOUND TRAIN NUMBER 6603, CONSISTING OF 2 TRANSIT CARS, DERAILED ITS TWO CAR TRAIN ON A CROSSOVER SWITCH AT EAST 49TH STREET. THE TRAIN OPERATOR AND TWELVE PASSENGERS WERE TREATED AND RELEASED AT A LOCAL HOSPITAL FOR MINOR INJURIES. NINETY PASSENGERS WERE TRANSFERRED FROM THE TRAIN AND TRANSPORTED BY A WESTBOUND TRAIN TO THE TERMINAL. THE TRAIN MOVEMENT OVER THE SWITCH WAS PROTECTED BY AN INTERLOCKING DWARF SIGNAL AND THE INSTRUCTIONS WERE BEING CONVEYED BY RADIO FROM THE CONTROL TOWER.

- | | |
|--|---|
| ----- PROBABLE CAUSES ----- | ----- OTHER FACTORS ----- |
| 1. FAILURE OF PERSONNEL TO DETECT SIGNAL | 1. LACK OF INFORMATION FOR PERFORMING NECESSARY TRAIN OPERATION PROCEDURE |
| 2. INATTENTIVENESS TO DUTIES | |

| | | |
|------------------------|-----------------------------|--------------|
| ----- CASUALTIES ----- | ----- PROPERTY LOSSES ----- | |
| NONE | RAILROAD | NON-RAILROAD |
| | \$ 60,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0098

BRIEF OF RAILROAD ACCIDENT #ATL85FR013

REPORTED BY:
METRO ATLANTA RAPID TRANSIT AUTHORITY

| -----LOCATION----- | | ---TIME-- | ---DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|---------------------------------------|-------------------|-----------|---------------------------|----------------------|----------------|
| ATLANTA, GEORGIA | | 0941 EDT | 07/19/85 | CLEAR | DAY/5000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- |
| 1 | METRO ATLANTA RAPID TRANSIT AUTHORITY | PASSENGER TRANSIT | NORTH | SETOUT/PICKUP NOT IN YARD | | YARD 001 |
| 2 | METRO ATLANTA RAPID TRANSIT AUTHORITY | PASSENGER TRANSIT | NORTH | MOVEMENT IN YARD | | YARD 001 |

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

A RAPID TRANSIT TRAIN THAT WAS BEING OPERATED INTO A TURNBACK AREA COLLIDED WITH PARKED RAPID TRANSIT CARS IN A STORAGE TRACK NEAR THE LENOX STATION. TRAIN NUMBER 153 WAS NORTHBOUND AND HAD JUST DISCHARGED ALL PASSENGERS (EXCEPT ONE UNAUTHORIZED PASSENGER) AT LENOX STATION. NUMBER 153 CONSISTED OF 6 SELF-PROPELLED CARS, AS DID THE PARKED TRAIN THAT IT STRUCK. A YARD OPERATOR WAS STANDING IN THE REAR DOORWAY OF THE PARKED TRAIN. SHE SAW THAT NUMBER 153 WAS APPROACHING ON THE SAME TRACK TOO FAST TO STOP. SHE SIGNALED TO THE OPERATOR OF NUMBER 153 TO SLOW DOWN, THEN RAN TO THE CENTER OF THE CAR AS NUMBER 153 STRUCK THE TRAIN. THE 2 OPERATORS AND THE UNAUTHORIZED PASSENGER WERE INJURED IN THE COLLISION. THE TRAINS DID NOT DERAIL, BUT THE CARS WERE DAMAGED.

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

1. HUMAN FAILURE - TRAIN WAS OPERATED AT EXCESSIVE SPEED
2. ERROR IN JUDGEMENT
3. LACK OF EXPERIENCE

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

1. LACK OF EXPERIENCE IN PROCEDURE PRESCRIBED BY RR OPERATING RULE #125

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-------------------|------------|----------|
| EMPLOYEES ON DUTY | 0 | 2 |
| PASSENGERS | 0 | 1 |

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

| | RAILROAD | NON-RAILROAD |
|----|----------|--------------|
| \$ | 125,000 | \$ 0 |
| \$ | | \$ 0 |

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

1. THROWN FROM SEAT/POSITION IN COLLISION/DERAILMENT

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #FTW86FR005

85-0156

REPORTED BY:
MISSOURI PACIFIC RR CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|--------------------|-------------------------|-----------------|-----------|---------------------------|----------------------|
| LONGVIEW, TEXAS | | 0500 CST | 12/20/85 | CLEAR | DARK/1000 FT |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
| 1 | MISSOURI PACIFIC RR CO. | YARD/SWITCHING | WEST | MAKEUP/BREAKUP | INDUSTRIAL 001 |

+++++!+++++ ACCIDENT DESCRIPTION +++++!+++++

ABOUT 5:00 A.M. DECEMBER 20, 1985, A YARD SWITCHING JOB, CONSISTING OF 2 LOCOMOTIVE UNITS AND 12 CARS, WAS MAKING A SWITCHING MOVE IN THE TEXAS EASTMAN COMPANY YARD WHEN ONE OF THE 2 BRAKEMEN (PIN MAN) SLIPPED AND FELL INTO A LAKE ADJACENT TO THE TRACK. THE LOCOMOTIVE UNITS WERE SHOVING THE CARS AND THE ENGINEER STOPPED THE TRAIN. THE ENGINEER WENT INTO THE LAKE TO TRY TO RESCUE THE BRAKEMAN, AND BOTH WERE LATER FOUND IN THE WATER AND BOTH MEN HAD DROWNED. AUTOPSY TESTS FOR ALCOHOL AND DRUGS WERE PERFORMED ON BOTH EMPLOYEES. THE TEST ON THE ENGINEER WAS POSITIVE FOR THE PRESENCE OF MARIJUANA.

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

1. HUMAN FAILURE - BRAKEMAN FELL IN LAKE, ENGINEER ATTEMPTED RESCUE
2. INDIVIDUAL ACCEPTED RISKS BEYOND SKILL LEVEL, UNKNOWN TO MANAGEMENT

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

1. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE #OR-L

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-------------------|------------|----------|
| EMPLOYEES ON DUTY | 2 | 0 |

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

NONE

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

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #DCN86FR003

85-0139

REPORTED BY:
NORFOLK AND WESTERN RY CO.

| -----LOCATION----- | | ---TIME--- | ---DATE--- | WEATHER | -----VISIBILITY----- | |
|----------------------|----------------------------|-----------------|------------|---------------------------|----------------------|----------------|
| WENTZVILLE, MISSOURI | | 0240 CST | 10/31/85 | RAIN | DARK/0600 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- |
| 1 | NORFOLK AND WESTERN RY CO. | YARD/SWITCHING | EAST | MOVEMENT IN YARD | | YARD 005 |
| 2 | NORFOLK AND WESTERN RY CO. | FREIGHT | WEST | EN ROUTE | | MAIN 001 |

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

ABOUT 2:40 A.M. ON OCTOBER 31, 1985, ROAD SWITCHES JOB NUMBER MO4W, CONSISTING OF 1 LOCOMOTIVE UNIT AND 66 CARS, WENT OVER A DERAIL AT THE EAST END OF THE WENTZVILLE YARD. THE LEAD 4 CARS DERAILED. THREE OF THE DERAILED CARS JACKKED AND STRUCK THE SIDE OF FREIGHT TRAIN MOXW THAT WAS MOVING THROUGH A NEARBY SIDING. FOURTEEN CARS OF TRAIN MOXW DERAILED. BOTH TRAINS WERE MOVING ABOUT 10 MPH AT THE TIME. TRAIN MO4W WAS BEING SWITCHED AROUND IN THE YARD, SO THE CREW HAD NOT HOOKED UP THE AIR HOSES BETWEEN THE LOCOMOTIVE AND THE LEAD CAR. THE EAST LEAD TRACK OF THE YARD GOES DOWN A 1.6 PERCENT GRADE TOWARD THE MAIN TRACK. THE ENGINEER COULD ONLY USE THE INDEPENDENT BRAKE AND THE DYNAMIC BRAKE, AND WAS UNABLE TO STOP OR SLOW THE TRAIN BEFORE IT RAN OVER THE DERAIL.

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

1. HUMAN FAILURE - CREW MOVED 66 CARS WITH NO AIR HOSES HOOKED UP

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 465,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0150

BRIEF OF RAILROAD ACCIDENT #ATL86FR006

REPORTED BY:
SE PENNSYLVANIA TRANSPORTATION AUTHORITY

| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|----------------------------|----------|----------|---------|----------------------|
| PHILADELPHIA, PENNSYLVANIA | 1753 EST | 12/11/85 | RAIN | DAWN OR DUSK/0600 FT |

| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
|-------|--|-------------------|-----------|---------------------------|----------------|
| 1 | SE PENNSYLVANIA TRANSPORTATION AUTHORITY | PASSENGER TRANSIT | NORTH | EN ROUTE | MAIN 002 |
| 2 | SE PENNSYLVANIA TRANSPORTATION AUTHORITY | PASSENGER TRANSIT | SOUTH | EN ROUTE | MAIN 002 |

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

ABOUT 5:53 P.M. ON DECEMBER 11, 1985, NORTHBOUND TROLLEY CAR NUMBER 200, CARRYING ABOUT 65 PASSENGERS, DERAILED AT THE NORTH END OF WEST OVERLOOK STATION ON THE NORTHBOUND TRACK OF THE NORRISTOWN HIGH SPEED LINE, FOULING THE SOUTHBOUND TRACK. MOMENTS LATER, SOUTHBOUND TROLLEY CAR NUMBER 160, CARRYING ABOUT 20 PASSENGERS, STRUCK CAR NUMBER 200. ONE CREWMEMBER AND 7 PASSENGERS WERE HOSPITALIZED FOR OBSERVATION. 49 OTHER PASSENGERS WERE TREATED FOR MINOR INJURIES. VANDALS FLED THE AREA AFTER THE DERAILMENT. CAR NUMBER 200 DERAILED AFTER STRIKING DEBRIS THAT HAD BEEN PLACED ON THE TRACK. THIS PARTICULAR OPERATION HAS NO RULES RELATIVE TO THE USE OF RADIOS, AND HAS NO RULES RELATIVE TO FLAGGING PROCEDURES.

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

1. VANDALISM, MALICIOUS MISCHIEF
2. HUMAN FAILURE - FIRST OPERATOR DID NOT FLAG SECOND TROLLEY

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

1. LACK OF INSTRUCTION/SUPERVISION
2. LACK OF SKILL/TRAINING
3. DISTRACTION FROM OTHER EVENTS

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|--------------|------------|----------|
| RAILROAD | 0 | 1 |
| NON-RAILROAD | 0 | 7 |

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 1,082,000 | \$ 0 |

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

DATA NOT AVAILABLE

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #NYC86FR005

85-0158

REPORTED BY:
SE PENNSYLVANIA TRANSPORTATION AUTHORITY

| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|----------------------------|----------|----------|---------|----------------------|
| CONSHOHOCKEN, PENNSYLVANIA | 0749 EST | 12/24/85 | CLEAR | DAY/1000 FT |

| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
|-------|--|-------------------|-----------|---------------------------|----------------|
| 1 | SE PENNSYLVANIA TRANSPORTATION AUTHORITY | PASSENGER TRANSIT | NORTH | EN ROUTE | MAIN 002 |
| 2 | SE PENNSYLVANIA TRANSPORTATION AUTHORITY | PASSENGER TRANSIT | SOUTH | EN ROUTE | MAIN 002 |

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

ABOUT 7:49 A.M. ON DECEMBER 24, 1985, RAIL CAR NUMBER 207, MAKING A REVERSE MOVE, WAS STRUCK BY RAIL CAR NUMBER 201 JUST SOUTH OF THE CONSHOHOCKEN STATION OF THE RED ARROW LINE. FOUR PASSENGERS AND THE OPERATORS OF THE 2 CARS REPORTEDLY RECEIVED MINOR INJURIES. THERE WERE ABOUT 20 PASSENGERS ON CAR NUMBER 201. CAR NUMBER 207 HAD JUST DISCHARGED ALL PASSENGERS AND WAS MAKING THE REVERSE MOVE THROUGH A CROSSOVER. NUMBER 201 WAS APPROACHING THE STATION, HAD PASSED 2 YELLOW SIGNALS, THEN A RED SIGNAL WAS SEEN BY THE OPERATOR. HE APPLIED THE BRAKES WHILE MOVING ABOUT 15 MPH, BUT CLAIMED THE CAR SLID UNTIL IT STRUCK THE SIDE OF NUMBER 207.

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

1. HUMAN FAILURE - RAILCAR SPEED NOT IN COMPLIANCE WITH SIGNAL

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|-----------|--------------|
| \$ 25,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #FTW85FR027

85-0117

REPORTED BY:
SEABOARD COAST LINE RR

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|------------------------|-----------------|-----------|---------------------------|----------------------|-----|
| PENSACOLA, FLORIDA | | 0015 CDT | 09/07/85 | CLOUDY | DARK/0300 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | SEABOARD COAST LINE RR | FREIGHT | NORTH | EN ROUTE | MAIN | 001 |

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

ABOUT 12:15 A.M. ON SEPTEMBER 7, 1985, NORTHBOUND FREIGHT TRAIN NO. 606, CONSISTING OF 3 LOCOMOTIVE UNITS AND 124 CARS, HAD THE 3 LOCOMOTIVE UNITS AND 8 CARS DERAIL WHILE MOVING AT 9 MPH OVER A WASHED OUT ROADBED. THE HEAD-END OF THE TRAIN HAD PASSED OVER THE ESCAMBIA BAY BRIDGE AND WAS ROUNDING A 4 DEGREE AND 8 MINUTE CURVE, WHEN THE HEAD-END CREW SAW THE WASHOUT IN FRONT OF THE TRAIN AND THE ENGINEER PLACED THE TRAIN BRAKES IN EMERGENCY APPLICATION. THE FIRST AND THIRD LOCOMOTIVE UNITS TURNED OVER DURING THE DERRAILMENT AND THE SECOND UNIT STOPPED UPRIGHT AND LEANING. THE AREA HAD BEEN RECEIVING HEAVY RAINFALL DURING THE PAST 2 WEEKS.

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

1. FAILURE OF ROADBED - LEVEE CONSTRUCTED BY CONTRACTOR BROKE
2. DAMAGE FROM CONSTRUCTION ACTIVITY
3. ROADBED WASHOUT

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 548,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #NYC85FR020

85-0122

REPORTED BY:
SEABOARD COAST LINE RR

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|---------------------------|------------------------|-----------------|----------|-----------|---------------------------|----------------|
| CHARLOTTE, NORTH CAROLINA | | 2025 EDT | 09/18/85 | CLEAR | DARK/1000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
| 1 | SEABOARD COAST LINE RR | FREIGHT | | WEST | EN ROUTE | MAIN 001 |

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

ABOUT 8:25 P.M. ON SEPTEMBER 18, 1985, LOCAL FREIGHT TRAIN NUMBER 901 HAD 31 CARS DERAIL WHILE MOVING AT ABOUT 40 MPH. THE TRAIN WAS ON AN OVERHEAD BRIDGE AT THE TIME AND 13 OF THE DERAILED CARS PILED UP ON THE HIGHWAY BELOW. THE TRAIN CONSISTED OF 2 LOCOMOTIVE UNITS AND 47 CARS. THE ENGINEER FELT THE LOCOMOTIVE DIP AS IT WENT OVER THE BRIDGE, THEN THE BRAKES APPLIED IN AN UNDESIRED EMERGENCY BRAKE APPLICATION. AT ABOUT THE SAME TIME, THE CONDUCTOR FELT THE TRAIN SURGE. A BROKEN RAIL WAS FOUND LATEK AT THE LOCATION ON THE BRIDGE WHERE THE ENGINEER FELT THE LOCOMOTIVE DIP.

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

1. BROKEN RAIL
2. DAMAGE TO RAIL FROM TRAIN OPERATIONS

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 552,000 | \$ 5,000 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #ATL85FR014

85-A125

REPORTED BY:
SEABOARD COAST LINE RR

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|------------------------|-----------------|-----------|---------------------------|----------------------|----------------|
| KEELING, TENNESSEE | | 0030 CDT | 09/29/85 | CLEAR | DARK/2000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- |
| 1 | SEABOARD COAST LINE RR | FREIGHT | NORTH | EN ROUTE | | MAIN 001 |

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

ABOUT 12:30 A.M. ON SEPTEMBER 29, 1985, SCHEDULED NORTHBOUND FREIGHT TRAIN, NO. N-530, CONSISTING OF 4 LOCOMOTIVE UNITS AND 107 CARS, HAD 26 CARS DERAIL ON THE MAIN TRACK WHILE MOVING AT 34 MPH. THE INVESTIGATION REVEALED A BROKEN RAIL IN THE VICINITY OF THE DERAILMENT. THE BROKEN RAIL SHOWED EVIDENCE OF AN INTERNAL DEFECT. THE TRAIN PASSED A HOT BOX/Dragging EQUIPMENT DETECTOR 15 MILES BEFORE THE DERAILMENT AND NO UNSAFE CONDITIONS ON THE TRAIN WERE RECORDED. THE TRACK WAS LAST INSPECTED 3 DAYS PRIOR TO THE DERAILMENT AND NO DEFECTS OR EXCEPTIONS WERE NOTED OR TAKEN. A RAIL TEST CAR WAS OPERATED 12 DAYS PRIOR TO THE DERAILMENT AND THE INTERNAL DEFECT WAS NOT NOTED.

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

1. BROKEN RAIL
2. FAILURE OF RAIL - HEARTH-COOLED RAIL HAD TRANSVERSE FISSURE

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

1. MANUFACTURING/CONSTRUCTION DEFECT IN RAIL

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 418,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #ATL86FR001

85-0127

REPORTED BY:
SEABOARD COAST LINE RR

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|------------------------|-----------------|----------|-----------|---------------------------|----------------|
| LAKE CITY, FLORIDA | | 1651 EDT | 10/12/85 | CLEAR | DAY/9990 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
| 1 | SEABOARD COAST LINE RR | FREIGHT | | NORTH | EN ROUTE | MAIN 001 |

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

ABOUT 4:51 P.M. ON OCTOBER 12, 1985 SEABOARD RAILROAD NORTHBOUND FREIGHT TRAIN NO. J-602, CONSISTING OF 6 LOCOMOTIVE UNITS AND 151 CARS, HAD 38 CARS DERAIL ON THE MAIN TRACK WHILE MOVING AT 47 MPH. TWO OF THE DERAILED CARS WERE TANK CARS CONTAINING ANHYDROUS AMMONIA AND SOME OF THE PRODUCT LEAKED. THERE WERE APPROXIMATELY 400 LOCAL RESIDENTS EVACUATED FROM THE AREA OF THE DERAILEMENT. THE AREA SURROUNDING THE DERAILEMENT WAS SPARSELY POPULATED AND RURAL. THE INVESTIGATION REVEALED THAT PLACEMENT OF EMPTY CARS IN THE FORWARD PORTION OF THE TRAIN WITH HEAVY TONNAGE BEHIND WAS NOT IN ACCORDANCE WITH GOOD TRAIN MAKEUP GUIDELINES. EVIDENCE INDICATED THE WHEEL OF AN EMPTY CAR STRUCK THE POINT OF A SWITCH FROG AT THE POINT OF DERAILEMENT. THE WHEEL THEN ROLLED OVER THE FROG POINT AND DROPPED ON THE FIELD SIDE OF THE RAIL.

1. LOOSELY SECURED GUARD RAIL CHECK GAGE
2. DAMAGE TO GUARD RAIL CHECK GAGE FROM TRAIN OPERATIONS

1. INADEQUATE INSTRUCTIONS FOR DISTRIBUTION OF LOADED AND EMPTY CARS IN TRAIN CONSIST

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 1,418,000 | \$ 47,000 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0145

BRIEF OF RAILROAD ACCIDENT #ATL86FR005

REPORTED BY:
SEABOARD COAST LINE RR

| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|--------------------|----------|----------|---------|----------------------|
| MARIETTA, GEORGIA | 1100 EST | 11/08/85 | CLEAR | DAY/0700 FT |

| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
|-------|------------------------|--------------------|-----------|---------------------------|----------------|
| 1 | SEABOARD COAST LINE RR | FREIGHT | NORTH | EN ROUTE | MAIN 001 |
| 2 | SEABOARD COAST LINE RR | FREIGHT UNIT TRAIN | SOUTH | EN ROUTE | MAIN 003 |

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

ABOUT 11:00 A.M. ON NOVEMBER 8, 1985, NORTHBOUND FREIGHT TRAIN NUMBER 580, CONSISTING OF 4 LOCOMOTIVE UNITS AND 90 CARS, COLLIDED WITH UNIT COAL TRAIN EXTRA 2307 SOUTH. THE SOUTHBOUND TRAIN CONSISTED OF 4 LOCOMOTIVE UNITS AND 73 CARS AND WAS ENTERING THE SIDING AT A SPEED OF 15 MPH. THE EXTRA NORTH WAS MOVING AT 30 MPH AND THE FRONT OF THE LEAD LOCOMOTIVE UNIT STRUCK THE SIDE OF THE SECOND LOCOMOTIVE UNIT ON THE COAL TRAIN. THE FUEL SUPPLY TANKS WERE RUPTURED AND FUEL WAS IGNITED AND BURNED. THE WAYSIDE SIGNALS WERE DISPLAYING A STOP INDICATION FOR A NORTHBOUND MOVEMENT. A TOTAL OF 6 LOCOMOTIVE UNITS AND 9 CARS WERE DERAILED. THREE OF THE LOCOMOTIVE UNITS WERE DESTROYED BY FIRE. TRAIN NUMBER 580 HAD BEEN MOVING ABOUT 30 MPH WHEN THE HEAD BRAKEMAN REMINDED THE ENGINEER THAT PREVIOUS SIGNAL INDICATED "APPROACH." THE ENGINEER APPLIED THE BRAKES WHEN ALMOST IMMEDIATELY THE STOP SIGNAL CAME INTO VIEW. HE THEN PLACED THE BRAKES INTO EMERGENCY APPLICATION, AND HE AND THE BRAKEMAN JUMPED OFF THE TRAIN. TOXICOLOGY REVEALED THE PRESENCE OF SLEEPING PILLS IN THE ENGINEER AND TRACES OF MARIJUANA IN THE HEAD BRAKEMAN.

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| ----- PROBABLE CAUSES ----- | ----- OTHER FACTORS ----- |
|--|---------------------------|
| 1. FAILURE OF PERSONNEL TO DETECT SIGNAL 2. INATTENTIVENESS TO DUTIES | 1. USE OF DRUGS |

| ----- CASUALTIES ----- | ----- PROPERTY LOSSES ----- | | | |
|------------------------|-----------------------------|----------|--------------|----------|
| FATALITIES | INJURIES | RAILROAD | NCN-RAILROAD | |
| EMPLOYEES ON DUTY | 0 | 1 | \$ 1,682,000 | \$ 1,000 |

----- PROBABLE CAUSES OF CASUALTIES -----
1. THROWN FROM SEAT/POSITION IN COLLISION/DERAILMENT

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #DENG5FR024

85-0124

REPORTED BY:
SOO LINE RR CO.

| | | | | | | |
|--------------------|--------------------|-----------------|----------|-----------|---------------------------|----------------|
| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
| CUBA, NORTH DAKOTA | | 0550 CDT | 09/30/85 | CLEAR | DAWN OR DUSK/2640 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
| 1 | SOO LINE RR CO. | FREIGHT | | WEST | EN ROUTE | MAIN 001 |

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

ABOUT 5:50 A.M. ON SEPTEMBER 30, 1985, FREIGHT TRAIN EXTRA 6608 WEST CONSISTING OF 2 LOCOMOTIVE UNITS AND 125 CARS, HAD 29 CARS DERAIL IN A CURVE WHILE MOVING AT 41 MPH. THERE WERE 14 EMPTY TANK CARS INVOLVED IN THE DERAILMENT AND THERE WAS NO EVACUATION OR UNCONTROLLED RELEASE OF HAZARDOUS MATERIALS. THE ENGINEER MADE A BRAKE APPLICATION WHEN HE OBSERVED A PORTION OF THE HEAD OF THE RAIL MISSING AHEAD OF THE TRAIN AND MOMENTS LATER THE DERAILMENT OCCURRED. A SECTION OF STOCK RAIL WAS FOUND AT THE SITE WITH A PIECE OF THE RAIL HEAD BROKEN OUT. A MATCHING PIECE OF RAIL HEAD WAS FOUND NEXT TO THE RAIL.

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

1. BROKEN RAIL TREAD

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

1. FAILURE OF RAIL TREAD DUE TO NORMAL DETERIORATION/WEAR

----- CASUALTIES -----

NONE

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

| | |
|------------|--------------|
| RAILROAD | NON-RAILROAD |
| \$ 364,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
Washington, D.C. 20594

85-103

Reported by: Southern Pacific Transportation Co.

Brief of Railroad No.: FTW-85-F-R022

Location:

Staples, Louisiana

Time:

1730 CDT

Date:

7-31-85

Weather:

Clear

Visibility:

9,000 FT.

Train:

Railroad:

Class:

Direction:

Operating Phase:

Track No.:

1 Southern Pacific Transp. Co.

Freight

West

Enroute

1

2 _____

3 _____

Accident Description: About 5:30 p.m. on July 31, 1985, westbound freight train No. 1-ESTXK-30, consisting of 5 locomotive units and 132 cars, had 38 cars derail while moving about 39 m.p.h. The engineer saw a sun-kink in the track ahead and applied the train brakes. The derailment occurred as the train passed over the sun-kink. The ambient temperature had exceeded 95 degrees F for the 13 previous days.

Probable Cause:

1. Track insufficiently anchored to prevent longitudinal movement during hot weather.
2. Extreme heat.
3. _____

Other Factors:

1. _____
2. _____

Fatalities:

Number:

0

Description:

Injuries:

Number:

0

Description:

Probable Cause of Casualty:

1. _____
2. _____

Property Losses:

Railroad: \$1,021,000

Non-Railroad: 0

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #FTW85FR023

85-0108

REPORTED BY:
 SOUTHERN PACIFIC TRANSP. CO.

| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|--------------------|----------|----------|---------|----------------------|
| ALPINE, TEXAS | 0225 CDT | 08/20/85 | CLEAR | DARK/0800 FT |

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

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

ABOUT 2:25 A.M. ON AUGUST 20, 1985, FREIGHT TRAIN 01-MPLAT, CONSISTING OF 5 LOCOMOTIVE UNITS AND 101 CARS, STRUCK A PICKUP TRUCK THAT WAS STANDING ON THE TRACK. THE TRAIN SPEED HAD BEEN 48 MPH, BUT AT IMPACT HAD SLOWED TO ABOUT 40 MPH AS A RESULT OF THE ENGINEER PLACING THE TRAIN BRAKES IN EMERGENCY APPLICATION. THE DRIVER WAS ARRESTED FOR PUBLIC INTOXICATION. 20 CARS IN THE TRAIN DERAILED AFTER THE EMERGENCY BRAKE APPLICATION. ONE DERAILED CAR STRUCK A METAL BUILDING NEARBY.

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

1. USE OF INTOXICANTS
2. HUMAN FAILURE - DRUNK DRIVER GOT TRUCK STUCK ON TRACK

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|------------|--------------|
| \$ 267,000 | \$ 14,000 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0121

BRIEF OF RAILROAD ACCIDENT #FTW85FR028

REPORTED BY:
SOUTHERN PACIFIC TRANSP. CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|------------------------------|-----------------|----------|-----------|---------------------------|----------------|
| MCDONNA, TEXAS | | 2240 CDT | 09/14/85 | CLOUDY | DARK/0500 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- |
| 1 | SOUTHERN PACIFIC TRANSP. CO. | FREIGHT | | EAST | EN ROUTE | MAIN 001 |

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

ABOUT 10:40 P.M. ON SEPTEMBER 14, 1985, FREIGHT TRAIN EXTRA 7621 EAST, CONSISTING OF 4 LOCOMOTIVE UNITS AND 112 CARS, HAD 28 CARS DERAIL WHILE MOVING AT 41 MPH OVER THE MEDINA RIVER BRIDGE. INCLUDED IN THE 28 DERAILED CARS WERE 21 TANK CARS CONTAINING SULFURIC ACID. ALL THE TANK CARS BREACHED DURING THE DERAILMENT AND EACH CAR SPILLED ALL OR PART OF ITS LOAD. SOME OF THE ACID SPILLED ENTERED THE MEDINA RIVER. PRIOR TO THE DERAILMENT THE CREW OF TRAIN 7621 WAS TOLD BY CREWMEMBERS OF OTHER TRAINS THAT WERE MET, THAT THEY HAD A CAR IN THEIR TRAIN WITH A SHIFTED LOAD. THE CREW MADE NO ATTEMPT TO SET-OUT THE CAR WITH THE SHIFTED LOAD AND DARKNESS REDUCED THE VISIBILITY OF THE SHIFTED LOAD FROM THE LOCOMOTIVE UNIT. THE INVESTIGATION REVEALED HARSH SLACK ACTION OCCURRED PRIOR TO THE DERAILMENT AND THE SHIFTED LOAD STRUCK THE BRIDGE OVER THE MEDINA RIVER. THE TRAIN WAS TRAVELING 11 MPH IN EXCESS OF ITS MAXIMUM AUTHORIZED SPEED OF 30 MPH.

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

1. HUMAN FAILURE - CREW IGNORED WARNINGS OF SHIFTED LOAD

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

1. DAMAGE TO TIEDOWN EQUIPMENT FROM EXCESSIVE TRAIN BUFF FORCES
2. DAMAGE TO TIEDOWN EQUIPMENT FROM EXCESSIVE TRAIN DRAFT FORCES
3. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE #829

----- CASUALTIES -----

| | FATALITIES | INJURIES |
|-------------------|------------|----------|
| EMPLOYEES ON DUTY | 0 | 2 |

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 1,960,000 | \$ 2,350,000 |

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

1. TOXIC REACTION

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #LAX03FR003

85-0151

REPORTED BY:
 SOUTHERN PACIFIC TRANSP. CO.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|--------------------|------------------------------|-----------------|-----------|---------------------------|----------------------|----------------|
| STOVAL, ARIZONA | | 0700 MST | 12/12/85 | CLEAR | DAWN OR DUSK/0600 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | | ---TRACK/NO--- |
| 1 | SOUTHERN PACIFIC TRANSP. CO. | FREIGHT | WEST | EN ROUTE | | MAIN 001 |

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

ABOUT 7:00 A.M. ON DECEMBER 12, 1985, FREIGHT TRAIN EXTRA 7476 WEST, CONSISTING OF 5 LOCOMOTIVE UNITS AND 129 CARS, HAD 3 LOCOMOTIVE UNITS AND 31 CARS DERAIL ON THE MAIN TRACK WHILE MOVING AT 45 MPH. THE HEAD END CREW FELT THE LOCOMOTIVE UNIT MOVE OVER AN UNKNOWN OBJECT AND HEARD A LOUD THUMP. THE ENGINEER LOOKED IN THE SIDE MIRROR AND SAW THE SECOND LOCOMOTIVE UNIT JUMP AND THE TRAIN JERKED. THE TRAIN POWER WAS REDUCED AND IMMEDIATELY AN UNPLANNED AIR-BRAKE APPLICATION OCCURRED. THE INVESTIGATION REVEALED A COMPLETE TRANSVERSE SEPARATION OF THE RAIL IN THE PLANT WELDED AREA OF THE WELDED RAIL. A RAIL DETECTOR TEST CAR WAS LAST OPERATED OVER THE AREA 9 MONTHS PRIOR TO THE RAIL FAILURE, BUT FOUND NO DEFECTS AT THAT TIME.

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

1. FAILURE OF RAIL - DUE TO DEFECTIVE PLANT WELD
2. BROKEN RAIL

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 1,272,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
Washington, D.C. 20594

85-76

Reported by: St Louis Southwestern Railway Co.

Brief of Railroad No.: DCA-85-M-R-007

Location: Pine Bluff, AR. Time: 1333 CDT Date: 6/9/85 Weather: Clear Visibility: 9,000 FT.

| Train: | Railroad: | Class: | Direction: | Operating Phase: | Track No.: |
|--------|---|----------------|--------------|------------------|------------|
| 1 | <u>St. Louis Southwestern Railway Co.</u> | <u>Freight</u> | <u>North</u> | <u>Enroute</u> | <u>1</u> |
| 2 | _____ | _____ | _____ | _____ | _____ |
| 3 | _____ | _____ | _____ | _____ | _____ |

Accident Description: About 1:33 p.m., c.d.t. on June 9, 1985, freight train Extra 4835 North derailed while passing over a ballast-deck pile trestle located about 3.3 miles southwest of Pine Bluff, Arkansas. Eighteen of the 42 derailed cars were loaded tank cars, and 14 of these cars contained regulated hazardous or toxic chemical commodities; 4 others contained non-regulated flammable petroleum and liquid plastics products. Fire broke out in the wreckage, and smoke and toxic gasses were released into the atmosphere. Two tank cars exploded. More than 2,800 persons were evacuated from within a 1-mile radius of the derailment site.

Probable Cause:

- Failure to properly distress and anchor track to retard longitudinal movement.
- Excessive speed and heavy braking on a downgrade compounded the stresses imposed on the track by hot
- weather.

Other Factors:

- _____
- _____

| Fatalities: | Number: | Description: | Injuries: | Number: | Description: |
|-------------|----------|--------------|-----------|----------|--------------|
| | <u>0</u> | _____ | | <u>0</u> | _____ |
| | _____ | _____ | | _____ | _____ |
| | _____ | _____ | | _____ | _____ |
| | _____ | _____ | | _____ | _____ |

- Probable Cause of Casualty:
- _____
 - _____

Property Losses:
Railroad: \$4,388,000
Non-Railroad: 0

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #NYC86FR006

85-0159

REPORTED BY:
TRANSPORT OF NEW JERSEY.

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|---------------------|-------------------------|--------------------|-----------|---------------------------|----------------------|-----|
| HOBOKEN, NEW JERSEY | | 0820 EST | 12/30/85 | CLEAR | DAY/4000 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | TRANSPORT OF NEW JERSEY | PASSENGER COMMUTER | EAST | EN ROUTE | MAIN | 014 |

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

ABOUT 8:20 A.M. ON DECEMBER 30, 1985, PASSENGER COMMUTER TRAIN NUMBER 616, CONSISTING OF 6 SELF PROPELLED CARS, ENTERED ARRIVAL TRACK NUMBER 14 AT HOBOKEN TERMINAL, WAS UNABLE TO STOP AND STRUCK THE BUMPING BLOCK AT THE END OF THE TRACK. FOUR OF THE SIX CARS DERAILED. SOME PASSENGERS HAD MINOR INJURIES, BUT NONE WERE HOSPITALIZED. THE TRAIN HAD ENTERED THE STATION MOVING ABOUT 10 MPH WHEN THE OPERATOR APPLIED THE BRAKES TO STOP. HE SAID THE TRAIN SURGED AHEAD AND HIT THE BUMPING BLOCK. INVESTIGATION REVEALED THAT 2 DAYS BEFORE THE ACCIDENT, ULTRASONIC WHEEL TESTING HAD BEEN DONE TO THE WHEELS OF PASSENGER CARS PARKED ON TRACK NUMBER 14. PART OF THE TESTING PROCESS RESULTS IN THE RAILS BEING COATED WITH A SLIPPERY SONIC TESTING GEL. THE GEL WAS TO BE CLEANED OFF BY A CREW LATER, BUT WAS NOT DONE WHEN COMMUNICATIONS WERE MISUNDERSTOOD BETWEEN A TROUBLE DESK CLERK AND A TRACK FOREMAN.

1
44
1

| ----- PROBABLE CAUSES ----- | ----- OTHER FACTORS ----- |
|---|---|
| 1. HUMAN FAILURE - WHEEL-TESTING GREASE WAS NOT CLEANED OFF RAILS | 1. AMBIGUOUS OR UNCLEAR INSTRUCTIONS GIVEN 2. LACK OF INFORMATION ABOUT THE STATE OF THE SYSTEM 3. LACK OF INFORMATION FOR PERFORMING NECESSARY MAINTENANCE OF WAY PROCEDURE 4. SYSTEM INFORMATION INADEQUATE OR TOO SLOW FOR RESPONSIVE ACTIONS |

| ----- CASUALTIES ----- | ----- PROPERTY LOSSES ----- | |
|------------------------|-----------------------------|--------------|
| NONE | RAILROAD | NON-RAILROAD |
| | \$ 20,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #LAX85FR021

85-0093

REPORTED BY:
UNION PACIFIC RR

| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|--------------------|----------|----------|---------|----------------------|
| BOLSER, WYOMING | 1555 MDT | 07/05/85 | CLEAR | DAY/3000 FT |

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

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

FREIGHT TRAIN RV-03, CONSISTING OF 4 LOCOMOTIVE UNITS AND 126 CARS, HAD 26 CARS DERAIL WHILE MOVING 69 MPH. THE DERAILED CARS WERE THE 103RD THROUGH 126TH CARS. TWO TANK CARS ENDED UP IN COOPER'S LAKE, NEXT TO THE TRACKS, BUT NO HAZARDOUS MATERIALS WERE SPILLED. INVESTIGATION REVEALED A LOOSE WHEEL (IN THE 103RD CAR) WHICH HAD SLID INBOARD ON THE AXLE, ALLOWING THE WHEEL TO DROP INTO THE TRACK GAGE. LABORATORY TESTS INDICATED EXTREME FORCES PUSHED THE WHEEL IN ON THE AXLE.

+++++ PROBABABLE CAUSES +++++

----- PROBABLE CAUSES -----
1. FAILURE OF WHEEL - LOOSE WHEEL SHOVED RAILS APART

----- OTHER FACTORS -----
1. DAMAGE TO WHEEL FROM TRAIN OPERATIONS

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

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 1,082,000 | \$ 0 |

NATIONAL TRANSPORTATION SAFETY BOARD
 WASHINGTON, D.C. 20594

85-0120

BRIEF OF RAILROAD ACCIDENT #DEN95FR023

REPORTED BY:
 UNION PACIFIC RR

| -----LOCATION----- | | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- | |
|---------------------|--------------------|-----------------|-----------|---------------------------|----------------------|-----|
| MALLULA, WASHINGTON | | 0610 PDT | 09/11/85 | CLOUDY | DAWN OR DUSK/1500 FT | |
| TRAIN | -----RAILROAD----- | -----CLASS----- | DIRECTION | -----OPERATING PHASE----- | ---TRACK/NO--- | |
| 1 | UNION PACIFIC RR | FREIGHT | WEST | EN ROUTE | MAIN | 001 |

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

ABOUT 6:10 A.M. ON SEPTEMBER 11, 1985, FREIGHT TRAIN EXTRA 3735 WEST, CONSISTING OF 3 LOCOMOTIVE UNITS AND 92 CARS, HAD 21 CARS DERAIL. THE CREWMEMBERS WERE UNAWARE OF ANY PROBLEMS WITH THE TRAIN UNTIL AN UNWANTED EMERGENCY APPLICATION OF THE TRAINS AUTOMATIC AIR BRAKES OCCURRED. THE TRAIN WAS MOVING AT 32 MPH. AN AXLE BEARING HAD OVERHEATED ON THE THIRD CAR, RESULTING IN THE AXLE BREAKING. THE BEARING, JOURNAL, AND AXLE HUB HAD BURNED OFF, AND WERE FOUND 3 1/2 MILES FROM THE DERAILMENT SITE. THE INVESTIGATION REVEALED THAT THE CAR WAS OVERLOADED. THE TRAIN WAS GIVEN A 1,000 MILE TRAIN YARD INSPECTION BEFORE IT DEPARTED FROM THE TERMINAL 150 MILES BACK. THE CREWMEMBERS MADE SEVERAL MOVING ENROUTE INSPECTIONS OF THEIR TRAIN AND WERE UNAWARE OF ANY UNSAFE CONDITIONS. THE TERRITORY WAS NOT EQUIPPED WITH HOT BOX DETECTORS.

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| ----- PROBABLE CAUSES ----- | ----- OTHER FACTORS ----- |
|---|-------------------------------|
| 1. DAMAGE TO ROLLER BEARING FROM LOADS EXCEEDING CAPABILITY 2. FAILURE OF ROLLER BEARING - CARLOAD OF SCRAP PAPER WAS 37 TONS OVERLOADED | 1. OVER HEATED ROLLER BEARING |

| ----- CASUALTIES ----- | ----- PROPERTY LOSSES ----- | |
|------------------------|-----------------------------|--------------|
| NONE | RAILROAD | NON-RAILROAD |
| | \$ 763,000 | \$ 0 |

U.S. GOVERNMENT PRINTING OFFICE: 1987-191-101140094

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

85-0146

BRIEF OF RAILROAD ACCIDENT #LAX86FR002

REPORTED BY:
UNION PACIFIC RR

| -----LOCATION----- | --TIME-- | --DATE-- | WEATHER | -----VISIBILITY----- |
|--------------------|----------|----------|---------|----------------------|
| CROOKS, OREGON | 0950 MST | 11/23/85 | CLEAR | DAY/0500 FT |

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

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

ABOUT 9:50 A.M. ON NOVEMBER 23, 1985, UNIT GRAIN TRAIN NUMBER 02/SGTKA-20, CONSISTING OF 4 LOCOMOTIVE UNITS AND 75 CARS, HAD 58 CARS DERAIL WHILE MOVING ABOUT 57 MPH THROUGH AN 8 DEGREE CURVE ON A 1 1/2 PERCENT DESCENDING GRADE. THERE IS A SPEED RESTRICTION OF 25 MPH AT THAT LOCATION. THE ENGINEER KNEW THE TRAIN WAS GOING TOO FAST, BUT DID NOT PUT THE BRAKES IN EMERGENCY APPLICATION BECAUSE HE WAS AFRAID THE LOCOMOTIVE WOULD DERAIL IN THE CURVE. WHEN THE TRAIN FIRST STARTED DOWN THE GRADE, HE DID NOT MAKE AN ATTEMPT TO SLOW THE TRAIN AT THAT TIME. HE HAD BEEN TWICE DISCIPLINED FOR VIOLATION OF OPERATING RULES. THE CONDUCTOR HAD BEEN SUSPENDED PREVIOUSLY FOR A RULE VIOLATION THAT RESULTED IN A DERAILMENT.

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

1. HUMAN FAILURE - RAN TRAIN 57 MPH IN 25 MPH, 8-DEGREE CURVE

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

1. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE #804C

----- CASUALTIES -----

NONE

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

| RAILROAD | NON-RAILROAD |
|--------------|--------------|
| \$ 2,032,000 | \$ 0 |