

A REPORT ON THE SWITCHING OPERATIONS FATALITY ANALYSIS PROGRAM

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Background

Formed in February 1998 at request of FRA.

Switching fatalities to train and engine-service employees.

Determine causes and issue findings.

Non-regulatory effort.

Representatives from:

Association of American Railroads (AAR)

American Short Line and Regional Railroad Association (ASLRRA)

Brotherhood of Locomotive Engineers and Trainmen (BLET)

Federal Railroad Administration (FRA)

United Transportation Union (UTU)

Has issued two reports covering 124 cases.

October 1999

August 2004

SOFA Publications can be found here:

<http://www.fra.dot.gov/pages/1781.shtml>

Current group evaluated 55 more cases for the next report.




Five SOFA Life Savers

SOFA 1	<u>Life Saver:</u> Secure equipment before action is taken.
	<u>Selection Criteria:</u> Adjusting knuckles, adjusting drawbars, or installing EOT.
SOFA 2	<u>Life Saver:</u> Protect employees against moving equipment.
	<u>Selection Criteria:</u> Struck by equipment other than their own on yard or industry track.
SOFA 3	<u>Life Saver:</u> Discuss safety at the beginning of every job or when a project changes.
	<u>Selection Criteria:</u> Lack of or inadequate job safety briefing.
SOFA 4	<u>Life Saver:</u> Communicate before action is taken.
	<u>Selection Criteria:</u> Move controlled by a combination of hand and radio signals or specific distances were not given.
SOFA 5	<u>Life Saver:</u> Mentor less experienced employees to perform service safely.
	<u>Selection Criteria:</u> Fatality had 1.5 years of experience or less or had inadequate training.



SOFA Methodology

Assigned switching fatalities for review.

124 cases have already been reviewed from 1992 through 2003. 

55 cases from 2004 through 2009.  **179 cases total**

Case by case review of 55 new cases.

Record facts in a database.

Discuss the case.

Agree on Possible Contributing Factors (PCF).

Classified the 55 cases.

SOFA 1-5

15 Special Switching Hazards (SSH)

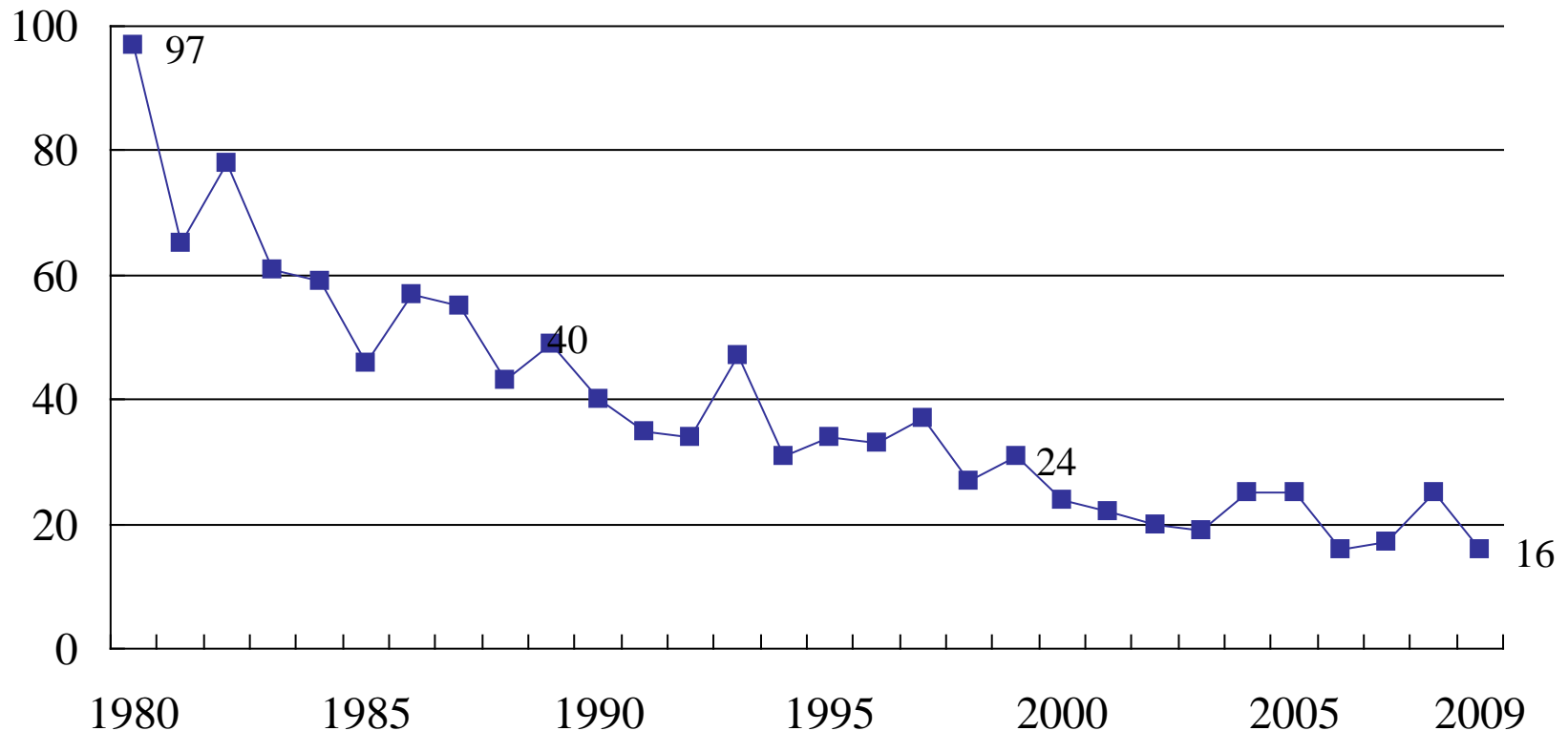
Looked for commonalities and trends among 179 cases.

Agree on findings.

Note: A single case can qualify for more than one SOFA or SSH.



Railroads have reduced employee fatalities by 60% since 1990.



Sources: <http://safetydata.fra.dot.gov/officeofsafety/publicsite/summary.aspx> (2009 preliminary data).

FRA, Railroad Safety Statistics Annual Report, 1997-2007, Tables 1-2, 1-3, 4-2.

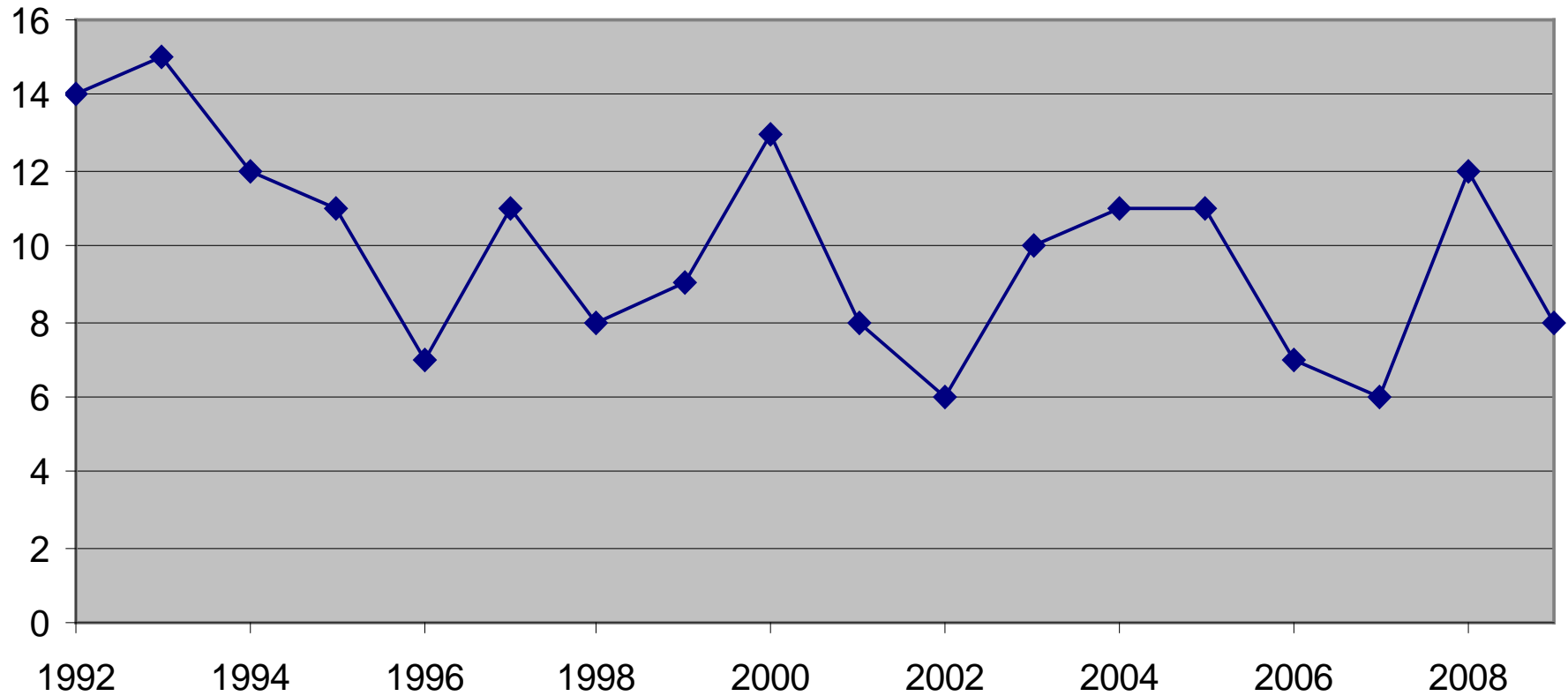
FRA Accident/Incident Bulletin, 1980-1996, Tables 13.

SOFA Fatalities: Two Time Periods

Before and After the First SOFA Report



SOFA Fatalities



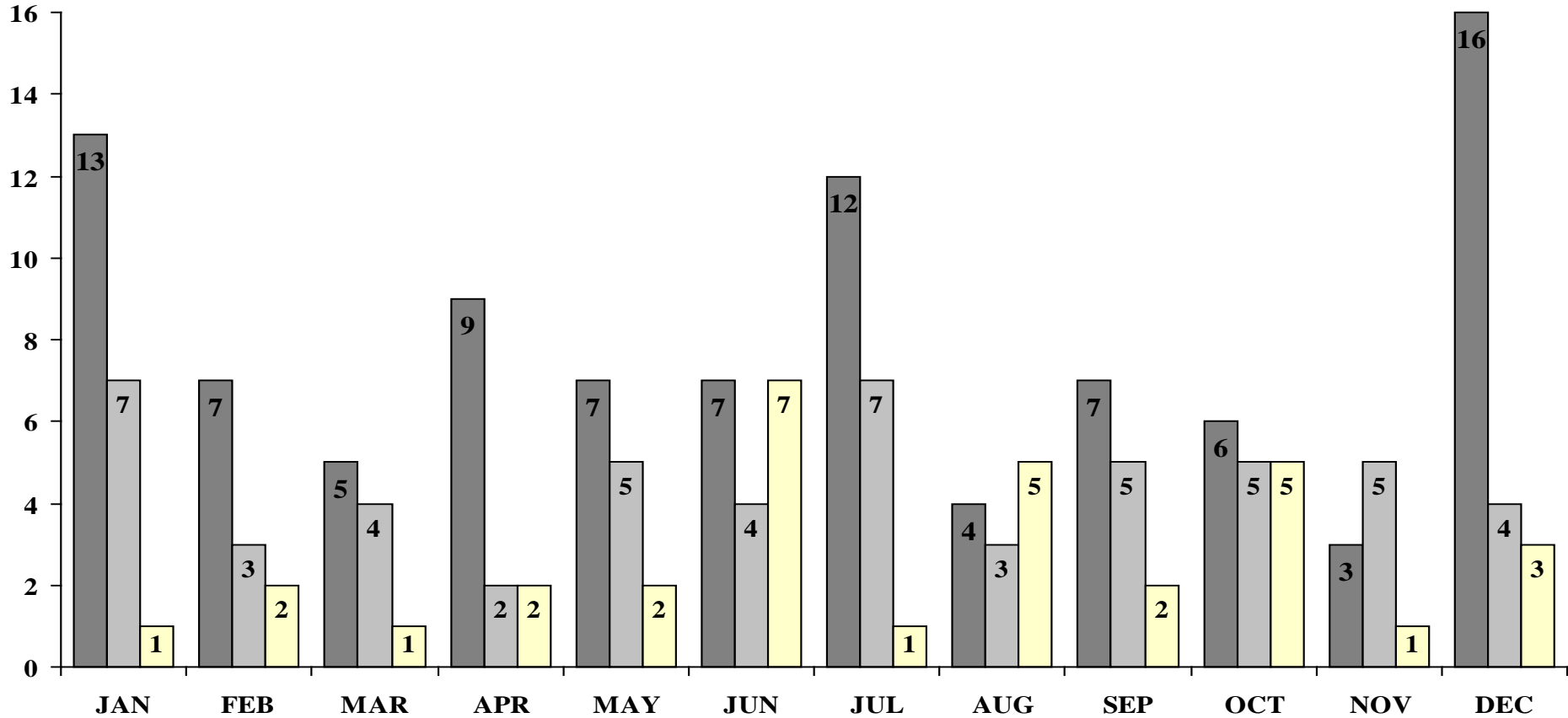


Classifying the 182 Switching Fatalities by SOFA Typeby Month: January 1, 1992 through June 20, 2010

■ SSH only

■ SSH and SOFA 1-5

■ SOFA 1-5 only



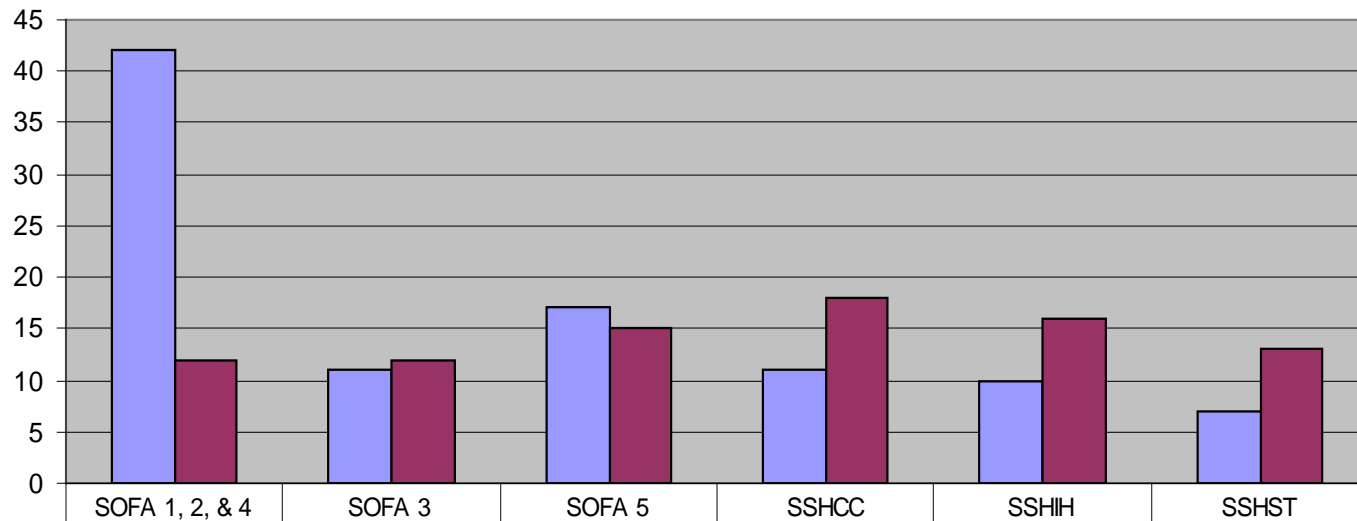
In the three months with the largest number of Switching Fatalities – January, July, and December – there were high numbers of Fatalities involving Special Switching Hazards.



SOFA Fatalities: Two Time Periods

Before and After the First SOFA Report

**SOFA Fatalities for
5 SOFA Recommendations and 3 Major Switching Hazards**



Pre-SOFA (92 - 00)	42	11	17	11	10	7
Post-SOFA (01- 09)	12	12	15	18	16	13

SSHCC = Close Clearance; SSHIH: Industry Track Hazard; SSHST = Struck by Mainline Train



Progress on SOFA 1, 2, and 4

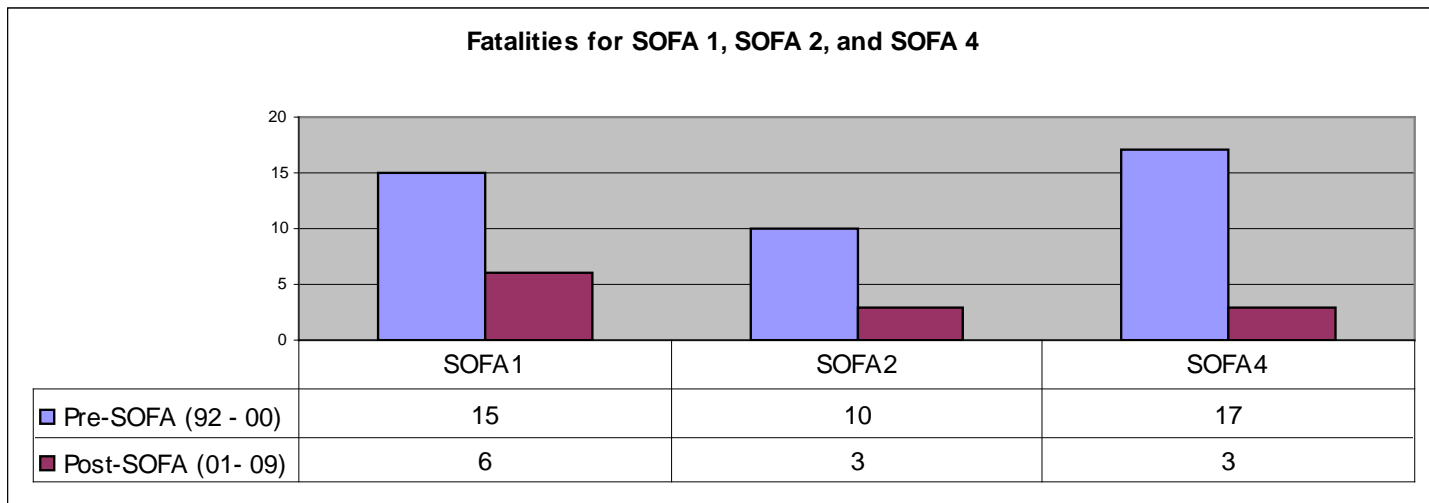
Overview

SOFA 1: Adjusting knuckles, adjusting drawbars, or installing EOT.

SOFA 2: Struck by equipment other than their own on yard or industry track.

SOFA 4: Move controlled by a combination of hand and radio signals or specific distances were not given.

Progress has been made.



Actions taken in these areas were effective.



SOFA Safety Forum

Met on February 25, 2010.

Purpose:

Engage with industry leaders.

Gain insight into five proposed SOFA findings.

Over 70 attendees including senior leaders of:

- AAR
- ASLRRA
- BLET
- UTU
- AMTRAK
- Seven Class 1 Railroads
- Seven Regional and Shortline Companies
- FRA

Five breakout groups discussed these findings:

- SOFA 3 (Job Briefing)
- SOFA 5 (Mentoring)
- Close Clearance
- Hazards on Industry Track
- Struck by Mainline Train.

A successful collaborative first step.



Hazards on Industrial Track

26 FATALITIES

New SOFA Category.

Trend (Growing Problem):

Pre-SOFA (92 – 00): 10

Post-SOFA (01 – 09): 16

3rd largest SOFA category

Example: A train crew shoving cars to spot on an industry track when the brakeman riding the leading end of the shove movement, was killed when the movement struck a semi-tractor and trailer which had entered the private road crossing in front of the trains movement. The brakeman jumped from the car he was riding and the trailer of the semi-trailer jackknifed crushing the brakeman between the trailer and rail car.



Struck by Mainline Train

20 FATALITIES

SOFA 2004 Update:

Other than vigilance, awareness, and alertness,
Difficult to prescribe a preventative measure.

Trend (Growing Problem):

Pre-SOFA (92 – 00): 7

Post-SOFA (01 – 09): 13

Tied for 6th largest SOFA category

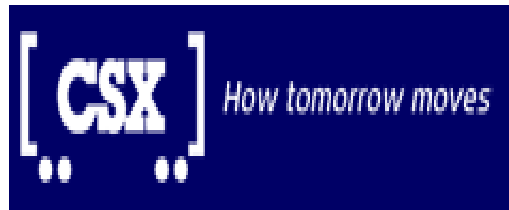
Example: A two-person crew was called to deadhead to a siding and bring the train that was there and tied down into the yard. Upon arrival at the train, the conductor began releasing handbrakes on the train and the engineer began releasing handbrakes and inspecting the four head end locomotives. An approaching train whistled and the conductor stopped what he was doing to position himself for a roll by inspection. His engineer was killed when he was struck by the passing train as he stepped out from between two of his units and began walking adjacent to, and in the foul of, the main track.



Overall goal is
ZERO FATALITIES



Thank you



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