PLEASE POST IMMEDIATELY
Zero Switching Fatalities...an attainable goal

December and January historically have been months with high fatalities...but there is always risk in switching operations

187 Switching Fatalities
(January 1, 1992 through December 16, 2010)
• 24 percent of the 187 Fatalities occurred in these two months
• SOFA believes weather, darkness, and ground conditions play a role
• Difficult to determine if Fatalities spike around the holiday period...but it is always good advice to stay alert!

Eight Switching Fatalities in 2010 through December 16
April 23.........Riverdale, IL
May 31.........Kearny, NJ
June 10...........Doswell, VA
July 01.........Meridian, MS
July 13.........Deerfield, MA
Sept 02.........Bridgeport, NJ
Sept 04.........Mobile, AL
Oct 11.........Orange, TX
preliminary summaries, page 2

SOFA-defined Severe Injuries
Increase in first nine months: 47 in 2010 v. 40 in 2009

SOFA Working Group (SWG)
Eight Switching Fatalities in 2010 through December 16
Preliminary Summaries (Not based on investigation)

1) April 23 – CSX – Riverdale, IL
An RCO Foreman had control of the RCL and stopped it clear of a switch. The Foreman aligned the switch, pitched control of the movement to her brakeman who was at the coupling 12 cars away, and began to walk. Shortly thereafter, the Foreman was struck and killed by the moving locomotive. (SSH & SOFA Recommendations 1-5)

2) May 31 – NJT – Kearny, NJ
A NJT Hostler was working on the locomotive fueling track and attempting to stop a slowly moving free rolling locomotive from the ground when he was caught and killed between the locomotive hand rail and a stairway railing. (SSH)

3) June 10 – CSX – Doswell, VA
A CSX conductor was doing an air brake test on his train to be ready to go South from a siding as soon as two Northward trains cleared his area. The conductor was struck and killed by the first Northward train coming by his location. (SSH)

4) July 01 – NS – Meridian, MS
A conductor rode the leading end of a set off move into the track where he intended to leave the cars, stopped the move, consulted with a yard job working the other end of the yard and dismounted. He instructed the engineer to begin shoving the cars into the track and, shortly thereafter, the conductor was found deceased near the track he was shoving. (SOFA Recommendations 1-5)

5) July 13 – GRS – Deerfield, MA
A 35-year-old conductor was switching cars into a track during a flat switching operation. After separating a cut, the conductor got between the cars attached to his locomotive and those that he had just cut away from and was crushed between the cars attached to his locomotive and the free rolling cars. (SOFA Recommendations 1-5)

6) September 2 – CR – Bridgeport, NJ
A conductor was switching cars into an industrial track and riding the leading end of a tank car when the tank car he was riding collided with another car that was fouling the switch he was to use. As a result of the collision, he was crushed between the cars and died. (SOFA Recommendations 1-5)

7) September 4 – TASD – Mobile, AL
A trainman, hired on April 16 was at/on the leading end of a 94 car shove with the intent of picking up two additional cars at a coal unloading plant. The trainman was killed when he was struck and knocked into the side of the coal dumper near the point where the coupling was to take place. (SOFA 5: Inexperienced Employees; and SSH: Close Clearances)

8) October 11 – TXTX – Orange, TX
A brakeman trainee was found dead adjacent to a track that was being pulled during a conventional switching operation in an industry. (SOFA 5: Inexperienced Employees)
Switching Fatalities come when least expected, and tend to cluster in time. But these tragic events are preventable…the Zero Fatality Goal is attainable

179 Fatalities by Hours on Duty before Fatality Event, 1992 through 2009
The first hour on duty often includes safety and job briefings, and other preparations to perform tasks safely. Thirty (30) Fatalities have occurred in the second hour on duty. This second hour may correspond to the first hour a crew is actually on or about rolling stock or other equipment
Winter Months...December, January, and February

- 24 percent of the 187 Fatalities (January 1, 1992 through December 16, 2010) occurred in December and January
- Risk is somewhat concentrated in cold-weather states. But other states also have Fatalities during winter months. (And, of course, all months have risk for Fatalities)
- SOFA believes weather, darkness, and ground conditions play a role. Main and industrial tracks are the most frequent locations in cold weather states for winter-month Fatalities
- Fatalities resulting from Struck by Mainline Trains – one of Five Advisories in need of special attention – increase during winter months
- Difficult to determine if Fatalities spike around the holiday period...but it is always good advice to stay alert!
- Consider ways to make operations safer during winter months
- SOFA-defined Severe Injuries increase in December, January, and February...many result from falls

1,569 SOFA-defined Severe Injuries, January 1, 1997 through September 30, 2010
Five Advisories in Need of Special Attention

The SOFA Working Group (SWG) has recently identified Five Advisories in need of special attention. This need exists because recent Fatalities have resulted. Details about these Advisories will be contained in the release of the new 2010 SOFA Report, in January 2011.

In the five pages immediate following, summary information is provided about each Advisory. These summaries are suitable for posting (PLEASE POST IMMEDIATELY) in locations where ballast-level employees assemble. As well, the entire industry should take note. Again stated, the need exists because recent tragic events have resulted. And, of course, SWG is not suggesting that such special attention come at the neglect of other safety efforts.

- Inexperienced Employees (SOFA Recommendation 5)
- Close Clearances
- Industrial Track Hazards
- Job Briefings (SOFA Recommendation 3)
- Struck by Mainline Trains

(See the next five pages for some specifics)

Zero Switching Fatalities…an attainable goal
Inexperienced Employees (SOFA Recommendation 5)

- SOFA essentially classifies as *inexperienced* those Fatality events where the deceased had 1.5 years of craft experience or less.
- But *inexperienced* has a broader meaning in Fatality events. Such as whether employee (s) had sufficient and recent familiarity with a location to perform work safely.
- Inexperience may be a growing concern as hiring waves replace retiring employees. And crew size dwindles.
- Productivity expectations should adjust to employee experience.
- Crew composition should pair an inexperienced employee with experienced employees when possible. Excess risk may exist for crews with one or more inexperienced employees.
- Training should always seek improvement. Sharing of best practices is essential.
- Crafting an effective behavioral rule, practice, or procedure that can be assessed for inexperienced employee compliance is difficult. Thus, in training going beyond a rulebook approach is necessary. Developing metrics to assess training quality presents challenges.
- Principles of Crew Resource Management should be included in new employee training.
- Classroom training should be balanced with on-the-job training (OJT). OJT should nurture, providing positive instruction and feedback on inadequacies. Concerns of inexperienced employees should be considered.
- Mentoring can be challenging. It is not always possible to pair experienced with inexperienced employees, as in smaller operations. Just having experience does not necessarily translate into good mentoring. Criteria for mentors should be established. Mentors should be good listeners, and provide positive and reinforcing feedback on inadequacies. Inexperienced employees have responsibility to learn from mentors.
- Shove moves may be particularly challenging to inexperienced employees.

Please consult the 2010 SOFA Report for additional information

http://www.fra.dot.gov/Pages/1781.shtml [posting anticipated in January 2011]
Close Clearances

- Close and no clearances involve insufficient space:
  - **No Clearance**: Insufficient space to avoid being struck if passing or being passed by an object, structure, or equipment.
  - **Close Clearance**: Insufficient space to take evasive action to avoid being struck by moving equipment that derails into an object, structure, or other equipment.
- Close and no clearances can be permanent or temporary:
  - **Permanent Close/No Clearance**: A fixed structure that remains in the same location from day to day, such as a building, loading dock, fence, post, beam, or other permanent structure, that an employee passes.
  - **Temporary Close/No Clearance**: A movable object, including equipment on or near one track fouling another track, rolling stock on an adjacent track, stacks of cross ties, construction materials, and doors or gates left open, that passes by an employee or and employee passes.
- Remedies include:
  - Eliminate when possible. This is the favorable approach.
  - Sign with standardize signage, at an appropriate distance (not too close or far) and on the same side, with instructions on how to act.
  - Improve lighting.
  - Indentify through maps, job briefings, transference of knowledge from experienced to inexperienced employees, inspection before action is taken, reporting with follow up, and reporting of close calls.
  - When operating look for close/no clearances, ride away from these hazards or dismount as appropriate, plan for possibility of a derailment with an escape strategy, and avoid distractions (unnecessary conversation, doing paperwork, or cellphone use).

Please consult the 2010 SOFA Report for additional information
http://www.fra.dot.gov/Pages/1781.shtml [posting anticipated in January 2011]
Industrial Track Hazards

- Industrial track hazards occur when a structure, vehicle, temporary obstruction, or other hazards (such as close/no clearances) presents risk on industrial track. Industrial plant employers and employees, and truck drivers, can create these hazards. Periodic inspections should be made of industrial conditions. Any hazards should be reported immediately.

- These hazards can include, or result from:
  - **Industrial Track Agreements:** These agreements may not be current, require notification of a change in conditions, and/or may allow conditions to become unsafe due to changes over time. Systematic review of agreements is inconsistent across the railroad industry. Shippers/receivers utilizing the same industrial lead may have different industry track agreements.

  - Remedies include, but our not limited to, removing close/no clearances; ice and snow; and objects and debris fouling track. Performing needs assessment for lighting installation and maintenance. Marking private crossing clearly. Separation of train right-of-ways and motor vehicle roads. Separation of railroad and non-railroad employees. Empowering employees to stop work in the presence of hazards. Safety should take precedence over work completion.

  - **Inconsistent training and updating of plant circumstances:** Training in plant characteristics may be inconsistent. An employee who is unfamiliar with an industrial property may not be aware of the industrial hazards. Job aids such as maps usually do not exist.

    - Remedies include providing job aids (as maps), including hazard identifications and knowledge exchange between experience and less experienced employees in job briefings, inspecting site before switching, and sharing close-call episodes among employees.

  - **Collision with motor vehicles during shoving:** Fatalities have resulted from employees riding railroad equipment while shoving across an industrial grade crossing.

    - Remedies include advising non-railroad employees on separation of their activities and roadways from those of railroading, and installing and maintaining lighting.

Please consult the 2010 SOFA Report for additional information

http://www.fra.dot.gov/Pages/1781.shtm [posting anticipated in January 2011]
Job Briefings (SOFA Recommendation 3)

• A job briefing is specific to upcoming work, and its interrelated and independent tasks. A safety briefing is more general, often occurring at the beginning of a shift. Specific types of Fatalities are not associated with job briefings.
• A job briefing is important in planning before work begins. And in continuing monitoring of work-in-progress for anomalies.
• At a minimum, a job briefing is needed when the nature of work changes. Or there are safety concerns.
• Recognize when the nature of work changes. Think about risks that could occur when work is not being done as originally anticipated or planned.
• A job briefing involves all crew members. Everyone should understand the exact nature of work to be performed.
• All crew members should be empowered to stop work and request a job briefing. All crew members regardless of seniority should participate and be heard. Work should not begin again until safety issues are resolved.
• A job briefing cannot be standardized, generalized, or simply rule based. Switching acts can be unique to circumstances and location. A briefing must be adequate, specific to the acts. Fatalities have resulted even after a job briefing because the briefing was not adequate.
• At a minimum, a job briefing should include:
  - Who will act
  - What act is to be done
  - Where act will occur
  - When act will occur
  - Why act is being done

Please consult the 2010 SOFA Report for additional information
http://www.fra.dot.gov/Pages/1781.shtml [posting anticipated in January 2011]
Struck by Mainline Trains

- Darkness and winter months are associated with this Fatality type. Awareness may be compromised and degraded. Darkness may impair depth perception. Use multiple warning methods (as radio, horn, bell, and headlight), both visual and auditory. A single warning from one device can be misconstrued or forgotten. Reflective clothing, and clothing that does not impair hearing and peripheral vision are desirable.
- Mainline inspections (as locomotive, roll-by, and hotbox) can involve risks. Employees should exercise discretion about the location and timing. A job briefing should be conducted before any member exits the cab. At a minimum, a this job briefing should include:
  - Determination of a safe location to stop.
  - If inspection can be performed from the safe field side.
  - If not, can dismounting be from the field side.
  - If not, there must be awareness of all approaching movements, consideration of time to dismount, avoidance of fouling track, recognition that warnings may not be adequate, and planning of a worst-case scenario that includes and escape route.
- Communication may not be adequate when work is performed along a mainline. Effective communication must exist among crew, between crews, dispatchers, and yardmasters. Effective communication includes:
  - Utilizing established programs like Crew Resource Management.
  - Not exiting the cab without verbalizing intentions.
  - Contact with, and providing warnings, for crew members outside the cab.
  - Establishing a safe zone outside the cab for communication with the crew, other crews and movements, dispatcher, and yardmaster.

Please consult the 2010 SOFA Report for additional information

http://www.fra.dot.gov/Pages/1781.shtml [posting anticipated in January 2011]
SOFA-defined Severe Injuries… All Harm to Employees is of Concern

Increase in first nine months of 2010: There were 47 SOFA-defined Severe Injuries in the first nine months of 2010 v. 40 in the corresponding period of 2009. However, based on nine months, it would be premature to make any prediction about the number of these Injuries that will occur in 2010, full-year.

Historical trends: In 2002, SOFA-defined Severe Injuries began to decline. By 2009, these Injuries were at a 13-year low. The decline appears to have stages, as indicated by the shading in the display below. For the years, 1997 through 2001 Severe Injuries averaged 138.0 per year. For 2002 through 2007, an average of 115.3 per year occurred. In 2008, there were 87 Injuries. Then in 2009 Injuries declined to 53. The decline since 2002 has not been consistent year-to-year.

SOFA-defined Severe Injuries by year, 1997 through 2009
(1997 is the first year these injuries can be defined based on the interests of the SWG)

![Bar chart showing SOFA-defined Severe Injuries by year from 1997 to 2009]

Definition: Based on its interests, Severe Injuries are defined by the SOFA Working Group as (1) potentially life threatening; (2) having a high likelihood of permanent loss of function, permanent occupational limitation, or other permanent disability; (3) likely to result in significant work restrictions; and (4) resulting from a high-energy impact to the human body. ‘Severe Injuries’ include amputation, dislocation of the neck, loss of eye, electric shock or burn, and fracture to any bone except the lower arm, fingers, foot, and toes. 1997 is the first year these Injuries to train and engine service employees can be determined as defined by the interest of the SOFA Working Group. For more information, see Severe Injuries to Train and Engine Service Employees: Data Description and Injury Characteristics. July 2001. [http://www.fra.dot.gov/Pages/1781.shtml](http://www.fra.dot.gov/Pages/1781.shtml)

Importance of SOFA-defined Severe Injuries: From January 1, 1997 through September 30, 2009, there have been 1,569 Severe Injuries 206 of which were amputations. While in recent years these Injuries have declined, the continuing existence of these Injuries some of which are major trauma indicates the importance of safety efforts devoted towards complete elimination.
SOFA-defined Severe Injuries, by month and year, January 1997 through September 2010
(Note: Among SOFA Updates, counts previously presented may change based on revisions to FRA data)

All Harm to Employees is of Concern

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SOFA Working Group (SWG)  current through December 16, 2010
Amputations (a type of Severe Injury), by month and year, January 1997 through September 2010
(Note: Among SOFA Updates, counts previously presented may change based on revisions to FRA data)

A type of SOFA-defined Severe Injury, Amputations is displayed separately because of the extreme trauma to employees engaged in switching, and the likelihood of permanent occupational and lifestyle limitations.

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| subtotals | 12 | 19 | 14 | 11 | 15 | 10 | 10 | 11 | 12 | 9 | 13 | 8 | 5 | 5 | 10.4 |
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| NOV       | 2  | 2  | 2  | 2  | 3  | 0  | 1  | 1  | 2  | 3  | 1  | 0  | 0  | 0  | 19   | 1.5   |
| DEC       | 4  | 1  | 0  | 4  | 1  | 1  | 2  | 1  | 1  | 0  | 0  | 0  | 0  | 1  | 16   | 1.2   |

| totals    | 20 | 27 | 18 | 19 | 19 | 11 | 15 | 15 | 15 | 12 | 16 | 8  | 6  | 206  |
Switching Fatalities, SOFA-defined Severe Injuries, and Other Railroad Reportable Events, full year 1992 through 2009, and January through September of 2010
(source: Switching Fatalities from *SOFA Database*; all other series from FRA, accessed December 3, 2010)

<table>
<thead>
<tr>
<th>Year</th>
<th>SOFA Switching Fatalities</th>
<th>SOFA-defined Severe Injuries</th>
<th>All Reportable Employee Casualty to T&amp;E Employees (includes Fatalities And Severe Injuries)</th>
<th>All Accidents</th>
<th>Human Factor Accidents</th>
<th>Highway-Rail Crossing Incidents</th>
<th>Trespasser Incidents (not at crossings)</th>
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*SOFA-defined Severe Injuries are defined only back to 1997

**Counts happened to be identical for these successive years
SOFA Switching Fatality Review Section

December, January, February
Cases that occurred in these months for the years 1992 through 2010

This section contains Switching Fatality cases for review
The Switching Fatality narrative summaries, and additional case information, are taken from the SOFA Database, which contains specifics about each case as developed by the SOFA Working Group in its review process of on-duty fatality investigations (These investigations are required by 49 U.S.C. Section 20903).

Classification of Fatalities
The classification of Switching Fatalities is based on a new system which recognizes that a Fatality event can involve one or more SOFA Recommendations 1-5; as well as one or more Special Switching Hazards (SSHs).

In respect
Intent is that review will prove preventive. In reviewing, please be mindful that these employees lost their lives in railroad service, and that their families will forever bear the burden of this loss.

Where to find more information
The new 2010 SOFA Report will be released in January 2011. The new, and previous SOFA reports, will be (are) available at:

http://www.fra.dot.gov/Pages/1781.shtml
[accessed December 16, 2010]

Zero Switching Fatalities...an attainable goal
23 December Fatalities, 1992 through 2009

Monthly Sequence Number: 1
Report number: FE-1993-49
Date: 05-Dec-93
Railroad: SOU
Location: Atlanta, GA
Job Description: Freight Conductor
Age: 59
Narrative: Change in operating procedure between two crews swapping equipment resulted in conductor being struck by unexpected movement while he was in the foul of the track.
SOFa 3: Lack of or inadequate job safety briefing
Special Switching Hazard: Unexpected Movement of Railcars

Monthly Sequence Number: 2
Report number: FE-1993-53
Date: 30-Dec-93
Railroad: CR
Location: Brook Park, OH
Job Description: Yard Conductor/Foreman
Age: 61
Narrative: A three-person yard crew was in the process of switching a plant. The brakeman was at the plant doors and the conductor and engineer had hauled out to put away a car that had been removed from the plant. After the conductor had tied onto the cars to go into the plant and begun to shove toward the plant, the car that had just been placed on an adjacent track rolled out, fouled the conductor’s movement, and crushed him between the leading car and the rolling car.
Special Switching Hazard: Environment
Special Switching Hazard: Industrial Hazard

Monthly Sequence Number: 3
Report number: FE-1994-31
Date: 06-Dec-94
Railroad: CR
Location: Campbell Hall, NY
Job Description: Brakeman Trainee
Age: 28
Narrative: The brakeman trainee was on the caboose to direct the shove move of the three engines, three cars and a caboose toward Track 1 in the yard. The shove move continued although the only radio transmission after getting the move started was “the derail is off.” The movement, which reached approximately 19 mph, struck standing equipment after diverging through two mis-aligned switches and killed the brakeman trainee.
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
SOFa 5: FE had 1.5 years of experience or less or had inadequate training

Zero Switching Fatalities…an attainable goal

SOFA Working Group
Monthly Sequence Number: 4
Report number: FE-1994-32
Date: 13-Dec-94
Railroad: UP
Location: Thorton, CA
Job Description: Freight Brakeman/Flagman
Age: 48
Narrative: Crew coupling up cars in an industry track, brakeman attempted to couple air between cars when unexpected movement of railcars occurred, resulting in his fatal injury.
SOFA 1: Adjusting knuckles, adjusting drawbars, or installing EOT

Monthly Sequence Number: 5
Report number: FE-1995-33
Date: 11-Dec-95
Railroad: NS
Location: Toledo, OH
Job Description: Brakeman
Age: 53
Narrative: A three-person crew was called to switch an industry that all were very familiar with. During the switching moves, the brakeman was inside an area with no clearances between the cars and the hand railings installed on the walls. He was making coupling and, according to the conductor and engineer, upon completion of that work, ordered the engineer to haul out of the building where the conductor would take over the next move to be performed. Subsequently, a plant employee observed the brakeman slumped beside the track, rushed to assistance, call 911 and notified the conductor that his man was down. The brakeman died later on at the hospital of crushing wounds incurred when he was rolled between the cars being pulled out and the railing.
Special Switching Hazard: Close Clearance
Special Switching Hazard: Industrial Hazard

Monthly Sequence Number: 6
Report number: FE-1995-34
Date: 14-Dec-95
Railroad: CSXT
Location: Monroe, NC
Job Description: Conductor
Age: 54
Narrative: A three-person crew (engineer, conductor & conductor trainee) was called to operate a local freight train. During a switching operation at a yard, the conductor was riding nine cars down a clear track and directing the shove move by radio. When the engineer did not hear any more radio transmissions from the conductor, he stopped the move and found the conductor dead and lying beside the track he had been shoving down. Post accident investigation revealed that he had been struck by a truck trailer door positioned on a flat car standing on an adjacent track and that had been left open and swinging freely. The investigation revealed that a vandal had broken into the trailer and stolen material from it.
Special Switching Hazard: Close Clearance

Zero Switching Fatalities…an attainable goal
Monthly Sequence Number: 7
Report number: FE-1996-30
Date: 16-Dec-96
Railroad: UP
Location: Clinton, IA
Job Description: Brakeman
Age: 51
Narrative: A three-person crew was in the process of switching a plant when the conductor sent the locomotive and cars out of one track toward the brakeman who was to handle the switches and direct the cars into another track. The conductor stopped the move after the cars had cleared an industry road crossing and the engineer waited to receive instructions from the brakeman. However, the brakeman had mounted the second head car behind the locomotives and had apparently slipped or fell from that position and was found dead by the engineer and conductor lying between and beneath the fourth head car. The brakeman tested positive for THCA & THC.

Special Switching Hazard: Employee Tripping, Slipping, or Falling
Special Switching Hazard: Drugs and Alcohol

Monthly Sequence Number: 8
Report number: FE-1996-31
Date: 18-Dec-96
Railroad: IC
Location: Chicago, IL
Job Description: Conductor
Age: 45
Narrative: A three-person yard crew was in the process of switching a plant. The brakeman was at the plant doors and the conductor and engineer had hauled out to put away a car that had been removed from the plant. After the conductor had tied onto the cars to go into the plant and begun to shove toward the plant, the car that had just been placed on an adjacent track rolled out, fouled the conductor’s movement, and crushed him between the leading car and the rolling car.

Special Switching Hazard: Unsecured Cars

Monthly Sequence Number: 9
Report number: FE-1997-36
Date: 02-Dec-97
Railroad: BNSF
Location: Emporia, KS
Job Description: Freight Conductor
Age: 50
Narrative: The three-person crew had just finished making up their train at the yard. The conductor, for unknown reasons, had positioned himself on the “live” main trackside of his train, near the second and third locomotives. The conductor was struck and killed by a passing main track train that had approached the area from the opposite direction than that the conductor’s train was to proceed.

Special Switching Hazard: Struck by Mainline Train

Monthly Sequence Number: 10
Report number: FE-1997-45
Date: 26-Dec-97
Railroad: UP
Location: Boise, ID
Job Description: Freight Conductor
Age: 55
Narrative: Conductor was riding equipment while setting hand brakes. Move was being shoved; improper radio communication.
SOFA 4: Move controlled by a combination of hand and radio signals or specific distances were not given
Monthly Sequence Number: 11
Report number: FE-1998-37
Date: 28-Dec-98
Railroad: IC
Location: Durrant, MS
Job Description: Conductor
Age: 55
Narrative: Shove movement was not properly controlled by radio communication and resulted in a collision with a fallen tree which caused the derailment and death of the conductor.

SOFA 4: Move controlled by a combination of hand and radio signals or specific distances were not given
Special Switching Hazard: Derailment

Monthly Sequence Number: 12
Report Number: FE-2000-32
Date: 28-Dec-00
Railroad: UP
Location: Dupo, IL
Job Description: Switchman
Age: 52
Narrative: A three-person yard switching crew was in the process of pulling cars down a long lead that ran parallel to a main track. The switchman was standing between the cars that were being pulled out onto the lead and the main track. While the cars were being moved, a main line train approached his location. The switchman, with nowhere to go, was struck by the passing main line train and killed by a blow to the head.

Special Switching Hazard: Struck by Mainline Train

Monthly Sequence Number: 13
Report number: FE-2000-33
Date: 29-Dec-00
Railroad: BNSF
Location: Gillette, WY
Job Description: Conductor
Age: 29
Narrative: A two-person freight train crew was about to be passed by another freight train at a location on line-of-road. The conductor of the stopped train got up out of his seat, exited the leading locomotive and crossed over the track on which the on-coming train was proceeding. The conductor was struck and killed by the lead locomotive of the passing train.

Special Switching Hazard: Struck by Mainline Train
Special Switching Hazard: Electronic Device (Cell phone, MP3 player)

Monthly Sequence Number: 14
Report number: FE-2001-39
Date: 22-Dec-01
Railroad: NS
Location: Eden, NC
Job Description: Brakeman
Age: 50
Narrative: A three-person, local switching crew that included a conductor in training was in the process of shoving a cut of cars over a highway road crossing at grade. The brakeman was riding one corner of the leading car and the conductor in training was riding the opposite side of the car. All warning devices were in operation when a van struck the leading end of the car knocking the brakeman off the car and under the leading wheels.

Special Switching Hazard: Struck, or Struck by, Motor Vehicle
Monthly Sequence Number: 15
Report number: FE-2001-40
Date: 24-Dec-01
Railroad: NS
Location: Lynchburg, VA
Job Description: Conductor
Age: 30
Narrative: A conductor, engineer and conductor in training had been transported to an unattended train standing on a siding a portion of which was in a tunnel adjacent to the main track. After storing their equipment, the conductor and the conductor in training left the locomotive to release hand brakes on the train. The conductor was killed when she failed to step in between two boxcars of her train as the conductor in training had done and was subsequently struck by a passing mainline train.
Special Switching Hazard: Close Clearance
Special Switching Hazard: Struck by Mainline Train

Monthly Sequence Number: 16
Report number: FE-2003-35
Date: 07-Dec-03
Railroad: UP
Location: San Antonio, TX
Job Description: Conductor
Age: 37
Narrative: A pitch/catch remote control operation was being run by a single operator who was struck and killed during a yard operation by his own locomotive. He stepped in front of its movement as he was headed for the other end of a crossover switch that he intended to line for the route he intended his engine to use.
Special Switching Hazard: Unexpected Movement of Railcars

Monthly Sequence Number: 17
Report number: FE-2004-30
Date: 17-Dec-04
Railroad: BNSF
Location: Radium, CO
Job Description: Conductor
Age: 44
Narrative: An eastbound train was stopped on the siding waiting for the passage of two westbound trains. The first train, approaching at a speed of 20 -23 mph, was observed by the engineer and heard the train sounding its whistle and bell. The conductor on the standing train got up and without a word, departed the locomotive's cab to conduct a roll-by inspection and stepped off the standing train locomotive on the live side between tracks. The approaching train struck the conductor, killing the conductor.
SOFA 3: Lack of or inadequate job safety briefing
Special Switching Hazard: Struck by Mainline Train

Zero Switching Fatalities...an attainable goal
Monthly Sequence Number: 18
Report number: FE-2005-36
Date: 04-Dec-05
Railroad: BNSF
Location: Burlington, IA
Job Description: Brakeman
Age: 34

Narrative: A three person switch crew held a job briefing with the intent to deliver 125 car loads of coal onto five (5) industry tracks. Only the engineer was familiar with the industry plant and its tracks. The engineer offered to operate the locomotive into the plant to allow the rest of the crew to become more familiar with the work area; the other crew members declined. The track passes under an overhead walkway with only 5 1/2 inch clearance between the part of the car on which the brakeman was riding, and a support beam of the walkway. The brakeman failed to take heed of this situation and was fatally injured when he was crushed between the car and the support member.

SOFA 5: FE had 1.5 years of experience or less or had inadequate training
Special Switching Hazard: Close Clearance
Special Switching Hazard: Industrial Hazard

Monthly Sequence Number: 19
Report number: FE-2006-22
Date: 04-Dec-06
Railroad: UP
Location: Carson, CA
Job Description: Brakeman
Age: 35

Narrative: A two-person crew, performing switching operation with a remote control locomotive, were in the process of shoving six cars over a highway-rail grade crossing equipped with an active warning system. The conductor was riding the leading end of the shove move and struck a truck cab that drove in front of the movement. The conductor died days later as a result of the collision.

Special Switching Hazard: Struck, or Struck by, Motor Vehicle
Special Switching Hazard: Industrial Hazard

Monthly Sequence Number: 20
Report number: FE-2006-26
Date: 28-Dec-06
Railroad: UP
Location: Sioux City, IA
Job Description: Yard Foreman
Age: 57

Narrative: A three person switching crew working with a student switchman began switching following a safety briefing. Two rail cars kicked toward a track stalled foul of the clearance point on the adjacent track. The next car switched was rolling free when the footboard yardmaster/switch foreman and student switchman saw that the cars were fouling the clearance point. The footboard yardmaster/switch foreman in an attempt to board and stop the free rolling car became trapped between the sides of the cars and carried for a distance between the cars.

Special Switching Hazard: Close Clearance
Special Switching Hazard: Free-Rolling Railcars

Zero Switching Fatalities… an attainable goal
Narrative: A three person crew switching at an industry was trying to control equipment that failed to couple to equipment left on the main track. While attempting to stop the equipment the brakeman was pulled between the equipment that fouled on an adjacent track and was crushed.

Special Switching Hazard: Unsecured Cars

Narrative: A two person crew performed a shoving movement with the conductor riding the leading end of a bulkhead flatcar. A tractor-trailer operated over the crossing in front of the movement. The tractor-trailer was moving at about 18 mph when it occupied the crossing protected only by crossbucks in front of the train movement. The conductor, who was riding on the crossover platform, radioed the engineer in an attempt to stop the movement, but the leading car of the train struck the side of the trailer at about 5 mph. The impact crushed and killed the conductor.

Special Switching Hazard: Struck, or Struck by, Motor Vehicle
Special Switching Hazard: Industrial Hazard

Narrative: A two-person RCL crew shoved five empty cars into a snow-covered industry track. Ice build-up on the track caused the lead car of the movement to derail. The RCL operator, riding the lead car and controlling the move, was crushed against the side of an industry building and fatally injured.

Special Switching Hazard: Environment
Special Switching Hazard: Close Clearance
Special Switching Hazard: Industrial Hazard
Special Switching Hazard: Derailment

Zero Switching Fatalities…an attainable goal
Narrative: A four-person crew (engineer, switch foreman, 2 switchmen) had just shoved cars into track 11 and held onto one for track 9. The switch foreman got the switch for 9, noticed his front switchman standing near cars on track 11, and rode the locomotive onto the lead. After the 11th switch was lined for the lead, the switch foreman kicked the single car into track 9. The front switchman was struck and killed by the free rolling car.

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

Special Switching Hazard: Free-Rolling Railcars

Narrative: Industry switch crew, engineer and two flagmen, both flagmen rode the lower steps of the leading end of the lead locomotive. FE (flagman) was on left side, the other flagman on right side. After 2000 feet into this light engine movement the surviving flagman noticed the FE stopped talking and he crossed over to the FE’s side and saw FE lying next to the track behind movement. Investigation showed FE either slipped off the fireman’s side or tripped while dismounting or attempting to remount from the fireman’s side. FE had six months experience.

SOFA 5: FE had 1.5 years of experience or less or had inadequate training

Narrative: A three-person crew were in the process of pulling a cut of cars out of a track and leaving two additional cuts sitting separately in the track. The helper was riding the cut out of the track and the foreman was last seen walking between the two remaining cuts of cars. Evidence suggests that the foreman attempted to cross over the tracks between the cars being pulled out and the first of two remaining cuts of cars when he was crushed between the cars being pulled out and the second cut of cars after they were impacted by the third, unsecured cut.

Special Switching Hazard: Unsecured Cars

Zero Switching Fatalities...an attainable goal
Narrative: A three-person crew reported for duty and later was in the process of shoving cars down a track with the switch foreman riding the point. At the same time, another yard switching job was pulling cars in the opposite direction on an adjacent track and derailed. The foreman immediately told the other crew that they were on the ground and then told his engineer to stop the shove he was riding. The foreman was found crushed between the car he was riding and the car that derailed on the adjacent track.

Special Switching Hazard: Equipment
Special Switching Hazard: Derailment

Narrative: A three person switching crew was in the process of shoving cars down an industrial lead. The conductor and brakeman were riding the end platform of a tank car and, as the move approached a highway/rail grade crossing, the brakeman gave the engineer a car count in which to stop. As a result, there was some “slack action” and the conductor fell from the end platform onto the rail and was pronounced dead at the hospital over five hours later.

Special Switching Hazard: Miscellaneous

Narrative: Conductor riding side of two cars to be kicked, he moves to the opposite side of car to work hand brake and is immediately struck by locomotives standing on adjacent track creating a no-clearance condition. Conductor was not aware that the locomotives had arrived at that location since he had last been there.

SOFA 2: Struck by equipment other than their own on yard or industry track
Special Switching Hazard: Close Clearance
Special Switching Hazard: Free-Rolling Railcars

Zero Switching Fatalities…an attainable goal
Monthly Sequence Number: 7
Report number: FE-1995-02
Date: 11-Jan-95
Railroad: CR
Location: Indianapolis, IN
Job Description: Conductor
Age: 51
Narrative: A three-person crew was in the process of switching a plant. The conductor was riding the leading end of the lead car during an eight-car shove. He had notified the engineer that he had mounted the moving car and told him by radio to continue shoving. When the engineer did not hear any more from the conductor, he stopped and the brakeman walked back to find the conductor had been run over by five of the eight cars being shove. An exception was taken by the FRA for the absence of the “BR” end handhold that could have been used to assist the conductor in moving from the side of the car to the end of the car.
Special Switching Hazard: Equipment

Monthly Sequence Number: 8
Report number: FE-1997-02
Date: 12-Jan-97
Railroad: UP
Location: S Fontana, CA
Job Description: Conductor
Age: 60
Narrative: A three-person road crew arrived at a siding, pulled into the siding and stopped their train. They then cut off their locomotive consist, ran around the 50 loaded cars in their train, and tied onto the opposite end. The conductor and brakeman then positioned themselves on the leading end of the shove move and directed the engineer by radio to begin the shove into the plant. As the move entered a descending grade into the plant, the slack ran out, the conductor lost his hold on the leading car, fell in front of the car he was riding, was run over and died.
Special Switching Hazard: Employee Tripping, Slipping, or Falling

Monthly Sequence Number: 9
Report number: FE-1997-04
Date: 29-Jan-97
Railroad: UP
Location: Mason City, IA
Job Description: Conductor
Age: 48
Narrative: Conductor and engineer were moving toward engine house area with lite engines and using hand signals. The conductor stopped the movement to line a switch. The engineer while waiting heard and acted upon an unidentified radio transmission “come ahead 21.” The engineer initiated the shove movement and eventually, the conductor was struck from behind and killed.
SOFA 4: Move controlled by a combination of hand and radio signals or specific distances were not given
Special Switching Hazard: Failure to Confirm Route of Movement

Zero Switching Fatalities…an attainable goal
Narrative: A three person switching crew was working in close proximity to another switching crew and, after some discussion, but no absolute understanding of the move just made by the other crew, began to pull down the switching lead. As they approached a misaligned switch, the foreman jumped off the moving locomotive, ran to the switch and was in the process of “flopping it over” when the leading wheels of the locomotive entered the switch, popped the handle up, striking the foreman in the face and killing him. Post accident testing indicated that drug impairment may have contributed to the fatality.

Special Switching Hazard: Drugs and Alcohol

Narrative: A three person industry switching crew was in the process of switching cars back and forth over a private crossing equipped with an in-ground hand throw switch. The brakeman was at the switch and the conductor was going back and forth from one set of cars to another. The conductor shouted to the brakeman that he wanted the next move down one track but the cars started down the other. The brakeman tried to warn the conductor who had his back to the move and then stopped the move but too late to save the conductor who was hit and run over by the leading car of the shove.

Special Switching Hazard: Failure to Confirm Route of Movement

Narrative: A three person local switching crew was shoving a loaded covered hopper down an industrial lead. The conductor was riding on one side of the car and the brakeman was riding the other. As the car was shoved over a private crossing, the accumulation of ice and snow lifted the car off the rails and it tipped over and onto the conductor who was killed as a result of the derailment.

Special Switching Hazard: Derailment

Special Switching Hazard: Environment

Zero Switching Fatalities…an attainable goal
Monthly Sequence Number: 13
Report number: FE-2000-02
Date: 02-Jan-00
Railroad: CIRR
Location: Cedar Springs, GA
Job Description: Conductor
Age: 49
Narrative: A two person switching crew was in the process of switching cars in a storage yard and the conductor was riding the leading end of a cut of cars being shoved down a track. The move was taking place in dense fog and in darkness when the car he was riding collided with other cars on an adjacent track that were fouling the track he was on. The conductor was killed as a result of the collision.
Special Switching Hazard: Environment

Monthly Sequence Number: 14
Report number: FE-2001-02
Date: 10-Jan-01
Railroad: CSX
Location: Chicago, IL
Job Description: Conductor
Age: 42
Narrative: Conductor with 14-months service was struck and killed by passing mainline train while attempting to board locomotive at crew-change point.
SOFA 5: FE had 1.5 years of experience or less or had inadequate training
Special Switching Hazard: Struck by Mainline Train

Monthly Sequence Number: 15
Report number: FE-2001-03
Date: 11-Jan-01
Railroad: NS
Location: South Fork, PA
Job Description: Engineer
Age: 52
Narrative: The engineer and conductor of a road train were told to stop and check their locomotives for flat spots. Once stopped, and without a job briefing the locomotive engineer left the lead unit and shortly thereafter, was struck and killed by a passing mainline train.
SOFA 3: Lack of or inadequate job safety briefing
Special Switching Hazard: Equipment
Special Switching Hazard: Struck by Mainline Train

Monthly Sequence Number: 16
Report number: FE-2004-03
Date: 14-Jan-04
Railroad: NS
Location: Kankakee, IL
Job Description: Freight Conductor
Age: 40
Narrative: A two person crew was switching on the yard lead when the conductor, with 4 years experience, gave a "kick" sign via radio. The conductor wearing ice creepers pulled the pin and was struck by his own cut of cars and killed.
Special Switching Hazard: Environment
Special Switching Hazard: Employee Tripping, Slipping, or Falling
Monthly Sequence Number: 17
Report number: FE-2005-02
Date: 10-Jan-05
Railroad: UP
Location: Buena Vista, AR
Job Description: Conductor
Age: 52
Narrative: A two person crew was switching on the yard lead when the conductor, with 4 years experience, gave a "kick" sign via radio. The conductor wearing ice creepers pulled the pin and was struck by his own cut of cars and killed.
Special Switching Hazard: Struck by Mainline Train

Monthly Sequence Number: 18
Report number: FE-2005-04
Date: 26-Jan-05
Railroad: PHL
Location: Los Angeles, CA
Job Description: Yard Conductor
Age: 52
Narrative: A conductor was struck and killed by his own cut of cars when he lined switches, thought the cars were going to one track, and turned his back of the cars. The cars came back down on the track he was fouling, and struck and killed the conductor.
Special Switching Hazard: Failure to Confirm Route of Movement

Monthly Sequence Number: 19
Report number: FE-2008-01
Date: 08-Jan-08
Railroad: UP
Location: Waukegan, IL
Job Description: Passenger Brakeman
Age: 59
Narrative: A four-person commuter train crew (No. 355) arrived at their destination station and prepared to back the train from the northbound track through the crossovers south of the platform, and onto the southbound track where it would be worked as a southbound train by another crew. The crew would then go off-duty. Ordinarily, the brakeman would line both switches. However, the Extraboard Engineer while backing the train through the crossovers shouted down to the Brakeman that he would get the south crossover switch when the engine cleared it and stopped. The Brakeman agreed and stayed at the north crossover switch. After the Engineer aligned the switch and returned to the locomotive cab. The Brakeman walking south toward the train gave the Engineer two confusing, contradictory signals. As the Brakeman was stooping to examine or attempting to line the south crossover switch (which the Engineer had already lined), a following train (No. 357) moving northward on Main Track No. 1 passed the head-end of job No. 355 and struck the brakeman killing him. The striking train was not ringing the locomotive’s bell as it passed the standing train.
Special Switching Hazard: Struck by Mainline Train

Zero Switching Fatalities…an attainable goal
Narrative: A two person road freight train crew was operating on the main track westbound when the engineer exited the cab of the controlling locomotive to get to the trailing locomotive. The conductor, a qualified locomotive engineer, took over operation of the locomotive and train. After several minutes when the engineer had not returned, the conductor stopped the train and went in search of the engineer and notified the dispatcher. A following westbound train found the engineer on a parallel road where he had fallen from the train. The engineer died as a result of injuries sustained in the fall.

Special Switching Hazard: Employee Tripping, Slipping, or Falling

Narrative: A four person yard switching crew was pulling cars up to make a shoving movement into a yard track, while a road train was approaching in the same direction on the main track adjacent to the switching lead. The conductor riding in the second locomotive of the yard switcher exited the cab and got off on the live side next to the main track, fouling the main track, and was struck by the passing road train.

Special Switching Hazard: Struck by Mainline Train

Special Switching Hazard: Close Clearance

Zero Switching Fatalities...an attainable goal
12 February Fatalities, 1992 through 2010

Monthly Sequence Number: 1
Report number: FE-1995-09
Date: 17-Feb-95
Railroad: CR
Location: St James, OH
Job Description: Conductor
Age: 48
Narrative: Arbitrary change in switching operations by conductor resulted in him being unexpectedly struck and fatally injured by approaching cars while he was fouling the track.
SOFA 3: Lack of or inadequate job safety briefing
SOFA 4: Move controlled by a combination of hand and radio signals or specific distances were not given
Special Switching Hazard: Unexpected Movement of Railcars

Monthly Sequence Number: 2
Report number: FE-1995-11
Date: 24-Feb-95
Railroad: ATSF
Location: Amarillo, TX
Job Description: Engine Foreman
Age: 44
Narrative: Two crews working in the same yard from opposite ends, one crew dropped ten free rolling cars in on top of the cut where the other crew's foreman was installing the EOT at the opposite end. Cars impacted with sufficient force to knock down and run over the foreman.
SOFA 1: Adjusting knuckles, adjusting drawbars, or installing EOT
SOFA 2: Struck by equipment other than their own on yard or industry track
Special Switching Hazard: Free-Rolling Railcars

Monthly Sequence Number: 3
Report number: FE-1997-05
Date: 02-Feb-97
Railroad: CR
Location: Burns Harbor, IN
Job Description: Engine Foreman
Age: 54
Narrative: Two yard jobs working on adjacent tracks. The conductor of one is studying his switch list as the other job is shoving into the adjacent track. Conductor is struck and killed by the lead car of the adjacent track shove move.
SOFA 2: Struck by equipment other than their own on yard or industry track

Zero Switching Fatalities...an attainable goal

SOFA Working Group
Narrative: Conductor and switchman making hoses on track 12, last transmission by conductor is “I think I got all the hoses after that next one....” Conductor later found to have been struck and killed by a free rolling car on the adjacent track.

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

Special Switching Hazard: Close Clearance

Special Switching Hazard: Free-Rolling Railcars

Narrative: A three person switching crew was working in a piggy-back facility and had just finished shoving a cut of cars down a track to be worked by the piggy-packers (equipment used to load and unload TOFC/COFC rail shipments). The conductor was returning to the locomotive when he was struck and killed by one of the piggy-packers.

Special Switching Hazard: Struck, or Struck by, Motor Vehicle

Narrative: A three-person crew (engineer, conductor, brakeman) were stopped and the engineer and conductor were awaiting the brakeman’s return from the “Trim Shanty”. During this time, another crew was in the process of shoving a cut of cars down a track that was located between where the brakeman’s crew was waiting and the Shanty. The brakeman exited the Shanty and was struck by the shove move as he crossed the tracks to get to his crew. The shove move was being preceded by two of the striking train’s crew who were riding in a van at the time.

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

Narrative: A two person crew was flat switching in a yard when the switchman, needed a break. He mentioned it to the yard foreman and they decided to go to break after one last car was “kicked” into a specific track. A short time after the car had been released, the foreman’s operating control unit indicated a “no poll” failure and the locomotive shut down. When the foreman couldn’t contact the switchman he went looking for him. The brakeman was found struck and killed by the last car that had been “kicked.”

Special Switching Hazard: Free-Rolling Railcars
Monthly Sequence Number: 8  
Report number: FE-2003-05  
Date: 18-Feb-03  
Railroad: CSXT  
Location: Cheektowaga, NY  
Job Description: Switch Foreman  
Age: 51  
Narrative: A three person switching crew was in the process of shoving cars into a track at an industry. The switch foreman was riding the leading end of the shove and directing the move when he was struck by the cut of cars that they had left on another track and which had rolled out and into his shove move.  
Special Switching Hazard: Unsecured Cars

Monthly Sequence Number: 9  
Report number: FE-2008-03  
Date: 03-Feb-08  
Railroad: NS  
Location: Chicago, IL  
Job Description: Freight Conductor  
Age: 28  
Narrative: A conductor and engineer were transported to their train on main track two and boarded. The ground conditions between main tracks two and one were very poor. The ground was covered by 5 inches of snow; however, the ambient lighting was good. On the south side of the standing train, the footing was good, but the lighting was poor. After receiving 3-Point Protection, the conductor dismounted the lead locomotive and proceeded to walk west, between the two main tracks, on the north side of his standing train, to untie handbrakes. An approaching westbound freight train sounded the whistle for the conductor walking in the foul and the conductor ducked between two freight cars to clear the oncoming movement. The conductor then reemerged from his safe location foul of the adjacent main track. He was struck by the westbound train and died 42 hours later.  
Special Switching Hazard: Struck by Mainline Train

Monthly Sequence Number: 10  
Report number: FE-2009-08  
Date: 07-Feb-09  
Railroad: BNSF  
Location: Holbrook, AZ  
Job Description: Freight Conductor  
Age: 43  
Narrative: A two person crew had boarded their train on main track two and the conductor began walking the train making an inspection. At that time another train approaching on main track one observed the conductor walking in the foul of main track one. The engineer on the approaching train switched the headlight from dim to bright to alert the conductor on the ground. A van driver beside the track also attempted to get the attention of the conductor without success. The train on main track two struck and killed the conductor.  
Special Switching Hazard: Struck by Mainline Train

**Zero Switching Fatalities...an attainable goal**
Narrative: A two person road train crew was doubling back to their train on main track one with the conductor walking between main track one and main track two giving hand signals to the engineer. The conductor was fouling main track two when another train operating on main track two struck and killed the conductor. A van driver located across from the conductor's position attempted to warn the conductor by yelling at him.

**Special Switching Hazard:** Struck by Mainline Train

**Special Switching Hazard:** Miscellaneous

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**Narrative:** A two person road train with the conductor riding the end car made a shoving movement into the siding to leave cars on the siding. The movement was controlled by radio communications from the conductor during the shove. During the shove movement the conductor was knocked off when the conductor impacted a tie bundle closely positioned next to the rail. The impact caused the conductor to be knocked off the equipment and killed.

**Special Switching Hazard:** Close Clearance

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