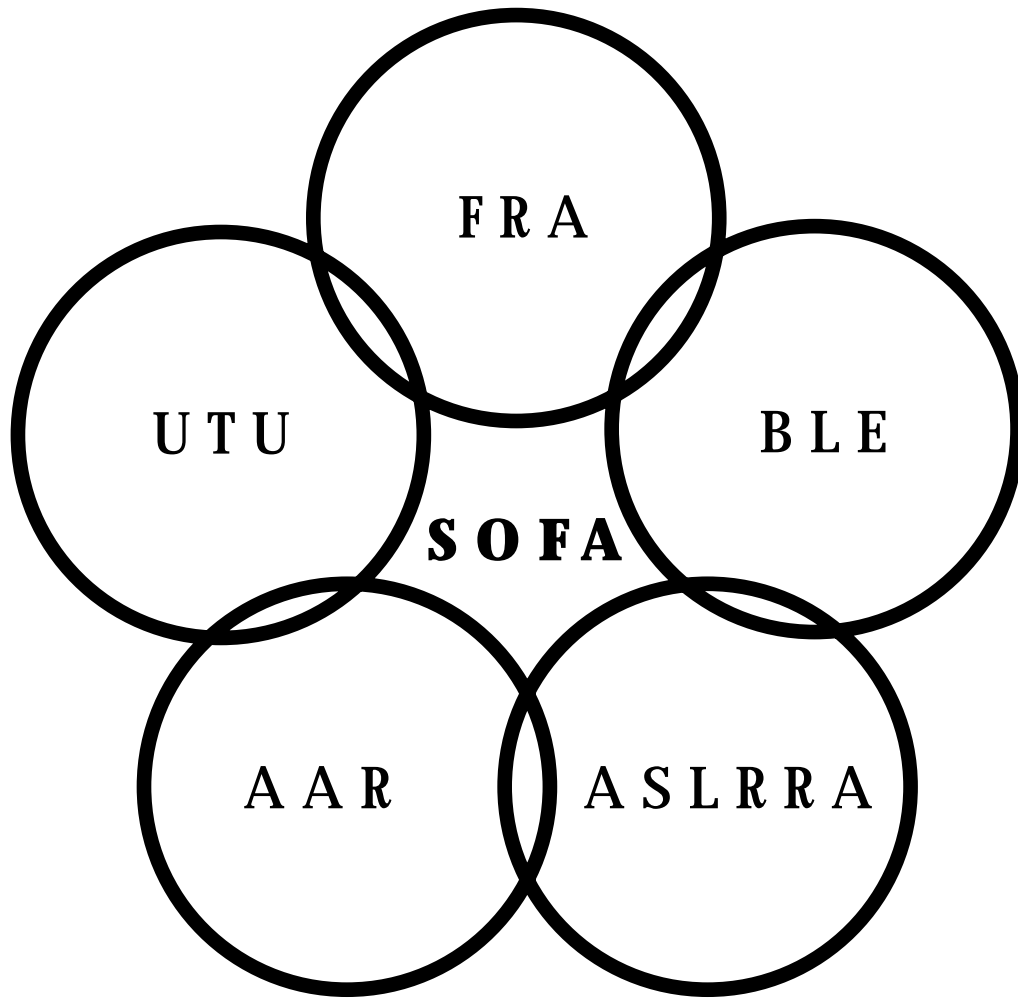


# Switching Operations Fatality Analysis



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## **Volume II - Appendix**

Findings and Recommendations of the SOFA Working Group

August 2000

## PREFACE

This Appendix is the second volume of the report, *Findings and Recommendations of the SOFA Working Group* (October 1999). It is published for those interested in examining the many tables and figures (charts and graphs) of the variables in the SOFA Matrix used by the SOFA Working Group in developing operational recommendations to prevent employee fatalities (FEs) among on-duty, railroad employees engaged in switching operations.

The SOFA Working Group first coded the extensive data contained in the SOFA Matrix by considering and discussing each of 76 FEs engaged in switching operations from January 1, 1992 to July 1, 1998. After the coding, the Working Group determined which of the variables, that they were able to fully code, were common among groups of FEs.

Section I of this Appendix lists the 206 variables of the SOFA Matrix, the information that the SOFA Working Group had available or wish to have. Section I also contains the full SOFA Matrix. Examination of this Matrix will show that some of the variables could not be fully coded, or coded at all. For one reason or another, the data simply was not originally collected; and it was not possible for the Working Group to reconstruct it. Because of the occurrence of this missing data, the SOFA Working Group, in addition to making operational recommendations, made the recommendation to collect additional information during a FE investigation.

Many of the exhibits contained in Section II actually formed the basis for *ruling out* that a particular variable, or factor, alone or in combination with other factors, was involved in any event chain leading up to FEs. (Please note that some of the exhibits were created when only 68 of the 76 FEs for the SOFA Matrix had been coded.) Many of the factors that were important in event chains are shown in figures and tables in the report itself.

Section III contains a partially coded SOFA Matrix for the years 1975 to 1991, the period for which only partial information on switching operation FEs is available. Only ten of the 206 variables have been coded for that period. Of particular interest to the SOFA Working Group was the number of FEs that occurred in the pre-study period.

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# SOFA WORKING GROUP

## Section I:

### SOFA Matrix Variables and Matrix

# SOFA WORKING GROUP

## SOFA Matrix Variables

# SOFA Matrix Variables

1	REPORT #	41	Act
2	Railroad	42	Event
3	Accident Category	43	Local
4	City	44	Act
5	State	45	Local
6	Date	46	Act
7	Day	47	Local
8	Time	48	Crew size
9	Temp	49	Engine Crew
10	D/N	50	Train Crew
11	Visibility	51	Crew/Ground
12	Grnd/Foot	52	Grnd crew invld
13	Wind	53	Cause Code
14	FE Code	54	FE crew's next move
15	Engineer	55	External Circmst.
16	Conductor	56	Poss. Cont. Factors
17	Brakeman	57	Duty/30 days
18	Engineer Frmn	58	FE's last tour
19	Switchman	59	Time off b/4 shift
20	Student	60	Time FE on duty b/4 incident
21	Age	61	FE regular job
22	Service	62	If not, had FE worked it
23	Occupation	63	Track type:
24	Rules	64	Line of road
25	Safety	65	Siding
26	Formal	66	Yard
27	Informal	67	Hump
28	Exam	68	Lead
29	Crew Size	69	Rec/Dept
30	Engine Crew	70	Class.
31	Train Crew	71	Repair
32	On Ground	72	Storage
33	Ground crew involved	73	Service
34	PCF [Possible Contributing Factors]	74	Insp.
35	PCF	75	Other
36	PCF	76	Flat
37	PCF	77	Lead
38	PCF	78	Rec/Dept
39	PCF	79	Class.
40	PCF	80	Repair

## SOFA Matrix Variables

- 81 Storage
- 82 Service
- 83 Insp.
- 84 Other
- 85 Industrial
- 86 Spot (L/U)
- 87 Inside
- 88 Outside
- 89 Stub Trk
- 90 Storage
- 91 Repair
- 92 Cleaning
- 93 Insp.
- 94 Other
- 95 Mvmnt Authority:
- 96 Disp.
- 97 YM
- 98 Cond/Eng-Frmn.
- 99 TM
- 100 Other
- 101 Eqpmnt. speed
- 102 Struck by own eqpmnt?
- 103 Was FE between
- 104 FE struck by other crew
- 105 FE result of train mvmnt
- 106 Mvmnt pulled
- 107 Mvmnt shoved
- 108 Mvmnt free-running
- 109 FE riding side
- 110 Leading end
- 111 Trailing end
- 112 FE riding end
- 113 Mvmnts near
- 114 On same track
- 115 On adjacent tracks
- 116 FE worked here b/4
- 117 Autopsy
- 118 Behavioral displays
- 119 Prescrt meds
- 120 Drugs a factor
- 161 Loco mounted
- 121 Drugs present
- 122 FE - PPE
- 123 Ears
- 124 Eyes
- 125 Feet
- 126 Hard hat
- 127 Liner/hood
- 128 Contrib clothing
- 129 Contrib footwear
- 130 Striking equip within rules
- 131 Communication:
- 132 Hand signs
- 133 Watching for signs
- 134 Complied with signals
- 135 Misinterpeted signal
- 136 Proper signals given
- 137 Strange signs used
- 138 Miss-interpeted gestures
- 139 Plainly seen signals
- 140 Clear signals
- 141 Signs past on eng. side
- 142 Stop/leaves sight
- 143 Light disapears, movement stopped
- 144 Brakes controled frm point
- 145 Day
- 146 Night
- 147 Lantern used
- 148 Other light
- 149 Fusee
- 150 Day signs, under lights
- 151 Lighting conditions
- 152 Daylight
- 153 Dawn/Dusk
- 154 Night/no-art. lights
- 155 Night-artificial lights
- 156 Radio
- 157 Handset
- 158 Chestpack
- 159 Remote mic
- 160 Waist/belt pack
- 201 Brakeman



## SOFA Matrix Variables

162	Radio over hand signs	202	Railroad expr.
163	Know when radio is to be used	203	Craft expr.
164	Know radio to be used only	204	Switchman
165	Inst. given for each movement	205	railroad expr.
166	Crew respond to instructions	206	craft expr.
167	Dir/Dist		
168	Dir/Dist Acknowledged		
169	Clear channel		
170	Give req. ID		
171	Proceed w/o acknowledgment		
172	ID a factor		
173	over/out' a factor		
174	Incomp/misundrst com acted on		
175	Radio Sig acknowledged		
176	Stopped 1/2 dist when sig lost		
177	Radio tested prior		
178	Radio failure		
179	Radio & Hand		
180	Proper channel		
181	Radio Procdures		
182	Radio clear		
183	Cont. operable		
184	ER		
185	ER proceds. follows		
186	ER timely		
187	Other factors		
188	Experience, other employee(s)		
189	Yardmaster		
190	Railroad experiance		
191	Craft experiance		
192	Dispatcher		
193	Railroad experiance		
194	Craft experiance		
195	Engineer		
196	Railroad exper.		
197	Craft exper.		
198	Conductor		
199	Railroad expr.		
200	Craft expr.		

## SOFA Matrix Variables

### **Railroad**

**Accident Category**

**City**

**State**

**Date**

**Day of Week (Sun = 1, Mon = 2 etc..)**

**Time**

**Temperature, (f)**

### **Weather**

Daylight / Nightlight (D = 1 or N = 2)

Raining/Snowing/Freezing rain (R/S/F)

Visibility

Ground Conditions

Footing

Wind (mph)

### **Employee Occupation Code:**

Engineer

Conductor

Brakeman

Engine Foreman

Switchman

Student

### **Age**

**Length of Service (yr)**

**Length of Time in Occupation (yr)**

**Last Rules Training (mo)**

**Last Safety Training (mo)**

Formal (mo)

Informal (mo)

**Months since last in-service physical exam (mo)**

### **Crew information**

FE's crew information

Crew size

Engine Crew

Train Crew

How many crew members on ground

*How many ground crew members actively involved in move*

## SOFA Matrix Variables

### **Probable Cause, Appendix 'C' Code**

Possible Contributing Factor, Appendix 'C' Code

Possible Contributing Factor, Appendix 'C' Code

Possible Contributing Factor, Appendix 'C' Code

### **Activity at Time of Accident (Event Circumstance Code)**

FE

Physical Act

Event

Location

Cause Code

Cause Code

FE's Crew

Cause Code

Cause Code

Engineer

Physical Act

Location

Other Trainman

Physical Act

Location

Cause Code

### **Other involved crew's information**

Crew size

Engine Crew

Train Crew

How many crew members on ground

*How many ground crew members actively involved in move*

Contributing crew

Cause Code

### **FE crew's anticipated next move**

### **External Circumstance**

Possible Contributing Circumstance

### **Work/rest issues**

How many duty assignments had the FE performed in the previous 30 days

How many hours had the FE been on duty during the previous assignment

How many hours had the FE been off before starting shift

What was the amount of the time FE was on duty before incident

Was this the regular assignment for the FE

If not, had fatality worked this assignment before

## SOFA Matrix Variables

### **Type Track**

Line of Road

Siding

Yard

    Hump

        Lead

        Receiving/Departure

        Classification

        Repair

        Storage

        Service

        Inspection

        Other

    Flat

        Lead

        Receiving/Departure

        Classification

        Repair

        Storage

        Service

        Inspection

        Other

Industrial

    Spot (Loading/Unloading)

        Inside

        Outside

Stub Track

Storage

Repair

Cleaning

Inspection

Other

### **Authority for Movement**

Dispatcher

Yardmaster

Conductor/Engine Foreman

Trainmaster

Other

## SOFA Matrix Variables

### **Speed of moving equipment**

#### **Was employee struck by his/her crew's equipment**

Was fatality between locomotive/equipment when incident occurred

#### **Was employee struck by equipment in charge of another crew**

#### **Was fatality a result of train, rail car or engine movement**

Was movement being pulled

Was movement being shoved

Was movement free running

#### **Was fatality riding on the side of locomotive/equipment**

Leading end of locomotive/equipment

Trailing end of locomotive/equipment

Was fatality riding on end of locomotive/equipment

#### **Other movements in immediate area**

On same track

On adjacent tracks

#### **Has Employee worked at this location in past**

#### **Employee familiar with local rules and procedures**

#### **Are rules and procedures applicable nationwide**

#### **Was autopsy performed**

#### **Did the fatality display any identifiable stress or behavioral problems**

#### **Was the fatality taking prescription medication**

#### **Was alcohol/drugs a factor**

#### **Was alcohol/drugs present**

#### **Was FE wearing required PPE**

Hearing protection

Eye protection

Footwear

Hard hat

Hard hat liner or other hood

Any clothing contributory to incident

Any footwear contributory to incident

#### **What was the employee protection system in effect**

Was the protection in use

Is the protection required by rule or is it permissive

Were there multiple rules for protection

Was more than one person responsible for providing protection

Who had authority for protection

Who had control of protection

## SOFA Matrix Variables

### **Train/striking equipment operation in accordance with the rules**

#### **Communication in use**

##### Hand Signals

Were employees on the lookout for signals

Did employees comply with the intent of the signals

Did employees act on any signal that they did not understand or that may have been intended for other trains or engines

Was the proper signal (stop, proceed, back up) given

Did employees use other hand signals that the entire crew understood

Were gestures that resembled a hand signal given that resulted in confusion to those acting on them

Were the employees giving signals plainly seen

Were signals given clearly so they could be understood

Were signals given on the engineer's side of the track when practical

Did the movement stop, in accordance to requirements to stop, when a person who was giving the signal disappeared from view, when the signal was given to shove a train, engine or car

If a light was being used, under the same circumstances did the movement stop after the disappearance of the light?

Was the employee on the leading car in control of the air brakes?

Day

Night

Railroad lantern used

Flashlight or other individual light used

Fusee used

Day hand signal used in artificial lights

Lighting conditions:

Daylight

Dawn/Dusk

Night - no artificial lights

Night - artificial lights

Radio

Handset

Chestpack

Remote microphone

Waist/belt pack

Locomotive mounted

## SOFA Matrix Variables

Was the radio used when hand signals could have been used instead  
Did the employees know which moves were to be made by radio com.  
Did the employees understand that while using the radio, the engineer will not accept any hand signals, unless they are Stop signals  
Were specific instructions given for each movement  
Did the employees respond to those specific instructions  
If the movement involved backing or shoving, did the radio communication specify the direction and distance  
Was the direction & distance acknowledged if that distance was more than four car lengths  
Did the employees listen to make sure the channel was not being used  
Did the employees give the required identification  
Did the employees continue to proceed, though acknowledgement was not recieved  
Was proper identification a factor in the accident  
Was the use of or the absence of "over" and "out" an accident factor  
Did employees act on an incomplete or misunderstood radio com?  
Did employees acknowledge radio calls immediatly  
Was the movement stopped within half the distance specified when additional instructions were not recieved  
Was the radio tested by crew at some point preceding the accident  
Did radio malfunction any time b/4 accident and still used in service

### **Both, hand and radio signs used**

**Was radio on and tuned to proper channel**

**Were proper radio procedures utilized**

**Was transmission/reception clear**

**Was radio continuously operable**

**Emergency response**

**Emergency response procedure followed**

**Emergency response system timley**

**Other factors/information cited in investigation**

### **Experience, other employee(s)**

Yardmaster

railroad experiance

craft experiance

Dispatcher

railroad experiance

craft experience

Engineer

## SOFA Matrix Variables

railroad experience

craft experience

Conductor

railroad experience

craft experience

Brakeman

railroad experience

craft experience

Switchman

railroad experience

craft experience



# SOFA WORKING GROUP

## SOFA Matrix

n	1	2	3	4	5	6	7	8	9	10	11	12	13	
	REPORT #	Railroad	Accident Category	City	State	Date	Day	Time	Temp	Weather	D/N	Visibility	Grnd/Foot	Wind
	<b>SOFA Matrix</b>													
1	FE-31-96	IC	FE	Chicago	IL	12/18/1996	4	11:40 AM	15		1	S		
2	FE-30-96	UP	FE	Clinton	IA	12/16/1996	2	8:40 PM	32		2			
3	FE-24-96	UP	FE	Eagle Pass	TX	10/07/1996	2	8:48 PM			2	C		
4	FE-22-96	DGNO	FE	Dallas	TX	09/03/1996	3	6:30 PM	85		1	C		
5	FE-17-96	NS	FE	Sidney	IN	07/07/1996	1	1:08 AM	75		2			
6	FE-12-96	CSX	FE	Charlotte	NC	06/15/1996	4	8:30 AM	50		1	R		
7	FE-09-96	BRC	FE	Bedford Park	IL	03/20/1996	4	11:25 PM	28		2	C		
8	FE-02-97	UP	FE	S Fontana	CA	01/12/1997	1	10:15 PM	42		2	R/F	W	
9	FE-04-97	UP	FE	Mason City	IA	01/29/1997	4	12:55 PM	0		1	C	F	
10	FE-05-97	CR	FE	Burns Harbor	IN	02/02/1997	1	9:55 PM	30		2	C		
11	FE-16-97	CMRC	FE	Bay City	MI	06/06/1997	6	9:35 PM	76		2			
12	FE-19-97	NS	FE	Rowesville	SC	06/24/1997	3	8:58 PM	80		2	C		
13	FE-22-97	MNCW	FE	Stamford	CT	07/18/1997	6	1:29 AM	75		2			
14	FE-32-97	MRL	FE	Laurel	MT	10/16/1997	5	10:20 PM	63		2	C		17
15	FE-02-95	CR	FE	Indianapolis	IN	01/11/1995	4	11:30 PM			2			
16	FE-09-95	CR	FE	St. James	OH	02/17/1995	6	11:15 AM	39		1	C	I	
17	FE-11-95	ATSF	FE	Amarillo	TX	02/24/1995	6	9:45 AM	48		1	C		17
18	FE-12-95	NS	FE	Aiken	SC	03/02/1995	5	9:44 AM	45		1	Cld		
19	FE-16-95	WC	FE	Argoe	WI	04/06/1995	5	1:56 AM	18		2	Cld/S	W/Snw	
20	FE-17-95	SP	FE	Bassett	CA	03/21/1995	6	8:40 AM			1	C		
21	FE-18-95	CSXT	FE	Evansville	IN	05/03/1995	4	5:55 PM	60		1	Cld		
22	FE-23-95	CR	FE	Hershey	PA	07/21/1995	6	9:10 AM	80		1	Cld		
23	FE-29-95	CSXT	FE	Riverdale	IL	10/04/1995	4	12:40 AM	80		1	Cld		
24	FE-33-95	NS	FE	Toledo	OH	12/11/1995	2	6:25 PM	12		2	Cld/S	W/S	
25	FE-34-95	CSXT	FE	Monroe	NC	12/14/1995	5	4:30 AM	44		2	C		
26	FE-02-94	BN	FE	Hastings	NE	01/04/1994	3	7:00 PM	31		2			14S
27	FE-03-94	BN	FE	Amarillo	TX	01/14/1994	6	11:15 AM	48		1			
28	FE-04-94	CSXT	FE	Bainbridge	GA	01/18/1994	3	6:10 PM	38		1	C		
29	FE-06-94	UP		Fall City	NE	01/20/1994	5	8:00 PM	16		2	C		
30	FE-12-94	SP		Houston	TX	04/12/1994	3	7:45 AM			1	Cld/R		
31	FE-16-94	BN		Essex	MT	07/05/1994	3	4:45 PM	76		1	C		
32	FE-20-94	ARR		Clear Site	AK	09/20/1994	3	7:19 PM	50		1	Cld		
33	FE-26-94	UP		Donaldsonville	LA	10/17/1994	2	12:30 PM	76		1	Cld		
34	FE-28-94	PTRA		Houston	TX	11/10/1994	5	4:15 AM	70		2	C		
35	FE-29-94	CR		Painted Post	NY	11/15/1994	3	9:35 AM	55		1	Cld		
36	FE-31-94	CR		Campbell Hall	NY	12/06/1994	3	2:52 AM	51		2			
37	FE-32-94	UP		Thorton	CA	12/13/1994	3	12:01 AM	34		2	Lt Fog/R	W	0.5
38	FE-11-93	SP		Guadalupe	CA	03/27/1993	7	12:30 PM	60		1	PCL		
39	FE-13-93	CSX		Dwale	KY	04/13/1993	3	6:40 PM			1			
40	FE-20-93	ATSF		El Paso	TX	05/22/1993	7	10:30 AM	82		1	Cld		15

	1	14	15	16	17	18	19	20	21	22	23	24	25	26	27
n	REPORT #	FE Code	Engineer	Conductor	Brakeman	Engineer Frmn	Switchman	Student	Age	Service	Occupation	Rules	Safety	Formal	Informal
<b>SOFA Matrix</b>															
1	FE-31-96	614		1					45	26	26	7	7		
2	FE-30-96	613			1				51	21	21	8	3		
3	FE-24-96	614				1			35	10.08	1.42	2	6		
4	FE-22-96	613			1				43	0.06	0.06	0.27	0.27		
5	FE-17-96	614		1					29	1	1	14	14		
6	FE-12-96	615					1		36	1	1	8	8		
7	FE-09-96	614		1					28	0.34	0.34	3	3		
8	FE-02-97	608		1					60	35		14			
9	FE-04-97	608		1					48	28		10	12		
10	FE-05-97	614				1			54	27		13	13	13	0.03
11	FE-16-97	608		1					50	7	7	6		6	
12	FE-19-97	608		1					21	2.5	2.5	4		1	
13	FE-22-97	608		1					40	7.58	2.5	4		35	0.03
14	FE-32-97	615					1		22	0.83	0.83	6		1	
15	FE-02-95	614		1					51	30		2	1	13	
16	FE-09-95	609		1					48	29		8	0.5		
17	FE-11-95	614				1			44	19	18	5	5		
18	FE-12-95	613			1				46	22		2	1		
19	FE-16-95	608		1					45	7	15	11	11		
20	FE-17-95	613		1					55	24		26		91	11
21	FE-18-95	614		1					52	32		0.5	0.5		
22	FE-23-95	614		1					61	40	40	7	7		0.1
23	FE-29-95	614							39	0.5	0.5	3	5		0.1
24	FE-33-95	615			1				53	32	29	9	2		
25	FE-34-95	609		1					54	33		0.2	3		
26	FE-02-94	614		1					46	20	4	10	0.1		
27	FE-03-94	614		1					57	36		6	4		
28	FE-04-94	609		1					45	25		10	10		
29	FE-06-94	609							44	16	14	11	47		
30	FE-12-94	614							62	37	22	13	11		
31	FE-16-94	613							59	35	35	17			
32	FE-20-94	613							49	20	20	17			
33	FE-26-94	613							36	16		34	7		
34	FE-28-94	615							31	0.5	0.5	6	6		
35	FE-29-94	613							57	38		5	1		
36	FE-31-94	600							28	0.17	0.67				
37	FE-32-94	613							48	26	26	2	2		
38	FE-11-93	613							39	19		1	1		
39	FE-13-93	613							44	16		14	14		
40	FE-20-93	614							46	27		12	1		

n	1	28	29	30	31	32	33	34	35	36	37	38	39	40
	REPORT #	Exam	Crew Size	Eng. Crew	Train Crew	On Ground	Grd. crew invld.	Possible Cont. Factor (PCF)	PCF	PCF	PCF	PCF	PCF	PCF
<b>SOFA Matrix</b>														
1	FE-31-96	36	3	1	2	2	1	H018	H307	E02C				
2	FE-30-96	41	3	1	2	2	2	H998	H101					
3	FE-24-96	19	3	1	2	2	2	H018	E39C	E39L	H997			
4	FE-22-96	1	3	1	2	2	2	H018	E09C	H996				
5	FE-17-96	14	2	1	1	1	1	H990	H199					
6	FE-12-96	14	3	1	2	2	2	H599	M411					
7	FE-09-96	6	3	1	2	1	1	H990	H021					
8	FE-02-97	200	3	1	2	2	2	H503						
9	FE-04-97		2	1	1	1	1	H211	H990					
10	FE-05-97	60	3	1	2	1	0	H306						
11	FE-16-97	32	2	1	1	1	1	H210	SO12					
12	FE-19-97	30	2	1	1	1	1	H702						
13	FE-22-97	7	1	0	1	1	1	H990						
14	FE-32-97	6	3	1	2	2	2	E29C	H998					
15	FE-02-95		3	2	2	2	2	H998	E29C					
16	FE-09-95	33	3	1	2	2	2	H702	H990	H211				
17	FE-11-95	9	4	2	2	2	1	H305						
18	FE-12-95	7	3	1	2	2	2	H997	H316					
19	FE-16-95	98	2	1	1	1	1	H018	H008	H605				
20	FE-17-95	24	3	1	2	2	2	H990						
21	FE-18-95		3	1	2	2	2	H990						
22	FE-23-95	9	3	1	2	2	2	H998						
23	FE-29-95		4	1	2	2	2	H997	H996					
24	FE-33-95	20	3	1	2	2	2	M101	M411	H990				
25	FE-34-95	52	3	1	2	2	1	M502	M404					
26	FE-02-94	84	3	1	2	2	1	H990	H310					
27	FE-03-94	27	3	1	2	2	2							
28	FE-04-94		3	1	2	2	2	H998	H500					
29	FE-06-94	14	3	1	2	2	1	M411	H318					
30	FE-12-94	444	3	1	2	2	1	M411						
31	FE-16-94	41	3	1	2	2	1	H025	H599					
32	FE-20-94	17	3	1	2	0	2	M302	M304					
33	FE-26-94	84	3	1	2	2	1	H997	H210					
34	FE-28-94	7	3	1	2	2	1	H996	H999					
35	FE-29-94	8	3	1	2	2	2	H316	H605					
36	FE-31-94	2	3	1	2	0	1	H318	H211	H307	H605	H212	H303	H699
37	FE-32-94	20	4	1	3	3	3	H997						
38	FE-11-93	107	4	1	3	3	2	H990						
39	FE-13-93	78	3	1	2	1	1	H990						
40	FE-20-93	23	3	1	2	2	1	M302	M501					

	1		41	42	43			44	45		46	47		48	49	50	
n	REPORT #	Activity:	FE	Act	Event	Local	FE's crew:	Engineer;	Act	Local	Other Trainman	Act	Local	Other crew;	Crew size	Engine Crew	Train Crew
<b>SOFA Matrix</b>																	
1	FE-31-96			58	59	B8			51	A6		62	A2				
2	FE-30-96			58	59	A5			51	A6		72	B4				
3	FE-24-96			01	64	A5			51	A6		72	A3				
4	FE-22-96			62	42	B8			51	A6		59	A1				
5	FE-17-96			62	59	B7			51	A6				2	1	1	
6	FE-12-96			62	39	A1			51	A6		58	B8				
7	FE-09-96			01	59	A5			51	A6		60	A6				
8	FE-02-97			58	50	B6			51	A6		58	B6				
9	FE-04-97			72	59	B7			51	A6							
10	FE-05-97			62	59	A3			51	A6		60	A6	3	1	2	
11	FE-16-97			58	17	B8			51	A6							
12	FE-19-97			72	59	B7			51	A6							
13	FE-22-97			22	59	B7								3	1	2	
14	FE-32-97			58	34	A5			51	A6		72	A1				
15	FE-02-95			58	59	B6			51	A6							
16	FE-09-95			72	59	A1			51	A6		62	A1				
17	FE-11-95			39	59	B7			51	A6		72	A3	3	1	2	
18	FE-12-95			1	59	B7			51	A6		58	A3				
19	FE-16-95			58	17	B8			51	A6							
20	FE-17-95			72	59	B7			51	A6		62	B4				
21	FE-18-95			62	59	A4			51	A6		72	A1	3	1	2	
22	FE-23-95			58	99	A5			51	A6		62	A1				
23	FE-29-95			2	59	A5			51	A1							
24	FE-33-95			62	99	A1			51	A6		62	A1				
25	FE-34-95			58	61	B6			51	A6		62	A3				
26	FE-02-94			72	64	A5			51	A6		58	B6	3	1	2	
27	FE-03-94			62	21	A4			51	A6		62	A1	3	1	2	
28	FE-04-94			58	64	B8			51	A6		58	B8	3	1	2	
29	FE-06-94			58	99	B6			51	A6		45	A3	3	1	2	
30	FE-12-94			58	61	B6			51	A6		58	A6				
31	FE-16-94			51	99	A5			51	A6		45	A3				
32	FE-20-94			60	21	A7			51	A6		49	A7				
33	FE-26-94			16	64	A5			51	A6		72	A1				
34	FE-28-94			99	9	X9			51	A6		72	A1	1		1	
35	FE-29-94			62	59	B7			51	A6		58	A6				
36	FE-31-94			58	42	A7			51	A6		58	A6				
37	FE-32-94			2	64	A5			51	A6		62	A3				
38	FE-11-93			58	58	B8			51	A6		62	A3				
39	FE-13-93			72	59	B7			51	A6		60	A6	3	1	2	
40	FE-20-93			62	18	A1			51	A6							

	1	51	52	53	54	55
n	REPORT #	Crew/Ground	Grnd crew invld	Cause Code	FE crew's next move	External Circmst.
<b>SOFA Matrix</b>						
1	FE-31-96				Spot Cars	
2	FE-30-96				CO Power	
3	FE-24-96				Shove cars	
4	FE-22-96				Spot cars	
5	FE-17-96	0	1		Meet train	
6	FE-12-96				Spot Car	
7	FE-09-96				Couple Track	Crew experience
8	FE-02-97				Stop	Unfam w/territory
9	FE-04-97				SO power	
10	FE-05-97	2	2	H306	Begin Switching	
11	FE-16-97				Coupling	Radio Failure
12	FE-19-97				Make Cut	
13	FE-22-97	0	0			
14	FE-32-97				Stop	Moving Equipment
15	FE-02-95					
16	FE-09-95				Cut Cars	
17	FE-11-95	2	2			Yardmaster
18	FE-12-95					
19	FE-16-95				Coupling	
20	FE-17-95				Coupling	H199
21	FE-18-95	0	0	H306	Switch Car	Two Radio Channels Used
22	FE-23-95				Set Out Cars	
23	FE-29-95				Coupling	H999
24	FE-33-95				Set Out Cars	
25	FE-34-95				Cut Engine Off	
26	FE-02-94	2	2		Stop to uncouple	
27	FE-03-94	2	1	E39C	Cut Engine Off	
28	FE-04-94	2	2		Spot	
29	FE-06-94	2	1	H301	Stop Car	
30	FE-12-94				Make Cut	
31	FE-16-94				Stop the Drop	H099
32	FE-20-94				Shove cars	M305
33	FE-26-94				Pull ahead	H599
34	FE-28-94	1	1	M504		
35	FE-29-94				Couple Track	
36	FE-31-94				Set Out Cars	
37	FE-32-94				CO Power	H990
38	FE-11-93				Couple Track	M101
39	FE-13-93	0	0		Run Around Train	EC 24
40	FE-20-93				Spot Cars	

	1	56		57	58	59	60	61
n	REPORT #	Poss. Cont. Factors	Work/rest:	Duty/30 days	FE's last tour	Time off b/4 shift	Time FE on duty b/4 incident	FE regular job
<b>SOFA Matrix</b>								
1	FE-31-96	Cold Temp			8	16	0.246527778	Y
2	FE-30-96						0.236111111	Y
3	FE-24-96						0.116666667	
4	FE-22-96	Failure to test HB				24+	0.454861111	Y
5	FE-17-96			13/16	0.438888889	0.447916667	0.213888889	Y
6	FE-12-96				0.386111111	0.604166667	0.354166667	Y
7	FE-09-96				0.46875	0.666666667	:25	
8	FE-02-97					00:27	04:15	N
9	FE-04-97	Moved on wrong trnmsn.				10:50	04:55	
10	FE-05-97	Reading list			03:55			
11	FE-16-97	Clear x-ing			00:35			
12	FE-19-97				12	13	3	Y
13	FE-22-97						5	
14	FE-32-97					16	6:20	Y
15	FE-02-95						0.354861111	
16	FE-09-95						0.197916667	Y
17	FE-11-95	H305					0.09375	Y
18	FE-12-95						0.09375	
19	FE-16-95	H020					0.299305556	Y
20	FE-17-95						0.069444444	Y
21	FE-18-95						0.125	
22	FE-23-95	ECC 34					0.131944444	Y
23	FE-29-95	Green Ground Crew					0.048611111	N
24	FE-33-95						0.100694444	Y
25	FE-34-95					0.586805556	0.3125	Y
26	FE-02-94	H997					0.083333333	Y
27	FE-03-94						0.177777778	
28	FE-04-94						0.048611111	
29	FE-06-94						0.020833333	Y
30	FE-12-94						0.364583333	Y
31	FE-16-94						0.40625	Y
32	FE-20-94	Sun in eyes					0.471527778	N
33	FE-26-94						0.270833333	N
34	FE-28-94						0.177777778	N
35	FE-29-94						0.065972222	Y
36	FE-31-94						0.286111111	N
37	FE-32-94			62/87	0.333333333	0.90625	0.094444444	N
38	FE-11-93	H019					0.041666667	
39	FE-13-93	M307					0.225694444	
40	FE-20-93						0.166666667	





	1	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
n	REPORT #	Class.	Repair	Storage	Service	Insp.	Other	Industrial	Spot (L/U)	Inside	Outside	Stub Trk	Storage	Repair	Cleaning	Insp.	Other	Mvmnt Authority:
	<b>SOFA Matrix</b>																	
1	FE-31-96										1							
2	FE-30-96										1							
3	FE-24-96	1																
4	FE-22-96																1	
5	FE-17-96																	
6	FE-12-96									1								
7	FE-09-96																	
8	FE-02-97																	
9	FE-04-97																	
10	FE-05-97	Y																
11	FE-16-97	Y																
12	FE-19-97																	
13	FE-22-97																	
14	FE-32-97	Y																
15	FE-02-95							1	1	1		1						
16	FE-09-95							1	1			1						
17	FE-11-95																	
18	FE-12-95																	
19	FE-16-95																	
20	FE-17-95							1			1	1						
21	FE-18-95																	
22	FE-23-95							1	1		1							
23	FE-29-95	1																
24	FE-33-95							1	1	1								
25	FE-34-95	1																
26	FE-02-94	1																
27	FE-03-94	1																
28	FE-04-94							1	1		1							
29	FE-06-94	1																
30	FE-12-94			1						1								
31	FE-16-94							1	1		1	1						
32	FE-20-94																	
33	FE-26-94																	
34	FE-28-94							1	1		1							
35	FE-29-94																	
36	FE-31-94			1														
37	FE-32-94							1	1		1							
38	FE-11-93	1																
39	FE-13-93																	
40	FE-20-93								1		1	1						

	1	96	97	98	99	100	101	102	103	104	105
n	REPORT #	Disp.	YM	Cond/Eng-Frmn.	TM	Other	Eqmnt. speed	Struck by own eqmnt?	Was FE between	FE struck by other crew	FE result of train mvmnt
<b>SOFA Matrix</b>											
1	FE-31-96			1			4	Y	Y	N	Y
2	FE-30-96			1			1	Y	Y	N	Y
3	FE-24-96			1			1	Y	Y	N	Y
4	FE-22-96			1			25	N	N	N	Y
5	FE-17-96	1					38	N		Y	Y
6	FE-12-96			1			3	Y	N	N	Y
7	FE-09-96		1				1	Y	Y	N	Y
8	FE-02-97			1			8	Y	N	N	Y
9	FE-04-97			1			1	Y	N	N	Y
10	FE-05-97			1			11	N	N	Y	Y
11	FE-16-97			1			7	Y	Y	N	Y
12	FE-19-97	1					8	Y	N	N	Y
13	FE-22-97	1					38	N	N	Y	Y
14	FE-32-97			1			1	Y	Y	N	Y
15	FE-02-95			1			3	Y	N	N	Y
16	FE-09-95			1			2	Y	N	N	Y
17	FE-11-95		1				6	N	Y	Y	Y
18	FE-12-95			1			1	Y	Y	N	Y
19	FE-16-95			1			14	Y	Y	N	Y
20	FE-17-95			1			4	Y	N	N	Y
21	FE-18-95		1				5	N	N	Y	Y
22	FE-23-95			1			3	Y	Y	N	Y
23	FE-29-95		1				1	Y	Y	N	Y
24	FE-33-95			1			3	Y	N	N	Y
25	FE-34-95			1			8	Y	N	N	Y
26	FE-02-94			1			6	Y	Y	N	Y
27	FE-03-94		1				6	N	N	Y	Y
28	FE-04-94			1			6	Y	N	N	Y
29	FE-06-94			1			6	N	N	N	Y
30	FE-12-94		1				5	Y	N	N	Y
31	FE-16-94			1			10	Y	Y	N	Y
32	FE-20-94	1					19	N	N	N	Y
33	FE-26-94			1			1	Y	Y	N	Y
34	FE-28-94			1			0				
35	FE-29-94			1			6	Y	Y	N	Y
36	FE-31-94			1			19	N	N	N	Y
37	FE-32-94			1			1	Y	Y	N	Y
38	FE-11-93			1			2	Y	N	N	Y
39	FE-13-93	1					18	N	N	Y	Y
40	FE-20-93						0	N	N	Y	N







	1	135	136	137	138	139	140	141
n	REPORT #	Misinterpreted signal	Proper signals given	Strange signs used	Misinterpreted gestures	Plainly seen signals	Clear signals	Signs past on eng. side
<b>SOFA Matrix</b>								
1	FE-31-96							
2	FE-30-96							
3	FE-24-96							
4	FE-22-96							
5	FE-17-96							
6	FE-12-96							
7	FE-09-96							
8	FE-02-97							
9	FE-04-97							
10	FE-05-97							
11	FE-16-97							
12	FE-19-97							
13	FE-22-97							
14	FE-32-97		Y					
15	FE-02-95							
16	FE-09-95							
17	FE-11-95							
18	FE-12-95							
19	FE-16-95							
20	FE-17-95							
21	FE-18-95							
22	FE-23-95							
23	FE-29-95		Y					
24	FE-33-95							
25	FE-34-95							
26	FE-02-94							
27	FE-03-94							
28	FE-04-94							
29	FE-06-94							
30	FE-12-94	N	Y		N	Y	Y	Y
31	FE-16-94							
32	FE-20-94							
33	FE-26-94							
34	FE-28-94							
35	FE-29-94						N	
36	FE-31-94							
37	FE-32-94							
38	FE-11-93							
39	FE-13-93							
40	FE-20-93							



	1	151	152	153	154	155	156	157	158	159	160
n	REPORT #	Lighting conditions	Daylight	Dawn/Dusk	Night/no-art. lights	Night-artificial lights	Radio	Handset	Chestpack	Remote mic	Waist/belt pack
<b>SOFA Matrix</b>											
1	FE-31-96		Y					Y			
2	FE-30-96				N						
3	FE-24-96										
4	FE-22-96										
5	FE-17-96										
6	FE-12-96		Y						Y		
7	FE-09-96					Y			Y		
8	FE-02-97				Y			Y			
9	FE-04-97		Y			Y	Y	Y			
10	FE-05-97					Y		Y			
11	FE-16-97			Y				Y			
12	FE-19-97				Y			Y			
13	FE-22-97				Y						
14	FE-32-97					Y					
15	FE-02-95						Y	Y			
16	FE-09-95						Y				
17	FE-11-95										
18	FE-12-95						Y				
19	FE-16-95						Y				
20	FE-17-95						Y				
21	FE-18-95						Y	Y	Y		
22	FE-23-95						Y	Y			
23	FE-29-95				Y		Y				
24	FE-33-95					Y	Y	Y	Y	Y	
25	FE-34-95						Y	Y			
26	FE-02-94				Y		Y	Y			
27	FE-03-94						Y	Y			Y
28	FE-04-94						Y				
29	FE-06-94					Y	Y	Y			
30	FE-12-94		Y				Y	Y			
31	FE-16-94						Y				
32	FE-20-94										
33	FE-26-94						Y	Y			
34	FE-28-94						Y	Y			
35	FE-29-94						Y	Y			
36	FE-31-94						Y				
37	FE-32-94						Y	Y			Y
38	FE-11-93						Y	Y			
39	FE-13-93						Y	Y			
40	FE-20-93						Y	Y			



	1	161	162	163	164	165
n	REPORT #	Loco mounted	Radio over hand signs	Know when radio is to be used	Know radio to be used only	Inst. given for each movement
	<b>SOFA Matrix</b>					
1	FE-31-96			Y		
2	FE-30-96					
3	FE-24-96					
4	FE-22-96					
5	FE-17-96					
6	FE-12-96		N	Y		Y
7	FE-09-96		Y			Y
8	FE-02-97		N	Y		Y
9	FE-04-97		N	N		N
10	FE-05-97		N	N		N
11	FE-16-97		N	Y		Y
12	FE-19-97		D	Y		Y
13	FE-22-97					
14	FE-32-97					
15	FE-02-95					
16	FE-09-95		Y	Y	N	N
17	FE-11-95					
18	FE-12-95					Y
19	FE-16-95					Y
20	FE-17-95			Y	Y	Y
21	FE-18-95					Y
22	FE-23-95			Y		
23	FE-29-95					Y
24	FE-33-95		N	Y		
25	FE-34-95					
26	FE-02-94					
27	FE-03-94		N			
28	FE-04-94					
29	FE-06-94					
30	FE-12-94					
31	FE-16-94					
32	FE-20-94					
33	FE-26-94					Y
34	FE-28-94					
35	FE-29-94		Y	N		N
36	FE-31-94		Y			
37	FE-32-94					Y
38	FE-11-93		N			
39	FE-13-93					
40	FE-20-93					



	1	174	175	176	177	178	179	180
n	REPORT #	Incomp/misundrst com acted on	Radio Sig acknowledged	Stopped 1/2 dist when sig lost	Radio tested prior	Radio failure	Radio & Hand	Proper channel
<b>SOFA Matrix</b>								
1	FE-31-96	N	Y			Y		Y
2	FE-30-96							Y
3	FE-24-96							
4	FE-22-96							
5	FE-17-96							
6	FE-12-96	N	Y					Y
7	FE-09-96	N						Y
8	FE-02-97	N						Y
9	FE-04-97	Y	N	N			Y	Y
10	FE-05-97	N						N
11	FE-16-97			N				Y
12	FE-19-97	N		Y			N	Y
13	FE-22-97							
14	FE-32-97							
15	FE-02-95			Y				
16	FE-09-95							
17	FE-11-95							
18	FE-12-95	N	Y		Y	N		Y
19	FE-16-95			N				Y
20	FE-17-95							
21	FE-18-95							Y
22	FE-23-95							
23	FE-29-95							Y
24	FE-33-95							
25	FE-34-95							Y
26	FE-02-94							Y
27	FE-03-94							Y
28	FE-04-94							
29	FE-06-94							
30	FE-12-94							
31	FE-16-94						Y	
32	FE-20-94							
33	FE-26-94							
34	FE-28-94							
35	FE-29-94			N			Y	Y
36	FE-31-94	Y	N	N	Y	N	N	Y
37	FE-32-94	N				N	N	Y
38	FE-11-93							Y
39	FE-13-93							Y
40	FE-20-93							

	1	181	182	183	184	185	186	187
n	REPORT #	Radio Procedures	Radio clear	Cont. operable	ER	ER proceds. follows	ER timely	Other factors
	<b>SOFA Matrix</b>							
1	FE-31-96	N	Y	Y	Y	Y	Y	
2	FE-30-96	Y	Y	Y		Y	Y	
3	FE-24-96							
4	FE-22-96				Y	Y	Y	
5	FE-17-96				Y	Y	Y	
6	FE-12-96	Y	Y	Y	Y	Y	Y	
7	FE-09-96		Y	Y	Y	Y	Y	
8	FE-02-97							Lost hand hold
9	FE-04-97	N	N			Y	Y	
10	FE-05-97					Y	Y	Ejected off-slack
11	FE-16-97	N		N				
12	FE-19-97	Y	Y	Y				
13	FE-22-97							FE failed to stay clear of movent
14	FE-32-97							
15	FE-02-95	N	Y	Y	Y		Y	
16	FE-09-95	N	N		Y		Y	Poor Com. about work in progress
17	FE-11-95				Y			ATSF developed gen order for similar situations
18	FE-12-95	Y						Extra engineer, interpreted 'bump' sign with thrtl 8
19	FE-16-95				Y			
20	FE-17-95						Y	Both lower ex's crushed off, bled out at hosp-55 mn
21	FE-18-95				Y		Y	Bleeder lined movement/informed FE of mvmnt
22	FE-23-95				Y		Y	
23	FE-29-95				Y		Y	
24	FE-33-95				Y		Y	Bulky Clothing
25	FE-34-95				Y		Y	FE struck vandilized trailer door
26	FE-02-94				Y			Portable radio unable to contact Dispatcher
27	FE-03-94	Y	Y					BN restricted these cars from being switched
28	FE-04-94				Y		N	Train crew could not raise disp to report injury for 7 min
29	FE-06-94				Y		Y	
30	FE-12-94				Y		Y	7.5" Clearance, co headache
31	FE-16-94				Y		N	EMS, 21 min response time
32	FE-20-94				Y			
33	FE-26-94				Y		Y	
34	FE-28-94				Y		Y	In plant EMS
35	FE-29-94	N			Y		N	Apparent 35 min response time
36	FE-31-94	N			Y		Y	8 min response
37	FE-32-94	Y	Y		Y		N	10 min from cond's call to EMS call
38	FE-11-93				Y		Y	
39	FE-13-93							
40	FE-20-93				Y		Y	H699





	1	2	3	4	5	6	7	8	9		10	11	12	13
n	REPORT #	Railroad	Accident Category	City	State	Date	Day	Time	Temp	Weather	D/N	Visibility	Grnd/Foot	Wind
	<b>SOFA Matrix</b>													
41	FE-22-93	SEPTA		Devon	PA	06/04/1993	6	11:25 PM	70		2	Cld		
42	FE-23-93	IC		Fulton	KY	06/07/1993	2	11:55 AM	87		1	C		
43	FE-26-93	CR		Anderson	IN	07/15/1993	5	5:25 PM	75		1	C		
44	FE-27-93	UP		Pryor	OK	08/04/1993	4	4:45 PM			1	C		
45	FE-30-93	SP		Tracy	CA	08/11/1993	4	11:52 AM			1	C	M	
46	FE-31-93	ATSF		Evandale	TX	08/12/1993	5	1:25 PM	100		1	C		
47	FE-35-93	ATSF		Carlsbad	NM	09/02/1993	5	12:30 PM	88		1	Cld		8
48	FE-40-93	SOO		Leal	ND	10/19/1993	3	8:17 PM	50		2	Cld/R	W	
49	FE-46-93	ATSF		Farewell	TX	11/12/1993	6	6:40 AM			2			
50	FE-47-93	GC		Macon	GA	11/13/1993	7	8:30 AM	50		1	C		
51	FE-49-93	SOU		Atlanta	GA	12/05/1993	1	7:00 AM	55		2	Cld		
52	FE-53-93	CR		Brook Park	OH	12/30/1993	5	9:20 AM			1			
53	FE-03-92	BN		Willmar	MN	01/28/1992	3	5:30 PM			2	C	F	
54	FE-04-92	AGC		Polk County	FL	01/30/1992	5	3:00 PM	75		1	C		
55	FE-08-92	FEC		Fort Pierce	FL	03/11/1992	4	1:15 AM	71		2	Cld	W	
56	FE-09-92	ATSF		Cheto	AZ	04/09/1992	5	2:39 PM			1			
57	FE-14-92	ATSF		Escondido	CA	06/01/1992	2	1:05 PM			1	C		
58	FE-15-92	BN		Seattle	WA	06/01/1992	2	4:15 PM	66		1	PCL		Lite
59	FE-16-92	IHRC		Henderson	KY	06/02/1992	3	5:55 AM			1	C		
60	FE-18-92	CNW		Northlake	IL	06/20/1992	7	11:45 AM	54		1	C		
61	FE-20-92	SSW		Conlen Siding	TX	07/07/1992	3	8:37 AM			1	C		
62	FE-22-92	UP		Portland	OR	07/25/1992	7	11:40 AM	76		1	C		
63	FE-30-92	GBW		Wisconsin	WI	07/24/1992	5	12:40 AM	50		2	C		
64	FE-33-92	BN		Omaha	NE	10/15/1992	5	1:25 AM			2			
65	FE-34-92	GTW		Dearborn	MI	10/23/1992	6	10:00 AM			1			
66	FE-39-92	TTIS		Maysville	KY	11/16/1992	2	6:05 PM	45		2	C		
67	FE-36-97	BNSF		Emporia	KS	12/02/1997	3	7:45 PM	43		2	R		
68	FE-45-97	UP		Boise	ID	12/26/1997	6	5:45 PM	27		2	C		
69	FE-18-97	UP		Portland	OR	06/24/1997	3	4:30 AM	52		2	C		0
70	FE-25-97	UP		Elko	NV	08/15/1997	6	3:30 AM	65		2	C		
71	FE-02-98	BNSF		Omaha	NE	01/24/1998	7	10:15 AM	20		1	Cld	S	
72	FE-05-98	BRC		Bedford Park	IL	02/04/1998	4	5:33 PM	35		1	C		
73	FE-15-98	BRC		Bedford Park	IL	05/26/1998	3	7:33 AM	8		1	Cld		Slr
74	FE-16-98	BNSF		Lubbock	TX	06/01/1998	2	12:30 PM	72		2	C		Clm
75	FE-17-98	NS		Hapeville	GA	06/05/1998	6	6:40 AM			1	Cld		
76	FE-19-98	NS		Buechel	KY	07/01/1998	4	2:50 AM	74		2	C		

	1	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
n	REPORT #	FE Code	Engineer	Conductor	Brakeman	Engineer Frmn	Switchman	Student	Age	Service	Occupation	Rules	Safety	Formal	Informal	
<b>SOFA Matrix</b>																
41	FE-22-93	616							29	6		4	4			
42	FE-23-93	615							49	20		7	31			
43	FE-26-93	615							43	25		4	4			
44	FE-27-93	613							42	18		16	10			
45	FE-30-93	613							47	29		6	3			
46	FE-31-93	613							52	31		3	3			
47	FE-35-93	609							55	24		18	4			
48	FE-40-93	613							43	2	0.25	1	2			
49	FE-46-93	609							41	21	18	1	1			
50	FE-47-93	614							47	1		13	0.3			
51	FE-49-93	608							59	29		9	10			
52	FE-53-93	614							61	38		6	6			
53	FE-03-92	615							57	22	22	11	3			
54	FE-04-92	615							32	0.5	0.5	6				
55	FE-08-92	614							36	16		24	25			
56	FE-09-92	617							54	13		8	8			
57	FE-14-92	609							58	29		9	9			
58	FE-15-92	615							42	22	22	12	7			
59	FE-16-92	608							52	23	1	11	11			
60	FE-18-92	614							42	15		1	3			
61	FE-20-92	618							58	12		22	53			
62	FE-22-92	613							54	28		4	4			
63	FE-30-92	612							34	13	13	17	17			
64	FE-33-92	615							32	14		6	6			
65	FE-34-92	613							49	28		13				
66	FE-39-92	608							35	13		2	2			
67	FE-36-97	608							50	30	19	30	30			
68	FE-45-97	609							55	32		8	8			
69	FE-18-97	614							53	28		24	8			
70	FE-25-97	615							53	28	28	11	12			
71	FE-02-98	614							47	26		22	22			
72	FE-05-98	614							42	23	23	4	4			
73	FE-15-98	614							57	36	6	6	6			
74	FE-16-98	614							24	0.83	0.83	11	11			
75	FE-17-98	614							48	27		4	1			
76	FE-19-98	600							54	30		4	1			



n	1	28	29	30	31	32	33	34	35	36	37	38	39	40
	REPORT #	Exam	Crew Size	Eng. Crew	Train Crew	On Ground	Grd. crew invld.	Possible Cont. Factor (PCF)	PCF	PCF	PCF	PCF	PCF	PCF
<b>SOFA Matrix</b>														
41	FE-22-93	11	2	1	1	0	0	M599						
42	FE-23-93	NR	4	1	3	3	3	H990	H316					
43	FE-26-93	44	3	1	2	2	1	H990	H998	H316	H211			
44	FE-27-93	71	3	1	2	2	2	T222	M411	H998				
45	FE-30-93	NR	5	2	3	2	2	H316	H207	E29C				
46	FE-31-93	1	3	1	2	1	1	H990						
47	FE-35-93	15	5	2	3	3	2	H990	H997	H312				
48	FE-40-93	2	3	1	2	1	1	H303	H996	H318				
49	FE-46-93	15	3	1	2	2	2	H021	H310					
50	FE-47-93	3	3	1	2	2	2	H316	H990					
51	FE-49-93	20	2	1	1	1	1	H990	H399					
52	FE-53-93	7	3	1	2	2	1	T099	M101	H602				
53	FE-03-92	30	3	1	2	3	2	H990	H399					
54	FE-04-92	17	3	1	2	2	2	H316						
55	FE-08-92	199	2	1	1	1	1	T319	E67C					
56	FE-09-92	24	3	1	2	2	2	H602						
57	FE-14-92	13	3	1	2	2	2	H210	H306	H316				
58	FE-15-92	5	4	1	3	3	3	H018	H317					
59	FE-16-92	11	2	1	1	1	1	H018	H990					
60	FE-18-92	28	3	1	2	1	1	H997	H310	H312				
61	FE-20-92	101	2	1	1	2	1	H990						
62	FE-22-92	4	3	1	2	2	1	H990						
63	FE-30-92	36	3	1	2	1	1	H990	M599					
64	FE-33-92	38	3	1	2	2	2	H999	M101					
65	FE-34-92	2	3	1	2	2	2	H997						
66	FE-39-92	7	2	1	1	1	1	H990						
67	FE-36-97	66	3	1	2	2	2	H990						
68	FE-45-97	82	3	1	2	2	2	H990	H316	H211				
69	FE-18-97	38	3	1	2	2	2	H019	H990					
70	FE-25-97	84	3	1	2	2	2	H021	H990					
71	FE-02-98	114	3	1	2	1	1	H605	H399	H702	H101			
72	FE-05-98	88	3	1	2	2	2	H990	M411					
73	FE-15-98	34	3	1	2	2	2	H990	H305	H021	H997			
74	FE-16-98	11	3	1	2	2	1	H307	H302	H996				
75	FE-17-98	187	3	1	2	1	1	H990	H312	H310				
76	FE-19-98	20	3	1	2	2	2	H316	M411					

	1			41	42	43			44	45		46	47		48	49	50
n	REPORT #	Activity:	FE	Act	Event	Local	FE's crew:	Engineer;	Act	Local	Other Trainman	Act	Local	Other crew;	Crew size	Engine Crew	Train Crew
<b>SOFA Matrix</b>																	
41	FE-22-93			62	34	A6						60	A7				
42	FE-23-93			62	64	B7			51	A6		62	A1				
43	FE-26-93			13	59	B7			51	A6		62	X9				
44	FE-27-93			58	21	B8			51	A6		72	A1				
45	FE-30-93			24	59	B8			60	X9	See Other Factors						
46	FE-31-93			62	59	B7			51	A6		72	A6		4	1	3
47	FE-35-93			16	59	B7			58	A6		62	A1				
48	FE-40-93			58	21	B6			51	A6		58	A6				
49	FE-46-93			58	59	B6			51	A6		58	B6				
50	FE-47-93				59	B7			51	A6		62	A1				
51	FE-49-93			25	59	A4			51	A6					2	1	1
52	FE-53-93			58	21	B6			51	A6		58	A6				
53	FE-03-92			72	59	B7			51	A6		58	A6				
54	FE-04-92			24	35	C6			51	A6		58	C6				
55	FE-08-92			58	21	A1			51	A6							
56	FE-09-92			50	59	A1			51	A6		62	A1				
57	FE-14-92			9	64	A5			51	A6		62	A1				
58	FE-15-92			58	17	B8			51	A6		58	B6				
59	FE-16-92			59	59	B7			51	A6							
60	FE-18-92			2	20	B7			51	A6		58	A6				
61	FE-20-92			72	59	A4						62	A1		21	1	1
62	FE-22-92			72	59	A4			51	A6		62	A1				
63	FE-30-92			13	59	B7			60	X9		58	A6		3	1	2
64	FE-33-92			99	9	X9			51	A6		62	A1				
65	FE-34-92			62	17	A4			51	A6		62	A1				
66	FE-39-92			62	17	A5			51	A6							
67	FE-36-97			62	59	A4			51	A6					2	1	1
68	FE-45-97			50	64	B7			51	A6		62	A1				
69	FE-18-97			72	59	A1			51	A6		62	A1				
70	FE-25-97			2	64	A5			51	A6		62	A1				
71	FE-02-98			45	58	A3			51	A6		62	A6		3	1	2
72	FE-05-98			62	64	A4			51	A6		62	A1				
73	FE-15-98			2	64	B7			51	A6		58	A6				
74	FE-16-98			58	17	C6			51	A6		45	A3		3	1	2
75	FE-17-98			2	17	A4			51	A6		58	A6				
76	FE-19-98			58	99	B6			51	A6		72	C2				

	1	51	52	53	54	55
n	REPORT #	Crew/Ground	Grnd crew invld	Cause Code	FE crew's next move	External Circmst.
<b>SOFA Matrix</b>						
41	FE-22-93				Stop at Station	
42	FE-23-93				Switch Cars	X-car-/list chng
43	FE-26-93				CO Engine	
44	FE-27-93				Couple	
45	FE-30-93				Shove to Yard	H318
46	FE-31-93	2	2	H306	Make Cut	H317
47	FE-35-93				Couple	H999
48	FE-40-93				Make Joint	
49	FE-46-93				Spot Car	H101
50	FE-47-93				Pull Another Track	TM Assisted Crew
51	FE-49-93	1	1	H399	Line Switch	T099
52	FE-53-93				Spot Car	Others Assisted Crew
53	FE-03-92				Engine to two track	Heavy Clothing, Hood(s)
54	FE-04-92				Wye Engine	Board/disbaord wrong side
55	FE-08-92				Couple	Track Conditions
56	FE-09-92				Couple to train	T099
57	FE-14-92				Couple to car	
58	FE-15-92				Shove to Clear	H399
59	FE-16-92				Spot Car	
60	FE-18-92				Couple track	M411
61	FE-20-92	0	0	None	Depart Siding	Noise from FE's Locos
62	FE-22-92				Return to other end of yard	Engineer didn't change ends
63	FE-30-92	2	2	H305		Improper mingeling of crews members
64	FE-33-92				Spot load at pit	
65	FE-34-92				Line-up Car	Unsafe commonly accepted operational practice
66	FE-39-92				Replace Knuckle	Jammed Knuckle pin
67	FE-36-97	0	0	None	Couple Train	
68	FE-45-97				Uncouple cars to spot	Grade x-ing placement
69	FE-18-97				Back To Coupling	
70	FE-25-97				Couple Track	Yard Track Grade
71	FE-02-98			H399	Go to industry	
72	FE-05-98				Couple Track	Track Centerline at 13 feet
73	FE-15-98				Couple Track	
74	FE-16-98			H021	Run around yard	
75	FE-17-98				Spot Car	No Devise to asst. aligning drawbar
76	FE-19-98				Switch Cars	Illegal Handrail

	1	56		57	58	59	60	61
n	REPORT #	Poss. Cont. Factors	Work/rest:	Duty/30 days	FE's last tour	Time off b/4 shift	Time FE on duty b/4 incident	FE regular job
<b>SOFA Matrix</b>								
41	FE-22-93						0.340277778	Y
42	FE-23-93	H305				16	0.184027778	
43	FE-26-93						0.059027778	N
44	FE-27-93						0.28125	
45	FE-30-93	M199				13	0.119444444	N
46	FE-31-93	H399					0.142361111	
47	FE-35-93						0.083333333	
48	FE-40-93						0.240972222	N
49	FE-46-93						0.246527778	
50	FE-47-93	H399					0.020833333	
51	FE-49-93				0.317361111	23	0.135416667	N
52	FE-53-93						0.05625	
53	FE-03-92	Radio Conversation w/2nd crew					0.083333333	Y
54	FE-04-92	H996					0.006944444	Y
55	FE-08-92					72	0.260416667	N
56	FE-09-92	H399					0.19375	
57	FE-14-92						0.253472222	Y
58	FE-15-92						0.03125	
59	FE-16-92						0.434027778	
60	FE-18-92	Use of wood chalks & descending grade of yard					0.322916667	Y
61	FE-20-92	M404					0.025694444	
62	FE-22-92	Hand Switch Confusion					0.194444444	Y
63	FE-30-92	No on-going job briefing					0.152777778	
64	FE-33-92						0.079861111	Y
65	FE-34-92						0.104166667	Y
66	FE-39-92	Track curve/broken knuckle					0.170138889	Y
67	FE-36-97					2.951388889	0.40625	Y
68	FE-45-97						0.395833333	Y
69	FE-18-97						0.188194444	
70	FE-25-97					16	0.146527778	Y
71	FE-02-98	H305				2	0.114583333	
72	FE-05-98						0.127083333	Y
73	FE-15-98			23 days	8	16	0.04375	Y
74	FE-16-98	History of track roll outs					0.416666667	N
75	FE-17-98	2 Super cushioned cars		26	8	48	0.278472222	Y
76	FE-19-98				8	16	0.11875	Y





	1	96	97	98	99	100	101	102	103	104	105
n	REPORT #	Disp.	YM	Cond/Eng-Frmn.	TM	Other	Eqpmnt. speed	Struck by own eqpmnt?	Was FE between	FE struck by other crew	FE result of train mvmt
<b>SOFA Matrix</b>											
41	FE-22-93	1					51	N	N	N	Y
42	FE-23-93		1				1	Y	N	N	Y
43	FE-26-93		1				4	Y	Y	N	Y
44	FE-27-93			1			6	Y	N	N	Y
45	FE-30-93			1			5	Y		N	Y
46	FE-31-93			1			5	N	N	Y	Y
47	FE-35-93			1			3	Y	Y	N	Y
48	FE-40-93	1					10	Y	N	N	Y
49	FE-46-93			1			4	Y	N	N	Y
50	FE-47-93			1			1	Y		N	Y
51	FE-49-93	1					2	N	N	Y	Y
52	FE-53-93			1			8	Y	N	N	Y
53	FE-03-92		1				4	Y	N	N	Y
54	FE-04-92					1	5	Y	N	N	Y
55	FE-08-92		1				5	Y	N	N	Y
56	FE-09-92			1			10	Y	N	N	Y
57	FE-14-92			1			5	Y	Y	N	Y
58	FE-15-92		1				5	Y			Y
59	FE-16-92			1			1	Y	N	N	Y
60	FE-18-92		1				1	Y	Y	N	Y
61	FE-20-92	1					60	N	N	Y	Y
62	FE-22-92		1				3	Y	N		Y
63	FE-30-92			1			1	N	Y	Y	Y
64	FE-33-92			1			0	N	N	N	N
65	FE-34-92		1				1	Y	Y	N	Y
66	FE-39-92			1			1	Y	Y	N	Y
67	FE-36-97	1					54	N	N	Y	Y
68	FE-45-97			1			3	Y	Y	N	Y
69	FE-18-97		1				5	Y	Y	N	Y
70	FE-25-97			1			1	Y	Y	N	N
71	FE-02-98		1				9	N	N	N	Y
72	FE-05-98		1				1	N	N	N	N
73	FE-15-98		1				1	Y	Y	N	N
74	FE-16-98			1			7	N	N		
75	FE-17-98			1			1	Y	Y		Y
76	FE-19-98			1			3		N	N	Y

	1	106	107	108	109	110	111	112	113	114
n	REPORT #	Mvmnt pulled	Mvmnt shoved	Mvmnt free-running	FE riding side	Leading end	Trailing end	FE riding end	Mvmnts near	On same track
<b>SOFA Matrix</b>										
41	FE-22-93	Y								
42	FE-23-93	N	N	Y					Y	Y
43	FE-26-93	N	Y	N						
44	FE-27-93	N	Y	N				Y	N	
45	FE-30-93	N	Y	N						
46	FE-31-93	N	Y	N					Y	N
47	FE-35-93	N	Y	N						
48	FE-40-93	N	Y	N	Y	Y			N	
49	FE-46-93	N	Y	N	Y	Y			N	
50	FE-47-93								N	
51	FE-49-93	Y							Y	N
52	FE-53-93	N	Y	N	Y	Y			N	
53	FE-03-92		Y	Y					Y	
54	FE-04-92	Y					Y		N	
55	FE-08-92	N	Y	N	Y	Y			N	
56	FE-09-92	N	N	Y	Y	Y			N	
57	FE-14-92	N	N	Y					N	
58	FE-15-92			Y				Y	N	
59	FE-16-92			Y					N	
60	FE-18-92			Y						
61	FE-20-92	Y							Y	N
62	FE-22-92		Y						N	
63	FE-30-92			Y						
64	FE-33-92									
65	FE-34-92		Y							
66	FE-39-92		Y							
67	FE-36-97	Y							Y	
68	FE-45-97		Y						N	
69	FE-18-97	Y								
70	FE-25-97			Y						
71	FE-02-98	Y								
72	FE-05-98			Y					Y	
73	FE-15-98			Y						
74	FE-16-98				Y	Y				
75	FE-17-98		Y							
76	FE-19-98	Y			Y					



	1	115	116	117	118	119	120	121	122	123	124	125	126
n	REPORT #	On adjacent tracks	FE worked here b/4	Autopsy	Behavioral displays	Prescript meds	Drugs a factor	Drugs present	FE - PPE	Ears	Eyes	Feet	Hard hat
<b>SOFA Matrix</b>													
41	FE-22-93		Y	Y			N	N					
42	FE-23-93	Y		Y			N	N					
43	FE-26-93		Y	Y			N	N				Y	
44	FE-27-93			N			N	N					
45	FE-30-93		Y	N			N	N					
46	FE-31-93	Y					N	N					
47	FE-35-93			Y			N	N					
48	FE-40-93			N			N	N					
49	FE-46-93			N			Y	Y					
50	FE-47-93			Y			N	N					
51	FE-49-93	Y	Y	Y			N	N			Y	Y	
52	FE-53-93		Y	Y			N	N					
53	FE-03-92		Y	Y			N	N					
54	FE-04-92		Y	Y			N	N					
55	FE-08-92		N	Y			N	N				Y	
56	FE-09-92			Y			N	N				Y	
57	FE-14-92		Y	Y			N	N					
58	FE-15-92			Y			N	N				Y	
59	FE-16-92			Y			N	N					
60	FE-18-92		Y	Y			N	N					
61	FE-20-92	Y	Y	Y			N	N					
62	FE-22-92		Y	Y			N	N					
63	FE-30-92			Y			N	N					
64	FE-33-92		Y	Y			N	N					
65	FE-34-92		Y	Y			N	N					
66	FE-39-92		Y	Y			N	N					
67	FE-36-97		Y	Y			N	N		Y			
68	FE-45-97		Y	Y			N	N					
69	FE-18-97		Y	Y		N	N	N			Y	Y	
70	FE-25-97		Y										
71	FE-02-98			Y				Y				Y	
72	FE-05-98	Y	Y				N	N					
73	FE-15-98		Y	Y			N	N				Y	
74	FE-16-98			Y			N	N				Y	
75	FE-17-98		Y	Y			N	N			Y	Y	
76	FE-19-98		Y	Y			N	N		Y	Y	Y	



	1	135	136	137	138	139	140	141
n	REPORT #	Misinterpreted signal	Proper signals given	Strange signs used	Misinterpreted gestures	Plainly seen signals	Clear signals	Signs past on eng. side
<b>SOFA Matrix</b>								
41	FE-22-93							
42	FE-23-93							
43	FE-26-93							
44	FE-27-93							
45	FE-30-93	Y						Y
46	FE-31-93							
47	FE-35-93							
48	FE-40-93							
49	FE-46-93	N	Y				Y	Y
50	FE-47-93							
51	FE-49-93							
52	FE-53-93							
53	FE-03-92							
54	FE-04-92							
55	FE-08-92							
56	FE-09-92		Y					
57	FE-14-92							
58	FE-15-92							
59	FE-16-92							
60	FE-18-92							
61	FE-20-92							
62	FE-22-92							
63	FE-30-92							
64	FE-33-92							
65	FE-34-92							
66	FE-39-92							
67	FE-36-97							
68	FE-45-97							
69	FE-18-97							
70	FE-25-97							
71	FE-02-98							
72	FE-05-98							
73	FE-15-98							
74	FE-16-98							
75	FE-17-98							
76	FE-19-98							



	1	151	152	153	154	155	156	157	158	159	160
n	REPORT #	Lighting conditions	Daylight	Dawn/Dusk	Night/no-art. lights	Night-artificial lights	Radio	Handset	Chestpack	Remote mic	Waist/belt pack
<b>SOFA Matrix</b>											
41	FE-22-93										
42	FE-23-93						Y	Y			
43	FE-26-93						Y	Y			
44	FE-27-93						Y	Y			
45	FE-30-93						Y	Y			
46	FE-31-93										
47	FE-35-93						Y	Y			
48	FE-40-93						Y	Y			
49	FE-46-93			Y			Y	Y			
50	FE-47-93						Y	Y	Y		
51	FE-49-93						Y				
52	FE-53-93						Y	Y			
53	FE-03-92						Y	Y			
54	FE-04-92										
55	FE-08-92						Y	Y	Y		
56	FE-09-92						Y	Y			
57	FE-14-92						Y	Y			
58	FE-15-92										
59	FE-16-92										
60	FE-18-92						Y	Y	Y		
61	FE-20-92										
62	FE-22-92						Y	Y			
63	FE-30-92						Y	Y	Y		
64	FE-33-92						Y	Y			
65	FE-34-92						Y	Y			
66	FE-39-92						Y	Y			
67	FE-36-97						Y	Y			
68	FE-45-97						Y	Y			
69	FE-18-97					Y	Y	Y			
70	FE-25-97						Y	Y			
71	FE-02-98						Y				
72	FE-05-98					Y	Y	Y			
73	FE-15-98					N	Y	Y			
74	FE-16-98						Y	Y			
75	FE-17-98						Y	Y			
76	FE-19-98						Y	Y			

	1	161	162	163	164	165
n	REPORT #	Loco mounted	Radio over hand signs	Know when radio is to be used	Know radio to be used only	Inst. given for each movement
	<b>SOFA Matrix</b>					
41	FE-22-93					
42	FE-23-93					
43	FE-26-93	Y				
44	FE-27-93					
45	FE-30-93	Y				
46	FE-31-93					
47	FE-35-93		Y			
48	FE-40-93					
49	FE-46-93					
50	FE-47-93					
51	FE-49-93					
52	FE-53-93	Y	Y			
53	FE-03-92		Y			
54	FE-04-92					
55	FE-08-92					
56	FE-09-92					
57	FE-14-92		Y			
58	FE-15-92					
59	FE-16-92					
60	FE-18-92					
61	FE-20-92					
62	FE-22-92		Y			
63	FE-30-92					
64	FE-33-92					
65	FE-34-92		Y			
66	FE-39-92		N			
67	FE-36-97					
68	FE-45-97		N			
69	FE-18-97	Y	N	Y		
70	FE-25-97	Y	N			
71	FE-02-98					
72	FE-05-98					
73	FE-15-98					
74	FE-16-98					
75	FE-17-98					
76	FE-19-98					



	1	174	175	176	177	178	179	180
n	REPORT #	Incomp/misundrst com acted on	Radio Sig acknowledged	Stopped 1/2 dist when sig lost	Radio tested prior	Radio failure	Radio & Hand	Proper channel
<b>SOFA Matrix</b>								
41	FE-22-93							
42	FE-23-93						N	
43	FE-26-93			Y				
44	FE-27-93							
45	FE-30-93						Y	
46	FE-31-93							
47	FE-35-93				Y			
48	FE-40-93							
49	FE-46-93						Y	
50	FE-47-93							
51	FE-49-93					N		
52	FE-53-93							
53	FE-03-92						Y	
54	FE-04-92							
55	FE-08-92							
56	FE-09-92						N	
57	FE-14-92			N				
58	FE-15-92							
59	FE-16-92							
60	FE-18-92							
61	FE-20-92							
62	FE-22-92	Y						
63	FE-30-92							
64	FE-33-92							
65	FE-34-92							
66	FE-39-92							
67	FE-36-97							
68	FE-45-97							
69	FE-18-97	N						
70	FE-25-97	N						
71	FE-02-98							
72	FE-05-98							
73	FE-15-98							
74	FE-16-98							
75	FE-17-98							
76	FE-19-98							



	1	181	182	183	184	185	186	187
n	REPORT #	Radio Procedures	Radio clear	Cont. operable	ER	ER proceds. follows	ER timely	Other factors
	<b>SOFA Matrix</b>							
41	FE-22-93				Y		Y	Fell from control cab
42	FE-23-93				Y		Y	xtra car in train, not on list
43	FE-26-93				Y		Y	S012
44	FE-27-93				Y		N	45 Min EMS Respponse
45	FE-30-93				Y		Y	51, A6 - Co-Engineer/60,X9 - 2nd bkmn yard office
46	FE-31-93				Y			
47	FE-35-93			Y	Y		Y	
48	FE-40-93				Y		Y	
49	FE-46-93							19 nanograms/ml THC, 97 nanogram/ml THCA
50	FE-47-93							
51	FE-49-93				Y			
52	FE-53-93				Y		Y	H318
53	FE-03-92				Y			Walking backwards while watching other track
54	FE-04-92				Y		Y	FE 5'2" / 155-160#
55	FE-08-92				Y		Y	Appeared to De-train b4 impact
56	FE-09-92				Y			
57	FE-14-92				Y			
58	FE-15-92				Y			
59	FE-16-92				Y		Y	Failed to use air properly
60	FE-18-92				Y		Y	Dangerous Standard Operating Practice
61	FE-20-92							
62	FE-22-92				Y		N	
63	FE-30-92				Y			
64	FE-33-92				Y		Y	
65	FE-34-92				Y		Y	
66	FE-39-92				Y		Y	
67	FE-36-97				Y		Y	
68	FE-45-97				Y		Y	
69	FE-18-97				Y		Y	
70	FE-25-97				Y		N	40 min unaccount for in ER
71	FE-02-98				Y		Y	
72	FE-05-98				Y			Incomplete information on ER
73	FE-15-98				Y			Inccomplete (20 min delay?) info on ER
74	FE-16-98				Y		N	RR Emergency Radio Channels x2, no response
75	FE-17-98				Y			Incomplete information on ER
76	FE-19-98				Y		Y	





# SOFA WORKING GROUP

## Section II:

### Charts and Tables

Used by the SOFA Working Group

# SOFA WORKING GROUP

FEs

organized by

Geographic Location

Group 1

### FEs by State and City

State	City	REPORT #	Date	Day	Time	Railroad
AK	Clear Site	FE-20-94	09/20/94	3	7:19 PM	ARR
AZ	Cheto	FE-09-92	04/09/92	5	2:39 PM	ATSF
CA	Bassett	FE-17-95	03/21/95	6	8:40 AM	SP
CA	Escondido	FE-14-92	06/01/92	2	1:05 PM	ATSF
CA	Guadalupe	FE-11-93	03/27/93	7	12:30 PM	SP
CA	S Fontana	FE-02-97	01/12/97	1	10:15 PM	UP
CA	Thorton	FE-32-94	12/13/94	3	12:01 AM	UP
CA	Tracy	FE-30-93	08/11/93	4	11:52 AM	SP
CT	Stamford	FE-22-97	07/18/97	6	1:29 AM	MNCW
FL	Fort Pierce	FE-08-92	03/11/92	4	1:15 AM	FEC
FL	Polk County	FE-04-92	01/30/92	5	3:00 PM	AGC
GA	Atlanta	FE-49-93	12/05/93	1	7:00 AM	SOU
GA	Bainbridge	FE-04-94	01/18/94	3	6:10 PM	CSXT
GA	Macon	FE-47-93	11/13/93	7	8:30 AM	GC
IA	Clinton	FE-30-96	12/16/96	2	8:40 PM	UP
IA	Mason City	FE-04-97	01/29/97	4	12:55 PM	UP
ID	Boise	FE-45-97	12/26/97	6	5:45 PM	UP
ID	Sidney	FE-17-96	07/07/96	1	1:08 AM	NS
IL	Bedford Park	FE-09-96	03/20/96	4	11:25 PM	BRC
IL	Chicago	FE-31-96	12/18/96	4	11:40 AM	IC
IL	Northlake	FE-18-92	06/20/92	7	11:45 AM	CNW
IL	Riverdale	FE-29-95	10/04/95	4	12:40 AM	CSXT
IN	Anderson	FE-26-93	07/15/93	5	5:25 PM	CR
IN	Burns Harbor	FE-05-97	02/02/97	1	9:55 PM	CR
IN	Evansville	FE-18-95	05/03/95	4	5:55 PM	CSXT
IN	Indianapolis	FE-02-95	01/11/95	4	11:30 PM	CR
KS	Emporia	FE-36-97	12/02/97	3	7:45 PM	BNSF

### FEs by State and City

State	City	REPORT #	Date	Day	Time	Railroad
KY	Dwale	FE-13-93	04/13/93	3	6:40 PM	CSX
KY	Fulton	FE-23-93	06/07/93	2	11:55 AM	IC
KY	Henderson	FE-16-92	06/02/92	3	5:55 AM	IHRC
KY	Maysville	FE-39-92	11/16/92	2	6:05 PM	TTIS
LA	Donaldsonville	FE-26-94	10/17/94	2	12:30 PM	UP
MI	Bay City	FE-16-97	06/06/97	6	9:35 PM	CMRC
MI	Dearborn	FE-34-92	10/23/92	6	10:00 AM	GTW
MN	Willmar	FE-03-92	01/28/92	3	5:30 PM	BN
MT	Essex	FE-16-94	07/05/94	3	4:45 PM	BN
MT	Laurel	FE-32-97	10/16/97	5	10:20 PM	MRL
NC	Charlotte	FE-12-96	06/15/96	4	8:30 AM	CSX
NC	Monroe	FE-34-95	12/14/95	5	4:30 AM	CSXT
ND	Leal	FE-40-93	10/19/93	3	8:17 PM	SOO
NE	Fall City	FE-06-94	01/20/94	5	8:00 PM	UP
NE	Hastings	FE-02-94	01/04/94	3	7:00 PM	BN
NE	Omaha	FE-33-92	10/15/92	5	1:25 AM	BN
NM	Carlsbad	FE-35-93	09/02/93	5	12:30 PM	ATSF
NY	Campbell Hall	FE-31-94	12/06/94	3	2:52 AM	CR
NY	Painted Post	FE-29-94	11/15/94	3	9:35 AM	CR
OH	Brook Park	FE-53-93	12/30/93	5	9:20 AM	CR
OH	St. James	FE-09-95	02/17/95	6	11:15 AM	CR
OH	Toledo	FE-33-95	12/11/95	2	6:25 PM	NS
OK	Pryor	FE-27-93	08/04/93	4	4:45 PM	UP
OR	Portland	FE-22-92	07/25/92	7	11:40 AM	UP

### FEs by State and City

<b>State</b>	<b>City</b>	<b>REPORT #</b>	<b>Date</b>	<b>Day</b>	<b>Time</b>	<b>Railroad</b>
PA	Devon	FE-22-93	06/04/93	6	11:25 PM	SEPTA
PA	Hershey	FE-23-95	07/21/95	6	9:10 AM	CR
SC	Aiken	FE-12-95	03/02/95	5	9:44 AM	NS
SC	Rowesville	FE-19-97	06/24/97	3	8:58 PM	NS
TX	Amarillo	FE-11-95	02/24/95	6	9:45 AM	ATSF
TX	Amarillo	FE-03-94	01/14/94	6	11:15 AM	BN
TX	Conlen Siding	FE-20-92	07/07/92	3	8:37 AM	SSW
TX	Dallas	FE-22-96	09/03/96	3	6:30 PM	DGNO
TX	Eagle Pass	FE-24-96	10/07/96	2	8:48 PM	UP
TX	El Paso	FE-20-93	05/22/93	7	10:30 AM	ATSF
TX	Evandale	FE-31-93	08/12/93	5	1:25 PM	ATSF
TX	Farewell	FE-46-93	11/12/93	6	6:40 AM	ATSF
TX	Houston	FE-28-94	11/10/94	5	4:15 AM	PTRA
TX	Houston	FE-12-94	04/12/94	3	7:45 AM	SP
WA	Seattle	FE-15-92	06/01/92	2	4:15 PM	BN
WI	Argoe	FE-16-95	04/06/95	5	1:56 AM	WC
WI	Wisconsin	FE-30-92	07/24/92	5	12:40 AM	GBW



### FEs by State

state	total FEs	freight railroad employees 1997 *	railroad mileage operated in each state **	railroads
AL		3,875	3,149	
AK	1	303	0	ARR
AZ	1	2,398	1,333	ATSF
AR		4,058	2,781	
CA	6	10,625	5,559	2 SP, ATSF, SP, 2 UP,
CO		4,264	3,274	
CT	1	145	70	MNCW
DE		298	235	
DC		11	32	
FL	2	6,589	1,899	FEC, AGC
GA	3	6,843	3,576	SOU, CSXT, GC
HI		1	0	
ID	2	1,800	1,482	UP, NS
IL	4	14,418	8,092	BRC, IC, CNW, CSXT
IN	4	5,790	3,635	3 CR, CSXT
IA	2	4,344	2,507	2 UP
KS	1	6,847	4,174	BNSF
KY	4	4,917	2,436	CSX, IC, IHRC, TTIS
LA	1	3,288	2,682	UP
ME		864	0	
MD		2,004	768	
MA		806	470	
MI	2	5,208	2,248	CMRC, GTW
MN	1	5,861	3,846	BN
MS		1,981	2,183	
MO		7,692	3,879	
MT	2	3,003	2,261	BN, MRL
NE	3	10,012	2,852	UP, 2 BN
NV		754	1,916	
NH		247	0	
NJ		1,713	964	
NM	1	1,720	2,250	ATSF
NY	2	3,183	2,240	2 CR

### FEs by State

state	total FEs	freight railroad employees 1997 *	railroad mileage operated in each state **	railroads
NC	2	2,697	2,595	CSX, CSXT
ND	1	1,898	2,716	SOO
OH	3	8,996	4,179	2 CR, NS
OK	1	1,828	2,811	UP
OR	1	2,595	1,948	UP
PA	2	10,282	3,358	SEPTA, CR
RI		69	0	
SC	2	1,840	2,144	2 NS
SD		785	1,013	
TN		4,605	2,347	
TX	10	15,249	11,409	4 ATSF, BN, SSW, DGNO,
UT		2,120	1,802	
VT		213	0	
VA		6,903	3,205	
WA	1	4,471	2,488	BN
WV		3,289	2,374	
WI	2	4,107	1,880	WC, GBW
WY		2908	2,013	
totals	68	200,717	121,075	

\* Active freight railroad contributors to the Railroad Retirement system. From AAR (1997).

\*\* Railroad mileage operated in each state by Class I's.

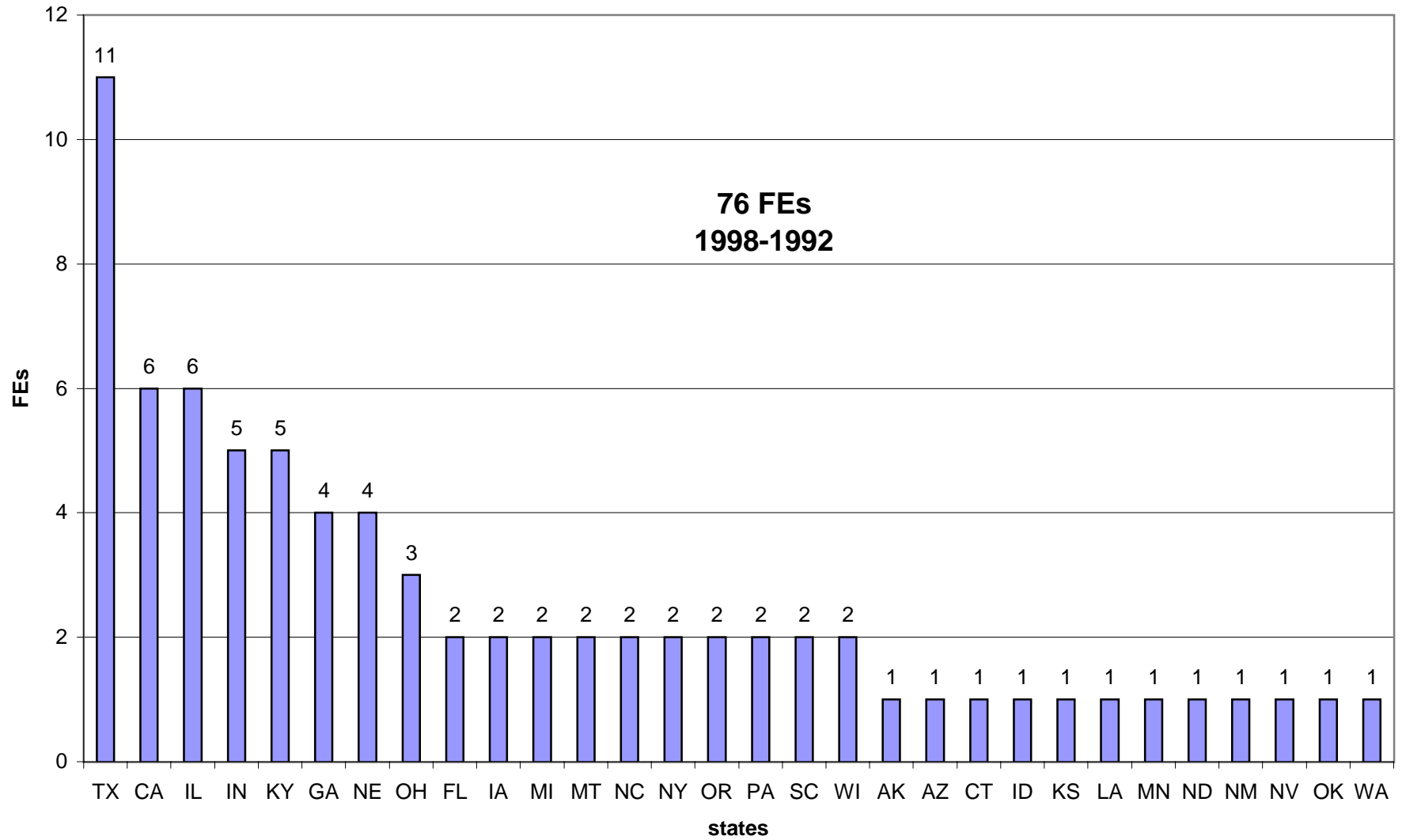
There are 49,615 non-Class I's and 1,492 miles operated by Canadian RRs.

Mileage operated is more than amount of track owned because of trackage rights.

### FEs by State, 1991 - 1975

state	count	%
IL	30	8.7%
OH	27	7.8%
TX	24	7.0%
PA	18	5.2%
CA	16	4.6%
VA	16	4.6%
NY	12	3.5%
NJ	12	3.5%
MI	12	3.5%
IN	12	3.5%
MN	11	3.2%
KS	10	2.9%
WV	9	2.6%
WI	8	2.3%
NC	8	2.3%
MO	8	2.3%
MD	8	2.3%
KT	8	2.3%
IA	7	2.0%
GA	7	2.0%
FL	7	2.0%
WY	6	1.7%
LA	6	1.7%
ID	6	1.7%
AR	6	1.7%
TN	5	1.4%
OR	5	1.4%
MS	5	1.4%
OK	4	
MT	4	
AL	4	
ND	3	
MA	3	
CO	3	
WA	2	
UT	2	
NM	2	
NE	2	
SD	1	
SC	1	
NV	1	
KY	1	
DC	1	
CT	1	
AZ	1	

### FEs by Sate



**FEs by State**

<b>FEs count</b>	<b>State</b>	<b>RR</b>	<b>Day</b>	<b>Time</b>	<b>Date</b>
1	AK	ARR	Tues	7:19 PM	09/20/1994
1	AZ	ATSF	Thurs	2:39 PM	04/09/1992
	CA	ATSF	Mon	1:05 PM	06/01/1992
	CA	SP	Fri	8:40 AM	03/21/1995
	CA	SP	Sat	12:30 PM	03/27/1993
	CA	SP	Wed	11:52 AM	08/11/1993
	CA	UP	Sun	10:15 PM	01/12/1997
6	CA	UP	Tues	12:01 AM	12/13/1994
1	CT	MNCW	Fri	1:29 AM	07/18/1997
	FL	AGC	Thurs	3:00 PM	01/30/1992
2	FL	FEC	Wed	1:15 AM	03/11/1992
	GA	CSXT	Tues	6:10 PM	01/18/1994
	GA	GC	Sat	8:30 AM	11/13/1993
	GA	NS	Fri	6:40 AM	06/05/1998
4	GA	SOU	Sun	7:00 AM	12/05/1993
	IA	UP	Mon	8:40 PM	12/16/1996
2	IA	UP	Wed	12:55 PM	01/29/1997
1	ID	UP	Fri	5:45 PM	12/26/1997
	IL	BRC	Tues	7:33 AM	05/26/1998
	IL	BRC	Wed	11:25 PM	03/20/1996
	IL	BRC	Wed	5:33 PM	02/04/1998
	IL	CNW	Sat	11:45 AM	06/20/1992
	IL	CSXT	Wed	12:40 AM	10/04/1995
6	IL	IC	Wed	11:40 AM	12/18/1996

**FEs by State**

<b>FEs count</b>	<b>State</b>	<b>RR</b>	<b>Day</b>	<b>Time</b>	<b>Date</b>
	IN	CR	Sun	9:55 PM	02/02/1997
	IN	CR	Thurs	5:25 PM	07/15/1993
	IN	CR	Wed	11:30 PM	01/11/1995
	IN	CSXT	Wed	5:55 PM	05/03/1995
5	IN	NS	Sun	1:08 AM	07/07/1996
1	KS	BNSF	Tues	7:45 PM	12/02/1997
	KY	CSX	Tues	6:40 PM	04/13/1993
	KY	IC	Mon	11:55 AM	06/07/1993
	KY	IHRC	Tues	5:55 AM	06/02/1992
	KY	NS	Wed	2:50 AM	07/01/1998
5	KY	TTIS	Mon	6:05 PM	11/16/1992
1	LA	UP	Mon	12:30 PM	10/17/1994
	MI	CMRC	Fri	9:35 PM	06/06/1997
2	MI	GTW	Fri	10:00 AM	10/23/1992
1	MN	BN	Tues	5:30 PM	01/28/1992
	MT	BN	Tues	4:45 PM	07/05/1994
2	MT	MRL	Thurs	10:20 PM	10/16/1997
	NC	CSX	Wed	8:30 AM	06/15/1996
2	NC	CSXT	Thurs	4:30 AM	12/14/1995
1	ND	SOO	Tues	8:17 PM	10/19/1993
	NE	BN	Thurs	1:25 AM	10/15/1992
	NE	BN	Tues	7:00 PM	01/04/1994
	NE	BNSF	Sat	10:15 AM	01/24/1998
4	NE	UP	Thurs	8:00 PM	01/20/1994
1	NM	ATSF	Thurs	12:30 PM	09/02/1993
1	NV	UP	Fri	3:30 AM	08/15/1997

**FEs by State**

<b>FEs count</b>	<b>State</b>	<b>RR</b>	<b>Day</b>	<b>Time</b>	<b>Date</b>
2	NY	CR	Tues	9:35 AM	11/15/1994
	NY	CR	Tues	2:52 AM	12/06/1994
3	OH	CR	Fri	11:15 AM	02/17/1995
	OH	CR	Thurs	9:20 AM	12/30/1993
	OH	NS	Mon	6:25 PM	12/11/1995
1	OK	UP	Wed	4:45 PM	08/04/1993
2	OR	UP	Sat	11:40 AM	07/25/1992
	OR	UP	Tues	4:30 AM	06/24/1997
2	PA	CR	Fri	9:10 AM	07/21/1995
	PA	SEPTA	Fri	11:25 PM	06/04/1993
2	SC	NS	Thurs	9:44 AM	03/02/1995
	SC	NS	Tues	8:58 PM	06/24/1997
11	TX	ATSF	Fri	9:45 AM	02/24/1995
	TX	ATSF	Fri	6:40 AM	11/12/1993
	TX	ATSF	Sat	10:30 AM	05/22/1993
	TX	ATSF	Thurs	1:25 PM	08/12/1993
	TX	BN	Fri	11:15 AM	01/14/1994
	TX	BNSF	Mon	12:30 PM	06/01/1998
	TX	DGNO	Tues	6:30 PM	09/03/1996
	TX	PTRA	Thurs	4:15 AM	11/10/1994
	TX	SP	Tues	7:45 AM	04/12/1994
	TX	SSW	Tues	8:37 AM	07/07/1992
	TX	UP	Mon	8:48 PM	10/07/1996
1	WA	BN	Mon	4:15 PM	06/01/1992
2	WI	GBW	Thurs	12:40 AM	07/24/1992
	WI	WC	Thurs	1:56 AM	04/06/1995
<b>76</b>	<b>total</b>				

**FEs**      **State**  
**count**  
**Summary**

11	TX
6	CA
6	IL
5	IN
5	KY
4	GA
4	NE
3	OH
2	FL
2	IA
2	MI
2	MT
2	NC
2	NY
2	OR
2	PA
2	SC
2	WI
1	AK
1	AZ
1	CT
1	ID
1	KS
1	LA
1	MN
1	ND
1	NM
1	NV
1	OK
1	WA



## FEs by State

state	total FEs	1995 freight railroad employees*		1995 railroad mileage operated in each state **		railroads
		rate *** per 100,000 workers	rate*** per 100,000 miles	rate*** per 100,000 miles	rate*** per 100,000 miles	
(1)	(2)	(1)/(2)	(3)	(1)/(3)		
AL		3,618	0	3,303	0	
AK	1	0		0		ARR
AZ	1	1,829	55	1,333	75	ATSF
AR		4,017	0	2,134	0	
CA	6	11,623	52	5,262	114	3-SP, 2-UP, ATSF
CO		4,402	0	3,439	0	
CT	1	72	1,389	189	529	MNCW
DE		293	0	226	0	
DC		22	0	37	0	
FL	2	5,550	36	1,973	101	FEC, AGC
GA	4	6,889	58	3,650	110	SOU, CSXT, GC, NS
HI		0		0		
ID	1	1,631	61	1,548	65	UP
IL	6	12,809	47	7,277	82	3-BRC, IC, CNW, CSXT
IN	5	4,802	104	3,395	147	3-CR, BNS, CSXT
IA	2	3,570	56	3,250	62	2-UP
KS	1	6,845	15	5,336	19	BNSF
KY	5	4,827	104	2,425	206	CSX, IC, IHRC, TTIS, NS
LA	1	3,050	33	2,562	39	UP
ME		2	0	0		
MD		1,988	0	787	0	
MA		399	0	429	0	
MI	2	6,046	33	2,452	82	CMRC, GTW
MN	1	5,827	17	4,500	22	BN
MS		893	0	2,208	0	
MO		7,885	0	4,527	0	
MT	2	2,225	90	2,261	88	BN, MRL
NE	4	9,885	40	3,556	112	2-BN, BNSF, UP
NV	1	663	151	1,339	75	UP

## FEs by State

state	total FEs	1995 freight railroad employees*		1995 railroad mileage operated in each state **		railroads
		rate *** per 100,000 workers	rate*** per 100,000 miles	rate*** per 100,000 miles		
	(1)	(2)	(1)/(2)	(3)	(1)/(3)	
NJ		1,702	0	915	0	
NM	1	1,387	72	2,247	45	ATSF
NY	2	2,970	67	2,296	87	2-CR
NC	2	2,611	77	2,598	77	CSX, CSXT
ND	1	1,851	54	3,263	31	SOO
OH	3	8,416	36	4,305	70	2-CR, NS
OK	1	1,652	61	3,169	32	UP
OR	2	2,565	78	2,139	94	2-UP
PA	2	10,469	19	3,199	63	SEPTA, CR
RI		18	0	0		
SC	2	1,859	108	2,174	92	2-NS
SD		362	0	1,172	0	
TN		4,813	0	2,347	0	
TX	11	13,437	82	10,803	102	4-ATSF, UP, DGNO, BN, SP, PTTRA, SSW, BNSF
UT		2,001	0	1,373	0	
VT		4	0	0		
VA		7,216	0	3,215	0	
WA	1	4,732	21	2,768	36	BN
WV		3,350	0	2,678	0	
WI	2	2,415	83	2,057	97	WC, GBW
WY		2445	0	2,065	0	
<b>totals</b>	<b>76</b>	<b>187,945</b>		<b>124,181</b>		

\* Active freight railroad contributors to the Railroad Retirement system. From AAR (1995).

\*\* Railroad mileage operated in each state by Class I's.

There are 49,615 non-Class I's and 1,492 miles operated by Canadian RRs.

Mileage operated is more than amount of track owned because of trackage rights.

\*\*\* Caution is advised in interpreting or comparing rates because of the small number of FEs per state.

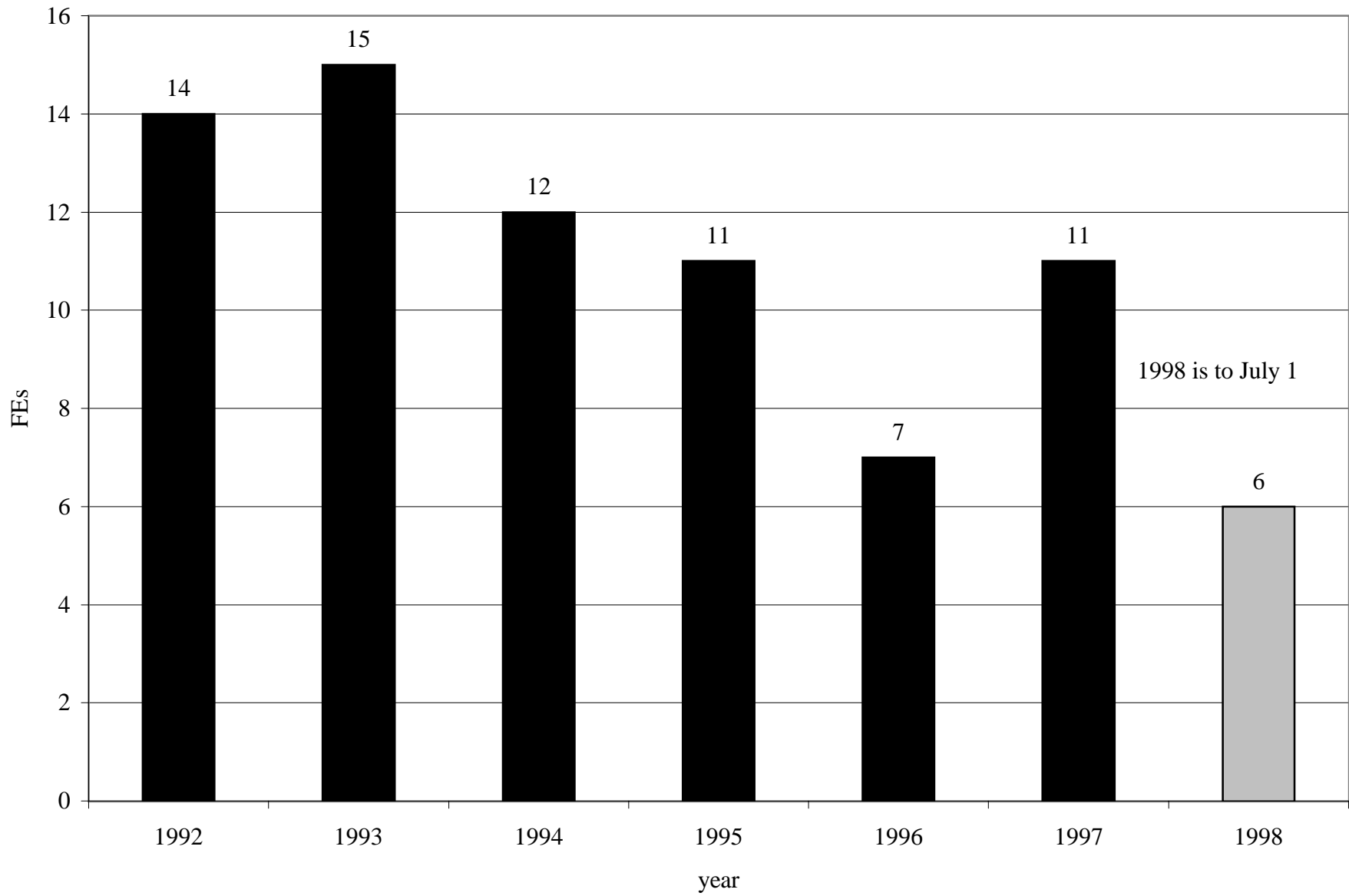
# SOFA WORKING GROUP

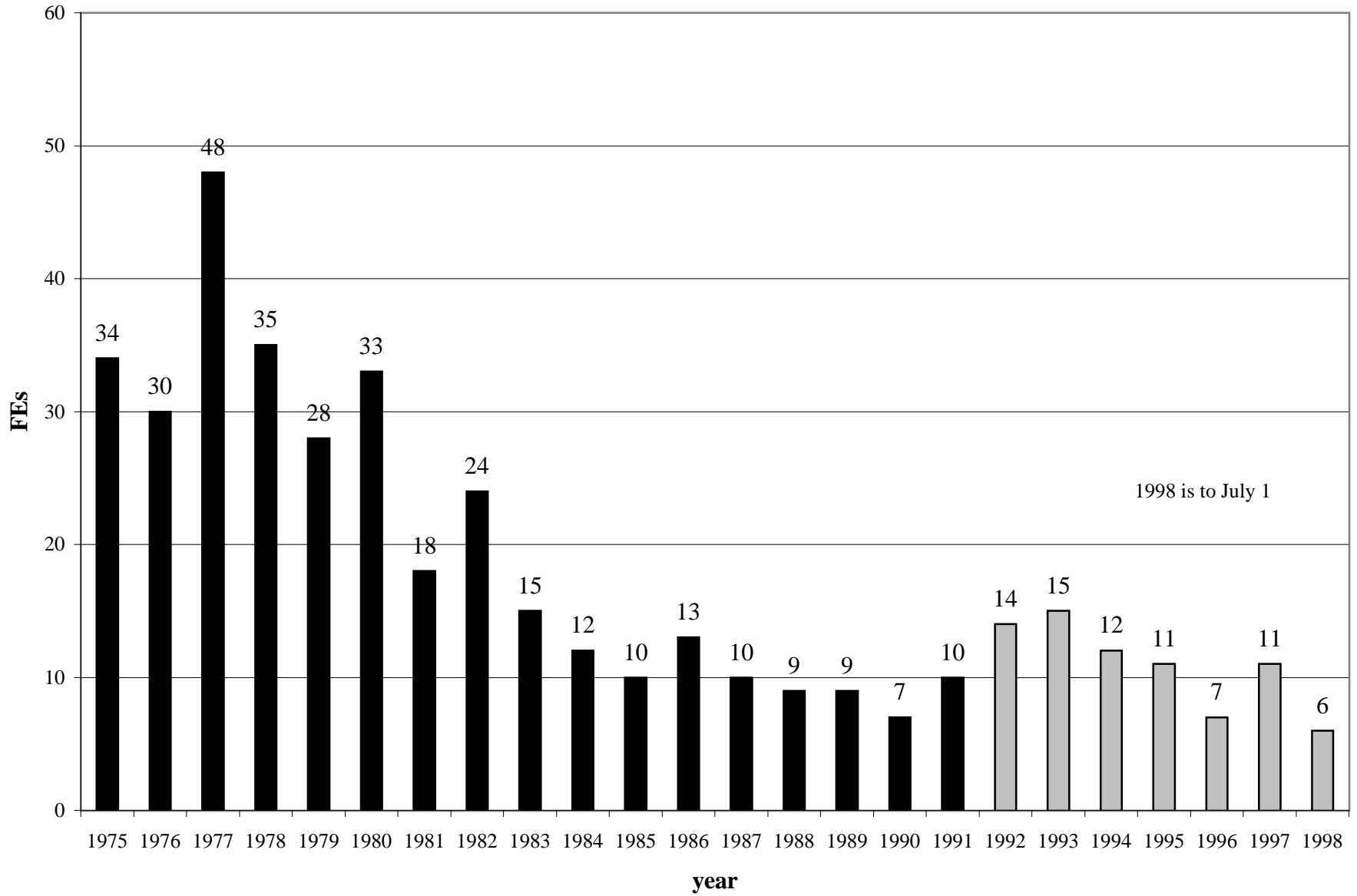
FEs

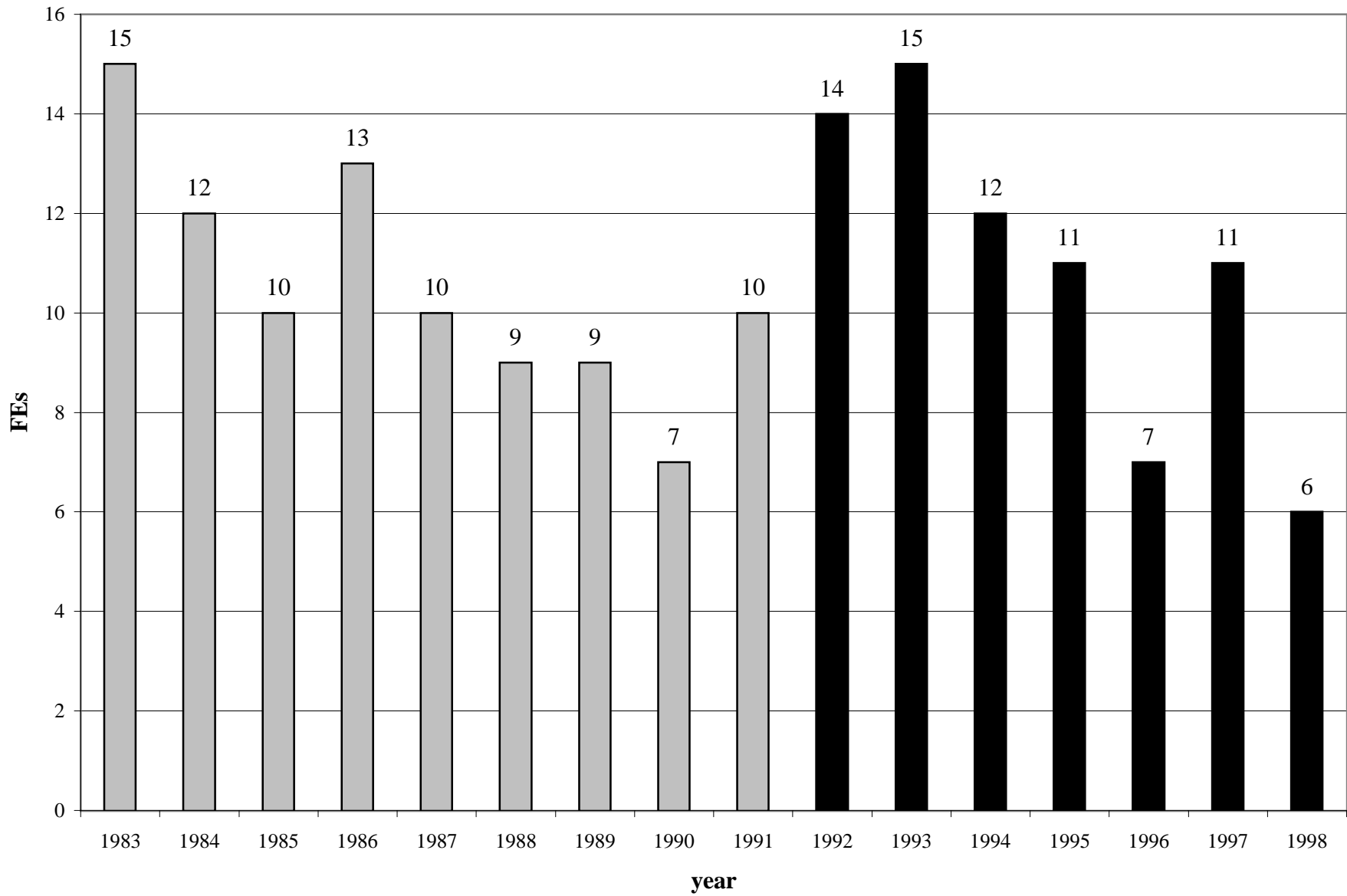
organized by

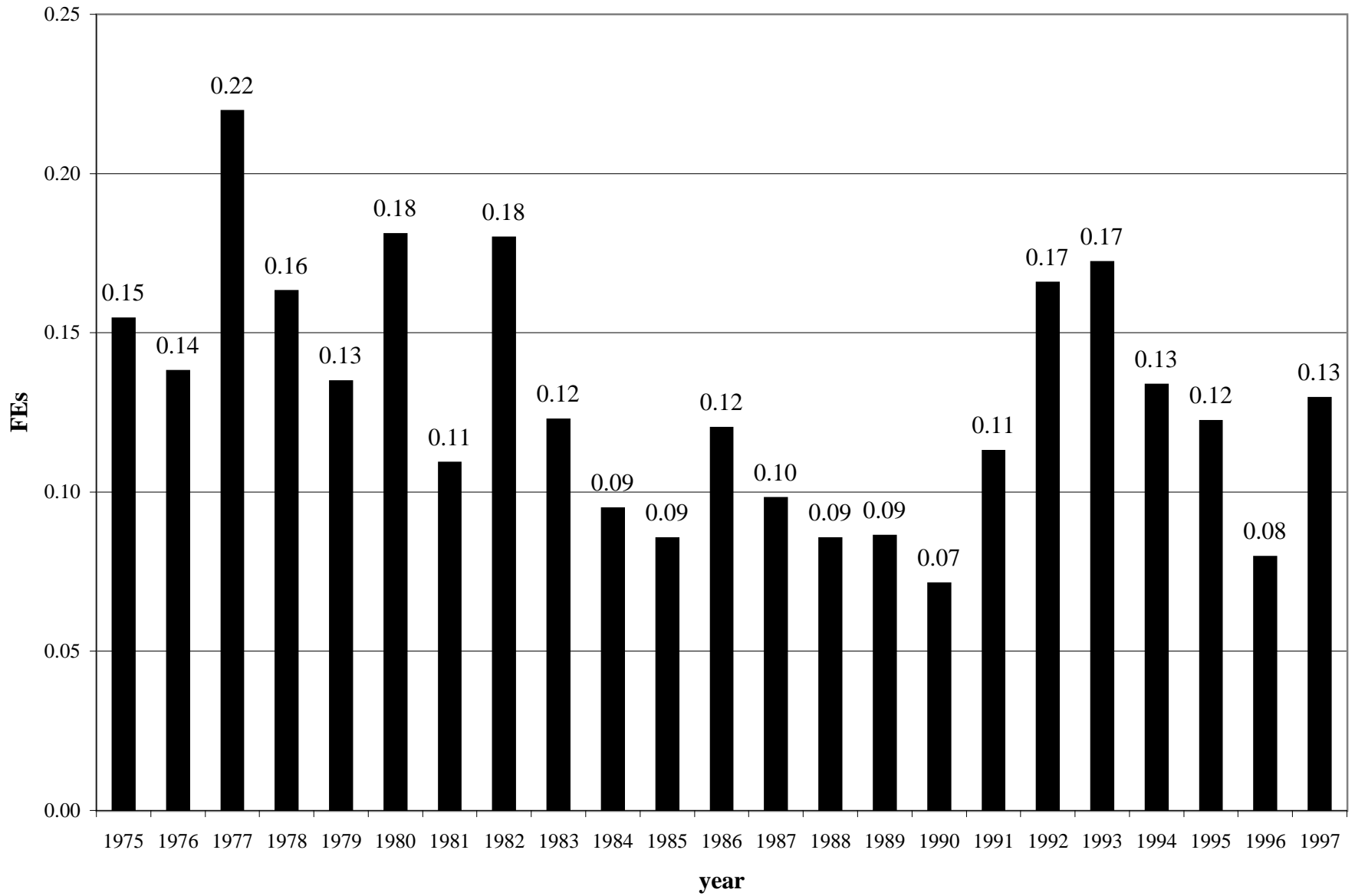
Year

Group 2

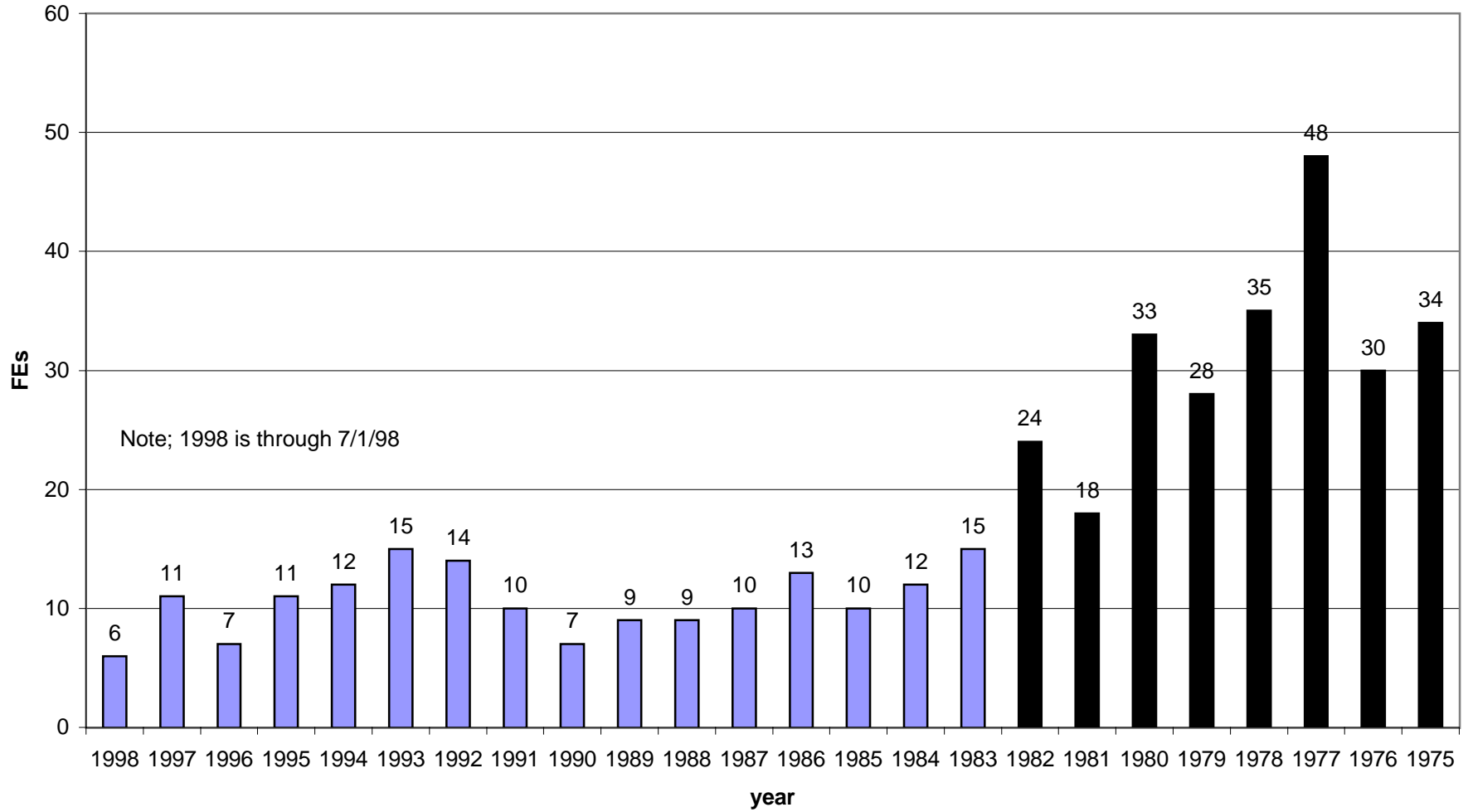






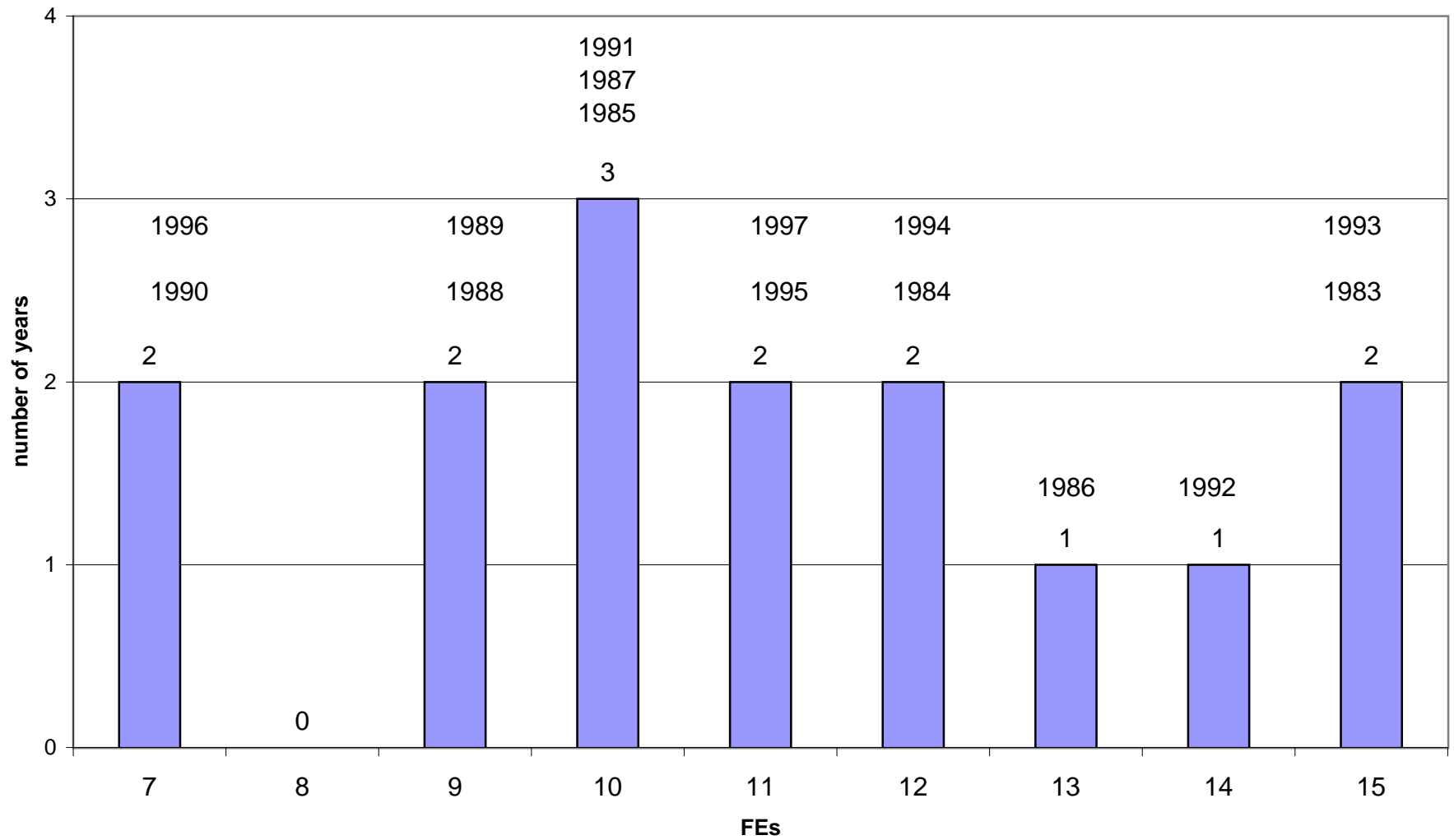


**FES by Year  
1998 - 1975**





**Distribution of Number of FEs for 15 Years,  
1997 - 1983**



# SOFA WORKING GROUP

FEs

organized by

Location and Direction of Movement

Group 3

## Location of FE and Whether Movement was a Shove

#	shoved	physical act	event	location	equip speed	struck by own	free running	FE crew's next move	age	service	date	report #	RR
<b>on ground -- not shoved</b>													
1	N	2-adj drawbar	59-struck-train	A5-between cars	1	Y	Y	Coupling	39	0.5	10/04/95	FE-29-95	CSXT
2	N	2-adj drawbar	64-unex movement	A5-between cars	1	Y	N	CO Power	48	26.0	12/13/94	FE-32-94	UP
3	N	9-climbing	64-unex movement	A5-between cars	5	Y	Y	Couple to car	58	29.0	06/01/92	FE-14-92	ATSF
4	N	50-adj angle cock	59-struck-train	A1-near equip	10	Y	Y	Couple to train	54	13.0	04/09/92	FE-09-92	ATSF
5	N	51-operating	99-other	A5-between cars	10	Y	Y	Stop the Drop	59	35.0	07/05/94	FE-16-94	BN
6	N	62-standing	21-derail	A4-between tracks	6	N	N	Cut Engine Off	57	36.0	01/14/94	FE-03-94	BN
7	N	62-standing	64-unex movement	B7-on track	1	Y	Y	Switch Cars	49	20.0	06/07/93	FE-23-93	IC
8	N	62-standing	99-other	A1-near equip	3	Y	N	Set Out Cars	53	32.0	12/11/95	FE-33-95	NS
9	N	72-walking	59-struck-train	B7-on track	18	N	N	Run Around Train	44	16.0	04/13/93	FE-13-93	CSX
<b>on ground -- shoved</b>													
1	Y	1-adj coupler	59-struck-train	B7-on track	1	Y			46	22.0	03/02/95	FE-12-95	NS
2	Y	13-coupling air hose	59-struck-train	B7-on track	4	Y	N	CO Engine	43	25.0	07/15/93	FE-26-93	CR
3	Y	16-crossing between	59-struck-train	B7-on track	3	Y	N	Couple	55	24.0	09/02/93	FE-35-93	ATSF
4	Y	16-crossing between	64-unex movement	A5-between cars	1	Y	N	Pull ahead	36	16.0	10/17/94	FE-26-94	UP
5	Y	50-adj angle cock	64-unex movement	B7-on track	3	Y		Uncouple cars to spot	55	32.0	12/26/97	FE-45-97	UP
6	Y	62-standing	17-collision-train	A4-between tracks	1	Y		Line-up Car	49	28.0	10/23/92	FE-34-92	GTW
7	Y	62-standing	17-collision-train	A5-between cars	1	Y		Replace Knuckle	35	13.0	11/16/92	FE-39-92	TTIS
8	Y	62-standing	39-pushed	A1-near equip	3	Y		Spot Car	36	1.0	06/15/96	FE-12-96	CSX
9	Y	62-standing	59-struck-train	A3-beside track	11	N		Begin Switching	54	27.0	02/02/97	FE-05-97	CR
10	Y	62-standing	59-struck-train	A4-between tracks	5	N	N	Switch Car	52	32.0	05/03/95	FE-18-95	CSXT
11	Y	62-standing	59-struck-train	B7-on track	6	Y	N	Couple Track	57	38.0	11/15/94	FE-29-94	CR
12	Y	62-standing	59-struck-train	B7-on track	5	N	N	Make Cut	52	31.0	08/12/93	FE-31-93	ATSF
13	Y	72-walking	59-struck-train	A1-near equip	2	Y	N	Cut Cars	48	29.0	02/17/95	FE-09-95	CR
14	Y	72-walking	59-struck-train	A4-between tracks	3	Y		Return to other end of yard	54	28.0	07/25/92	FE-22-92	UP
15	Y	72-walking	59-struck-train	B7-on track	1	Y		SO power	48	28.0	01/29/97	FE-04-97	UP
16	Y	72-walking	59-struck-train	B7-on track	8	Y		Make Cut	21	2.5	06/24/97	FE-19-97	NS
17	Y	72-walking	59-struck-train	B7-on track	4	Y	N	Coupling	55	24.0	03/21/95	FE-17-95	SP
18	Y	72-walking	59-struck-train	B7-on track	4	Y	Y	Engine to two track	57	22.0	01/28/92	FE-03-92	BN

## Location of FE and Whether Movement was a Shove

#	shoved	physical act	event	location	equip speed	struck by own	free running	FE crew's next move	age	service	date	report #	RR
<b>on ground -- 'shoved' blank</b>													
1		1-adj coupler	59-struck-train	A5-between cars	1	Y	Y	Couple Track	28	0.3	03/20/96	FE-09-96	BRC
2		1-adj coupler	64-unex movement	A5-between cars	1	Y	Y	Shove cars	35	10.1	10/07/96	FE-24-96	UP
3		2-adj drawbar	20-defective equip	B7-on track	1	Y	Y	Couple track	42	15.0	06/20/92	FE-18-92	CNW
4		13-coupling air hose	59-struck-train	B7-on track	1	N	Y		34	13.0	07/24/92	FE-30-92	GBW
5		22-flagging	59-struck-train	B7-on track	38	N			40	7.6	07/18/97	FE-22-97	MNCW
6		25-getting off	59-struck-train	A4-between tracks	2	N		Line Switch	59	29.0	12/05/93	FE-49-93	SOU
7		39-installing	59-struck-train	B7-on track	6	N	Y		44	19.0	02/24/95	FE-11-95	ATSF
8		59-running	59-struck-train	B7-on track	1	Y	Y	Spot Car	52	23.0	06/02/92	FE-16-92	IHRC
9		62-standing	18-collision-auto	A1-near equip	0	N		Spot Cars	46	27.0	05/22/93	FE-20-93	ATSF
10		62-standing	59-struck-train	A4-between tracks	54	N		Couple Train	50	30.0	12/02/97	FE-36-97	BNSF
11		62-standing	59-struck-train	B7-on track	38	N		Meet train	29	1.0	07/07/96	FE-17-96	NS
12		72-walking	59-struck-train	A4-between tracks	60	N		Depart Siding	58	12.0	07/07/92	FE-20-92	SSW
13		72-walking	64-unex movement	A5-between cars	6	Y	Y	Stop to uncouple	46	20.0	01/04/94	FE-02-94	BN
14			59-struck-train	B7-on track	1	Y		Pull Another Track	47	1.0	11/13/93	FE-47-93	GC

## Location of FE and Whether Movement was a Shove

#	shoved	physical act	event	location	equip speed	struck by own	free running	FE crew's next move	age	service	date	report #	RR
<b>on equipment -- not shoved</b>													
1	N	58-riding	61-struck against object	B6-on side of car	5	Y	N	Make Cut	62	37.0	04/12/94	FE-12-94	SP
2	N	58-riding	99-other	A5-between cars	3	Y	N	Set Out Cars	61	40.0	07/21/95	FE-23-95	CR
<b>on equipment -- shoved</b>													
1	Y	24-getting on	59-struck-train	B8-on end of car	5	Y	N	Shove to Yard	47	29.0	08/11/93	FE-30-93	SP
2	Y	58-riding	17-collision	B8-on end of car	7	Y		Coupling	50	7.0	06/06/97	FE-16-97	CMRC
3	Y	58-riding	17-collision	B8-on end of car	14	Y	N	Coupling	45	7.0	04/06/95	FE-16-95	WC
4	Y	58-riding	21-derail	A1-along side equip	5	Y	N	Couple	36	16.0	03/11/92	FE-08-92	FEC
5	Y	58-riding	21-derail	B6-on side of car	10	Y	N	Make Joint	43	2.0	10/19/93	FE-40-93	SOO
6	Y	58-riding	21-derail	B6-on side of car	8	Y	N	Spot Car	61	38.0	12/30/93	FE-53-93	CR
7	Y	58-riding	21-derail	B8-on end of car	6	Y	N	Couple	42	18.0	08/04/93	FE-27-93	UP
8	Y	58-riding	34-lost balance	A5-between cars	1	Y		Stop	22	0.8	10/16/97	FE-32-97	MRL
9	Y	58-riding	42-rain into train	A7-in caboose	19	N	N	Set Out Cars	28	0.2	12/06/94	FE-31-94	CR
10	Y	58-riding	50-slack action	B6-on side of car	8	Y		Stop	60	35.0	01/12/97	FE-02-97	UP
11	Y	58-riding	59-struck-train	B6-on side of car	3	Y	N		51	30.0	01/11/95	FE-02-95	CR
12	Y	58-riding	59-struck-train	B6-on side of car	4	Y	N	Spot Car	41	21.0	11/12/93	FE-46-93	ATSF
13	Y	58-riding	59-struck-train	B8-on end of car	4	Y	Y	Spot Cars	45	26.0	12/18/96	FE-31-96	IC
14	Y	58-riding	61-struck against object	B6-on side of car	8	Y	N	Cut Engine Off	54	33.0	12/14/95	FE-34-95	CSXT
15	Y	58-riding	64-unex movement	B8-on end of car	6	Y	N	Spot	45	25.0	01/18/94	FE-04-94	CSXT
16	Y	60-sitting	21-derail	A7-in car	19	N		Shove cars	49	20.0	09/20/94	FE-20-94	ARR
<b>on equipment -- 'shoved' blank</b>													
1		24-getting on	35-missed handhold	C6-on loc	5	Y		Wye Engine	32	0.5	01/30/92	FE-04-92	AGC
2		58-riding	17-collision	B8-on end of car	5	Y	Y	Shove to Clear	42	22.0	06/01/92	FE-15-92	BN
3		58-riding	58-struck by object	B8-on end of car	2	Y		Couple Track	39	19.0	03/27/93	FE-11-93	SP
4		58-riding	59-struck-train	A5-between cars	1	Y		CO Power	51	21.0	12/16/96	FE-30-96	UP
5		58-riding	99-other	B6-on side of car	6	N	Y	Stop Car	44	16.0	01/20/94	FE-06-94	UP
6		62-standing	34-lost balance	A6-on/in loc	51	N		Stop at Station	29	6.0	06/04/93	FE-22-93	SEPTA
7		62-standing	42-rain into train	B8-on end of car	25	N	Y	Spot cars	43	0.1	09/03/96	FE-22-96	DGNO

**Location of FE and Whether Movement was a Shove**

#	shoved	physical act	event	location	equip speed	struck by own	free running	FE crew's next move	age	service	date	report #	RR
<b>fell into pit -- 'shoved' blank</b>													
1		99-other	9-compressed	X9-fell in pit	0				31	0.5	11/10/94	FE-28-94	PTRA
2		99-other	9-compressed	X9-fell in proc...	0	N		Spot load at pit	32	14.0	10/15/92	FE-33-92	BN

## Location of FE and Whether Movement was a Shove

#	shoved	physical act	event	location	equip speed	struck by own	free running	FE crew's next move	age	service	date	report #	RR
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### Summary

	count	percentage
shoved	34	75.6%
not shoved	11	24.4%
<b>total</b>	<b>45</b>	<b>100.0%</b>

shoved	34	50.0%
not shoved	11	16.2%
not coded	23	33.8%
<b>total</b>	<b>68</b>	<b>100.0%</b>

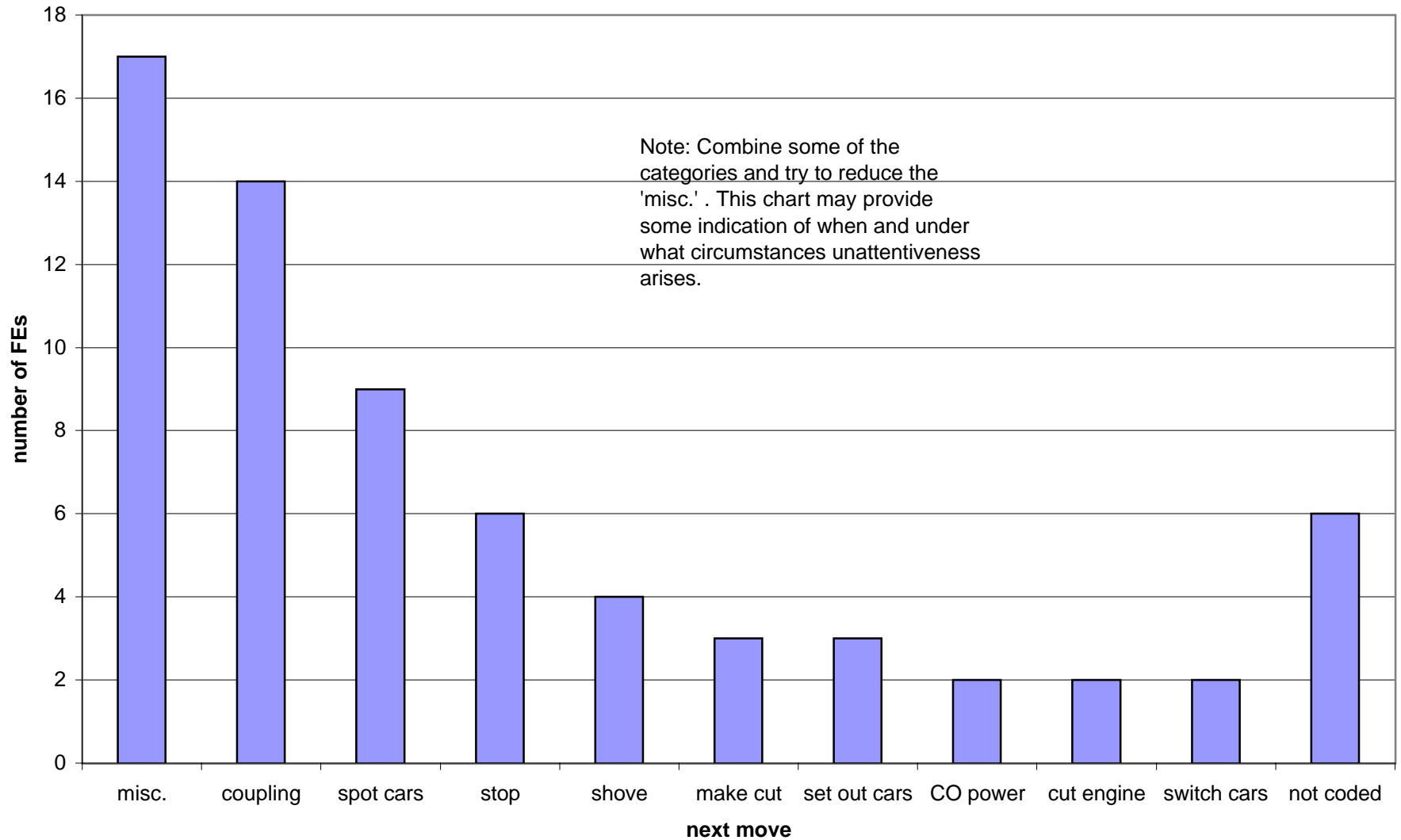
on ground	41	60.3%
on equipment	25	36.8%
fell into pit	2	2.9%
<b>total</b>	<b>68</b>	<b>100.0%</b>

on ground		
not shoved	9	22.0%
shoved	18	43.9%
not coded	14	34.1%
<b>total</b>	<b>41</b>	<b>100.0%</b>

on equipment		
not shoved	2	8.0%
shoved	16	64.0%
not coded	7	28.0%
<b>total</b>	<b>25</b>	<b>100.0%</b>

fell into pit

## FE Crew's Next Move





**FEs by Railroads and Whether Movement was a Shove**

	shoved	RR	report #	date	day	time	
1	N	CR	FE-23-95	07/21/95	6	9:10 AM	
2	N	CSXT	FE-29-95	10/04/95	4	12:40 AM	
3	N	CSX	FE-13-93	04/13/93	3	6:40 PM	
4	N	NS	FE-33-95	12/11/95	2	6:25 PM	
5	Y	CR	FE-26-93	07/15/93	5	5:25 PM	
6	Y	CR	FE-53-93	12/30/93	5	9:20 AM	
7	Y	CR	FE-29-94	11/15/94	3	9:35 AM	
8	Y	CR	FE-31-94	12/06/94	3	2:52 AM	
9	Y	CR	FE-02-95	01/11/95	4	11:30 PM	
10	Y	CR	FE-09-95	02/17/95	6	11:15 AM	
11	Y	CR	FE-05-97	02/02/97	1	9:55 PM	
12	Y	CSXT	FE-04-94	01/18/94	3	6:10 PM	
13	Y	CSXT	FE-18-95	05/03/95	4	5:55 PM	
14	Y	CSXT	FE-34-95	12/14/95	5	4:30 AM	
15	Y	CSX	FE-12-96	06/15/96	4	8:30 AM	
16	Y	NS	FE-12-95	03/02/95	5	9:44 AM	
17	N=4	Y	NS	FE-19-97	06/24/97	3	8:58 PM
18	Y=13		NS	FE-17-96	07/07/96	1	1:08 AM
19	blanks=2		SOU	FE-49-93	12/05/93	1	7:00 AM
1	N	SP	FE-12-94	04/12/94	3	7:45 AM	
2	N	UP	FE-32-94	12/13/94	3	12:01 AM	
3	Y	SP	FE-30-93	08/11/93	4	11:52 AM	
4	Y	SP	FE-17-95	03/21/95	6	8:40 AM	
5	Y	UP	FE-22-92	07/25/92	7	11:40 AM	
6	Y	UP	FE-27-93	08/04/93	4	4:45 PM	
7	Y	UP	FE-26-94	10/17/94	2	12:30 PM	
8	Y	UP	FE-02-97	01/12/97	1	10:15 PM	
9	Y	UP	FE-04-97	01/29/97	4	12:55 PM	
10	Y	UP	FE-45-97	12/26/97	6	5:45 PM	
11		CNW	FE-18-92	06/20/92	7	11:45 AM	
12		SP	FE-11-93	03/27/93	7	12:30 PM	
13		SSW	FE-20-92	07/07/92	3	8:37 AM	
14	N=2	UP	FE-06-94	01/20/94	5	8:00 PM	
15	Y=8	UP	FE-24-96	10/07/96	2	8:48 PM	
16	blanks=6	UP	FE-30-96	12/16/96	2	8:40 PM	

**FEs by Railroads and Whether Movement was a Shove**

	shoved	RR	report #	date	day	time	
1	N	ATSF	FE-09-92	04/09/92	5	2:39 PM	
2	N	ATSF	FE-14-92	06/01/92	2	1:05 PM	
3	N	BN	FE-03-94	01/14/94	6	11:15 AM	
4	N	BN	FE-16-94	07/05/94	3	4:45 PM	
5	Y	ATSF	FE-31-93	08/12/93	5	1:25 PM	
6	Y	ATSF	FE-35-93	09/02/93	5	12:30 PM	
7	Y	ATSF	FE-46-93	11/12/93	6	6:40 AM	
8	Y	BN	FE-03-92	01/28/92	3	5:30 PM	
9		ATSF	FE-20-93	05/22/93	7	10:30 AM	
10		ATSF	FE-11-95	02/24/95	6	9:45 AM	
11		BN	FE-15-92	06/01/92	2	4:15 PM	
12	N=4	BN	FE-33-92	10/15/92	5	1:25 AM	
13	Y=4	BN	FE-02-94	01/04/94	3	7:00 PM	
14	blanks=6	BNSF	FE-36-97	12/02/97	3	7:45 PM	
1	N=1	N	IC	FE-23-93	06/07/93	2	11:55 AM
2	Y=2	Y	IC	FE-31-96	12/18/96	4	11:40 AM
3	blanks=0	Y	GTW	FE-34-92	10/23/92	6	10:00 AM
1	N=0		GBW	FE-30-92	07/24/92	5	12:40 AM
2	Y=1 blanks=1	Y	WC	FE-16-95	04/06/95	5	1:56 AM
1		Y	ARR	FE-20-94	09/20/94	3	7:19 PM
2		Y	CMRC	FE-16-97	06/06/97	6	9:35 PM
3		Y	FEC	FE-08-92	03/11/92	4	1:15 AM
4		Y	MRL	FE-32-97	10/16/97	5	10:20 PM
5		Y	SOO	FE-40-93	10/19/93	3	8:17 PM
6		Y	TTIS	FE-39-92	11/16/92	2	6:05 PM
7			AGC	FE-04-92	01/30/92	5	3:00 PM
8			BRC	FE-09-96	03/20/96	4	11:25 PM
9			DGNO	FE-22-96	09/03/96	3	6:30 PM
10			GC	FE-47-93	11/13/93	7	8:30 AM
11			IHRC	FE-16-92	06/02/92	3	5:55 AM
12	N=0		MNCW	FE-22-97	07/18/97	6	1:29 AM
13	Y=6		PTRA	FE-28-94	11/10/94	5	4:15 AM
14	blanks=8		SEPTA	FE-22-93	06/04/93	6	11:25 PM

**Train Movement, Own Equipment, and Shoving  
Jan 1, 1992 to July 1, 1998**

	<i>total FEs</i>	<i>train movement</i>	<i>own equip</i>	<i>shoved</i>
	(1)	(2)	(3)	(4)
<b>TOTAL FEs:</b>	76			
<b>train movement</b>		69	91%	
<u>own equip</u>			50	72%
shoved				30
not shoved				9
blank				11
<u>not own equip</u>			18	
shoved				5
not shoved				2
blank				11
<u>equip blank</u>			1	
shoved				0
not shoved				0
blank				1
<b>no train movement</b>		5		
<u>own equip</u>			2	
shoved				0
not shoved				0
blank				2
<u>not own equip</u>			3	
blank				3
<u>equip blank</u>			0	
<b>blank train movement</b>		2		
<u>own equip</u>			0	
<u>not own equip</u>			1	
blank				1
<u>equip blank</u>			1	
blank				1
<b>TOTALS</b>	<b>76</b>	<b>76</b>	<b>76</b>	<b>76</b>

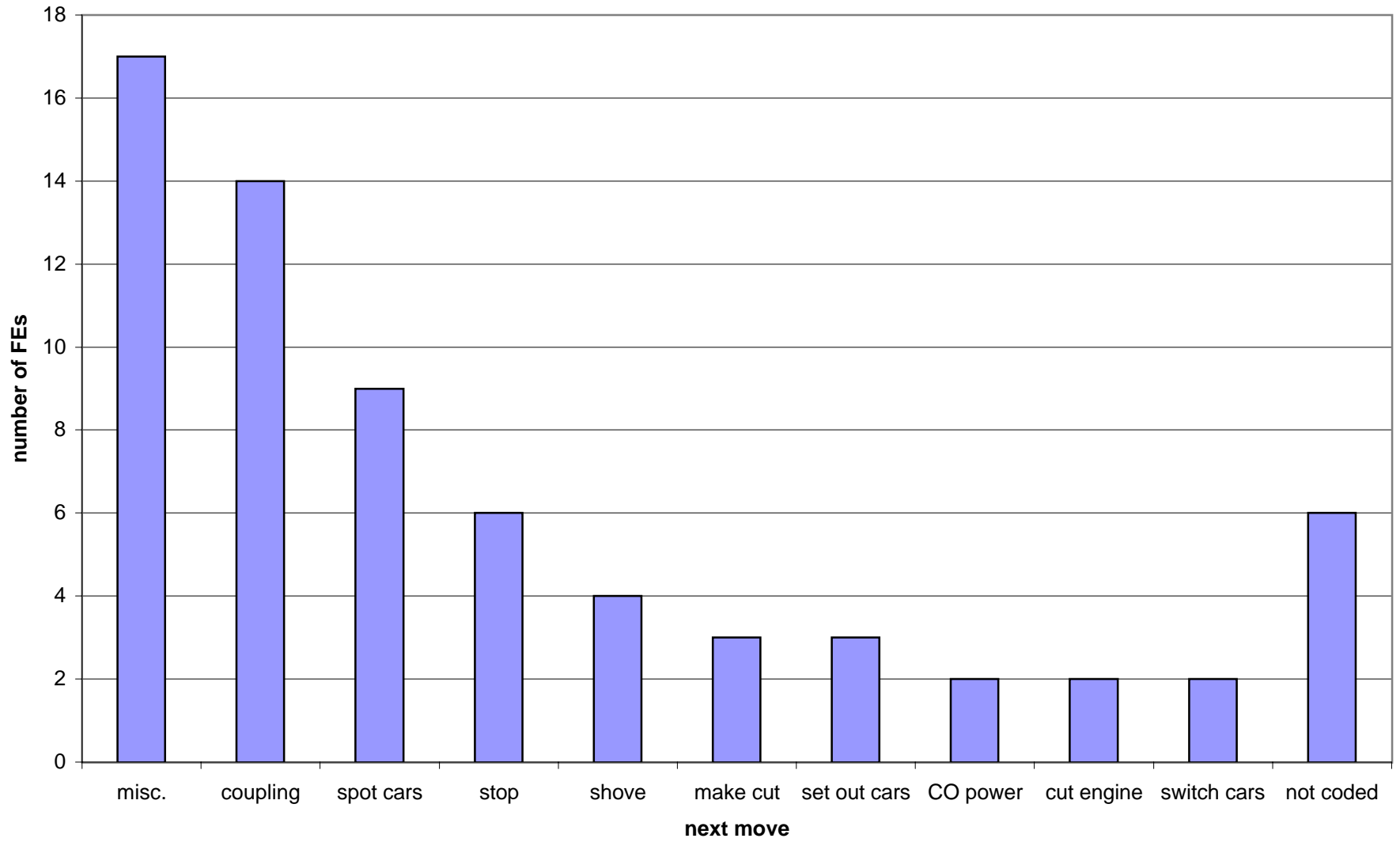
### Movement Pulled, Shoved, or Free Running

Mvmnt pulled	Mvmnt shoved	Mvmnt free-running	Equip speed	Railroad	State	Date	Report #
N	N	Y	1	CSXT	IL	10/04/95	FE-29-95
N	N	Y	10	BN	MT	07/05/94	FE-16-94
N	N	Y	1	IC	KY	06/07/93	FE-23-93
N	N	Y	10	ATSF	AZ	04/09/92	FE-09-92
N	N	Y	5	ATSF	CA	06/01/92	FE-14-92
N	Y	N	14	WC	WI	04/06/95	FE-16-95
N	Y	N	4	SP	CA	03/21/95	FE-17-95
N	Y	N	5	CSXT	IN	05/03/95	FE-18-95
N	Y	N	8	CSXT	NC	12/14/95	FE-34-95
N	Y	N	6	CSXT	GA	01/18/94	FE-04-94
N	Y	N	1	UP	LA	10/17/94	FE-26-94
N	Y	N	6	CR	NY	11/15/94	FE-29-94
N	Y	N	19	CR	NY	12/06/94	FE-31-94
N	Y	N	4	CR	IN	07/15/93	FE-26-93
N	Y	N	6	UP	OK	08/04/93	FE-27-93
N	Y	N	5	SP	CA	08/11/93	FE-30-93
N	Y	N	5	ATSF	TX	08/12/93	FE-31-93
N	Y	N	3	ATSF	NM	09/02/93	FE-35-93
N	Y	N	10	SOO	ND	10/19/93	FE-40-93
N	Y	N	4	ATSF	TX	11/12/93	FE-46-93
N	Y	N	8	CR	OH	12/30/93	FE-53-93
N	Y	N	5	FEC	FL	03/11/92	FE-08-92
N	Y		1	NS	SC	03/02/95	FE-12-95
N		Y	6	UP	NE	01/20/94	FE-06-94
Y	N	N	3	CR	PA	07/21/95	FE-23-95
Y	N	N	3	NS	OH	12/11/95	FE-33-95
Y	N	N	6	BN	TX	01/14/94	FE-03-94
Y	N	N	5	SP	TX	04/12/94	FE-12-94
Y	N	N	1	UP	CA	12/13/94	FE-32-94
Y	N	N	18	CSX	KY	04/13/93	FE-13-93
Y		Y	6	BN	NE	01/04/94	FE-02-94
Y			1	UP	IA	12/16/96	FE-30-96
Y			38	NS	ID	07/07/96	FE-17-96
Y			38	MNCW	CT	07/18/97	FE-22-97

### Movement Pulled, Shoved, or Free Running

Mvmnt pulled	Mvmnt shoved	Mvmnt free-running	Equip speed	Railroad	State	Date	Report #
Y			2 SP		CA	03/27/93	FE-11-93
Y			51 SEPTA		PA	06/04/93	FE-22-93
Y			2 SOU		GA	12/05/93	FE-49-93
Y			5 AGC		FL	01/30/92	FE-04-92
Y			60 SSW		TX	07/07/92	FE-20-92
Y			54 BNSF		KS	12/02/97	FE-36-97
	Y	N	3 CR		IN	01/11/95	FE-02-95
	Y	N	2 CR		OH	02/17/95	FE-09-95
	Y	Y	4 IC		IL	12/18/96	FE-31-96
	Y	Y	4 BN		MN	01/28/92	FE-03-92
	Y		3 CSX		NC	06/15/96	FE-12-96
	Y		8 UP		CA	01/12/97	FE-02-97
	Y		1 UP		IA	01/29/97	FE-04-97
	Y		11 CR		IN	02/02/97	FE-05-97
	Y		7 CMRC		MI	06/06/97	FE-16-97
	Y		8 NS		SC	06/24/97	FE-19-97
	Y		1 MRL		MT	10/16/97	FE-32-97
	Y		19 ARR		AK	09/20/94	FE-20-94
	Y		3 UP		OR	07/25/92	FE-22-92
	Y		1 GTW		MI	10/23/92	FE-34-92
	Y		1 TTIS		KY	11/16/92	FE-39-92
	Y		3 UP		ID	12/26/97	FE-45-97
		Y	1 UP		TX	10/07/96	FE-24-96
		Y	25 DGNO		TX	09/03/96	FE-22-96
		Y	1 BRC		IL	03/20/96	FE-09-96
		Y	6 ATSF		TX	02/24/95	FE-11-95
		Y	5 BN		WA	06/01/92	FE-15-92
		Y	1 IHRC		KY	06/02/92	FE-16-92
		Y	1 CNW		IL	06/20/92	FE-18-92
		Y	1 GBW		WI	07/24/92	FE-30-92
			0 PTR		TX	11/10/94	FE-28-94
			0 ATSF		TX	05/22/93	FE-20-93
			1 GC		GA	11/13/93	FE-47-93
			0 BN		NE	10/15/92	FE-33-92

### FE Crew's Next Move



### FE Crew's Next Move

Report #	RR	Date	FE crew's next move	External Circmst.	Poss. Cont. Factors
<b>Coupling</b>					
FE-36-97	BNSF	12/02/97	Couple Train		
FE-16-97	CMRC	06/06/97	Coupling	Radio Failure	Clear x-ing
FE-09-96	BRC	03/20/96	Couple Track	Crew experiance	
FE-29-95	CSXT	10/04/95	Coupling	H999	Green Ground Crew
FE-16-95	WC	04/06/95	Coupling		H020
FE-17-95	SP	03/21/95	Coupling	H199	
FE-29-94	CR	11/15/94	Couple Track		
FE-35-93	ATSF	09/02/93	Couple	H999	
FE-27-93	UP	08/04/93	Couple		
FE-11-93	SP	03/27/93	Couple Track	M101	H019
FE-18-92	CNW	06/20/92	Couple track	M411	Use of wood chalks & descending grade of yard
FE-14-92	ATSF	06/01/92	Couple to car		
FE-09-92	ATSF	04/09/92	Couple to train	T099	H399
FE-08-92	FEC	03/11/92	Couple	Track Conditions	
<b>Spot cars</b>					
FE-31-96	IC	12/18/96	Spot Cars		Cold Temp
FE-22-96	DGNO	09/03/96	Spot cars		Failure to test HB
FE-12-96	CSX	06/15/96	Spot Car		
FE-04-94	CSXT	01/18/94	Spot		
FE-53-93	CR	12/30/93	Spot Car	Others Assisted Crew	
FE-46-93	ATSF	11/12/93	Spot Car	H101	
FE-20-93	ATSF	05/22/93	Spot Cars		
FE-33-92	BN	10/15/92	Spot load at pit		
FE-16-92	IHRC	06/02/92	Spot Car		

### FE Crew's Next Move

Report #	RR	Date	FE crew's next move	External Circmst.	Poss. Cont. Factors
<b>Stop</b>					
FE-32-97	MRL	10/16/97	Stop	Moving Equipment	
FE-02-97	UP	01/12/97	Stop	Unfam w/territory	
FE-16-94	BN	07/05/94	Stop the Drop	H099	
FE-06-94	UP	01/20/94	Stop Car		
FE-02-94	BN	01/04/94	Stop to uncouple		H997
FE-22-93	SEPTA	06/04/93	Stop at Station		
<b>Shove</b>					
FE-24-96	UP	10/07/96	Shove cars		
FE-20-94	ARR	09/20/94	Shove cars	M305	Sun in eyes
FE-30-93	SP	08/11/93	Shove to Yard	H318	M199
FE-15-92	BN	06/01/92	Shove to Clear	H399	
<b>Make cut</b>					
FE-19-97	NS	06/24/97	Make Cut		
FE-12-94	SP	04/12/94	Make Cut		
FE-31-93	ATSF	08/12/93	Make Cut	H317	H399
<b>Set out cars</b>					
FE-33-95	NS	12/11/95	Set Out Cars		
FE-23-95	CR	07/21/95	Set Out Cars		ECC 34
FE-31-94	CR	12/06/94	Set Out Cars		



### FE Crew's Next Move

Report #	RR	Date	FE crew's next move	External Circmst.	Poss. Cont. Factors
<b>CO power</b>					
FE-30-96	UP	12/16/96	CO Power		
FE-32-94	UP	12/13/94	CO Power	H990	
<b>Cut engine</b>					
FE-34-95	CSXT	12/14/95	Cut Engine Off		
FE-03-94	BN	01/14/94	Cut Engine Off		
<b>Switch cars</b>					
FE-18-95	CSXT	05/03/95	Switch Car	Two Radio Chanel's Used	
FE-23-93	IC	06/07/93	Switch Cars	X-car-/lilst chng	H305
<b>Miscellaneous</b>					
FE-05-97	CR	02/02/97	Begin Switching		Reading ist
FE-26-93	CR	07/15/93	CO Engine		
FE-09-95	CR	02/17/95	Cut Cars		
FE-20-92	SSW	07/07/92	Depart Siding	Noise from FE's Locos	M404
FE-03-92	BN	01/28/92	Engine to two track	Heavy Clothing, Hood(s)	Radio Conversation w/2nd crew
FE-49-93	SOU	12/05/93	Line Switch	T099	
FE-34-92	GTW	10/23/92	Line-up Car	Unsafe commonly accepted	
FE-40-93	SOO	10/19/93	Make Joint		
FE-17-96	NS	07/07/96	Meet train		
FE-26-94	UP	10/17/94	Pull ahead	H599	
FE-47-93	GC	11/13/93	Pull Another Track	TM Assisted Crew	H399
FE-39-92	TTIS	11/16/92	Replace Knuckle	Jammed Knuckle pin	Track curve/broken knuckle
FE-22-92	UP	07/25/92	Return to other end of yard	Engineer didn't change ends	Hand Switch Confusion
FE-13-93	CSX	04/13/93	Run Around Train	EC 24	M307
FE-04-97	UP	01/29/97	SO power		Moved on wrong trnmsn.
FE-45-97	UP	12/26/97	Uncouple cars to spot	Grade x-ing placement	
FE-04-92	AGC	01/30/92	Wye Engine	Board/disbaord wrong side	H996
	<b>not coded</b>				

### FE Crew's Next Move

Report #	RR	Date	FE crew's next move	External Circmst.	Poss. Cont. Factors
FE-22-97	MNCW	07/18/97			
FE-12-95	NS	03/02/95			
FE-11-95	ATSF	02/24/95		Yardmaster	H305
FE-02-95	CR	01/11/95			
FE-28-94	PTRA	11/10/94			
FE-30-92	GBW	07/24/92		Improper mingeling of crew members	No on-going job briefing

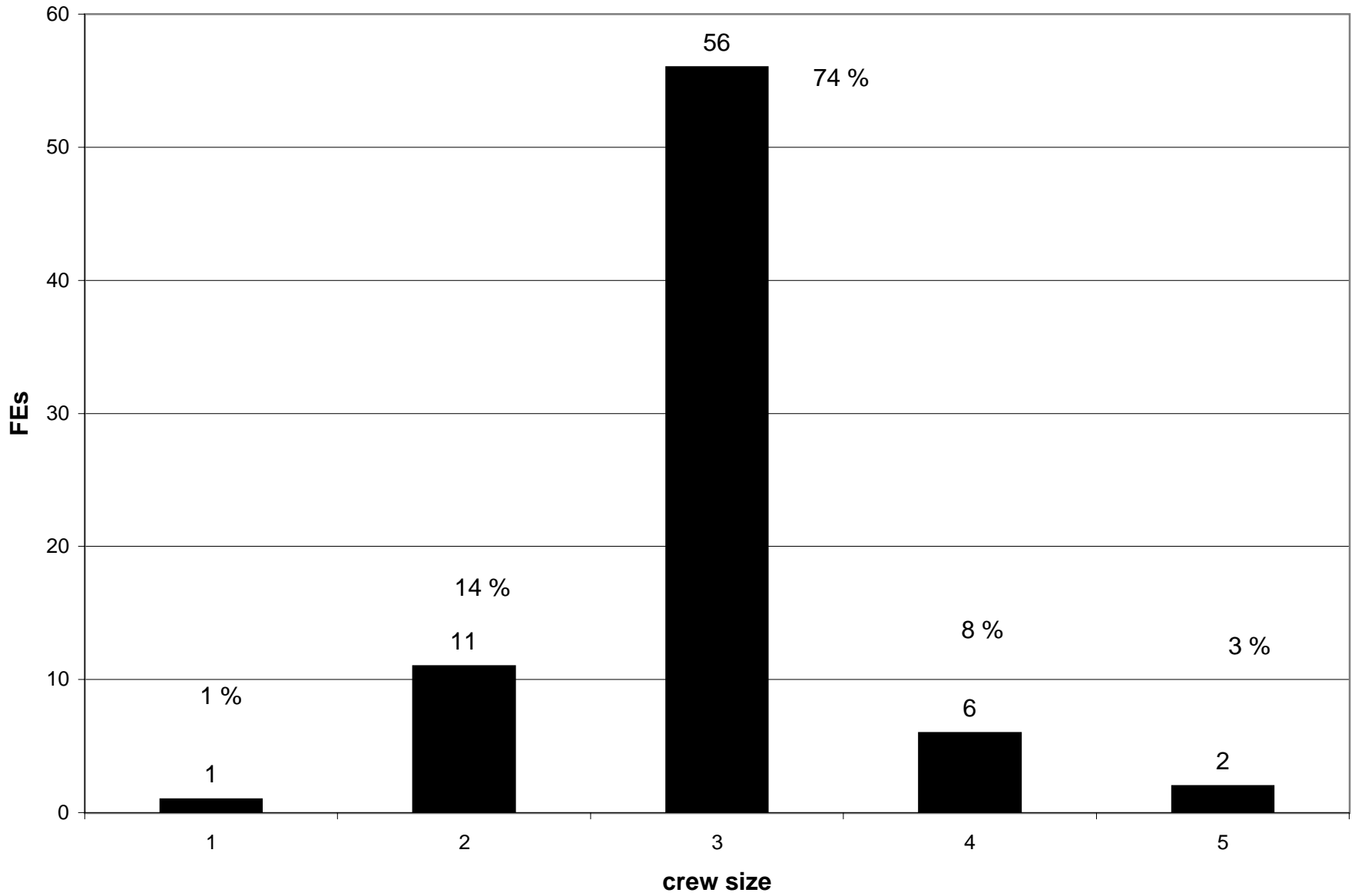
# SOFA WORKING GROUP

FEs

organized by

Crew Size

Group 4



## Crew Size

Report #	Date	Act	Event	Local	Crew Size	Engine Crew	Train Crew	On Grd.	Grd. Crew Invl.	Crew size Other	Engine Crew	Train Crew	Crew/Grd.	Grd. Crew Invl.
<b>1=crew size</b>														
FE-22-97	07/18/97	22	59	B7	1	0	1	1	1	3	1	2	0	0
<b>2=crew size</b>														
FE-19-97	06/24/97	72	59	B7	2	1	1	1	1					
FE-16-97	06/06/97	58	17	B8	2	1	1	1	1					
FE-04-97	01/29/97	72	59	B7	2	1	1	1	1					
FE-17-96	07/07/96	62	59	B7	2	1	1	1	1	2	1	1	0	1
FE-16-95	04/06/95	58	17	B8	2	1	1	1	1					
FE-49-93	12/05/93	25	59	A4	2	1	1	1	1	2	1	1	1	1
FE-22-93	06/04/93	62	34	A6	2	1	1	0	0					
FE-39-92	11/16/92	62	17	A5	2	1	1	1	1					
FE-20-92	07/07/92	72	59	A4	2	1	1	2	1	21	1	1	0	0
FE-16-92	06/02/92	59	59	B7	2	1	1	1	1					
FE-08-92	03/11/92	58	21	A1	2	1	1	1	1					

## Crew Size

Report #	Date	Act	Event	Local	Crew Size	Engine Crew	Train Crew	On Grd.	Grd. Crew Invl.	Crew size Other	Engine Crew	Train Crew	Crew/ Grd.	Grd. Crew Invl.
<b>3=crew size</b>														
FE-45-97	12/26/97	50	64	B7	3	1	2	2	2					
FE-36-97	12/02/97	62	59	A4	3	1	2	2	2	2	1	1	0	0
FE-32-97	10/16/97	58	34	A5	3	1	2	2	2					
FE-05-97	02/02/97	62	59	A3	3	1	2	1	0	3	1	2	2	2
FE-02-97	01/12/97	58	50	B6	3	1	2	2	2					
FE-31-96	12/18/96	58	59	B8	3	1	2	2	1					
FE-30-96	12/16/96	58	59	A5	3	1	2	2	2					
FE-24-96	10/07/96	1	64	A5	3	1	2	2	2					
FE-22-96	09/03/96	62	42	B8	3	1	2	2	2					
FE-12-96	06/15/96	62	39	A1	3	1	2	2	2					
FE-09-96	03/20/96	1	59	A5	3	1	2	1	1					
FE-34-95	12/14/95	58	61	B6	3	1	2	2	1					
FE-33-95	12/11/95	62	99	A1	3	1	2	2	2					
FE-23-95	07/21/95	58	99	A5	3	1	2	2	2					
FE-18-95	05/03/95	62	59	A4	3	1	2	2	2	3	1	2	0	0
FE-17-95	03/21/95	72	59	B7	3	1	2	2	2					
FE-12-95	03/02/95	1	59	B7	3	1	2	2	2					
FE-09-95	02/17/95	72	59	A1	3	1	2	2	2					
FE-02-95	01/11/95	58	59	B6	3	2	2	2	2					
FE-31-94	12/06/94	58	42	A7	3	1	2	0	1					
FE-29-94	11/15/94	62	59	B7	3	1	2	2	2					
FE-28-94	11/10/94	99	9	X9	3	1	2	2	1	1		1	1	1
FE-26-94	10/17/94	16	64	A5	3	1	2	2	1					
FE-20-94	09/20/94	60	21	A7	3	1	2	0	2					

## Crew Size

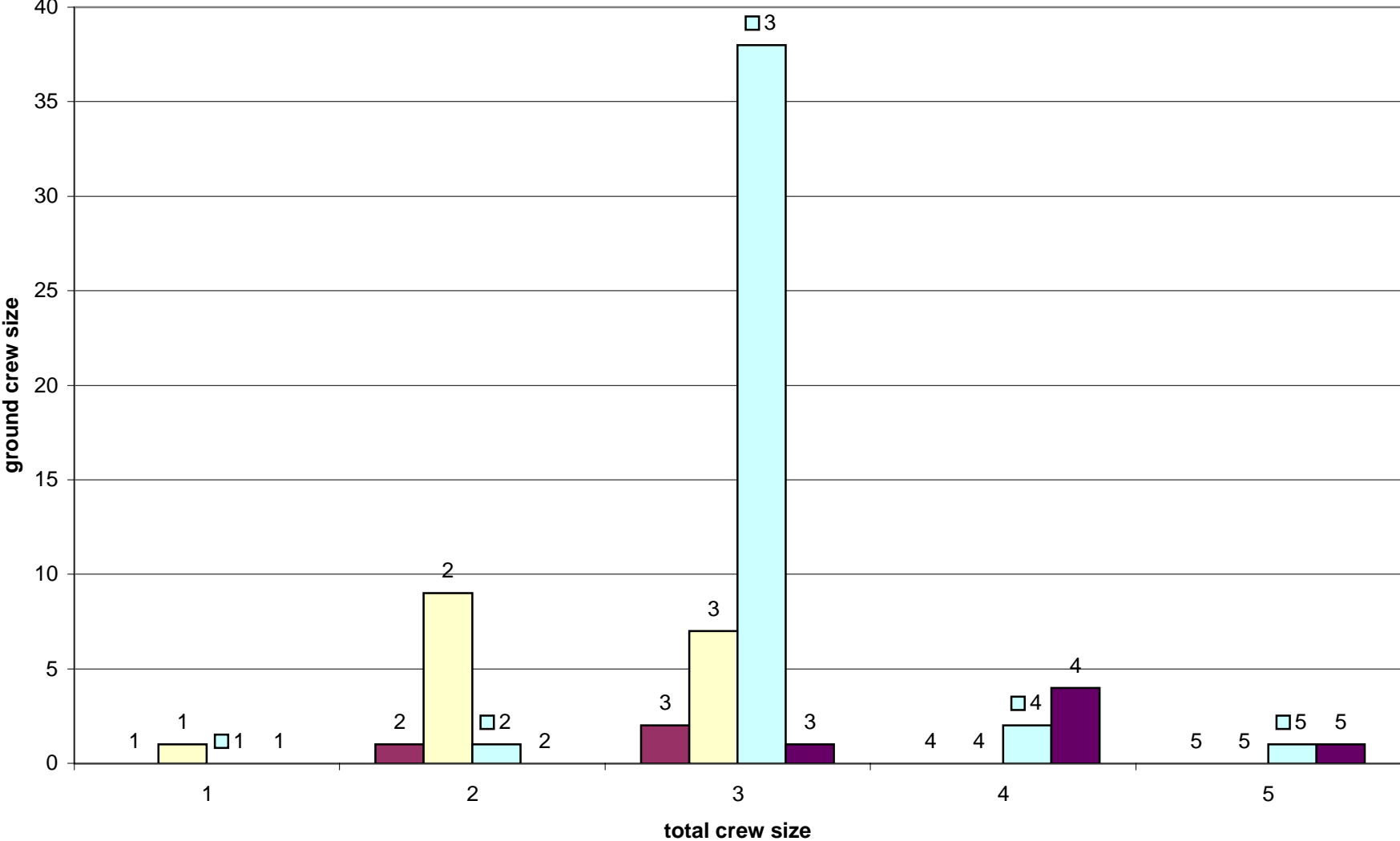
Report #	Date	Act	Event	Local	Crew Size	Engine Crew	Train Crew	On Grd.	Grd. Crew Invl.	Crew size Other	Engine Crew	Train Crew	Crew/ Grd.	Grd. Crew Invl.
FE-16-94	07/05/94	51	99	A5	3	1	2	2	1					
FE-12-94	04/12/94	58	61	B6	3	1	2	2	1					
FE-06-94	01/20/94	58	99	B6	3	1	2	2	1	3	1	2	2	1
FE-04-94	01/18/94	58	64	B8	3	1	2	2	2	3	1	2	2	2
FE-03-94	01/14/94	62	21	A4	3	1	2	2	2	3	1	2	2	1
FE-02-94	01/04/94	72	64	A5	3	1	2	2	1	3	1	2	2	2
FE-53-93	12/30/93	58	21	B6	3	1	2	2	1					
FE-47-93	11/13/93		59	B7	3	1	2	2	2					
FE-46-93	11/12/93	58	59	B6	3	1	2	2	2					
FE-40-93	10/19/93	58	21	B6	3	1	2	1	1					
FE-31-93	08/12/93	62	59	B7	3	1	2	1	1	4	1	3	2	2
FE-27-93	08/04/93	58	21	B8	3	1	2	2	2					
FE-26-93	07/15/93	13	59	B7	3	1	2	2	1					
FE-20-93	05/22/93	62	18	A1	3	1	2	2	1					
FE-13-93	04/13/93	72	59	B7	3	1	2	1	1	3	1	2	0	0
FE-34-92	10/23/92	62	17	A4	3	1	2	2	2					
FE-33-92	10/15/92	99	9	X9	3	1	2	2	2					
FE-22-92	07/25/92	72	59	A4	3	1	2	2	1					
FE-30-92	07/24/92	13	59	B7	3	1	2	1	1	3	1	2	2	2
FE-18-92	06/20/92	2	20	B7	3	1	2	1	1					
FE-14-92	06/01/92	9	64	A5	3	1	2	2	2					
FE-09-92	04/09/92	50	59	A1	3	1	2	2	2					
FE-04-92	01/30/92	24	35	C6	3	1	2	2	2					

## Crew Size

Report #	Date	Act	Event	Local	Crew Size	Engine Crew	Train Crew	On Grd.	Grd. Crew Invl.	Crew size Other	Engine Crew	Train Crew	Crew/Grd.	Grd. Crew Invl.
FE-03-92	01/28/92	72	59	B7	3	1	2	3	2					
<b>4=crew size</b>														
FE-29-95	10/04/95	2	59	A5	4	1	2	2	2					
FE-11-95	02/24/95	39	59	B7	4	2	2	2	1	3	1	2	2	2
FE-32-94	12/13/94	2	64	A5	4	1	3	3	3					
FE-23-93	06/07/93	62	64	B7	4	1	3	3	3					
FE-11-93	03/27/93	58	58	B8	4	1	3	3	2					
FE-15-92	06/01/92	58	17	B8	4	1	3	3	3					
<b>5=crew size</b>														
FE-35-93	09/02/93	16	59	B7	5	2	3	3	2					
FE-30-93	08/11/93	24	59	B8	5	2	3	2	2					



Number of Crew Members on Ground by Total Crew Size



# SOFA WORKING GROUP

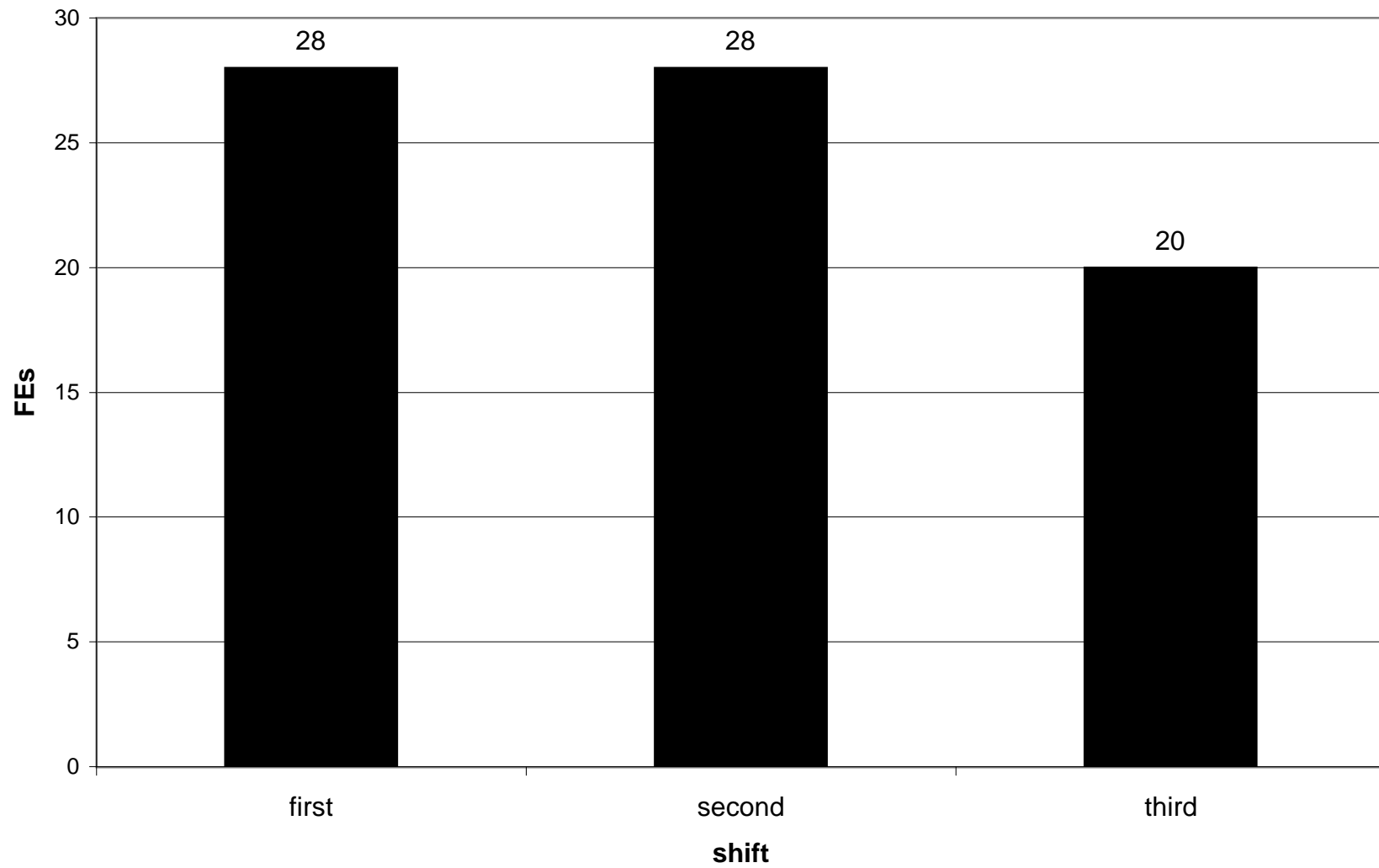
FEs

organized by

Time of Day and Shift

Group 5

'first'= 8am to 4pm, 'second' = 4pm to 12 am, 'third' = 12 am to 8 am



## FEs by Shift, Day of Week, and Time of Day

count	Time	Day	RR	Date	State	City	Report #
<b>first shift</b>							
1	8:30 AM	wed	4 CSX	06/15/96	NC	Charlotte	FE-12-96
2	8:30 AM	sat	7 GC	11/13/93	GA	Macon	FE-47-93
3	8:37 AM	tues	3 SSW	07/07/92	TX	Conlen Siding	FE-20-92
4	8:40 AM	fri	6 SP	03/21/95	CA	Bassett	FE-17-95
5	9:10 AM	fri	6 CR	07/21/95	PA	Hershey	FE-23-95
6	9:20 AM	thurs	5 CR	12/30/93	OH	Brook Park	FE-53-93
7	9:35 AM	tues	3 CR	11/15/94	NY	Painted Post	FE-29-94
8	9:44 AM	thurs	5 NS	03/02/95	SC	Aiken	FE-12-95
9	9:45 AM	fri	6 ATSF	02/24/95	TX	Amarillo	FE-11-95
10	10:00 AM	fri	6 GTW	10/23/92	MI	Dearborn	FE-34-92
11	10:30 AM	sat	7 ATSF	05/22/93	TX	El Paso	FE-20-93
12	11:15 AM	fri	6 BN	01/14/94	TX	Amarillo	FE-03-94
13	11:15 AM	fri	6 CR	02/17/95	OH	St. James	FE-09-95
14	11:40 AM	wed	4 IC	12/18/96	IL	Chicago	FE-31-96
15	11:40 AM	sat	7 UP	07/25/92	OR	Portland	FE-22-92
16	11:45 AM	sat	7 CNW	06/20/92	IL	Northlake	FE-18-92
17	11:52 AM	wed	4 SP	08/11/93	CA	Tracy	FE-30-93
18	11:55 AM	mon	2 IC	06/07/93	KY	Fulton	FE-23-93
19	12:30 PM	mon	2 UP	10/17/94	LA	Donaldsonville	FE-26-94
20	12:30 PM	thurs	5 ATSF	09/02/93	NM	Carlsbad	FE-35-93
21	12:30 PM	sat	7 SP	03/27/93	CA	Guadalupe	FE-11-93
22	12:55 PM	wed	4 UP	01/29/97	IA	Mason City	FE-04-97
23	1:05 PM	mon	2 ATSF	06/01/92	CA	Escondido	FE-14-92
24	1:25 PM	thurs	5 ATSF	08/12/93	TX	Evandale	FE-31-93
25	2:39 PM	thurs	5 ATSF	04/09/92	AZ	Cheto	FE-09-92
26	3:00 PM	thurs	5 AGC	01/30/92	FL	Polk County	FE-04-92

## FEs by Shift, Day of Week, and Time of Day

count	Time	Day	RR	Date	State	City	Report #
<b>second shift</b>							
1	4:15 PM	mon	2 BN	06/01/92	WA	Seattle	FE-15-92
2	4:45 PM	tues	3 BN	07/05/94	MT	Essex	FE-16-94
3	4:45 PM	wed	4 UP	08/04/93	OK	Pryor	FE-27-93
4	5:25 PM	thurs	5 CR	07/15/93	IN	Anderson	FE-26-93
5	5:30 PM	tues	3 BN	01/28/92	MN	Willmar	FE-03-92
6	5:45 PM	fri	6 UP	12/26/97	ID	Boise	FE-45-97
7	5:55 PM	wed	4 CSXT	05/03/95	IN	Evansville	FE-18-95
8	6:05 PM	mon	2 TTIS	11/16/92	KY	Maysville	FE-39-92
9	6:10 PM	tues	3 CSXT	01/18/94	GA	Bainbridge	FE-04-94
10	6:25 PM	mon	2 NS	12/11/95	OH	Toledo	FE-33-95
11	6:30 PM	tues	3 DGNO	09/03/96	TX	Dallas	FE-22-96
12	6:40 PM	tues	3 CSX	04/13/93	KY	Dwale	FE-13-93
13	7:00 PM	tues	3 BN	01/04/94	NE	Hastings	FE-02-94
14	7:19 PM	tues	3 ARR	09/20/94	AK	Clear Site	FE-20-94
15	7:45 PM	tues	3 BNSF	12/02/97	KS	Emporia	FE-36-97
16	8:00 PM	thurs	5 UP	01/20/94	NE	Fall City	FE-06-94
17	8:17 PM	tues	3 SOO	10/19/93	ND	Leal	FE-40-93
18	8:40 PM	mon	2 UP	12/16/96	IA	Clinton	FE-30-96
19	8:48 PM	mon	2 UP	10/07/96	TX	Eagle Pass	FE-24-96
20	8:58 PM	tues	3 NS	06/24/97	SC	Rowesville	FE-19-97
21	9:35 PM	fri	6 CMRC	06/06/97	MI	Bay City	FE-16-97
22	9:55 PM	sun	1 CR	02/02/97	IN	Burns Harbor	FE-05-97
23	10:15 PM	sun	1 UP	01/12/97	CA	S Fontana	FE-02-97
24	10:20 PM	thurs	5 MRL	10/16/97	MT	Laurel	FE-32-97
25	11:25 PM	wed	4 BRC	03/20/96	IL	Bedford Park	FE-09-96
26	11:25 PM	fri	6 SEPTA	06/04/93	PA	Devon	FE-22-93
27	11:30 PM	wed	4 CR	01/11/95	IN	Indianapolis	FE-02-95

## FEs by Shift, Day of Week, and Time of Day

count	Time	Day	RR	Date	State	City	Report #
<b>third shift</b>							
1	12:01 AM	tues	4 UP	12/13/94	CA	Thorton	FE-32-94
2	12:40 AM	wed	4 CSXT	10/04/95	IL	Riverdale	FE-29-95
3	12:40 AM	thurs	5 GBW	07/24/92	WI	Wisconsin	FE-30-92
4	1:08 AM	sun	1 NS	07/07/96	ID	Sidney	FE-17-96
5	1:15 AM	wed	4 FEC	03/11/92	FL	Fort Pierce	FE-08-92
6	1:25 AM	thurs	5 BN	10/15/92	NE	Omaha	FE-33-92
7	1:29 AM	fri	6 MNCW	07/18/97	CT	Stamford	FE-22-97
8	1:56 AM	thurs	5 WC	04/06/95	WI	Argoe	FE-16-95
9	2:52 AM	tues	3 CR	12/06/94	NY	Campbell Hall	FE-31-94
10	4:15 AM	thurs	5 PTR	11/10/94	TX	Houston	FE-28-94
11	4:30 AM	thurs	5 CSXT	12/14/95	NC	Monroe	FE-34-95
12	5:55 AM	tues	3 IHRC	06/02/92	KY	Henderson	FE-16-92
13	6:40 AM	fri	6 ATSF	11/12/93	TX	Farewell	FE-46-93
14	7:00 AM	sun	1 SOU	12/05/93	GA	Atlanta	FE-49-93
15	7:45 AM	tues	3 SP	04/12/94	TX	Houston	FE-12-94

## FEs by Shift, Day of Week, and Time of Day

count	Time	Day	RR	Date	State	City	Report #
		<b>first shift</b>			<b>second shift</b>		
		sun	=	0	sun	=	2
		mon	=	3	mon	=	5
		tues	=	2	tues	=	10
		wed	=	4	wed	=	4
		thurs	=	6	thurs	=	3
		fri	=	6	fri	=	3
		sat	=	5	sat	=	0
		total		26	total		27
						<b>third shift</b>	
		sun	=	2	sun	=	2
		mon	=	0	mon	=	0
		tues	=	3	tues	=	3
		wed	=	3	wed	=	3
		thurs	=	5	thurs	=	5
		fri	=	2	fri	=	2
		sat	=	0	sat	=	0
		total		15	total		15

## Days between FEs, Grouped by State, 100 Days or Less Highlighted

(want quick response to any potential FE  
producing conditions to prevent multiple occurrences)

#	state	city	RR	date	days between FEs	FEs related ????	FE
1	AK	Clear Site	ARR	09/20/94			FE-20-94
2	AZ	Cheto	ATSF	04/09/92			FE-09-92
3	CA	Escondido	ATSF	06/01/92			FE-14-92
4	CA	Guadalupe	SP	03/27/93	299		FE-11-93
5	CA	Tracy	SP	08/11/93	137		FE-30-93
6	CA	Thorton	UP	12/13/94	489	FE-32-94	
7	CA	Bassett	SP	03/21/95	98	FE-17-95	
8	CA	S Fontana	UP	01/12/97	663		FE-02-97
9	CT	Stamford	MNCW	07/18/97			FE-22-97
10	FL	Polk County	AGC	01/30/92		FE-04-92	
11	FL	Fort Pierce	FEC	03/11/92	41	FE-08-92	
12	GA	Macon	GC	11/13/93		FE-47-93	
13	GA	Atlanta	SOU	12/05/93	22	FE-49-93	
14	GA	Bainbridge	CSXT	01/18/94	44	FE-04-94	
15	IA	Clinton	UP	12/16/96		FE-30-96	
16	IA	Mason City	UP	01/29/97	44	FE-04-97	
17	ID	Sidney	NS	07/07/96			FE-17-96
18	ID	Boise	UP	12/26/97	537		FE-45-97
19	IL	Northlake	CNW	06/20/92			FE-18-92
20	IL	Riverdale	CSXT	10/04/95	1201		FE-29-95
21	IL	Bedford Park	BRC	03/20/96	168		FE-09-96
22	IL	Chicago	IC	12/18/96	273		FE-31-96
23	IN	Anderson	CR	07/15/93			FE-26-93
24	IN	Indianapolis	CR	01/11/95	545		FE-02-95
25	IN	Evansville	CSXT	05/03/95	112		FE-18-95



## Days between FEs, Grouped by State, 100 Days or Less Highlighted

(want quick response to any potential FE  
producing conditions to prevent multiple occurrences)

#	state	city	RR	date	days between FEs	FEs related ????	FE
26	IN	Burns Harbor	CR	02/02/97	641		FE-05-97
27	KS	Emporia	BNSF	12/02/97			FE-36-97
28	KY	Henderson	IHRC	06/02/92			FE-16-92
29	KY	Maysville	TTIS	11/16/92	167		FE-39-92
30	KY	Dwale	CSX	04/13/93	148	FE-13-93	
31	KY	Fulton	IC	06/07/93	55	FE-23-93	
32	LA	Donaldsonville	UP	10/17/94			FE-26-94
33	MI	Dearborn	GTW	10/23/92			FE-34-92
34	MI	Bay City	CMRC	06/06/97	1687		FE-16-97
35	MN	Willmar	BN	01/28/92			FE-03-92
36	MT	Essex	BN	07/05/94			FE-16-94
37	MT	Laurel	MRL	10/16/97	1199		FE-32-97
38	NC	Monroe	CSXT	12/14/95			FE-34-95
39	NC	Charlotte	CSX	06/15/96	184		FE-12-96
40	ND	Leal	SOO	10/19/93			FE-40-93
41	NE	Omaha	BN	10/15/92			FE-33-92
42	NE	Hastings	BN	01/04/94	446	FE-02-94	
43	NE	Fall City	UP	01/20/94	16	FE-06-94	
44	NM	Carlsbad	ATSF	09/02/93			FE-35-93
45	NY	Painted Post	CR	11/15/94		FE-29-94	
46	NY	Campbell Hall	CR	12/06/94	21	FE-31-94	
47	OH	Brook Park	CR	12/30/93			FE-53-93
48	OH	St. James	CR	02/17/95	414		FE-09-95

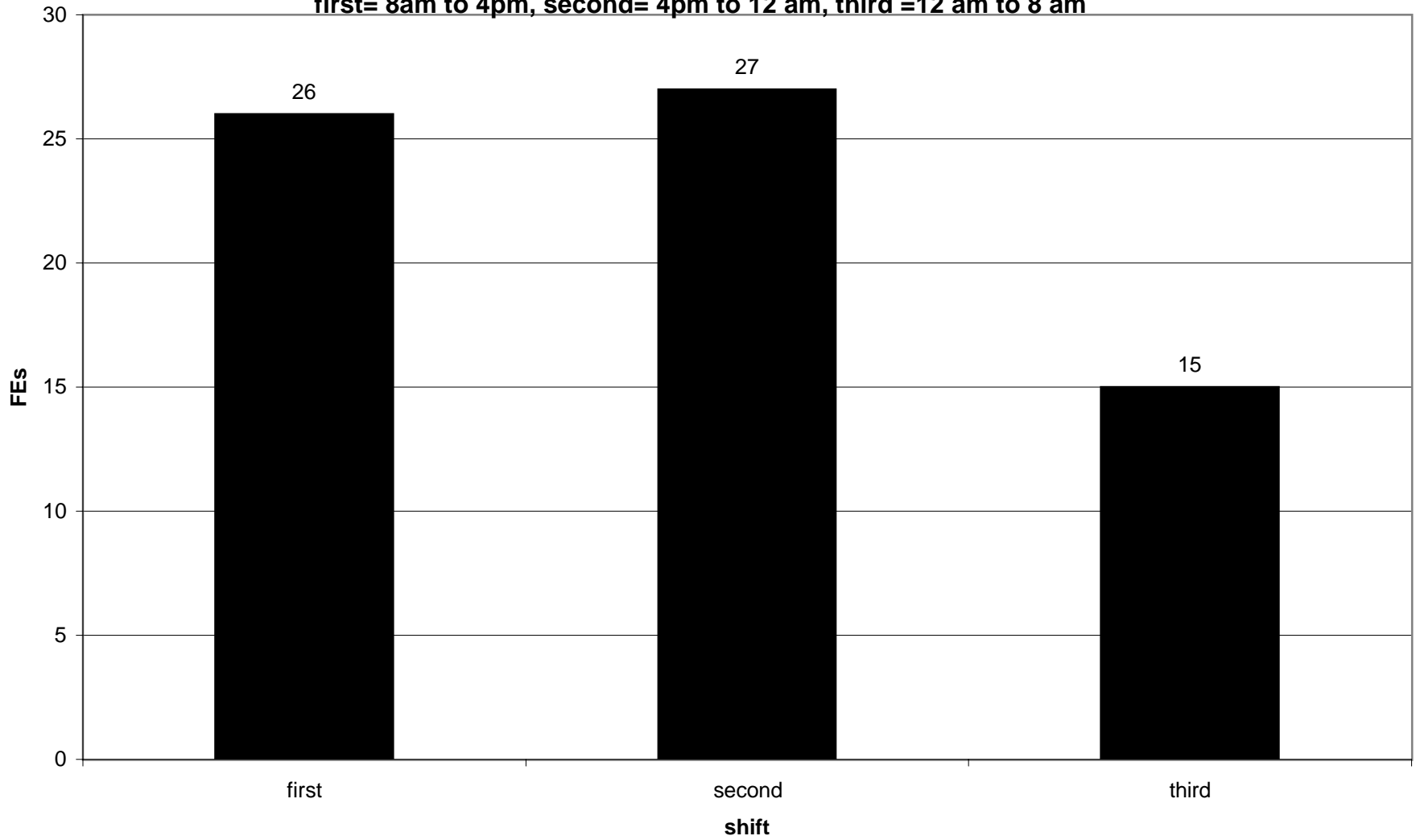
## Days between FEs, Grouped by State, 100 Days or Less Highlighted

(want quick response to any potential FE  
producing conditions to prevent multiple occurrences)

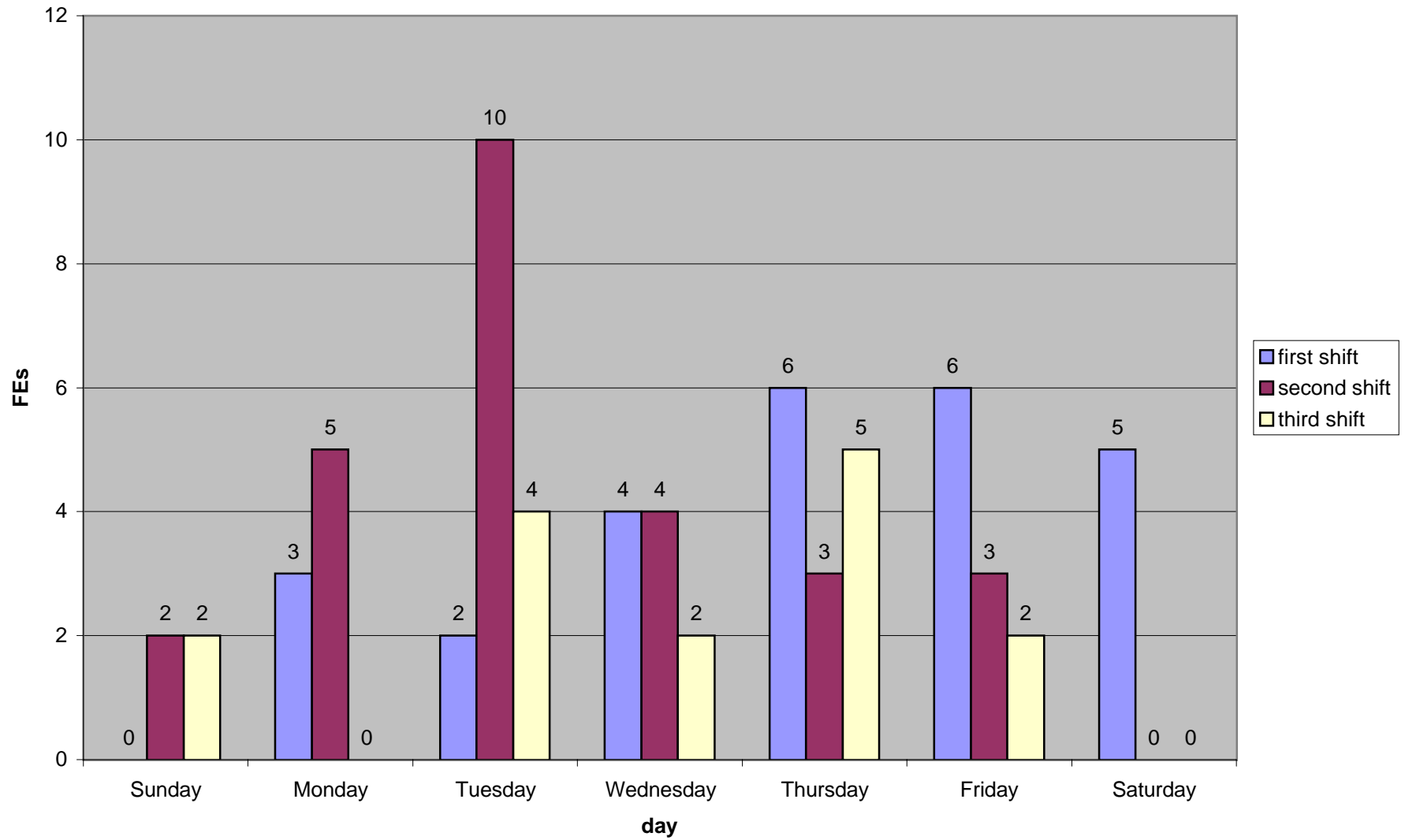
#	state	city	RR	date	days between FEs	FEs related ????	FE
49	OH	Toledo	NS	12/11/95	297		FE-33-95
50	OK	Pryor	UP	08/04/93			FE-27-93
51	OR	Portland	UP	07/25/92			FE-22-92
52	PA	Devon	SEPTA	06/04/93			FE-22-93
53	PA	Hershey	CR	07/21/95	777		FE-23-95
54	SC	Aiken	NS	03/02/95			FE-12-95
55	SC	Rowesville	NS	06/24/97	845		FE-19-97
56	TX	Conlen Siding	SSW	07/07/92			FE-20-92
57	TX	El Paso	ATSF	05/22/93	319	FE-20-93	
58	TX	Evandale	ATSF	08/12/93	82	FE-31-93	
59	TX	Farewell	ATSF	11/12/93	92	FE-46-93	
60	TX	Amarillo	BN	01/14/94	63	FE-03-94	
61	TX	Houston	SP	04/12/94	88	FE-12-94	
62	TX	Houston	PTRA	11/10/94	212		FE-28-94
63	TX	Amarillo	ATSF	02/24/95	106		FE-11-95
64	TX	Dallas	DGNO	09/03/96	557	FE-22-96	
65	TX	Eagle Pass	UP	10/07/96	34	FE-24-96	
66	WA	Seattle	BN	06/01/92			FE-15-92
67	WI	Wisconsin	GBW	07/24/92			FE-30-92
68	WI	Argoe	WC	04/06/95	986		FE-16-95

**FEs by Shift**  
**1997 - 1992**

**first= 8am to 4pm, second= 4pm to 12 am, third =12 am to 8 am**



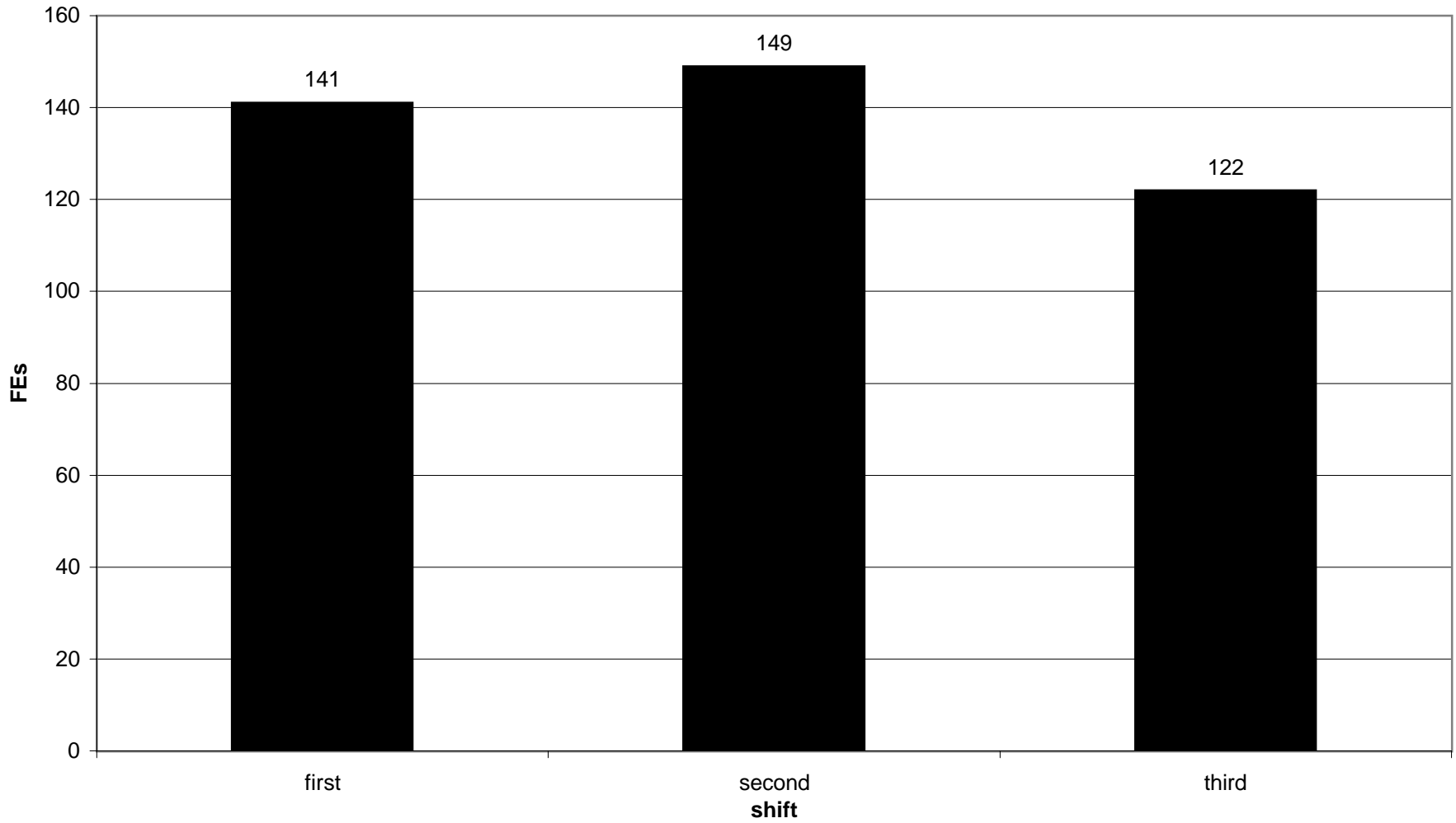
FEs by Day of Week and Shift



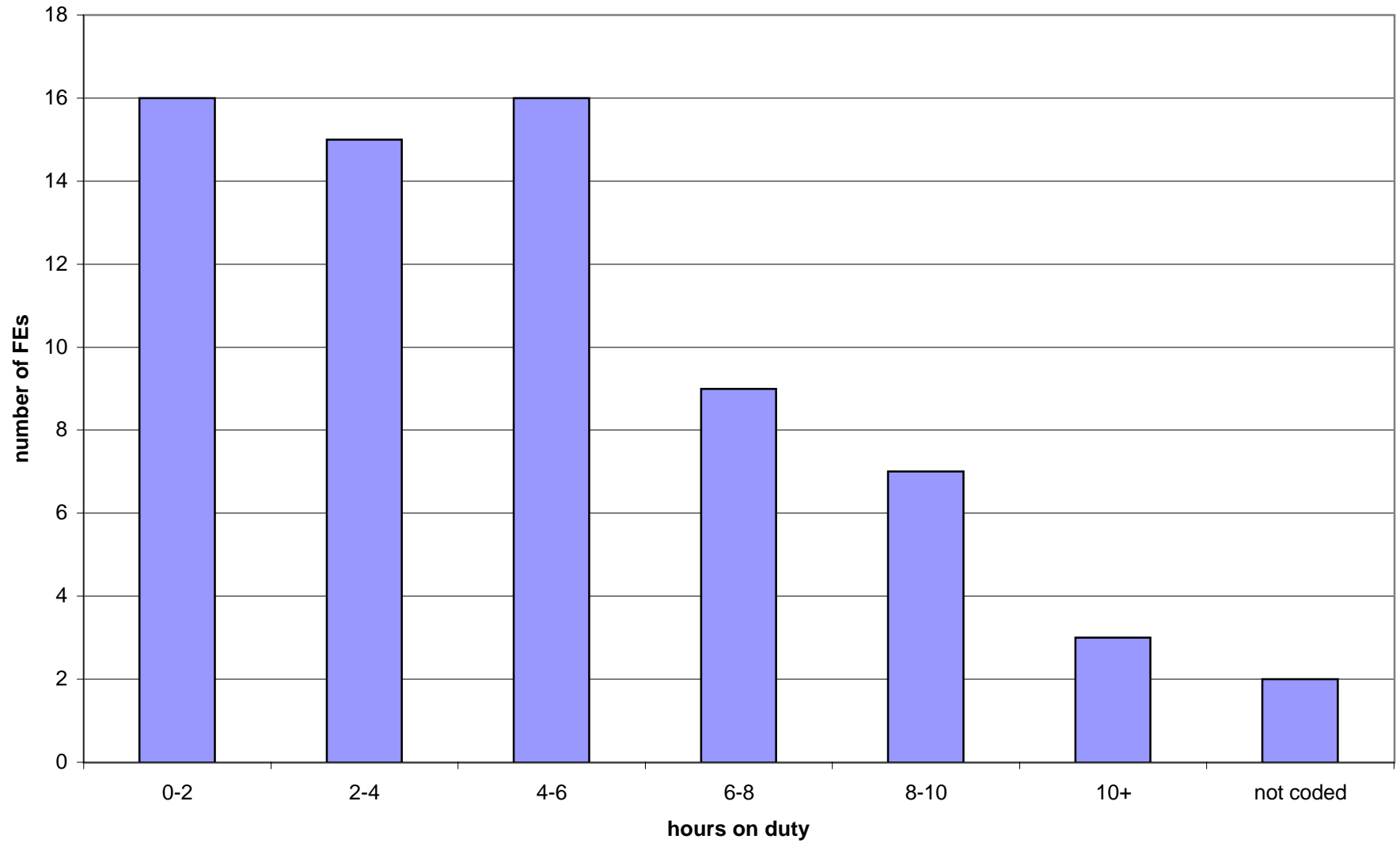
### FES by Shift

1997 - 1975

first= 8am to 4pm, second= 4pm to 12 am, third =12 am to 8 am



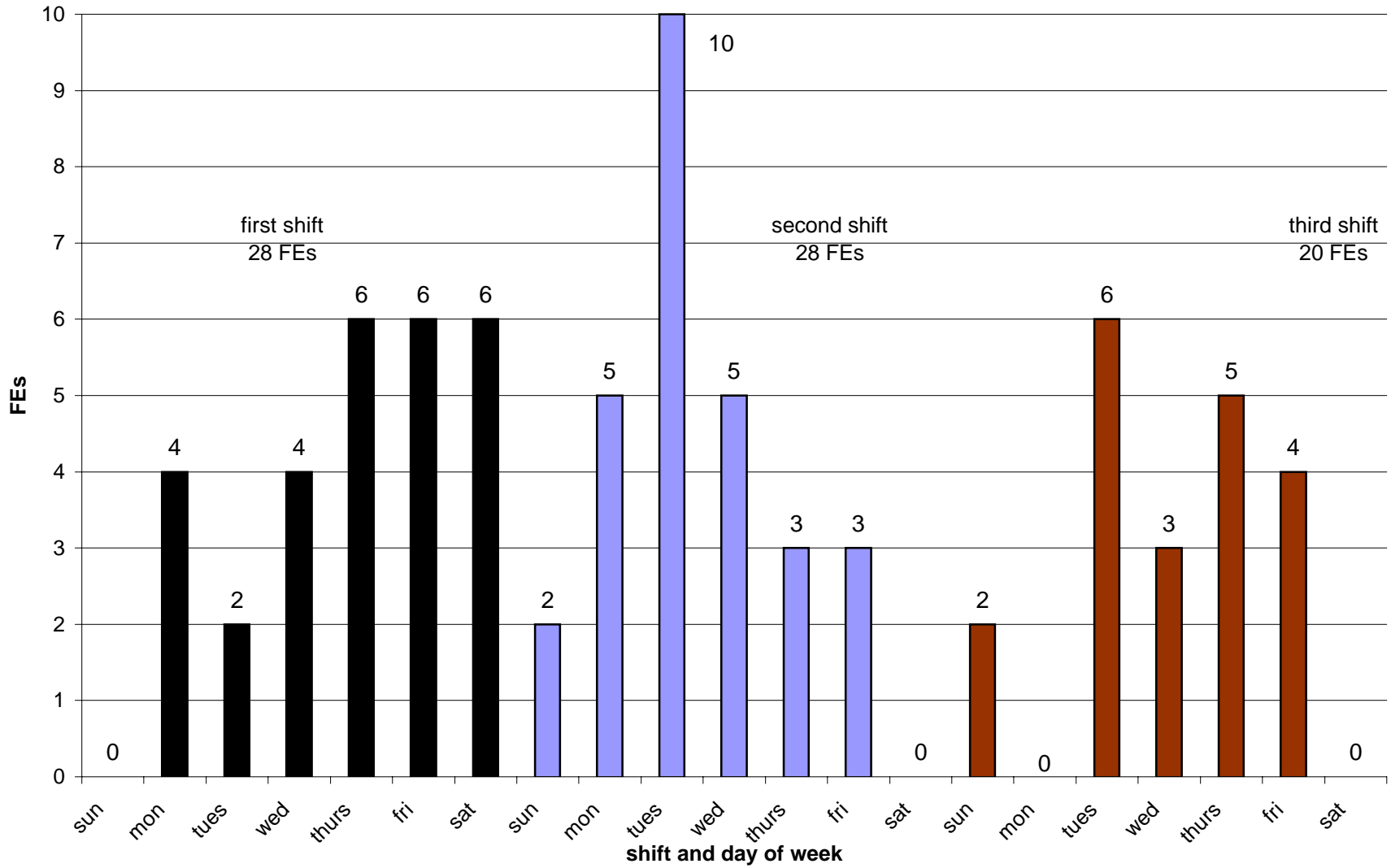
### Time FE on Duty Before Incident



## Time FE on Duty before Incident

REPORT #	time on duty	REPORT #	time on duty
1 FE-19-97	0.00	35 FE-03-94	4.16
2 FE-22-97	0.00	36 FE-28-94	4.16
3 FE-04-92	0.10	37 FE-23-93	4.25
4 FE-09-96	0.25	38 FE-09-92	4.39
5 FE-06-94	0.30	39 FE-22-92	4.40
6 FE-47-93	0.30	40 FE-09-95	4.45
7 FE-20-92	0.37	41 FE-04-97	4.55
8 FE-15-92	0.45	42 FE-17-96	5.08
9 FE-11-93	1.00	43 FE-13-93	5.25
10 FE-04-94	1.10	44 FE-30-96	5.40
11 FE-29-95	1.10	45 FE-40-93	5.47
12 FE-53-93	1.21	46 FE-31-96	5.55
13 FE-26-93	1.25	47 FE-46-93	5.55
14 FE-29-94	1.35	48 FE-14-92	6.05
15 FE-17-95	1.40	49 FE-08-92	6.15
16 FE-33-92	1.55	50 FE-32-97	6.20
17 FE-02-94	2.00	51 FE-26-94	6.30
18 FE-03-92	2.00	52 FE-27-93	6.45
19 FE-35-93	2.00	53 FE-31-94	6.52
20 FE-11-95	2.15	54 FE-16-95	7.11
21 FE-12-95	2.15	55 FE-34-95	7.30
22 FE-32-94	2.16	56 FE-18-92	7.45
23 FE-33-95	2.25	57 FE-22-93	8.10
24 FE-34-92	2.30	58 FE-12-96	8.30
25 FE-24-96	2.48	59 FE-02-95	8.31
26 FE-30-93	2.52	60 FE-12-94	8.45
27 FE-18-95	3.00	61 FE-45-97	9.30
28 FE-23-95	3.10	62 FE-16-94	9.45
29 FE-49-93	3.15	63 FE-36-97	9.45
30 FE-31-93	3.25	64 FE-16-92	10.25
31 FE-30-92	3.40	65 FE-22-96	10.55
32 FE-20-93	4.00	66 FE-20-94	11.19
33 FE-39-92	4.05	67 FE-05-97	blank
34 FE-02-97	4.15	68 FE-16-97	blank

### FEs by Shift and Day of Week 1998 - 1992





## FEs by Shift and Railroad, 1998 - 1992

count	RR	Shift	Time	Date
1	AGC	first	3:00 PM	01/30/1992
	ATSF	first	9:45 AM	02/24/1995
	ATSF	first	10:30 AM	05/22/1993
	ATSF	first	12:30 PM	09/02/1993
	ATSF	first	1:05 PM	06/01/1992
	ATSF	first	1:25 PM	08/12/1993
6	ATSF	first	2:39 PM	04/09/1992
1	BN	first	11:15 AM	01/14/1994
	BNSF	first	10:15 AM	01/24/1998
2	BNSF	first	12:30 PM	06/01/1998
1	CNW	first	11:45 AM	06/20/1992
	CR	first	9:10 AM	07/21/1995
	CR	first	9:20 AM	12/30/1993
	CR	first	9:35 AM	11/15/1994
4	CR	first	11:15 AM	02/17/1995
1	CSX	first	8:30 AM	06/15/1996
1	GC	first	8:30 AM	11/13/1993
1	GTW	first	10:00 AM	10/23/1992
	IC	first	11:40 AM	12/18/1996
2	IC	first	11:55 AM	06/07/1993
1	NS	first	9:44 AM	03/02/1995
	SP	first	8:40 AM	03/21/1995
	SP	first	11:52 AM	08/11/1993
3	SP	first	12:30 PM	03/27/1993
1	SSW	first	8:37 AM	07/07/1992
	UP	first	11:40 AM	07/25/1992
	UP	first	12:30 PM	10/17/1994
3	UP	first	12:55 PM	01/29/1997
<b>28</b>	<b>total</b>			

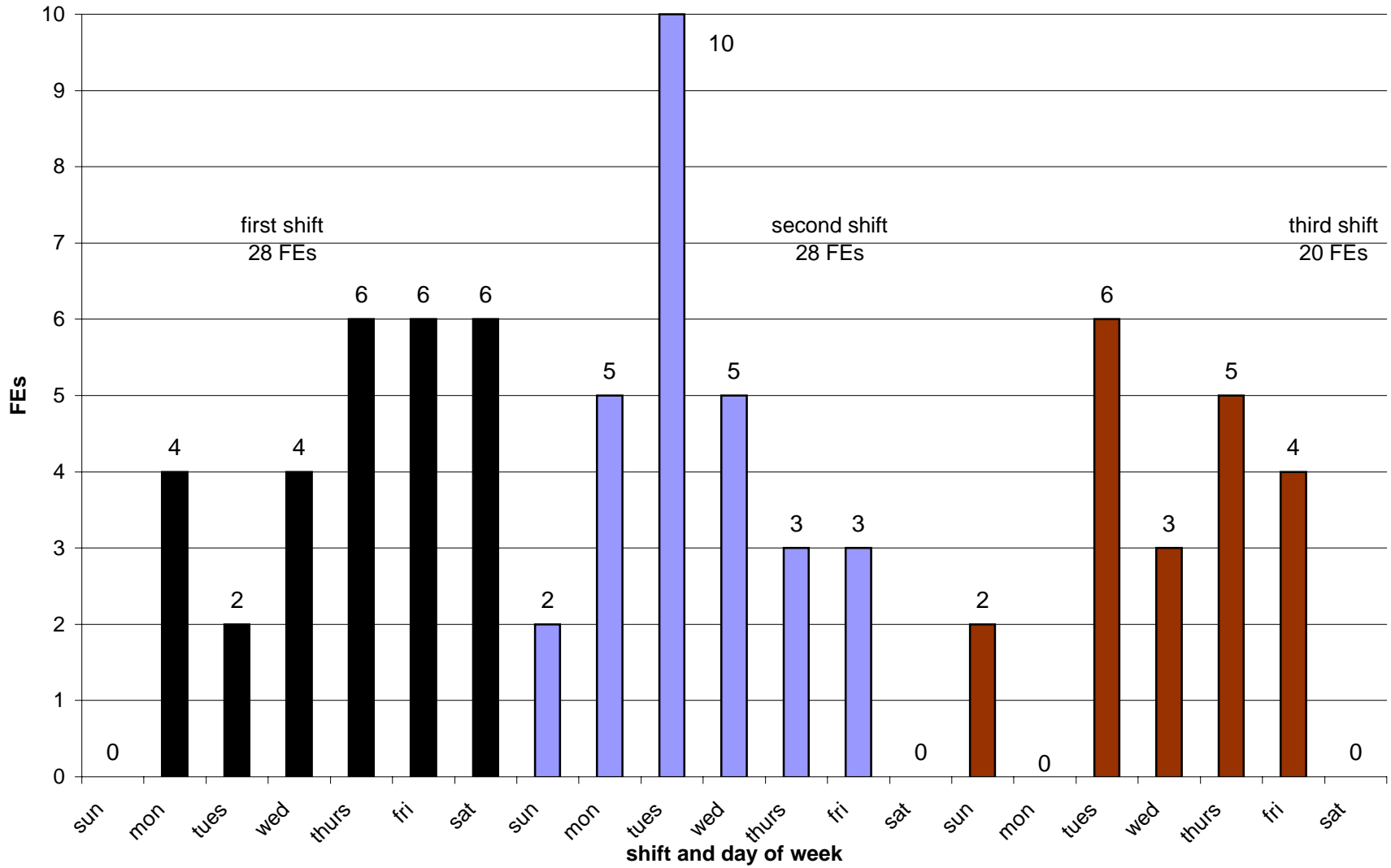
## FEs by Shift and Railroad, 1998 - 1992

count	RR	Shift	Time	Date
1	ARR	second	7:19 PM	09/20/1994
	BN	second	4:15 PM	06/01/1992
	BN	second	4:45 PM	07/05/1994
	BN	second	5:30 PM	01/28/1992
4	BN	second	7:00 PM	01/04/1994
1	BNSF	second	7:45 PM	12/02/1997
	BRC	second	5:33 PM	02/04/1998
2	BRC	second	11:25 PM	03/20/1996
1	CMRC	second	9:35 PM	06/06/1997
	CR	second	5:25 PM	07/15/1993
	CR	second	9:55 PM	02/02/1997
3	CR	second	11:30 PM	01/11/1995
1	CSX	second	6:40 PM	04/13/1993
	CSXT	second	5:55 PM	05/03/1995
2	CSXT	second	6:10 PM	01/18/1994
1	DGNO	second	6:30 PM	09/03/1996
1	MRL	second	10:20 PM	10/16/1997
	NS	second	6:25 PM	12/11/1995
2	NS	second	8:58 PM	06/24/1997
1	SEPTA	second	11:25 PM	06/04/1993
1	SOO	second	8:17 PM	10/19/1993
1	TTIS	second	6:05 PM	11/16/1992
	UP	second	4:45 PM	08/04/1993
	UP	second	5:45 PM	12/26/1997
	UP	second	8:00 PM	01/20/1994
	UP	second	8:40 PM	12/16/1996
	UP	second	8:48 PM	10/07/1996
6	UP	second	10:15 PM	01/12/1997
<b>28</b>	<b>total</b>			

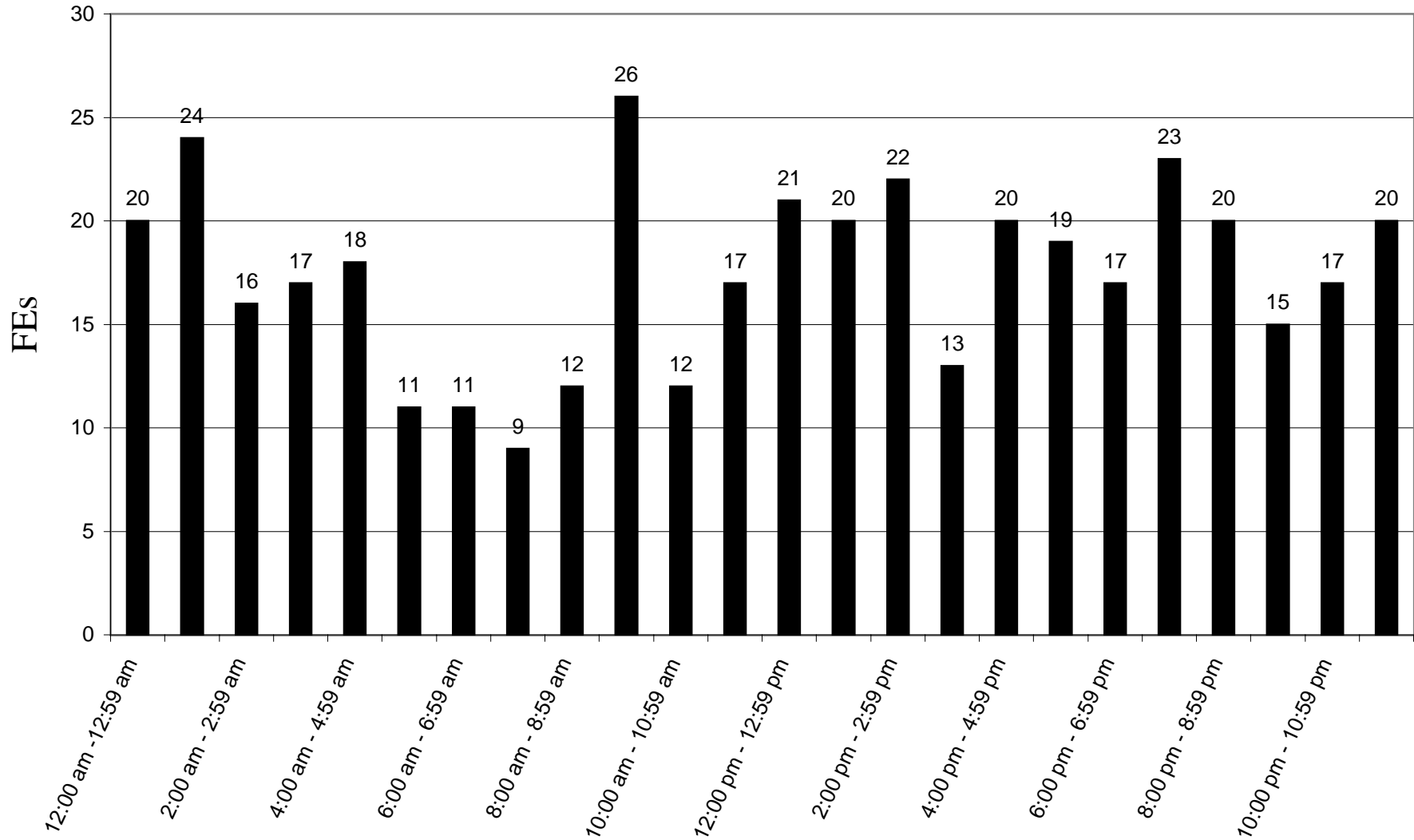
## FEs by Shift and Railroad, 1998 - 1992

count	RR	Shift	Time	Date
1	ATSF	third	6:40 AM	11/12/1993
1	BN	third	1:25 AM	10/15/1992
1	BRC	third	7:33 AM	05/26/1998
1	CR	third	2:52 AM	12/06/1994
	CSXT	third	12:40 AM	10/04/1995
2	CSXT	third	4:30 AM	12/14/1995
1	FEC	third	1:15 AM	03/11/1992
1	GBW	third	12:40 AM	07/24/1992
1	IHRC	third	5:55 AM	06/02/1992
1	MNCW	third	1:29 AM	07/18/1997
	NS	third	1:08 AM	07/07/1996
	NS	third	2:50 AM	07/01/1998
3	NS	third	6:40 AM	06/05/1998
1	PTRA	third	4:15 AM	11/10/1994
1	SOU	third	7:00 AM	12/05/1993
1	SP	third	7:45 AM	04/12/1994
	UP	third	12:01 AM	12/13/1994
	UP	third	3:30 AM	08/15/1997
3	UP	third	4:30 AM	06/24/1997
1	WC	third	1:56 AM	04/06/1995
<b>20</b>	<b>total</b>			

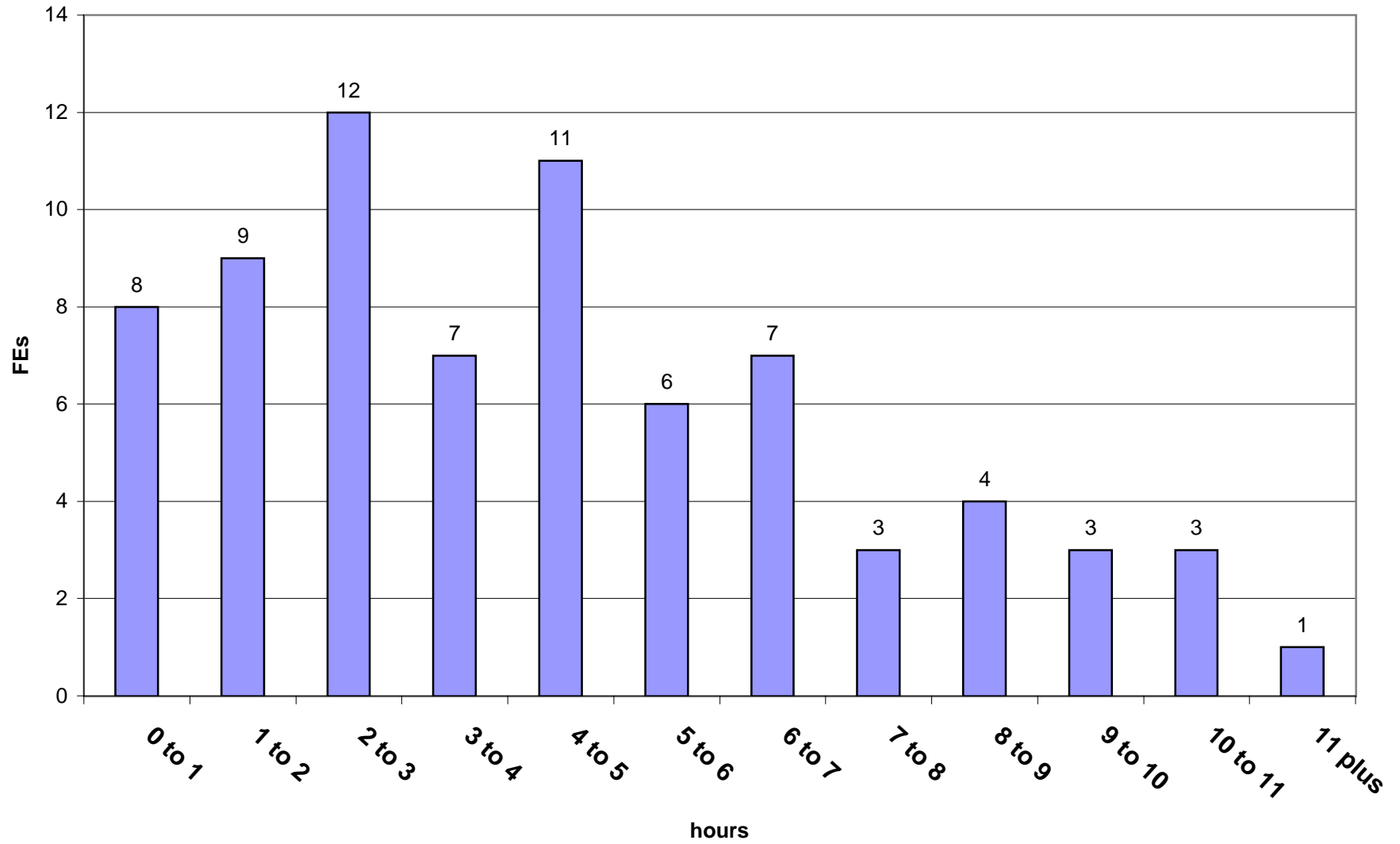
### FEs by Shift and Day of Week 1998 - 1992



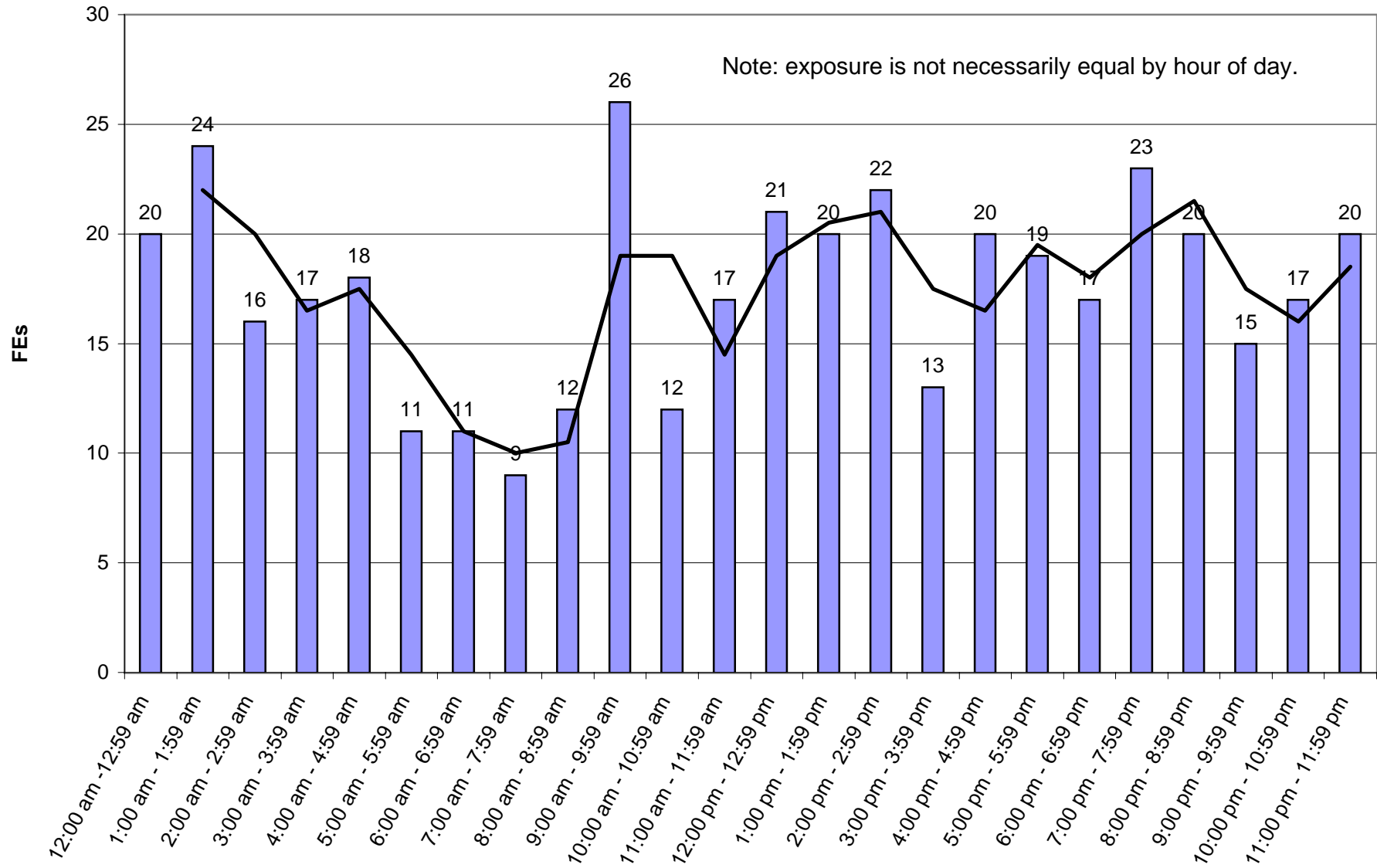
**Note: Exposure is not Necessarily Equal by Hour of Day**



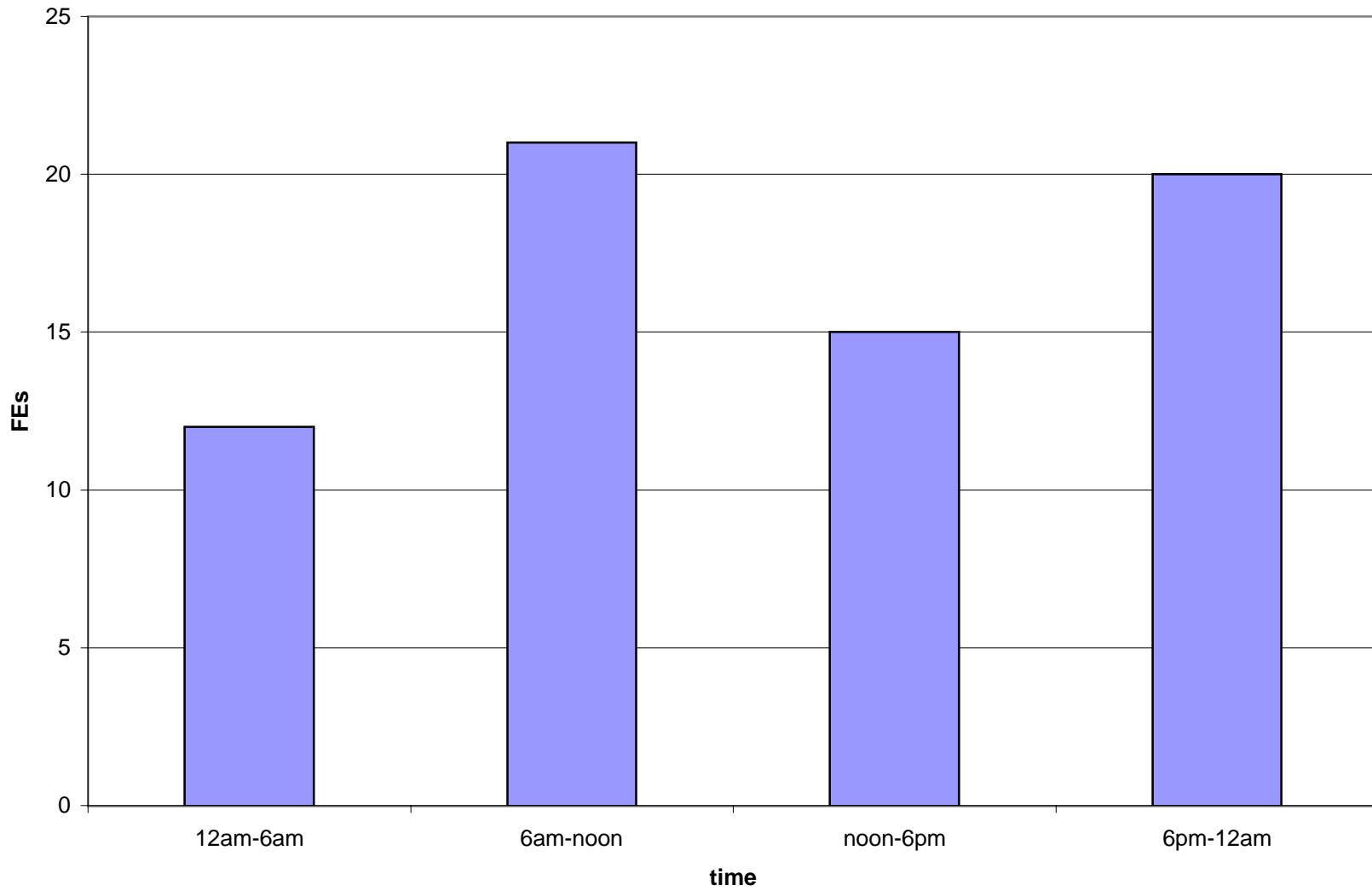
### Time FE on Duty before Event



### FES by Time of Day 1998 - 1975



**FES by Time of Day**





# SOFA WORKING GROUP

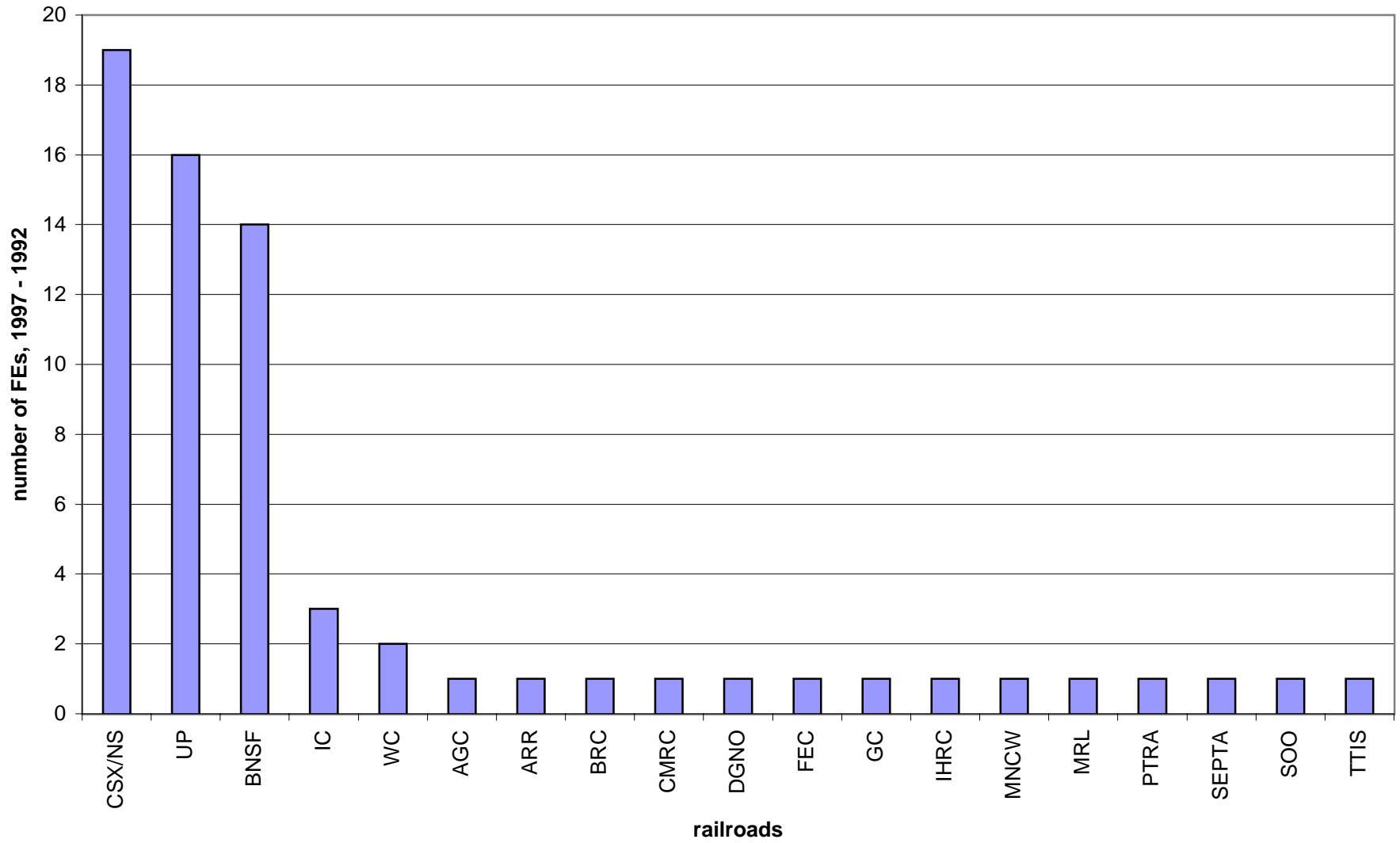
FEs

organized by

**Railroad**

Group 6

### FEs Grouped by Railroads and Recent Mergers



## FEs Grouped by Railroads by Recent Mergers

	FEs	RR	report #	date	day	time
	1	CR	FE-05-97	02/02/97	1	9:55 PM
	1	CR	FE-23-95	07/21/95	6	9:10 AM
	1	CR	FE-09-95	02/17/95	6	11:15 AM
	1	CR	FE-02-95	01/11/95	4	11:30 PM
	1	CR	FE-31-94	12/06/94	3	2:52 AM
	1	CR	FE-29-94	11/15/94	3	9:35 AM
	1	CR	FE-53-93	12/30/93	5	9:20 AM
	1	CR	FE-26-93	07/15/93	5	5:25 PM
	1	CSX	FE-12-96	06/15/96	4	8:30 AM
<b>CSX/NS</b>	1	CSX	FE-13-93	04/13/93	3	6:40 PM
	1	CSXT	FE-34-95	12/14/95	5	4:30 AM
	1	CSXT	FE-29-95	10/04/95	4	12:40 AM
	1	CSXT	FE-18-95	05/03/95	4	5:55 PM
	1	CSXT	FE-04-94	01/18/94	3	6:10 PM
	1	NS	FE-19-97	06/24/97	3	8:58 PM
	1	NS	FE-17-96	07/07/96	1	1:08 AM
	1	NS	FE-33-95	12/11/95	2	6:25 PM
	1	NS	FE-12-95	03/02/95	5	9:44 AM
<b>total = 19</b>	1	SOU	FE-49-93	12/05/93	1	7:00 AM
	1	UP	FE-45-97	12/26/97	6	5:45 PM
	1	UP	FE-04-97	01/29/97	4	12:55 PM
	1	UP	FE-02-97	01/12/97	1	10:15 PM
	1	UP	FE-30-96	12/16/96	2	8:40 PM
	1	UP	FE-24-96	10/07/96	2	8:48 PM
<b>UP</b>	1	UP	FE-32-94	12/13/94	3	12:01 AM
	1	UP	FE-26-94	10/17/94	2	12:30 PM
	1	UP	FE-06-94	01/20/94	5	8:00 PM
	1	UP	FE-27-93	08/04/93	4	4:45 PM
	1	UP	FE-22-92	07/25/92	7	11:40 AM
	1	CNW	FE-18-92	06/20/92	7	11:45 AM
	1	SP	FE-17-95	03/21/95	6	8:40 AM
	1	SP	FE-12-94	04/12/94	3	7:45 AM
	1	SP	FE-30-93	08/11/93	4	11:52 AM
	1	SP	FE-11-93	03/27/93	7	12:30 PM
<b>total = 16</b>	1	SSW	FE-20-92	07/07/92	3	8:37 AM

## FEs Grouped by Railroads by Recent Mergers

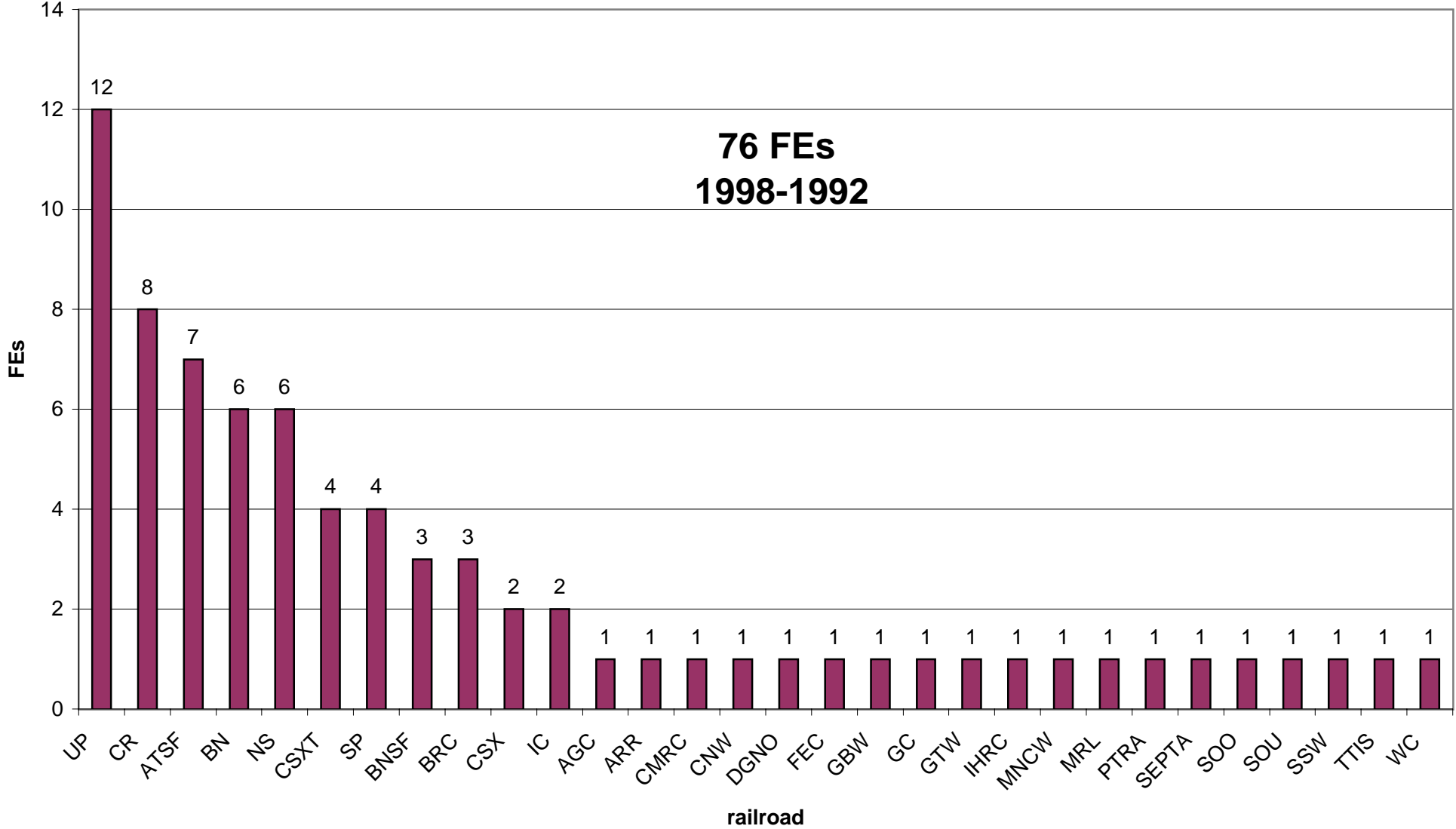
	FEs	RR	report #	date	day	time
	1	ATSF	FE-11-95	02/24/95	6	9:45 AM
	1	ATSF	FE-46-93	11/12/93	6	6:40 AM
	1	ATSF	FE-35-93	09/02/93	5	12:30 PM
	1	ATSF	FE-31-93	08/12/93	5	1:25 PM
	1	ATSF	FE-20-93	05/22/93	7	10:30 AM
	1	ATSF	FE-14-92	06/01/92	2	1:05 PM
<b>BNSF</b>	1	ATSF	FE-09-92	04/09/92	5	2:39 PM
	1	BN	FE-16-94	07/05/94	3	4:45 PM
	1	BN	FE-03-94	01/14/94	6	11:15 AM
	1	BN	FE-02-94	01/04/94	3	7:00 PM
	1	BN	FE-33-92	10/15/92	5	1:25 AM
	1	BN	FE-15-92	06/01/92	2	4:15 PM
	1	BN	FE-03-92	01/28/92	3	5:30 PM
<b>total = 14</b>	1	BNSF	FE-36-97	12/02/97	3	7:45 PM
<b>IC</b>	1	IC	FE-31-96	12/18/96	4	11:40 AM
	1	IC	FE-23-93	06/07/93	2	11:55 AM
<b>total = 3</b>	1	GTW	FE-34-92	10/23/92	6	10:00 AM
<b>WC</b>	1	GBW	FE-30-92	07/24/92	5	12:40 AM
<b>total = 2</b>	1	WC	FE-16-95	04/06/95	5	1:56 AM
	1	AGC	FE-04-92	01/30/92	5	3:00 PM
	1	ARR	FE-20-94	09/20/94	3	7:19 PM
	1	BRC	FE-09-96	03/20/96	4	11:25 PM
	1	CMRC	FE-16-97	06/06/97	6	9:35 PM
	1	DGNO	FE-22-96	09/03/96	3	6:30 PM
	1	FEC	FE-08-92	03/11/92	4	1:15 AM
	1	GC	FE-47-93	11/13/93	7	8:30 AM
	1	IHRC	FE-16-92	06/02/92	3	5:55 AM
	1	MNCW	FE-22-97	07/18/97	6	1:29 AM
	1	MRL	FE-32-97	10/16/97	5	10:20 PM
	1	PTRA	FE-28-94	11/10/94	5	4:15 AM
	1	SEPTA	FE-22-93	06/04/93	6	11:25 PM
	1	SOO	FE-40-93	10/19/93	3	8:17 PM
<b>total = 14</b>	1	TTIS	FE-39-92	11/16/92	2	6:05 PM

**68 FEs, 1992-97**

## FEs Grouped by Railroads by Recent Mergers

	FEs	RR	report #	date	day	time
Yard switching miles						
		%	miles			
Class I		83%	70,065,019			
RR with more than 400,000 hours but not Class I's		10%	8,535,634			
all other railroads		7%	6,273,146			
		<hr/>	<hr/>			
		100%	84,873,799			

FEs by Railroad



### FEs by Railroad

FEs count	RR	Date	Day	Time
	ATSF	02/24/1995	Wed	12:55 PM
	ATSF	11/12/1993	Sun	10:15 PM
	ATSF	09/02/1993	Wed	11:25 PM
	ATSF	08/12/1993	Wed	8:30 AM
	ATSF	05/22/1993	Sun	1:08 AM
	ATSF	06/01/1992	Tues	6:30 PM
7	ATSF	04/09/1992	Mon	8:48 PM
	BN	07/05/1994	Wed	11:30 PM
	BN	01/14/1994	Thurs	10:20 PM
	BN	01/04/1994	Fri	1:29 AM
	BN	10/15/1992	Tues	8:58 PM
	BN	06/01/1992	Fri	9:35 PM
6	BN	01/28/1992	Sun	9:55 PM
	BNSF	06/01/1998	Thurs	9:44 AM
	BNSF	01/24/1998	Fri	9:45 AM
3	BNSF	12/02/1997	Fri	11:15 AM
	BRC	05/26/1998	Wed	5:55 PM
	BRC	02/04/1998	Fri	8:40 AM
3	BRC	03/20/1996	Thurs	1:56 AM
	CR	02/02/1997	Tues	4:45 PM
	CR	07/21/1995	Tues	7:45 AM
	CR	02/17/1995	Thurs	8:00 PM
	CR	01/11/1995	Tues	6:10 PM
	CR	12/06/1994	Fri	11:15 AM
	CR	11/15/1994	Tues	7:00 PM
	CR	12/30/1993	Thurs	4:30 AM
8	CR	07/15/1993	Mon	6:25 PM
	CSX	06/15/1996	Mon	12:30 PM
2	CSX	04/13/1993	Tues	7:19 PM

### FEs by Railroad

FEs count	RR	Date	Day	Time
	CSXT	12/14/1995	Tues	12:01 AM
	CSXT	10/04/1995	Tues	2:52 AM
	CSXT	05/03/1995	Tues	9:35 AM
4	CSXT	01/18/1994	Thurs	4:15 AM
	IC	12/18/1996	Wed	4:45 PM
2	IC	06/07/1993	Thurs	5:25 PM
	NS	07/01/1998	Tues	5:30 PM
	NS	06/05/1998	Thurs	9:20 AM
	NS	06/24/1997	Sun	7:00 AM
	NS	07/07/1996	Sat	8:30 AM
	NS	12/11/1995	Fri	6:40 AM
6	NS	03/02/1995	Tues	8:17 PM
	SP	03/21/1995	Tues	8:37 AM
	SP	04/12/1994	Sat	11:45 AM
	SP	08/11/1993	Tues	5:55 AM
4	SP	03/27/1993	Mon	4:15 PM
	UP	12/26/1997	Fri	6:40 AM
	UP	08/15/1997	Mon	12:30 PM
	UP	06/24/1997	Tues	7:33 AM
	UP	01/29/1997	Wed	5:33 PM
	UP	01/12/1997	Sat	10:15 AM
	UP	12/16/1996	Fri	3:30 AM
	UP	10/07/1996	Tues	4:30 AM
	UP	12/13/1994	Fri	5:45 PM
	UP	10/17/1994	Tues	7:45 PM
	UP	01/20/1994	Mon	6:05 PM
	UP	08/04/1993	Fri	10:00 AM
12	UP	07/25/1992	Thurs	1:25 AM



### FEs by Railroad

FEs count	RR	Date	Day	Time
1	AGC	01/30/1992	Wed	11:40 AM
1	ARR	09/20/1994	Mon	8:40 PM
1	CMRC	06/06/1997	Fri	9:10 AM
1	CNW	06/20/1992	Wed	12:40 AM
1	DGNO	09/03/1996	Sat	12:30 PM
1	FEC	03/11/1992	Tues	6:40 PM
1	GBW	07/24/1992	Sat	10:30 AM
1	GC	11/13/1993	Fri	11:25 PM
1	GTW	10/23/1992	Mon	11:55 AM
1	IHRC	06/02/1992	Wed	11:52 AM
1	MNCW	07/18/1997	Thurs	1:25 PM
1	MRL	10/16/1997	Thurs	12:30 PM
1	PTRA	11/10/1994	Thurs	3:00 PM
1	SEPTA	06/04/1993	Wed	1:15 AM
1	SOO	10/19/1993	Thurs	2:39 PM
1	SOU	12/05/1993	Mon	1:05 PM
1	SSW	07/07/1992	Sat	11:40 AM
1	TTIS	11/16/1992	Thurs	12:40 AM
1	WC	04/06/1995	Wed	2:50 AM

**76**      **total**

## FEs by Railroad

**FEs**      **RR**  
**count**

### Summary

12	UP
8	CR
7	ATSF
6	BN
6	NS
4	CSXT
4	SP
3	BNSF
3	BRC
2	CSX
2	IC
1	AGC
1	ARR
1	CMRC
1	CNW
1	DGNO
1	FEC
1	GBW
1	GC
1	GTW
1	IHRC
1	MNCW
1	MRL
1	PTRA
1	SEPTA
1	SOO
1	SOU
1	SSW
1	TTIS
1	WC
<b>76</b>	<b>total</b>

## FEs by Railroad

<b>Railroad</b>	<b>Date</b>	<b>State</b>	<b>City</b>	<b>REPORT #</b>	<b>RR total</b>	<b>grouped by merger total</b>
<b>mergers</b>						
ATSF	04/09/92	AZ	Cheto	FE-09-92		
ATSF	06/01/92	CA	Escondido	FE-14-92		
ATSF	05/22/93	TX	El Paso	FE-20-93		
ATSF	08/12/93	TX	Evandale	FE-31-93		
ATSF	09/02/93	NM	Carlsbad	FE-35-93		
ATSF	11/12/93	TX	Farewell	FE-46-93		
ATSF	02/24/95	TX	Amarillo	FE-11-95	7	
BN	01/28/92	MN	Willmar	FE-03-92		
BN	06/01/92	WA	Seattle	FE-15-92		
BN	10/15/92	NE	Omaha	FE-33-92		
BN	01/04/94	NE	Hastings	FE-02-94		
BN	01/14/94	TX	Amarillo	FE-03-94		
BN	07/05/94	MT	Essex	FE-16-94	6	
BNSF	12/02/97	KS	Emporia	FE-36-97	1	14
UP	07/25/92	OR	Portland	FE-22-92		
UP	08/04/93	OK	Pryor	FE-27-93		
UP	01/20/94	NE	Fall City	FE-06-94		
UP	10/17/94	LA	Donaldsonville	FE-26-94		
UP	12/13/94	CA	Thorton	FE-32-94		
UP	10/07/96	TX	Eagle Pass	FE-24-96		
UP	12/16/96	IA	Clinton	FE-30-96		
UP	01/12/97	CA	S Fontana	FE-02-97		
UP	01/29/97	IA	Mason City	FE-04-97		
UP	12/26/97	ID	Boise	FE-45-97	10	
SP	03/27/93	CA	Guadalupe	FE-11-93		
SP	08/11/93	CA	Tracy	FE-30-93		
SP	04/12/94	TX	Houston	FE-12-94		
SP	03/21/95	CA	Bassett	FE-17-95	4	14

## FEs by Railroad

<b>Railroad</b>	<b>Date</b>	<b>State</b>	<b>City</b>	<b>REPORT #</b>	<b>RR total</b>	<b>grouped by merger</b>
CR	07/15/93	IN	Anderson	FE-26-93		
CR	12/30/93	OH	Brook Park	FE-53-93		
CR	11/15/94	NY	Painted Post	FE-29-94		
CR	12/06/94	NY	Campbell Hall	FE-31-94		
CR	01/11/95	IN	Indianapolis	FE-02-95		
CR	02/17/95	OH	St. James	FE-09-95		
CR	07/21/95	PA	Hershey	FE-23-95		
CR	02/02/97	IN	Burns Harbor	FE-05-97	8	
CSX	04/13/93	KY	Dwale	FE-13-93		
CSX	06/15/96	NC	Charlotte	FE-12-96	2	
CSXT	01/18/94	GA	Bainbridge	FE-04-94		
CSXT	05/03/95	IN	Evansville	FE-18-95		
CSXT	10/04/95	IL	Riverdale	FE-29-95		
CSXT	12/14/95	NC	Monroe	FE-34-95	4	
NS	03/02/95	SC	Aiken	FE-12-95		
NS	12/11/95	OH	Toledo	FE-33-95		
NS	07/07/96	ID	Sidney	FE-17-96		
NS	06/24/97	SC	Rowesville	FE-19-97	4	
SOU	12/05/93	GA	Atlanta	FE-49-93	1	

## FEs by Railroad

<b>Railroad</b>	<b>Date</b>	<b>State</b>	<b>City</b>	<b>REPORT #</b>	<b>RR total</b>	<b>grouped by merger</b>
<b>non-mergers</b>						
IC	06/07/93	KY	Fulton	FE-23-93		
IC	12/18/96	IL	Chicago	FE-31-96	2	
AGC	01/30/92	FL	Polk County	FE-04-92	1	
ARR	09/20/94	AK	Clear Site	FE-20-94	1	
BRC	03/20/96	IL	Bedford Park	FE-09-96	1	
CMRC	06/06/97	MI	Bay City	FE-16-97	1	
CNW	06/20/92	IL	Northlake	FE-18-92	1	
DGNO	09/03/96	TX	Dallas	FE-22-96	1	
FEC	03/11/92	FL	Fort Pierce	FE-08-92	1	
GBW	07/24/92	WI	Wisconsin	FE-30-92	1	
GC	11/13/93	GA	Macon	FE-47-93	1	
GTW	10/23/92	MI	Dearborn	FE-34-92	1	
IHRC	06/02/92	KY	Henderson	FE-16-92	1	
MNCW	07/18/97	CT	Stamford	FE-22-97	1	
MRL	10/16/97	MT	Laurel	FE-32-97	1	
PTRA	11/10/94	TX	Houston	FE-28-94	1	
SEPTA	06/04/93	PA	Devon	FE-22-93	1	
SOO	10/19/93	ND	Leal	FE-40-93	1	
SSW	07/07/92	TX	Conlen Siding	FE-20-92	1	
TTIS	11/16/92	KY	Maysville	FE-39-92	1	
WC	04/06/95	WI	Argoe	FE-16-95	1	

SOFA WORKING GROUP

FEs

with

Exposure Measures

Group 7

### Exposure Data: Seasonal Pattern of Carloadings (1,000s of carloads)

	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	
<b>1997</b>	315	343	346	341	344	347	327	351	na	na	na	na	339
<b>1996</b>	321	333	353	355	359	351	337	355	345	358	343	325	345
<b>1995</b>	340	354	354	357	357	345	340	357	368	362	345	339	352
<b>1994</b>	302	332	346	344	352	341	330	357	353	363	347	346	343
<b>1993</b>	309	316	319	331	338	327	311	317	327	344	328	326	324
<b>1992</b>	304	325	325	323	327	320	314	333	331	341	324	314	323
<b>1991</b>	311	321	318	314	322	320	306	337	336	342	321	308	321
<b>1990</b>	321	333	343	344	348	340	324	339	342	345	326	307	334
<b>1989</b>	329	327	335	350	347	332	292	339	334	348	334	311	332
<b>1988</b>	378	412	424	425	432	423	407	434	436	454	428	416	422
<b>1987</b>	367	385	396	387	361	416	400	426	446	443	342	293	389
<b>1986</b>	388	364	365	384	339	391	380	383	397	408	305	239	362
<b>1985</b>	328	384	398	389	392	398	380	391	394	391	300	250	366
<b>1984</b>	386	393	417	394	423	401	406	419	426	371	300	234	381
<b>1983</b>	341	348	347	371	377	377	381	385	394	403	301	233	355
<b>1982</b>	374	412	394	385	381	372	362	234	280	366	270	263	341
<b>1981</b>	410	437	456	382	385	424	411	439	435	441	403	360	415
<b>1980</b>	426	439	457	442	435	450	387	434	436	454	439	410	434
<b>1979</b>	392	407	584	478	494	611	446	476	476	488	459	399	476
<b>1978</b>	345	375	411	477	490	487	447	468	560	510	481	562	468
<b>1977</b>	378	426	475	471	488	480	443	442	459	480	455	379	448
<b>1976</b>	406	446	454	460	487	473	429	463	474	482	458	424	455
<b>1975</b>	426	442	439	442	449	468	405	430	461	494	463	410	444

**FEs and Rate by Million Yard Switching Miles  
1997 - 1975**

Year	FEs	yard switching miles	rate per million yard switching miles
	(1)	(2)	(1)/(2)
1997	9	84,873,799	0.11
1996	7	87,823,254	0.08
1995	11	89,891,866	0.12
1994	12	89,776,044	0.13
1993	15	87,121,756	0.17
1992	14	84,429,603	0.17
1991	10	88,519,350	0.11
1990	7	98,151,387	0.07
1989	9	104,330,103	0.09
1988	9	105,325,469	0.09
1987	10	101,954,793	0.10
1986	13	108,257,858	0.12
1985	10	117,059,027	0.09
1984	12	126,465,254	0.09
1983	15	122,233,983	0.12
1982	24	133,423,632	0.18
1981	18	164,754,470	0.11
1980	33	182,340,123	0.18
1979	28	207,848,728	0.13
1978	35	214,497,878	0.16
1977	48	218,543,852	0.22
1976	30	217,363,453	0.14
1975	34	220,175,000	0.15

total

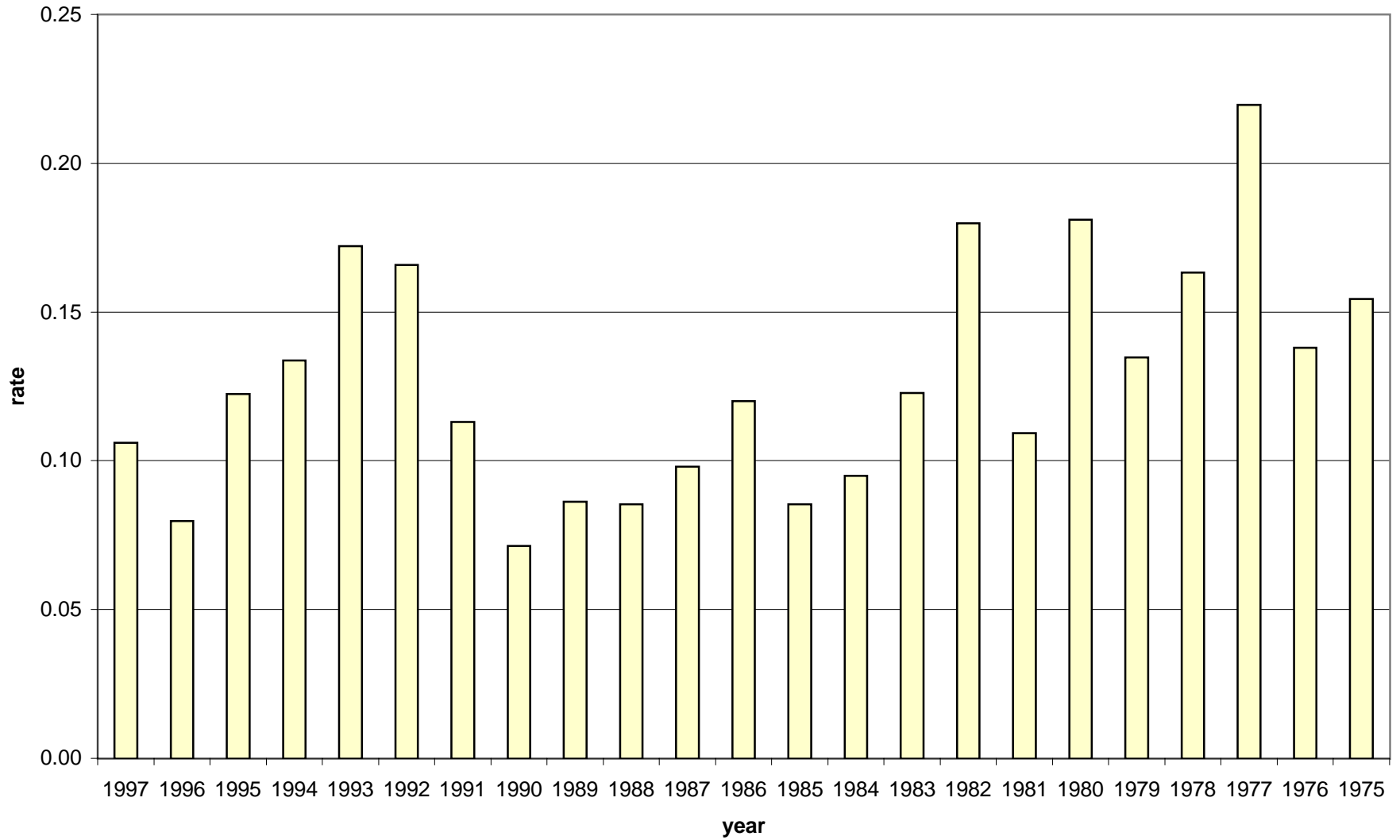
413

average

0.14



**FEs per Million Yard Switching Miles  
1997 - 1975**



### Exposure Data : Seasonal Pattern of Carloadings (1,000s of carloads)

Percentage greater or less for each month is from the average value of the 12 months of that particular year

	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	average month
<b>1997</b>	-7.1%	1.1%	2.0%	0.5%	1.4%	2.3%	-3.6%	3.5%	na	na	na	na	339
<b>1996</b>	-6.8%	-3.4%	2.4%	3.0%	4.2%	1.9%	-2.2%	3.0%	0.1%	3.9%	-0.5%	-5.7%	345
<b>1995</b>	-3.3%	0.7%	0.7%	1.6%	1.6%	-1.8%	-3.3%	1.6%	4.7%	3.0%	-1.8%	-3.6%	352
<b>1994</b>	-11.9%	-3.1%	0.9%	0.4%	2.7%	-0.5%	-3.7%	4.2%	3.0%	5.9%	1.2%	0.9%	343
<b>1993</b>	-4.8%	-2.6%	-1.7%	2.0%	4.2%	0.8%	-4.1%	-2.3%	0.8%	6.0%	1.1%	0.5%	324
<b>1992</b>	-6.0%	0.5%	0.5%	-0.1%	1.1%	-1.1%	-2.9%	3.0%	2.3%	5.4%	0.2%	-2.9%	323
<b>1991</b>	-3.2%	-0.1%	-1.0%	-2.3%	0.2%	-0.4%	-4.8%	4.9%	4.6%	6.4%	-0.1%	-4.1%	321
<b>1990</b>	-4.0%	-0.4%	2.6%	2.9%	4.1%	1.7%	-3.1%	1.4%	2.3%	3.2%	-2.5%	-8.2%	334
<b>1989</b>	-0.8%	-1.4%	1.1%	5.6%	4.7%	0.2%	-11.9%	2.3%	0.8%	5.0%	0.8%	-6.2%	332
<b>1988</b>	-10.5%	-2.5%	0.4%	0.6%	2.3%	0.1%	-3.6%	2.7%	3.2%	7.5%	1.3%	-1.5%	422
<b>1987</b>	-5.5%	-0.9%	1.9%	-0.4%	-7.1%	7.1%	3.0%	9.7%	14.8%	14.0%	-12.0%	-24.6%	389
<b>1986</b>	7.2%	0.6%	0.9%	6.1%	-6.3%	8.0%	5.0%	5.8%	9.7%	12.7%	-15.7%	-34.0%	362
<b>1985</b>	-10.4%	4.8%	8.7%	6.2%	7.0%	8.7%	3.8%	6.8%	7.6%	6.8%	-18.1%	-31.7%	366
<b>1984</b>	1.4%	3.2%	9.5%	3.5%	11.1%	5.3%	6.6%	10.0%	11.9%	-2.6%	-21.2%	-38.6%	381
<b>1983</b>	-3.9%	-1.9%	-2.2%	4.6%	6.2%	6.2%	7.4%	8.5%	11.0%	13.6%	-15.2%	-34.3%	355
<b>1982</b>	9.7%	20.8%	15.5%	12.9%	11.7%	9.1%	6.1%	-31.4%	-17.9%	7.3%	-20.8%	-22.9%	341
<b>1981</b>	-1.3%	5.2%	9.8%	-8.0%	-7.3%	2.1%	-1.0%	5.7%	4.8%	6.2%	-3.0%	-13.3%	415
<b>1980</b>	-1.9%	1.1%	5.3%	1.8%	0.2%	3.7%	-10.8%	0.0%	0.4%	4.6%	1.1%	-5.5%	434
<b>1979</b>	-17.6%	-14.5%	22.7%	0.5%	3.8%	28.4%	-6.3%	0.0%	0.0%	2.6%	-3.5%	-16.1%	476
<b>1978</b>	-26.2%	-19.8%	-12.1%	2.0%	4.8%	4.1%	-4.4%	0.1%	19.7%	9.0%	2.8%	20.1%	468
<b>1977</b>	-15.6%	-4.9%	6.0%	5.1%	8.9%	7.1%	-1.1%	-1.3%	2.5%	7.1%	1.6%	-15.4%	448
<b>1976</b>	-10.7%	-1.9%	-0.1%	1.2%	7.1%	4.0%	-5.6%	1.8%	4.3%	6.0%	0.7%	-6.7%	455
<b>1975</b>	-4.1%	-0.5%	-1.1%	-0.5%	1.1%	5.4%	-8.8%	-3.2%	3.8%	11.2%	4.3%	-7.7%	444

## Employment and Service Hours for Class I Railroads

source: Surface Transportation Board

	employees middle of the month	% change	number paid during month	% change	total service hours paid	% change	FEs -- all railroads	FEs per million hours paid
1992							14	
1993							15	
1994	62,473		67,646		190,031,440		12	0.063
1995	63,831	2.17%	69,195	2.29%	193,519,210	1.84%	11	0.057
1996	63,230	-0.94%	67,937	-1.82%	187,689,409	-3.01%	7	0.037
1997	63,422	0.30%	68,108	0.25%	189,325,391	0.87%	9	0.048
1998	65,988	4.05%	72,792	6.88%	202,204,015	6.80%	*6	

\* (through July 1)

## Exposure Measures

	FEs	yard switching miles	locomotive miles	employee hours worked	total train miles
		(1)	(2)	(3)	(4)
1998	6				
1997	11	84,873,799	512,415,869	503,917,598	676,716,407
1996	7	87,823,254	561,457,723		
1995	11	89,891,866	555,606,934		
1994	12	89,776,044	536,642,863		
1993	15	87,121,756	498,432,870		
1992	14	84,429,603	481,798,284		
1991	10	88,519,350	460,203,608		
1990	7	98,151,387	477,458,777		
1989	9	104,330,103	483,727,183		
1988	9	105,325,469	469,132,367		
1987	10	101,954,793	445,282,156		
1986	13	108,257,858	424,825,243		
1985	10	117,059,027	421,394,931		
1984	12	126,465,254	434,335,921		
1983	15	122,233,983	408,169,822		
1982	24	133,423,632	412,585,634		
1981	18	164,754,470	481,160,994		
1980	33	182,340,123	502,538,008		
1979	28	207,848,728	523,305,612		
1978	35	214,497,878	505,187,382		
1977	48	218,543,852	499,079,017		
1976	30	217,363,453	491,411,400		
1975	34	220,175,000	499,754,000		

## Exposure Measures

	<b>Total FEs</b>	<b>Class I</b>		<b>Class I</b>		<b>Class I</b>	
		<b>employees transportation - train and engine</b>		<b>train switching hours - road service freight</b>		<b>train switching hours - yard switching hours</b>	
1998	6						
1997	11	63,422	-0.2%	2,984,640	-5.1%	10,976,228	-4.3%
1996	7	63,528	-0.5%	3,144,365	-24.0%	11,475,032	-1.0%
1995	11	63,831	2.2%	4,137,665	34.1%	11,591,134	0.7%
1994	12	62,473	2.5%	3,084,547	20.3%	11,513,880	5.5%
1993	15	60,967		2,563,995		10,917,510	
1992	14						
1991	10						
1990	7						
1989	9						
1988	9						
1987	10						
1986	13						
1985	10						
1984	12						
1983	15						
1982	24						
1981	18						
1980	33						
1979	28						
1978	35						
1977	48						
1976	30						
1975	34						

### Yard Switching Miles by Month, 1997-1975

	total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
year													
1997	84,873,799	7,518,916	7,156,551	7,608,519	7,564,555	6,766,906	6,671,077	6,827,853	6,972,842	6,959,193	7,409,288	6,717,937	6,700,162
1996	87,823,254	7,499,405	7,694,328	7,208,197	7,128,708	7,230,762	7,301,352	7,289,091	7,471,668	7,152,463	7,632,808	7,205,371	7,009,101
1995	89,891,866	7,615,048	7,239,824	7,910,844	7,512,488	7,702,173	7,471,643	7,125,956	7,614,095	7,341,936	7,414,314	7,776,191	7,167,354
1994	89,776,044	7,435,320	7,130,968	7,874,839	7,450,819	7,665,720	7,450,000	7,057,340	7,418,195	7,526,984	7,936,145	7,387,544	7,442,170
1993	87,121,756	6,977,291	6,672,107	7,457,899	7,022,387	7,288,268	7,301,417	7,059,870	7,359,737	7,351,327	7,705,033	7,557,689	7,368,731
1992	84,429,603	7,011,822	6,883,261	7,388,512	7,089,453	7,073,823	6,761,883	7,071,139	7,104,418	6,936,957	7,319,318	6,915,774	6,873,243

### Average Yard Switching Miles, 1997-1992

	87,319,387	7,342,967	7,129,507	7,574,802	7,294,735	7,287,942	7,159,562	7,071,875	7,323,493	7,211,477	7,569,484	7,260,084	7,093,460
1991	88,519,350	7,507,336	6,920,066	7,370,647	7,138,605	7,484,877	7,320,725	7,439,088	7,646,700	7,342,076	7,937,367	7,339,433	7,072,430
1990	98,151,387	8,320,345	7,774,034	8,512,288	8,151,992	8,401,066	8,289,914	8,123,652	8,356,564	7,905,206	8,473,242	7,776,813	8,066,271
1989	104,330,103	8,514,965	8,417,492	9,082,315	9,658,860	8,692,710	8,449,882	8,325,160	8,725,581	8,242,344	8,795,673	8,800,555	8,624,566
1988	105,325,469	8,461,302	8,462,573	9,166,615	8,713,561	8,817,196	8,831,782	8,681,773	9,108,063	8,725,102	9,099,947	8,643,687	8,613,868
1987	101,954,793	8,506,274	8,212,193	8,851,305	8,936,296	8,201,216	8,583,152	8,602,692	8,418,159	8,407,300	9,011,639	8,081,275	8,143,292
1986	108,257,858	9,573,352	9,095,132	9,269,105	9,390,376	9,159,417	9,115,533	8,794,597	8,786,251	8,785,141	9,222,436	8,563,548	8,502,970
1985	117,059,027	10,016,655	9,610,539	10,407,774	10,178,614	10,081,607	9,680,604	9,547,886	9,797,747	9,386,069	9,923,715	9,320,576	9,107,241
1984	126,465,254	10,699,831	10,616,102	11,366,586	10,821,581	11,150,112	10,537,351	10,493,155	10,808,476	10,100,229	10,743,864	9,791,165	9,336,802
1983	122,233,983	9,483,547	9,395,300	10,480,664	10,043,949	10,210,967	10,112,633	9,897,479	10,463,940	10,272,707	10,987,985	10,701,876	10,182,936
1982	133,423,632	11,847,896	11,699,582	12,927,931	11,753,365	11,621,776	11,441,958	10,848,936	10,972,241	9,662,802	10,767,258	10,182,302	9,697,585
1981	164,754,470	14,542,175	13,922,170	14,969,390	14,073,251	13,762,701	13,929,958	13,967,921	13,867,069	13,113,766	13,712,053	12,777,987	12,116,029
1980	182,340,123	16,278,864	15,775,173	17,162,721	15,921,728	15,324,912	14,614,776	14,521,736	14,023,212	14,306,546	15,276,299	14,497,559	14,636,597
1979	207,848,728	17,546,978	16,993,305	18,612,834	17,530,803	18,506,435	17,393,491	17,202,848	17,454,159	16,252,020	17,597,569	16,756,864	16,001,422
1978	214,497,878	17,468,043	16,834,415	18,924,158	18,033,051	19,059,098	18,926,948	17,553,362	17,902,700	16,246,072	18,531,763	17,500,352	17,517,916
1977	218,543,852	17,727,015	17,160,063	19,445,625	18,258,840	18,841,093	18,599,327	17,813,202	18,307,553	17,694,320	18,326,915	18,199,541	18,170,358
1976	217,363,453	17,620,617	17,642,697	18,474,417	18,780,290	18,908,429	18,724,181	18,172,911	18,392,689	17,988,362	18,565,649	17,833,685	16,259,526
1975	220,175,000	18,822,000	17,683,000	19,199,000	18,735,000	18,136,000	17,943,000	17,534,000	18,127,000	17,793,000	19,273,000	17,963,000	18,967,000

### Yard Switching Miles by Month as Percent of Total Year, 1997-1975

	total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
year													
1997	100.0%	8.9%	8.4%	9.0%	8.9%	8.0%	7.9%	8.0%	8.2%	8.2%	8.7%	7.9%	7.9%
1996	100.0%	8.5%	8.8%	8.2%	8.1%	8.2%	8.3%	8.3%	8.5%	8.1%	8.7%	8.2%	8.0%
1995	100.0%	8.5%	8.1%	8.8%	8.4%	8.6%	8.3%	7.9%	8.5%	8.2%	8.2%	8.7%	8.0%
1994	100.0%	8.3%	7.9%	8.8%	8.3%	8.5%	8.3%	7.9%	8.3%	8.4%	8.8%	8.2%	8.3%
1993	100.0%	8.0%	7.7%	8.6%	8.1%	8.4%	8.4%	8.1%	8.4%	8.4%	8.8%	8.7%	8.5%
1992	100.0%	8.3%	8.2%	8.8%	8.4%	8.4%	8.0%	8.4%	8.4%	8.2%	8.7%	8.2%	8.1%
1991	100.0%	8.5%	7.8%	8.3%	8.1%	8.5%	8.3%	8.4%	8.6%	8.3%	9.0%	8.3%	8.0%
1990	100.0%	8.5%	7.9%	8.7%	8.3%	8.6%	8.4%	8.3%	8.5%	8.1%	8.6%	7.9%	8.2%
1989	100.0%	8.2%	8.1%	8.7%	9.3%	8.3%	8.1%	8.0%	8.4%	7.9%	8.4%	8.4%	8.3%
1988	100.0%	8.0%	8.0%	8.7%	8.3%	8.4%	8.4%	8.2%	8.6%	8.3%	8.6%	8.2%	8.2%
1987	100.0%	8.3%	8.1%	8.7%	8.8%	8.0%	8.4%	8.4%	8.3%	8.2%	8.8%	7.9%	8.0%
1986	100.0%	8.8%	8.4%	8.6%	8.7%	8.5%	8.4%	8.1%	8.1%	8.1%	8.5%	7.9%	7.9%
1985	100.0%	8.6%	8.2%	8.9%	8.7%	8.6%	8.3%	8.2%	8.4%	8.0%	8.5%	8.0%	7.8%
1984	100.0%	8.5%	8.4%	9.0%	8.6%	8.8%	8.3%	8.3%	8.5%	8.0%	8.5%	7.7%	7.4%
1983	100.0%	7.8%	7.7%	8.6%	8.2%	8.4%	8.3%	8.1%	8.6%	8.4%	9.0%	8.8%	8.3%
1982	100.0%	8.9%	8.8%	9.7%	8.8%	8.7%	8.6%	8.1%	8.2%	7.2%	8.1%	7.6%	7.3%
1981	100.0%	8.8%	8.5%	9.1%	8.5%	8.4%	8.5%	8.5%	8.4%	8.0%	8.3%	7.8%	7.4%
1980	100.0%	8.9%	8.7%	9.4%	8.7%	8.4%	8.0%	8.0%	7.7%	7.8%	8.4%	8.0%	8.0%
1979	100.0%	8.4%	8.2%	9.0%	8.4%	8.9%	8.4%	8.3%	8.4%	7.8%	8.5%	8.1%	7.7%
1978	100.0%	8.1%	7.8%	8.8%	8.4%	8.9%	8.8%	8.2%	8.3%	7.6%	8.6%	8.2%	8.2%
1977	100.0%	8.1%	7.9%	8.9%	8.4%	8.6%	8.5%	8.2%	8.4%	8.1%	8.4%	8.3%	8.3%
1976	100.0%	8.1%	8.1%	8.5%	8.6%	8.7%	8.6%	8.4%	8.5%	8.3%	8.5%	8.2%	7.5%
1975	100.0%	8.5%	8.0%	8.7%	8.5%	8.2%	8.1%	8.0%	8.2%	8.1%	8.8%	8.2%	8.6%

## Worksheet for Adjusting Monthly FEs by Average Yard Switching Miles

### Distribution of FEs by Year and Month, 1997-1992

year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1997	9	2	1			2	1			1		2
1996	7			1		1	1		1	1		2
1995	11	1	2	2	1	1		1		1		2
1994	12	4			1		1		1	1	2	2
1993	15			1	1	1	2	1	3	1	1	2
1992	14	2		1	1		4	3		2	1	

### FE Totals, 1997-1992

year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
68	9	3	5	4	2	9	8	3	3	7	5	10

### Average Yard Switching Miles, 1997- 1992

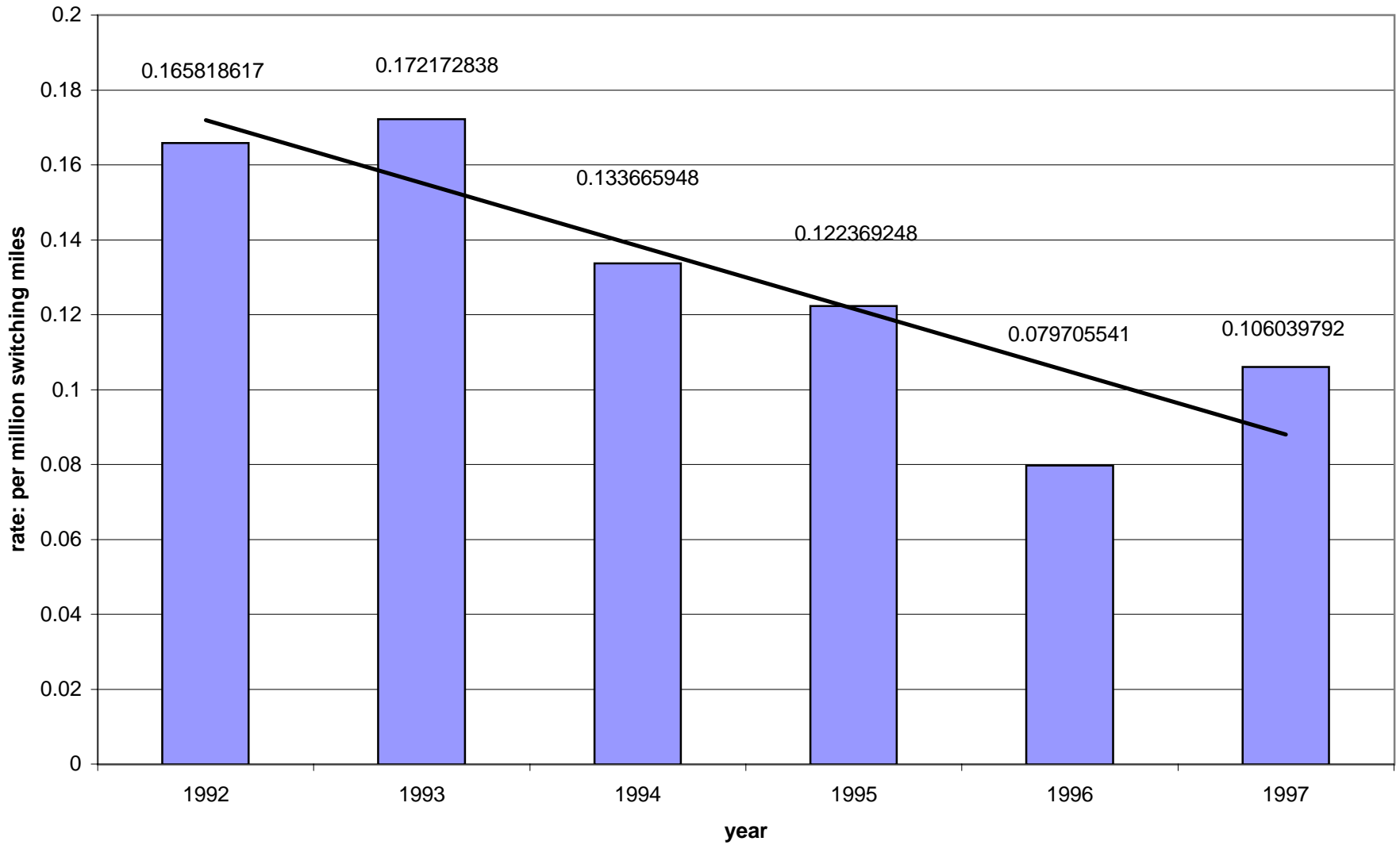
year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
87,319,387	7,342,967	7,129,507	7,574,802	7,294,735	7,287,942	7,159,562	7,071,875	7,323,493	7,211,477	7,569,484	7,260,084	7,093,460

### FE Rate per Average Million Yard Switching Miles

average year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.130	1.226	0.421	0.660	0.548	0.274	1.257	1.131	0.410	0.416	0.925	0.689	1.410



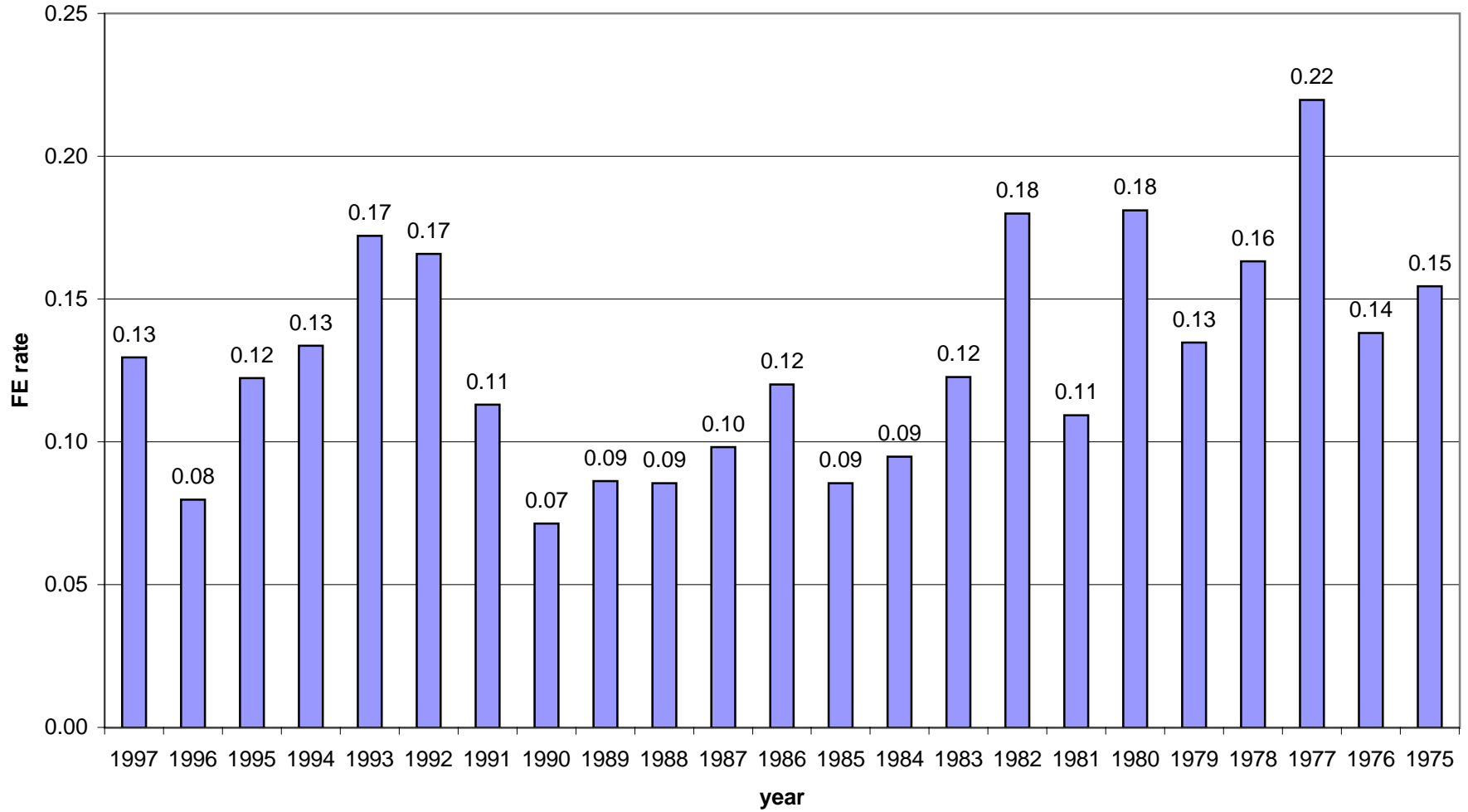
### FEs per Million Yard Switching Miles



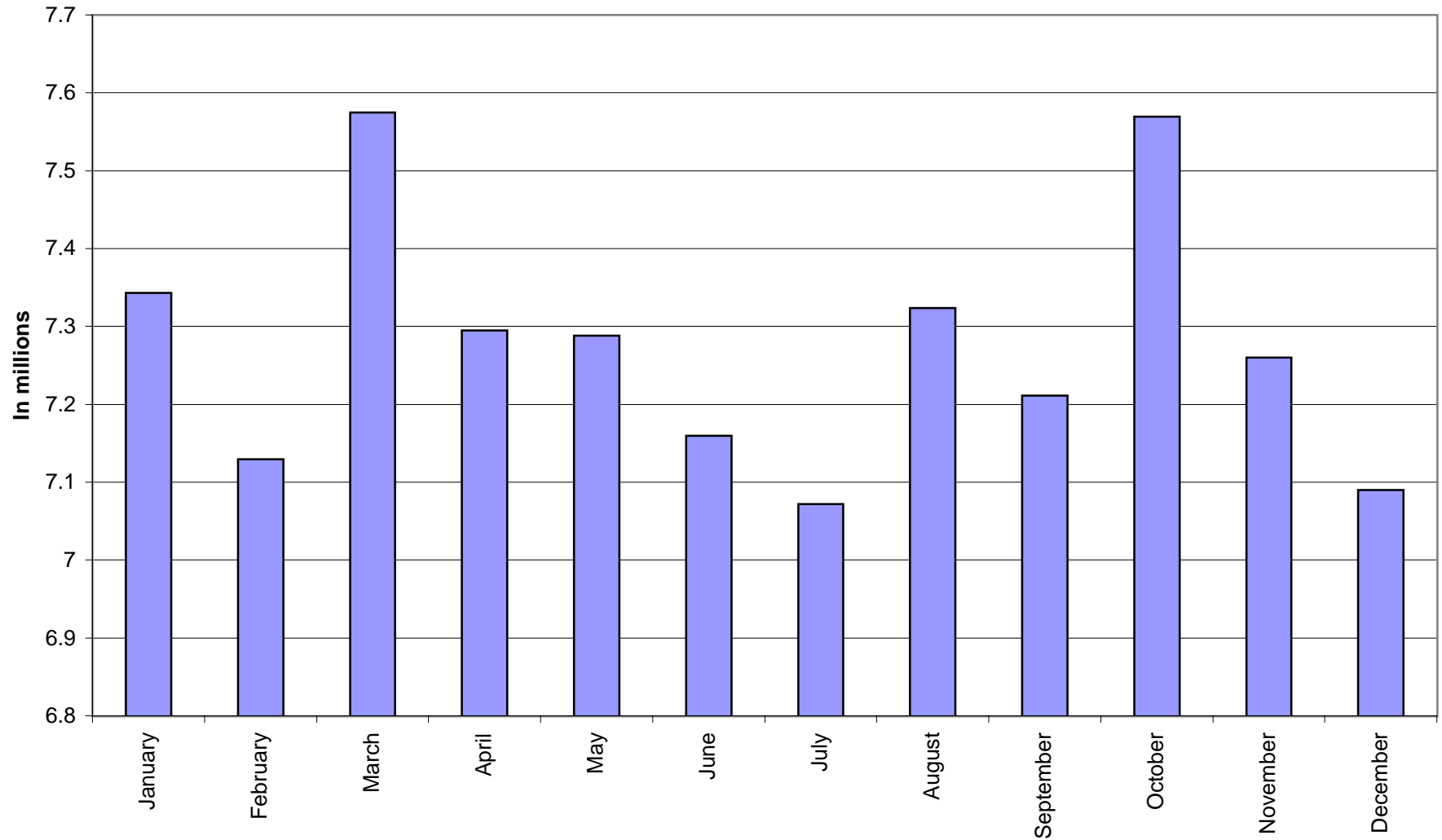
## FEs per Million Yard Switching Miles, 1997 - 1992

year	FEs	yard switching miles	FEs per per 1,000,000 yard switching miles
	(1)	(2)	(1)/(2)
1997	9	84,873,799	0.11
1996	7	87,823,254	0.08
1995	11	89,891,866	0.12
1994	12	89,776,044	0.13
1993	15	87,121,756	0.17
1992	14	84,429,603	0.17

**FEs per Million Yard Switching Miles  
1997 - 1975**



**Average Monthly Number of Yard Switching Miles  
1997 - 1992  
in millions**



# SOFA WORKING GROUP

FEs

organized by

Day of Week

Group 8

**FEs by Shift, Day of Week, and Time of Day**

count	Day	day code	Time	RR	Date	State	City	Report #
<b>first shift</b>								
1	mon	2	11:55 AM	IC	06/07/93	KY	Fulton	FE-23-93
2	mon	2	12:30 PM	UP	10/17/94	LA	Donaldsonville	FE-26-94
3	mon	2	1:05 PM	ATSF	06/01/92	CA	Escondido	FE-14-92
4	tues	3	8:37 AM	SSW	07/07/92	TX	Conlen Siding	FE-20-92
5	tues	3	9:35 AM	CR	11/15/94	NY	Painted Post	FE-29-94
6	wed	4	8:30 AM	CSX	06/15/96	NC	Charlotte	FE-12-96
7	wed	4	11:40 AM	IC	12/18/96	IL	Chicago	FE-31-96
8	wed	4	11:52 AM	SP	08/11/93	CA	Tracy	FE-30-93
9	wed	4	12:55 PM	UP	01/29/97	IA	Mason City	FE-04-97
10	thurs	5	9:20 AM	CR	12/30/93	OH	Brook Park	FE-53-93
11	thurs	5	9:44 AM	NS	03/02/95	SC	Aiken	FE-12-95
12	thurs	5	12:30 PM	ATSF	09/02/93	NM	Carlsbad	FE-35-93
13	thurs	5	1:25 PM	ATSF	08/12/93	TX	Evandale	FE-31-93
14	thurs	5	2:39 PM	ATSF	04/09/92	AZ	Cheto	FE-09-92
15	thurs	5	3:00 PM	AGC	01/30/92	FL	Polk County	FE-04-92
16	fri	6	8:40 AM	SP	03/21/95	CA	Bassett	FE-17-95
17	fri	6	9:10 AM	CR	07/21/95	PA	Hershey	FE-23-95
18	fri	6	9:45 AM	ATSF	02/24/95	TX	Amarillo	FE-11-95
19	fri	6	10:00 AM	GTW	10/23/92	MI	Dearborn	FE-34-92
20	fri	6	11:15 AM	BN	01/14/94	TX	Amarillo	FE-03-94
21	fri	6	11:15 AM	CR	02/17/95	OH	St. James	FE-09-95
22	sat	7	8:30 AM	GC	11/13/93	GA	Macon	FE-47-93
23	sat	7	10:30 AM	ATSF	05/22/93	TX	El Paso	FE-20-93
24	sat	7	11:40 AM	UP	07/25/92	OR	Portland	FE-22-92
25	sat	7	11:45 AM	CNW	06/20/92	IL	Northlake	FE-18-92
26	sat	7	12:30 PM	SP	03/27/93	CA	Guadalupe	FE-11-93

**FEs by Shift, Day of Week, and Time of Day**

count	Day	day code	Time	RR	Date	State	City	Report #
			<b>second shift</b>					
1	sun	1	9:55 PM	CR	02/02/97	IN	Burns Harbor	FE-05-97
2	sun	1	10:15 PM	UP	01/12/97	CA	S Fontana	FE-02-97
3	mon	2	4:15 PM	BN	06/01/92	WA	Seattle	FE-15-92
4	mon	2	6:05 PM	TTIS	11/16/92	KY	Maysville	FE-39-92
5	mon	2	6:25 PM	NS	12/11/95	OH	Toledo	FE-33-95
6	mon	2	8:40 PM	UP	12/16/96	IA	Clinton	FE-30-96
7	mon	2	8:48 PM	UP	10/07/96	TX	Eagle Pass	FE-24-96
8	tues	3	4:45 PM	BN	07/05/94	MT	Essex	FE-16-94
9	tues	3	5:30 PM	BN	01/28/92	MN	Willmar	FE-03-92
10	tues	3	6:10 PM	CSXT	01/18/94	GA	Bainbridge	FE-04-94
11	tues	3	6:30 PM	DGNO	09/03/96	TX	Dallas	FE-22-96
12	tues	3	6:40 PM	CSX	04/13/93	KY	Dwale	FE-13-93
13	tues	3	7:00 PM	BN	01/04/94	NE	Hastings	FE-02-94
14	tues	3	7:19 PM	ARR	09/20/94	AK	Clear Site	FE-20-94
15	tues	3	7:45 PM	BNSF	12/02/97	KS	Emporia	FE-36-97
16	tues	3	8:17 PM	SOO	10/19/93	ND	Leal	FE-40-93
17	tues	3	8:58 PM	NS	06/24/97	SC	Rowesville	FE-19-97
18	wed	4	4:45 PM	UP	08/04/93	OK	Pryor	FE-27-93
19	wed	4	5:55 PM	CSXT	05/03/95	IN	Evansville	FE-18-95
20	wed	4	11:25 PM	BRC	03/20/96	IL	Bedford Park	FE-09-96
21	wed	4	11:30 PM	CR	01/11/95	IN	Indianapolis	FE-02-95
22	thurs	5	5:25 PM	CR	07/15/93	IN	Anderson	FE-26-93
23	thurs	5	8:00 PM	UP	01/20/94	NE	Fall City	FE-06-94
24	thurs	5	10:20 PM	MRL	10/16/97	MT	Laurel	FE-32-97
25	fri	6	5:45 PM	UP	12/26/97	ID	Boise	FE-45-97
26	fri	6	9:35 PM	CMRC	06/06/97	MI	Bay City	FE-16-97
27	fri	6	11:25 PM	SEPTA	06/04/93	PA	Devon	FE-22-93

**FEs by Shift, Day of Week, and Time of Day**

count	Day	day code	Time	RR	Date	State	City	Report #
<b>third shift</b>								
1	sun	1	1:08 AM	NS	07/07/96	ID	Sidney	FE-17-96
2	sun	1	7:00 AM	SOU	12/05/93	GA	Atlanta	FE-49-93
3	tues	3	2:52 AM	CR	12/06/94	NY	Campbell Hall	FE-31-94
4	tues	3	5:55 AM	IHRC	06/02/92	KY	Henderson	FE-16-92
5	tues	3	7:45 AM	SP	04/12/94	TX	Houston	FE-12-94
6	tues	3	12:01 AM	UP	12/13/94	CA	Thorton	FE-32-94
7	wed	4	12:40 AM	CSXT	10/04/95	IL	Riverdale	FE-29-95
8	wed	4	1:15 AM	FEC	03/11/92	FL	Fort Pierce	FE-08-92
9	thurs	5	12:40 AM	GBW	07/24/92	WI	Wisconsin	FE-30-92
10	thurs	5	1:25 AM	BN	10/15/92	NE	Omaha	FE-33-92
11	thurs	5	1:56 AM	WC	04/06/95	WI	Argoe	FE-16-95
12	thurs	5	4:15 AM	PTRA	11/10/94	TX	Houston	FE-28-94
13	thurs	5	4:30 AM	CSXT	12/14/95	NC	Monroe	FE-34-95
14	fri	6	1:29 AM	MNCW	07/18/97	CT	Stamford	FE-22-97
15	fri	6	6:40 AM	ATSF	11/12/93	TX	Farewell	FE-46-93



### Days between FEs

(want quick response to any potential FE  
producing conditions to prevent multiple occurrences)

#	state	city	RR	date	days between FEs	FE
1	MN	Willmar	BN	01/28/92		FE-03-92
2	FL	Polk County	AGC	01/30/92	2	FE-04-92
3	FL	Fort Pierce	FEC	03/11/92	41	FE-08-92
4	AZ	Cheto	ATSF	04/09/92	29	FE-09-92
5	CA	Escondido	ATSF	06/01/92	53	FE-14-92
6	WA	Seattle	BN	06/01/92	0	FE-15-92
7	KY	Henderson	IHRC	06/02/92	1	FE-16-92
8	IL	Northlake	CNW	06/20/92	18	FE-18-92
9	TX	Conlen Siding	SSW	07/07/92	17	FE-20-92
10	WI	Wisconsin	GBW	07/24/92	17	FE-30-92
11	OR	Portland	UP	07/25/92	1	FE-22-92
12	NE	Omaha	BN	10/15/92	82	FE-33-92
13	MI	Dearborn	GTW	10/23/92	8	FE-34-92
14	KY	Maysville	TTIS	11/16/92	24	FE-39-92
15	CA	Guadalupe	SP	03/27/93	131	FE-11-93
16	KY	Dwale	CSX	04/13/93	17	FE-13-93
17	TX	El Paso	ATSF	05/22/93	39	FE-20-93
18	PA	Devon	SEPTA	06/04/93	13	FE-22-93
19	KY	Fulton	IC	06/07/93	3	FE-23-93
20	IN	Anderson	CR	07/15/93	38	FE-26-93
21	OK	Pryor	UP	08/04/93	20	FE-27-93
22	CA	Tracy	SP	08/11/93	7	FE-30-93
23	TX	Evandale	ATSF	08/12/93	1	FE-31-93
24	NM	Carlsbad	ATSF	09/02/93	21	FE-35-93
25	ND	Leal	SOO	10/19/93	47	FE-40-93
26	TX	Farewell	ATSF	11/12/93	24	FE-46-93
27	GA	Macon	GC	11/13/93	1	FE-47-93
28	GA	Atlanta	SOU	12/05/93	22	FE-49-93
29	OH	Brook Park	CR	12/30/93	25	FE-53-93
30	NE	Hastings	BN	01/04/94	5	FE-02-94
31	TX	Amarillo	BN	01/14/94	10	FE-03-94
32	GA	Bainbridge	CSXT	01/18/94	4	FE-04-94
33	NE	Fall City	UP	01/20/94	2	FE-06-94

### Days between FEs

(want quick response to any potential FE  
producing conditions to prevent multiple occurrences)

#	state	city	RR	date	days between FEs	FE
34	TX	Houston	SP	04/12/94	82	FE-12-94
35	MT	Essex	BN	07/05/94	84	FE-16-94
36	AK	Clear Site	ARR	09/20/94	77	FE-20-94
37	LA	Donaldsonville	UP	10/17/94	27	FE-26-94
38	TX	Houston	PTRA	11/10/94	24	FE-28-94
39	NY	Painted Post	CR	11/15/94	5	FE-29-94
40	NY	Campbell Hall	CR	12/06/94	21	FE-31-94
41	CA	Thorton	UP	12/13/94	7	FE-32-94
42	IN	Indianapolis	CR	01/11/95	29	FE-02-95
43	OH	St. James	CR	02/17/95	37	FE-09-95
44	TX	Amarillo	ATSF	02/24/95	7	FE-11-95
45	SC	Aiken	NS	03/02/95	6	FE-12-95
46	CA	Bassett	SP	03/21/95	19	FE-17-95
47	WI	Argoe	WC	04/06/95	16	FE-16-95
48	IN	Evansville	CSXT	05/03/95	27	FE-18-95
49	PA	Hershey	CR	07/21/95	79	FE-23-95
50	IL	Riverdale	CSXT	10/04/95	75	FE-29-95
51	OH	Toledo	NS	12/11/95	68	FE-33-95
52	NC	Monroe	CSXT	12/14/95	3	FE-34-95
53	IL	Bedford Park	BRC	03/20/96	97	FE-09-96
54	NC	Charlotte	CSX	06/15/96	87	FE-12-96
55	ID	Sidney	NS	07/07/96	22	FE-17-96
56	TX	Dallas	DGNO	09/03/96	58	FE-22-96
57	TX	Eagle Pass	UP	10/07/96	34	FE-24-96
58	IA	Clinton	UP	12/16/96	70	FE-30-96
59	IL	Chicago	IC	12/18/96	2	FE-31-96
60	CA	S Fontana	UP	01/12/97	25	FE-02-97
61	IA	Mason City	UP	01/29/97	17	FE-04-97
62	IN	Burns Harbor	CR	02/02/97	4	FE-05-97
63	MI	Bay City	CMRC	06/06/97	124	FE-16-97
64	SC	Rowesville	NS	06/24/97	18	FE-19-97
65	CT	Stamford	MNCW	07/18/97	24	FE-22-97
66	MT	Laurel	MRL	10/16/97	90	FE-32-97
67	KS	Emporia	BNSF	12/02/97	47	FE-36-97
68	ID	Boise	UP	12/26/97	24	FE-45-97

## Days between FEs, Grouped by State, 100 Days or Less Highlighted

(want quick response to any potential FE  
producing conditions to prevent multiple occurrences)

#	state	city	RR	date	days between FEs	FEs related ????	FE
1	AK	Clear Site	ARR	09/20/94			FE-20-94
2	AZ	Cheto	ATSF	04/09/92			FE-09-92
3	CA	Escondido	ATSF	06/01/92			FE-14-92
4	CA	Guadalupe	SP	03/27/93	299		FE-11-93
5	CA	Tracy	SP	08/11/93	137		FE-30-93
6	CA	Thorton	UP	12/13/94	489	FE-32-94	
7	CA	Bassett	SP	03/21/95	98	FE-17-95	
8	CA	S Fontana	UP	01/12/97	663		FE-02-97
9	CT	Stamford	MNCW	07/18/97			FE-22-97
10	FL	Polk County	AGC	01/30/92		FE-04-92	
11	FL	Fort Pierce	FEC	03/11/92	41	FE-08-92	
12	GA	Macon	GC	11/13/93		FE-47-93	
13	GA	Atlanta	SOU	12/05/93	22	FE-49-93	
14	GA	Bainbridge	CSXT	01/18/94	44	FE-04-94	
15	IA	Clinton	UP	12/16/96		FE-30-96	
16	IA	Mason City	UP	01/29/97	44	FE-04-97	
17	ID	Sidney	NS	07/07/96			FE-17-96
18	ID	Boise	UP	12/26/97	537		FE-45-97
19	IL	Northlake	CNW	06/20/92			FE-18-92
20	IL	Riverdale	CSXT	10/04/95	1201		FE-29-95
21	IL	Bedford Park	BRC	03/20/96	168		FE-09-96
22	IL	Chicago	IC	12/18/96	273		FE-31-96
23	IN	Anderson	CR	07/15/93			FE-26-93
24	IN	Indianapolis	CR	01/11/95	545		FE-02-95
25	IN	Evansville	CSXT	05/03/95	112		FE-18-95
26	IN	Burns Harbor	CR	02/02/97	641		FE-05-97

## Days between FEs, Grouped by State, 100 Days or Less Highlighted

(want quick response to any potential FE  
producing conditions to prevent multiple occurrences)

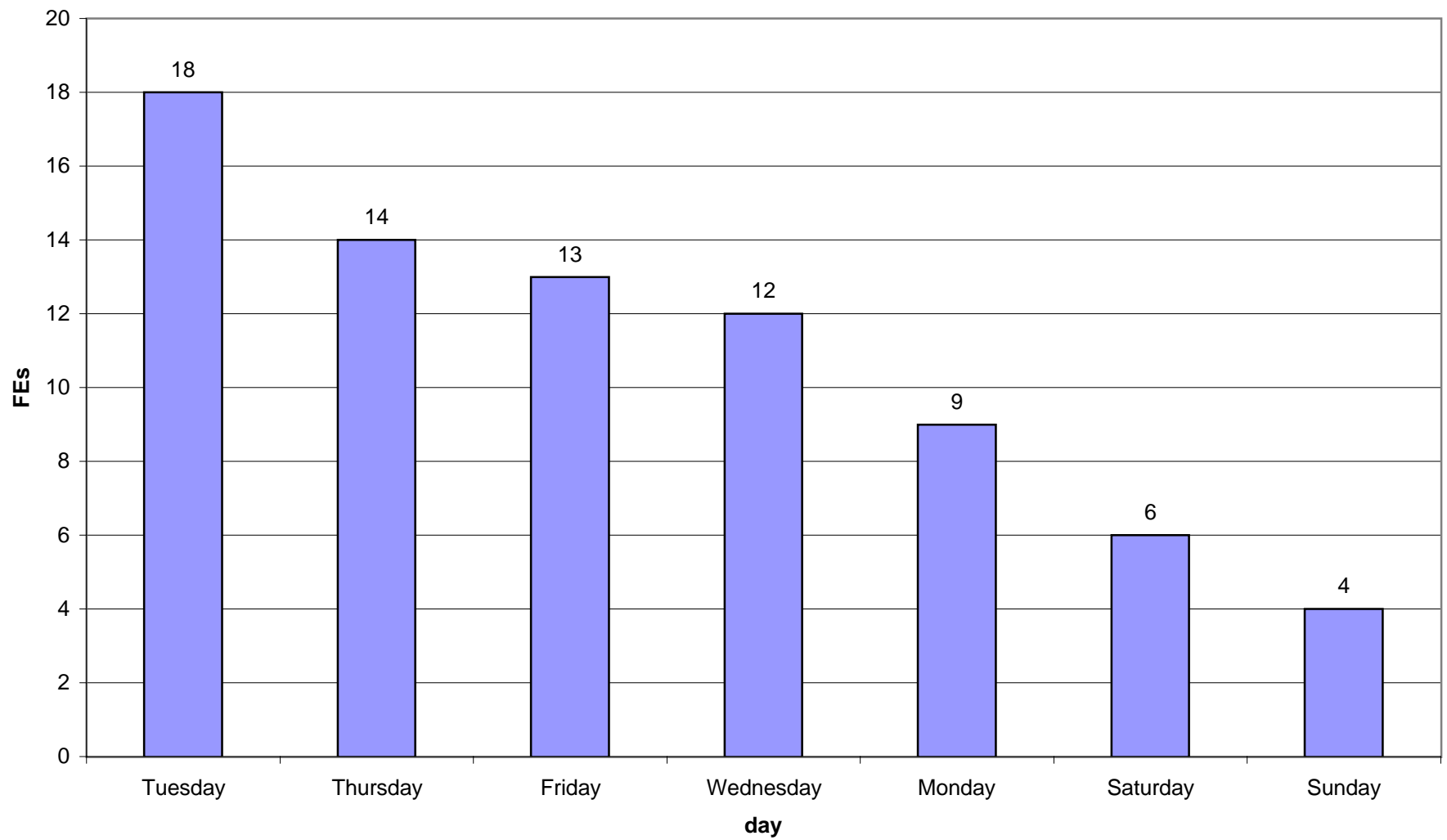
#	state	city	RR	date	days between FEs	FEs related ????	FE
27	KS	Emporia	BNSF	12/02/97			FE-36-97
28	KY	Henderson	IHRC	06/02/92			FE-16-92
29	KY	Maysville	TTIS	11/16/92	167		FE-39-92
30	KY	Dwale	CSX	04/13/93	148	FE-13-93	
31	KY	Fulton	IC	06/07/93	55	FE-23-93	
32	LA	Donaldsonville	UP	10/17/94			FE-26-94
33	MI	Dearborn	GTW	10/23/92			FE-34-92
34	MI	Bay City	CMRC	06/06/97	1687		FE-16-97
35	MN	Willmar	BN	01/28/92			FE-03-92
36	MT	Essex	BN	07/05/94			FE-16-94
37	MT	Laurel	MRL	10/16/97	1199		FE-32-97
38	NC	Monroe	CSXT	12/14/95			FE-34-95
39	NC	Charlotte	CSX	06/15/96	184		FE-12-96
40	ND	Leal	SOO	10/19/93			FE-40-93
41	NE	Omaha	BN	10/15/92			FE-33-92
42	NE	Hastings	BN	01/04/94	446	FE-02-94	
43	NE	Fall City	UP	01/20/94	16	FE-06-94	
44	NM	Carlsbad	ATSF	09/02/93			FE-35-93
45	NY	Painted Post	CR	11/15/94		FE-29-94	
46	NY	Campbell Hall	CR	12/06/94	21	FE-31-94	
47	OH	Brook Park	CR	12/30/93			FE-53-93
48	OH	St. James	CR	02/17/95	414		FE-09-95
49	OH	Toledo	NS	12/11/95	297		FE-33-95

## Days between FEs, Grouped by State, 100 Days or Less Highlighted

(want quick response to any potential FE  
producing conditions to prevent multiple occurrences)

#	state	city	RR	date	days between FEs	FEs related ????	FE
50	OK	Pryor	UP	08/04/93			FE-27-93
51	OR	Portland	UP	07/25/92			FE-22-92
52	PA	Devon	SEPTA	06/04/93			FE-22-93
53	PA	Hershey	CR	07/21/95	777		FE-23-95
54	SC	Aiken	NS	03/02/95			FE-12-95
55	SC	Rowesville	NS	06/24/97	845		FE-19-97
56	TX	Conlen Siding	SSW	07/07/92			FE-20-92
57	TX	El Paso	ATSF	05/22/93	319	FE-20-93	
58	TX	Evandale	ATSF	08/12/93	82	FE-31-93	
59	TX	Farewell	ATSF	11/12/93	92	FE-46-93	
60	TX	Amarillo	BN	01/14/94	63	FE-03-94	
61	TX	Houston	SP	04/12/94	88	FE-12-94	
62	TX	Houston	PTRA	11/10/94	212		FE-28-94
63	TX	Amarillo	ATSF	02/24/95	106		FE-11-95
64	TX	Dallas	DGNO	09/03/96	557	FE-22-96	
65	TX	Eagle Pass	UP	10/07/96	34	FE-24-96	
66	WA	Seattle	BN	06/01/92			FE-15-92
67	WI	Wisconsin	GBW	07/24/92			FE-30-92
68	WI	Argoe	WC	04/06/95	986		FE-16-95

**FES by Day of Week**



# SOFA WORKING GROUP

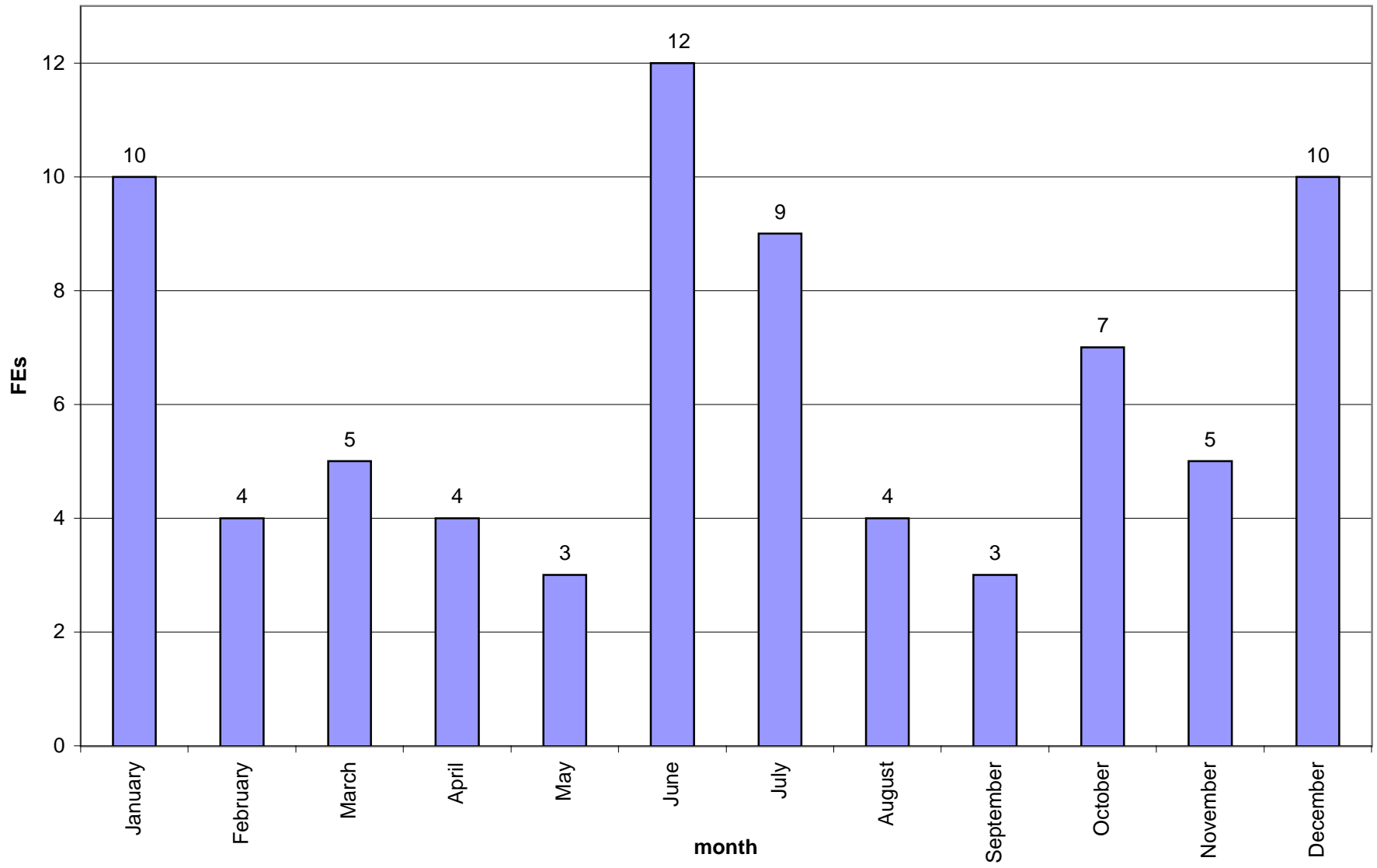
FEs

organized by

Month

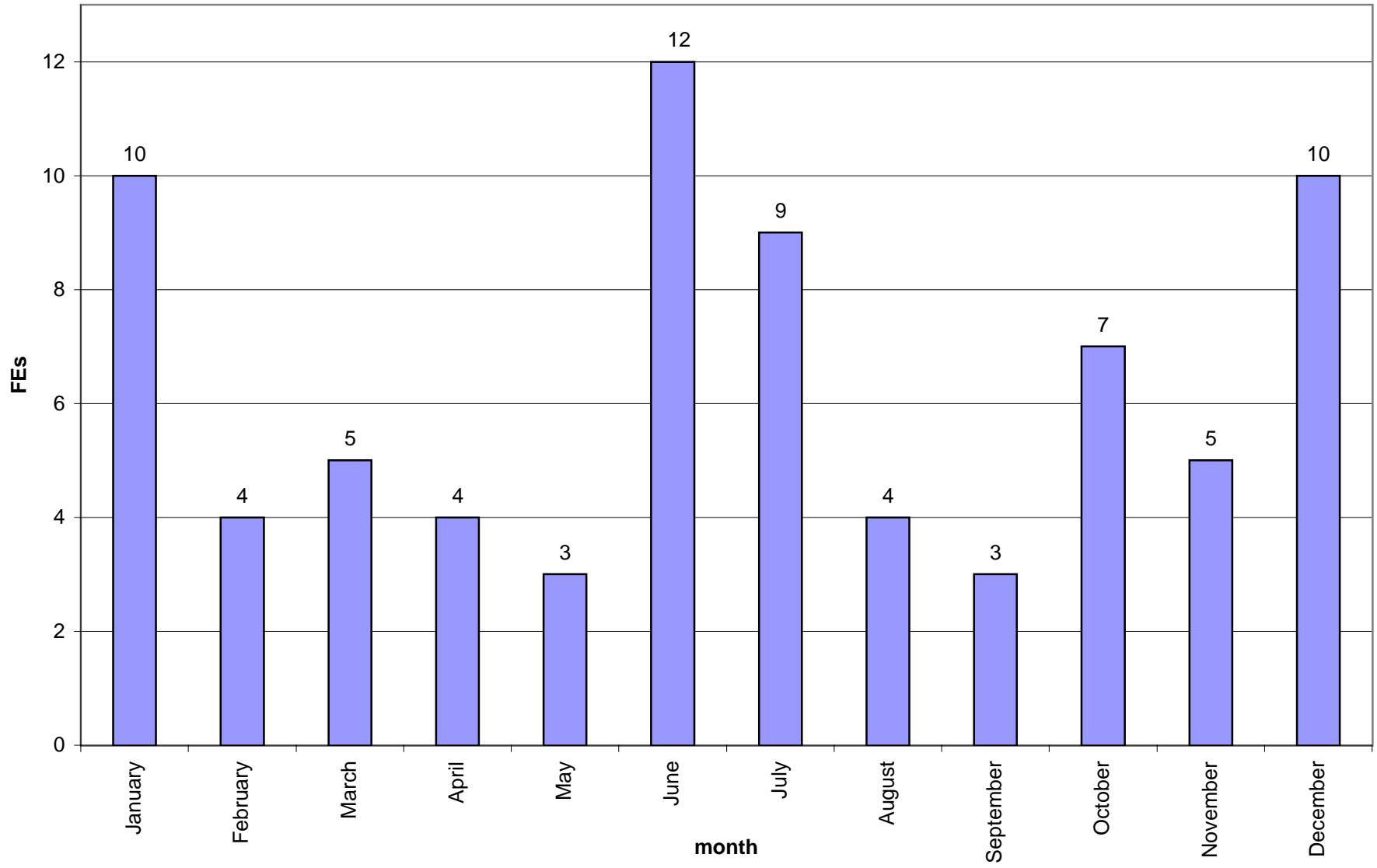
Group 9

**FEs by Month  
1998 - 1992**





**FEs by Month  
1998 - 1992**



# SOFA WORKING GROUP

FEs

organized by

Cause Code

Group 10

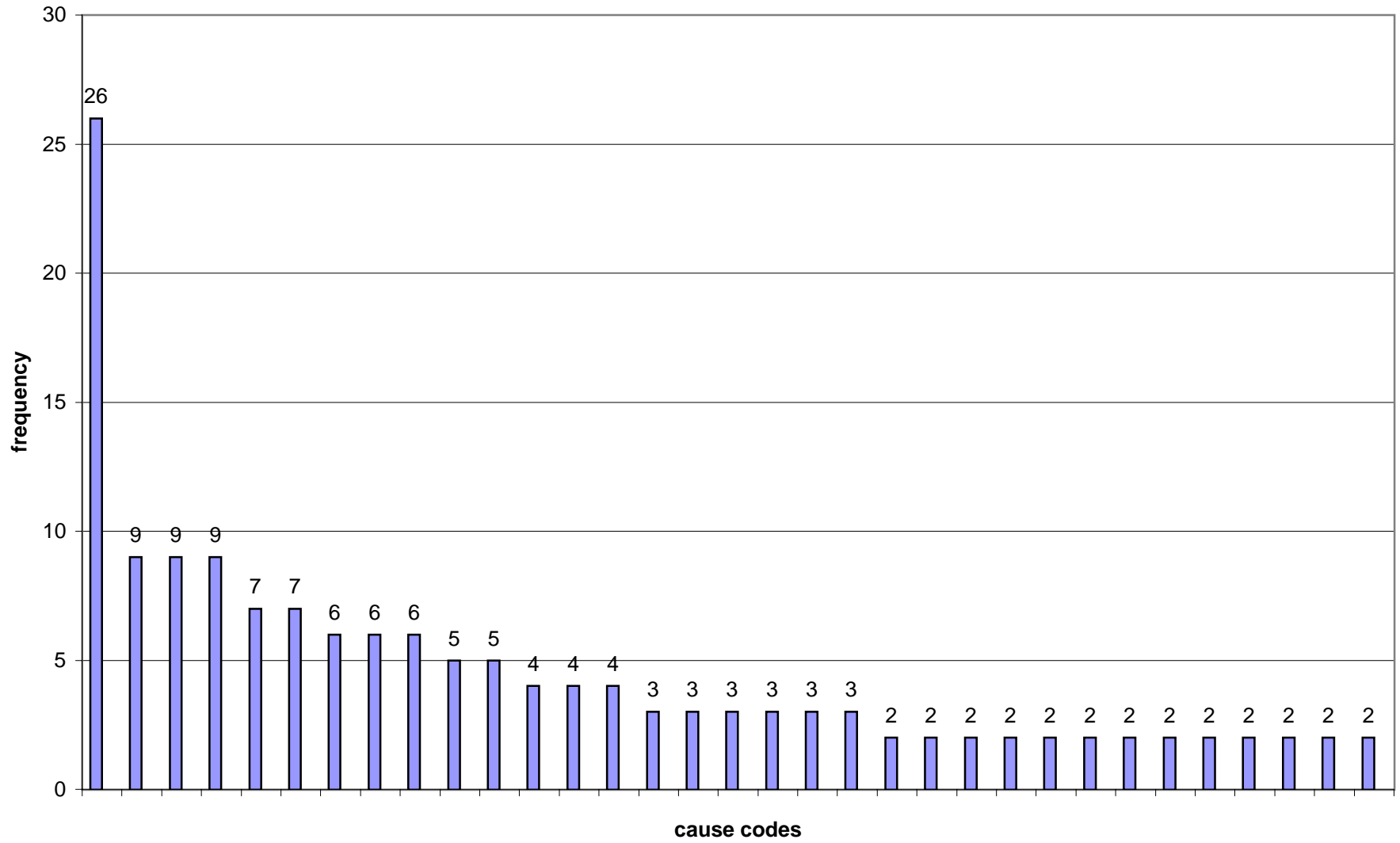
## Frequency of Cause Codes and Pairs Occurring Two or More Times

\* frequency of pairs of cause codes occurring two or more times anywhere in SOFA matrix

\*\* frequency of a cause code occurring two or more times anywhere in SOFA matrix

		freq*	freq **	
H399	H990	5	H990	26
			H316	9
H211	H990	4	H399	9
H316	H990	4	H997	9
			H306	7
H399	T099	3	H998	7
H990	H997	3	H018	6
			H305	6
E29C	H998	2	M411	6
H199	H990	2	H211	5
H211	H316	2	H996	5
H303	H318	2	H318	4
H305	H990	2	H999	4
H306	H990	2	M101	4
H310	H997	2	E29C	3
H312	H997	2	H210	3
H317	H399	2	H310	3
H602	T099	2	H599	3
H990	M101	2	H605	3
H996	H999	2	T099	3
H997	H999	2	E39C	2
			H021	2
			H101	2
			H199	2
			H303	2
			H307	2
			H312	2
			H317	2
			H602	2
			H702	2
			M302	2
			M404	2
			M599	2

### Frequency of Cause Codes Occurring Two or More Times



## Frequency of Cause Codes and Pairs Occurring Together

Frequency of a cause code occurring two or more times anywhere in the SOFX matrix

	freq		freq
H990	26	H990	5
H316	9	H990	4
H399	9	H990	4
H997	9	T099	3
H306	7	H997	3
H998	7	H998	2
H018	6	H990	2
H305	6	H316	2
M411	6	H318	2
H211	5	H990	2
H996	5	H990	2
H318	4	H997	2
H999	4	H997	2
M101	4	H399	2
E29C	3	T099	2
H210	3	M101	2
H310	3	H999	2
H599	3	H999	2
H605	3		
T099	3		
E39C	2		
H021	2		
H101	2		
H199	2		
H303	2		
H307	2		
H312	2		
H317	2		
H602	2		
H702	2		
M302	2		
M404	2		
M599	2		
H399	5		
H211	4		
H316	4		
H399	3		
H990	3		
E29C	2		
H199	2		
H211	2		
H303	2		
H305	2		
H306	2		
H310	2		
H312	2		
H317	2		
H602	2		
H990	2		
H996	2		
H997	2		

**Coded as Communication Cause Code in FEs Crew -- 17 Cases**

<b>Report #</b>	<b>Railroad</b>	<b>State</b>	<b>Date</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>
1	FE-45-97	UP	ID	12/26/97	H990	H316	H211			
2	FE-16-97	CMRC	MI	06/06/97	H210	SO12				
3	FE-04-97	UP	IA	01/29/97	H211	H990				
4	FE-16-95	WC	WI	04/06/95	H018	H008	H605			
5	FE-12-95	NS	SC	03/02/95	H997	H316				
6	FE-11-95	ATSF	TX	02/24/95	H305					
7	FE-09-95	CR	OH	02/17/95	H702	H990	H211			
8	FE-31-94	CR	NY	12/06/94	H318	H211	H307	H605	H212	H303 H699
9	FE-29-94	CR	NY	11/15/94	H316	H605				
10	FE-26-94	UP	LA	10/17/94	H997	H210				
11	FE-47-93	GC	GA	11/13/93	H316	H990				
12	FE-30-93	SP	CA	08/11/93	H316	H207	E29C			
13	FE-26-93	CR	IN	07/15/93	H990	H998	H316	H211		
14	FE-23-93	IC	KY	06/07/93	H990	H316				
15	FE-14-92	ATSF	CA	06/01/92	H210	H306	H316			
16	FE-15-92	BN	WA	06/01/92	H018	H317				
17	FE-04-92	AGC	FL	01/30/92	H316					

### FEs by Possible Contributing Factors

<b>Date</b>	<b>Railroad</b>	<b>State</b>	<b>Report #</b>	<b>PCF</b>	<b>PCF</b>
12/18/96	IC	IL	FE-31-96	H018	H307
12/16/96	UP	IA	FE-30-96	H998	H101
10/07/96	UP	TX	FE-24-96	H018	E39C
09/03/96	DGNO	TX	FE-22-96	H018	E09C
07/07/96	NS	ID	FE-17-96	H990	H199
06/15/96	CSX	NC	FE-12-96	H599	M411
03/20/96	BRC	IL	FE-09-96	H990	H021
01/12/97	UP	CA	FE-02-97	H503	
01/29/97	UP	IA	FE-04-97	H211	H990
02/02/97	CR	IN	FE-05-97	H306	
06/06/97	CMRC	MI	FE-16-97	H210	SO12
06/24/97	NS	SC	FE-19-97	H702	
07/18/97	MNCW	CT	FE-22-97	H990	
10/16/97	MRL	MT	FE-32-97	E29C	H998
01/11/95	CR	IN	FE-02-95	H998	E29C
02/17/95	CR	OH	FE-09-95	H702	H990
02/24/95	ATSF	TX	FE-11-95	H305	
03/02/95	NS	SC	FE-12-95	H997	H316
04/06/95	WC	WI	FE-16-95	H018	H008
03/21/95	SP	CA	FE-17-95	H990	
05/03/95	CSXT	IN	FE-18-95	H990	
07/21/95	CR	PA	FE-23-95	H998	
10/04/95	CSXT	IL	FE-29-95	H997	H996
12/11/95	NS	OH	FE-33-95	M101	M411
12/14/95	CSXT	NC	FE-34-95	M502	M404
01/04/94	BN	NE	FE-02-94	H990	H310
01/14/94	BN	TX	FE-03-94		
01/18/94	CSXT	GA	FE-04-94	H998	H500
01/20/94	UP	NE	FE-06-94	M411	H318
04/12/94	SP	TX	FE-12-94	M411	
07/05/94	BN	MT	FE-16-94	H025	H599
09/20/94	ARR	AK	FE-20-94	M302	M304
10/17/94	UP	LA	FE-26-94	H997	H210
11/10/94	PTRA	TX	FE-28-94	H996	H999
11/15/94	CR	NY	FE-29-94	H316	H605
12/06/94	CR	NY	FE-31-94	H318	H211
12/13/94	UP	CA	FE-32-94	H997	
03/27/93	SP	CA	FE-11-93	H990	

### FEs by Possible Contributing Factors

<b>Date</b>	<b>Railroad</b>	<b>State</b>	<b>Report #</b>	<b>PCF</b>	<b>PCF</b>
04/13/93	CSX	KY	FE-13-93	H990	
05/22/93	ATSF	TX	FE-20-93	M302	M501
06/04/93	SEPTA	PA	FE-22-93	M599	
06/07/93	IC	KY	FE-23-93	H990	H316
07/15/93	CR	IN	FE-26-93	H990	H998
08/04/93	UP	OK	FE-27-93	T222	M411
08/11/93	SP	CA	FE-30-93	H316	H207
08/12/93	ATSF	TX	FE-31-93	H990	
09/02/93	ATSF	NM	FE-35-93	H990	H997
10/19/93	SOO	ND	FE-40-93	H303	H996
11/12/93	ATSF	TX	FE-46-93	H021	H310
11/13/93	GC	GA	FE-47-93	H316	H990
12/05/93	SOU	GA	FE-49-93	H990	H399
12/30/93	CR	OH	FE-53-93	T099	M101
01/28/92	BN	MN	FE-03-92	H990	H399
01/30/92	AGC	FL	FE-04-92	H316	
03/11/92	FEC	FL	FE-08-92	T319	E67C
04/09/92	ATSF	AZ	FE-09-92	H602	
06/01/92	ATSF	CA	FE-14-92	H210	H306
06/01/92	BN	WA	FE-15-92	H018	H317
06/02/92	IHRC	KY	FE-16-92	H018	H990
06/20/92	CNW	IL	FE-18-92	H997	H310
07/07/92	SSW	TX	FE-20-92	H990	
07/25/92	UP	OR	FE-22-92	H990	
07/24/92	GBW	WI	FE-30-92	H990	M599
10/15/92	BN	NE	FE-33-92	H999	M101
10/23/92	GTW	MI	FE-34-92	H997	
11/16/92	TTIS	KY	FE-39-92	H990	
12/02/97	BNSF	KS	FE-36-97	H990	
12/26/97	UP	ID	FE-45-97	H990	H316



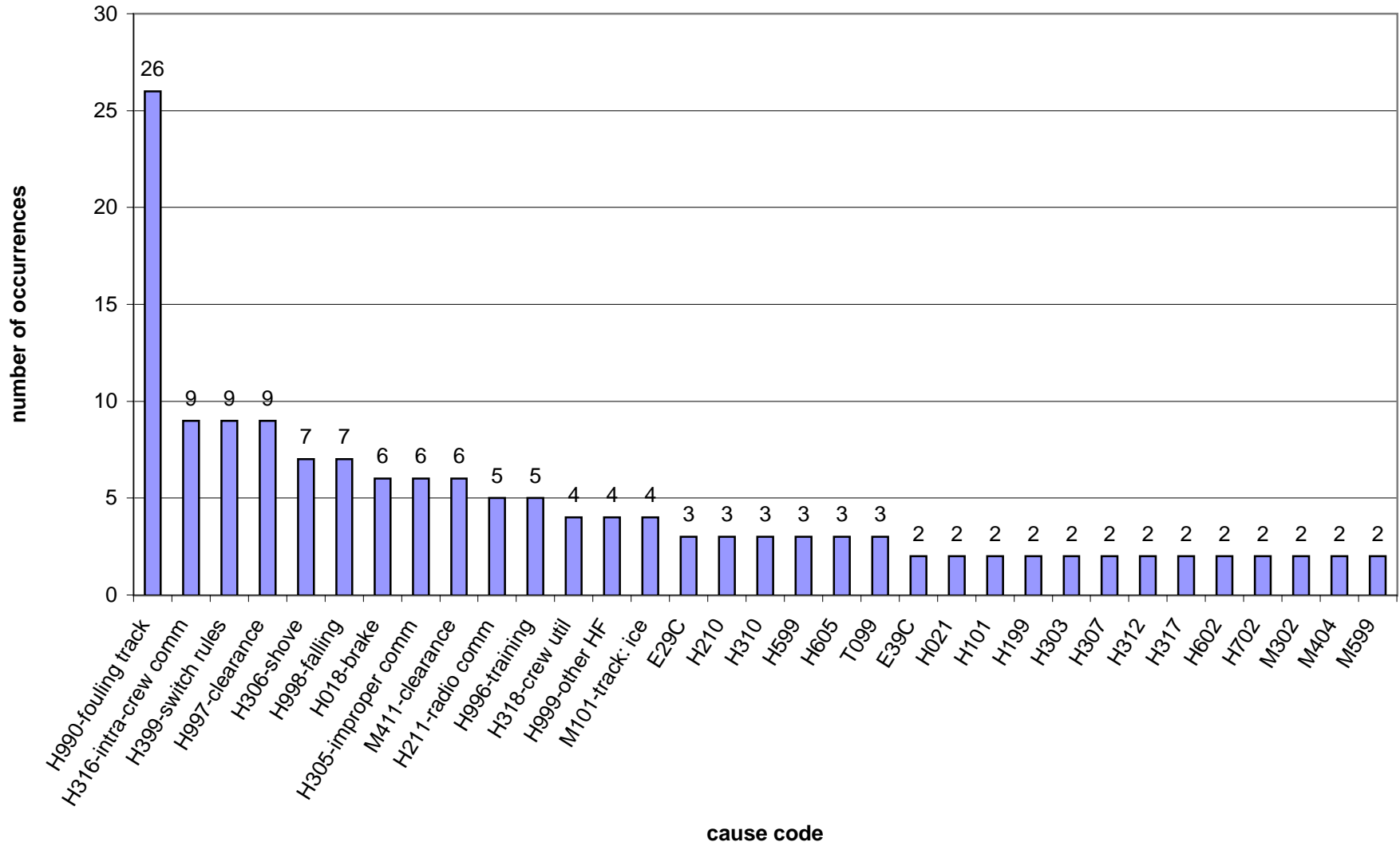
## Other Factors

	<b>REPORT #</b>	<b>other factors</b>
1	FE-31-96	
2	FE-30-96	
3	FE-24-96	
4	FE-22-96	
5	FE-17-96	
6	FE-12-96	
7	FE-09-96	
8	FE-02-97	Lost hand hold
9	FE-04-97	
10	FE-05-97	Ejected off-slack
11	FE-16-97	
12	FE-19-97	
13	FE-22-97	FE failed to stay clear of movent
14	FE-32-97	
15	FE-02-95	
16	FE-09-95	Poor Com. about work in progress
17	FE-11-95	ATSF developed gen order for similar situations
18	FE-12-95	Extra engineer, interpited 'bump' sign with thrtl 8
19	FE-16-95	
20	FE-17-95	Both lower ex's crushed off, bled out at hosp-55 mn
21	FE-18-95	Bleeder lined movement/informed FE of mvmnt
22	FE-23-95	
23	FE-29-95	
24	FE-33-95	Bulky Clothing
25	FE-34-95	FE struck vandilized trailer door
26	FE-02-94	Portable radio unable to contact Dispatcher
27	FE-03-94	BN restricted these cars from being switched
28	FE-04-94	Train crew could not raise disp to report injury for 7 min
29	FE-06-94	
30	FE-12-94	7.5" Clearance, co headache
31	FE-16-94	EMS, 21 min response time
32	FE-20-94	
33	FE-26-94	
34	FE-28-94	In plant EMS
35	FE-29-94	Apperent 35 min response time
36	FE-31-94	8 min response
37	FE-32-94	10 min from cond's call to EMS call

## Other Factors

<b>REPORT #</b>	<b>other factors</b>
38	FE-11-93
39	FE-13-93
40	FE-20-93 H699 Excessive speed on part of truck driver. Blind-spot trucker. Trucker Drug Screen Neg.
41	FE-22-93 Fell from control cab
42	FE-23-93 xtra car in train, not on list
43	FE-26-93 S012
44	FE-27-93 45 Min EMS Respponse
45	FE-30-93 51, A6 - Co-Engineer/60,X9 - 2nd bkmn yard office
46	FE-31-93
47	FE-35-93 Too many students assigned to job
48	FE-40-93
49	FE-46-93 19 nanograms/ml THC, 97 nanogram/ml THCA
50	FE-47-93
51	FE-49-93
52	FE-53-93 H318
53	FE-03-92 Walking backwards while watching other track
54	FE-04-92 FE 5'2" / 155-160#
55	FE-08-92 Appeared to De-train b4 impact
56	FE-09-92
57	FE-14-92
58	FE-15-92
59	FE-16-92 Failed to use air properly
60	FE-18-92 Dangerous Standard Operating Practice
61	FE-20-92
62	FE-22-92
63	FE-30-92
64	FE-33-92
65	FE-34-92
66	FE-39-92
67	FE-36-97
68	FE-45-97

### Frequency of Cause Codes Occurring Two or More Times



### External Circumstances of FE

External Circmst.	Report #	RR	Date	FE crew's next move	Poss. Cont. Factors
Board/disbaord wrong side	FE-04-92	AGC	01/30/92	Wye Engine	H996
Crew experiance	FE-09-96	BRC	03/20/96	Couple Track	
EC 24	FE-13-93	CSX	04/13/93	Run Around Train	M307
Engineer didn't change ends	FE-22-92	UP	07/25/92	Return to other end of yard	Hand Switch Confusion
Grade x-ing placement	FE-45-97	UP	12/26/97	Uncouple cars to spot	
H099	FE-16-94	BN	07/05/94	Stop the Drop	
H101	FE-46-93	ATSF	11/12/93	Spot Car	
H199	FE-17-95	SP	03/21/95	Coupling	
H317	FE-31-93	ATSF	08/12/93	Make Cut	H399
H318	FE-30-93	SP	08/11/93	Shove to Yard	M199
H399	FE-15-92	BN	06/01/92	Shove to Clear	
H599	FE-26-94	UP	10/17/94	Pull ahead	
H990	FE-32-94	UP	12/13/94	CO Power	
H999	FE-29-95	CSXT	10/04/95	Coupling	Green Ground Crew
H999	FE-35-93	ATSF	09/02/93	Couple	
Heavy Clothing, Hood(s)	FE-03-92	BN	01/28/92	Engine to two track	Radio Conversation w/2nd crew
Improper mingeling of crew members	FE-30-92	GBW	07/24/92		No on-going job briefing
Jammed Knuckle pin	FE-39-92	TTIS	11/16/92	Replace Knuckle	Track curve/broken knuckle
M101	FE-11-93	SP	03/27/93	Couple Track	H019
M305	FE-20-94	ARR	09/20/94	Shove cars	Sun in eyes
M411	FE-18-92	CNW	06/20/92	Couple track	Use of wood chalks & descending grade of yard
Moving Equipment	FE-32-97	MRL	10/16/97	Stop	
Noise from FE's Locos	FE-20-92	SSW	07/07/92	Depart Siding	M404

### External Circumstances of FE

External Circumst.	Report #	RR	Date	FE crew's next move	Poss. Cont. Factors
Others Assisted Crew	FE-53-93	CR	12/30/93	Spot Car	
Radio Failure	FE-16-97	CMRC	06/06/97	Coupling	Clear x-ing
T099	FE-49-93	SOU	12/05/93	Line Switch	
T099	FE-09-92	ATSF	04/09/92	Couple to train	H399
TM Assisted Crew	FE-47-93	GC	11/13/93	Pull Another Track	H399
Track Conditions	FE-08-92	FEC	03/11/92	Couple	
Two Radio Channels Used	FE-18-95	CSXT	05/03/95	Switch Car	
Unfam w/territory	FE-02-97	UP	01/12/97	Stop	
Unsafe commonly accepted	FE-34-92	GTW	10/23/92	Line-up Car	
X-car-/list chng	FE-23-93	IC	06/07/93	Switch Cars	H305
Yardmaster	FE-11-95	ATSF	02/24/95		H305

### External Circumstances of FE

External Circmst.	Report #	RR	Date	FE crew's next move	Poss. Cont. Factors
	FE-02-94	BN	01/04/94	Stop to uncouple	H997
	FE-06-94	UP	01/20/94	Stop Car	
	FE-22-93	SEPTA	06/04/93	Stop at Station	
	FE-33-92	BN	10/15/92	Spot load at pit	
	FE-20-93	ATSF	05/22/93	Spot Cars	
	FE-22-96	DGNO	09/03/96	Spot cars	Failure to test HB
	FE-31-96	IC	12/18/96	Spot Cars	Cold Temp
	FE-12-96	CSX	06/15/96	Spot Car	
	FE-16-92	IHRC	06/02/92	Spot Car	
	FE-04-94	CSXT	01/18/94	Spot	
	FE-04-97	UP	01/29/97	SO power	Moved on wrong trnmsn.
	FE-24-96	UP	10/07/96	Shove cars	
	FE-23-95	CR	07/21/95	Set Out Cars	ECC 34
	FE-31-94	CR	12/06/94	Set Out Cars	
	FE-33-95	NS	12/11/95	Set Out Cars	
	FE-17-96	NS	07/07/96	Meet train	
	FE-40-93	SOO	10/19/93	Make Joint	
	FE-12-94	SP	04/12/94	Make Cut	
	FE-19-97	NS	06/24/97	Make Cut	
	FE-03-94	BN	01/14/94	Cut Engine Off	
	FE-34-95	CSXT	12/14/95	Cut Engine Off	
	FE-09-95	CR	02/17/95	Cut Cars	
	FE-16-95	WC	04/06/95	Coupling	H020
	FE-36-97	BNSF	12/02/97	Couple Train	
	FE-29-94	CR	11/15/94	Couple Track	
	FE-14-92	ATSF	06/01/92	Couple to car	
	FE-27-93	UP	08/04/93	Couple	
	FE-30-96	UP	12/16/96	CO Power	
	FE-26-93	CR	07/15/93	CO Engine	

### External Circumstances of FE

<b>External Circmst.</b>	<b>Report #</b>	<b>RR</b>	<b>Date</b>	<b>FE crew's next move</b>	<b>Poss. Cont. Factors</b>
	FE-05-97	CR	02/02/97	Begin Switching	Reading ist
	FE-02-95	CR	01/11/95		
	FE-12-95	NS	03/02/95		
	FE-22-97	MNCW	07/18/97		
	FE-28-94	PTRA	11/10/94		

# SOFA WORKING GROUP

FEs

organized by

Atmospheric Condition and Visibility

Group 11



## Day/Night and Atmospheric Condition by Railroad

state	RR	day/night	visibility	report #	date	time
1 AZ	ATSF	day		FE-09-92	04/09/92	2:39 PM
2 CA	ATSF	day	clear	FE-14-92	06/01/92	1:05 PM
3 KS	BNSF	night	rain	FE-36-97	12/02/97	7:45 PM
4 MN	BN	night	clear	FE-03-92	01/28/92	5:30 PM
5 MT	BN	day	clear	FE-16-94	07/05/94	4:45 PM
6 NE	BN	night		FE-02-94	01/04/94	7:00 PM
7 NE	BN	night		FE-33-92	10/15/92	1:25 AM
8 NM	ATSF	day	cloudy	FE-35-93	09/02/93	12:30 PM
9 TX	ATSF	day	clear	FE-11-95	02/24/95	9:45 AM
10 TX	ATSF	day	cloudy	FE-20-93	05/22/93	10:30 AM
11 TX	ATSF	day	clear	FE-31-93	08/12/93	1:25 PM
12 TX	ATSF	night		FE-46-93	11/12/93	6:40 AM
13 TX	BN	day		FE-03-94	01/14/94	11:15 AM
14 WA	BN	day	partly cloudy	FE-15-92	06/01/92	4:15 PM
1 GA	CSXT	day	clear	FE-04-94	01/18/94	6:10 PM
2 GA	SOU	night	cloudy	FE-49-93	12/05/93	7:00 AM
3 ID	NS	night		FE-17-96	07/07/96	1:08 AM
4 IL	CSXT	day	cloudy	FE-29-95	10/04/95	12:40 AM
5 IN	CR	day	clear	FE-26-93	07/15/93	5:25 PM
6 IN	CR	night	clear	FE-05-97	02/02/97	9:55 PM
7 IN	CR	night		FE-02-95	01/11/95	11:30 PM
8 IN	CSXT	day	cloudy	FE-18-95	05/03/95	5:55 PM
9 KY	CSX	day		FE-13-93	04/13/93	6:40 PM
10 NC	CSX	day	rain	FE-12-96	06/15/96	8:30 AM
11 NC	CSXT	night	clear	FE-34-95	12/14/95	4:30 AM
12 NY	CR	day	cloudy	FE-29-94	11/15/94	9:35 AM
13 NY	CR	night		FE-31-94	12/06/94	2:52 AM
14 OH	CR	day	clear	FE-09-95	02/17/95	11:15 AM
15 OH	CR	day		FE-53-93	12/30/93	9:20 AM
16 OH	NS	night	cloudy/snow	FE-33-95	12/11/95	6:25 PM
17 PA	CR	day	cloudy	FE-23-95	07/21/95	9:10 AM
18 SC	NS	day	cloudy	FE-12-95	03/02/95	9:44 AM
19 SC	NS	night	clear	FE-19-97	06/24/97	8:58 PM

## Day/Night and Atmospheric Condition by Railroad

	state	RR	day/night	visibility	report #	date	time
1	CA	SP	day	clear	FE-17-95	03/21/95	8:40 AM
2	CA	SP	day	partly cloudy	FE-11-93	03/27/93	12:30 PM
3	CA	SP	day	clear	FE-30-93	08/11/93	11:52 AM
4	CA	UP	night	rain/fog	FE-02-97	01/12/97	10:15 PM
5	CA	UP	night	light fog/rain	FE-32-94	12/13/94	12:01 AM
6	IA	UP	day	clear	FE-04-97	01/29/97	12:55 PM
7	IA	UP	night		FE-30-96	12/16/96	8:40 PM
8	ID	UP	night	clear	FE-45-97	12/26/97	5:45 PM
9	IL	CNW	day	clear	FE-18-92	06/20/92	11:45 AM
10	LA	UP	day	cloudy	FE-26-94	10/17/94	12:30 PM
11	NE	UP	night	clear	FE-06-94	01/20/94	8:00 PM
12	OK	UP	day	clear	FE-27-93	08/04/93	4:45 PM
13	OR	UP	day	clear	FE-22-92	07/25/92	11:40 AM
14	TX	SP	day	cloudy/rain	FE-12-94	04/12/94	7:45 AM
15	TX	SSW	day	clear	FE-20-92	07/07/92	8:37 AM
16	TX	UP	night	clear	FE-24-96	10/07/96	8:48 PM
1	WI	GBW	night	clear	FE-30-92	07/24/92	12:40 AM
2	WI	WC	night	cloudy/snow	FE-16-95	04/06/95	1:56 AM
1	IL	IC	day	snow	FE-31-96	12/18/96	11:40 AM
2	KY	IC	day	clear	FE-23-93	06/07/93	11:55 AM
3	MI	GTW	day		FE-34-92	10/23/92	10:00 AM
1	AK	ARR	day	cloudy	FE-20-94	09/20/94	7:19 PM
2	CT	MNCW	night		FE-22-97	07/18/97	1:29 AM
3	FL	AGC	day	clear	FE-04-92	01/30/92	3:00 PM
4	FL	FEC	night	cloudy	FE-08-92	03/11/92	1:15 AM
5	GA	GC	day	clear	FE-47-93	11/13/93	8:30 AM
6	IL	BRC	night	clear	FE-09-96	03/20/96	11:25 PM
7	KY	IHRC	day	clear	FE-16-92	06/02/92	5:55 AM
8	KY	TTIS	night	clear	FE-39-92	11/16/92	6:05 PM
9	MI	CMRC	night		FE-16-97	06/06/97	9:35 PM
10	MT	MRL	night	clear	FE-32-97	10/16/97	10:20 PM
11	ND	SOO	night	cloudy/rain	FE-40-93	10/19/93	8:17 PM
12	PA	SEPTA	night	cloudy	FE-22-93	06/04/93	11:25 PM
13	TX	DGNO	day	clear	FE-22-96	09/03/96	6:30 PM
14	TX	PTRA	night	clear	FE-28-94	11/10/94	4:15 AM

### Day/Night and Atmospheric Condition by State

state	RR	day/night	visibility	report #	date	time
1 AK	ARR	day	cloudy	FE-20-94	09/20/94	7:19 PM
1 AZ	ATSF	day		FE-09-92	04/09/92	2:39 PM
CA	ATSF	day	clear	FE-14-92	06/01/92	1:05 PM
CA	SP	day	clear	FE-17-95	03/21/95	8:40 AM
CA	SP	day	partly cloudy	FE-11-93	03/27/93	12:30 PM
CA	SP	day	clear	FE-30-93	08/11/93	11:52 AM
CA	UP	night	rain/fog	FE-02-97	01/12/97	10:15 PM
6 CA	UP	night	light fog/rain	FE-32-94	12/13/94	12:01 AM
1 CT	MNCW	night		FE-22-97	07/18/97	1:29 AM
FL	AGC	day	clear	FE-04-92	01/30/92	3:00 PM
2 FL	FEC	night	cloudy	FE-08-92	03/11/92	1:15 AM
GA	CSXT	day	clear	FE-04-94	01/18/94	6:10 PM
GA	GC	day	clear	FE-47-93	11/13/93	8:30 AM
3 GA	SOU	night	cloudy	FE-49-93	12/05/93	7:00 AM
IA	UP	day	clear	FE-04-97	01/29/97	12:55 PM
2 IA	UP	night		FE-30-96	12/16/96	8:40 PM
ID	NS	night		FE-17-96	07/07/96	1:08 AM
2 ID	UP	night	clear	FE-45-97	12/26/97	5:45 PM
IL	BRC	night	clear	FE-09-96	03/20/96	11:25 PM
IL	CNW	day	clear	FE-18-92	06/20/92	11:45 AM
IL	CSXT	day	cloudy	FE-29-95	10/04/95	12:40 AM
4 IL	IC	day	snow	FE-31-96	12/18/96	11:40 AM
IN	CR	day	clear	FE-26-93	07/15/93	5:25 PM
IN	CR	night	clear	FE-05-97	02/02/97	9:55 PM
IN	CR	night		FE-02-95	01/11/95	11:30 PM
4 IN	CSXT	day	cloudy	FE-18-95	05/03/95	5:55 PM
1 KS	BNSF	night	rain	FE-36-97	12/02/97	7:45 PM

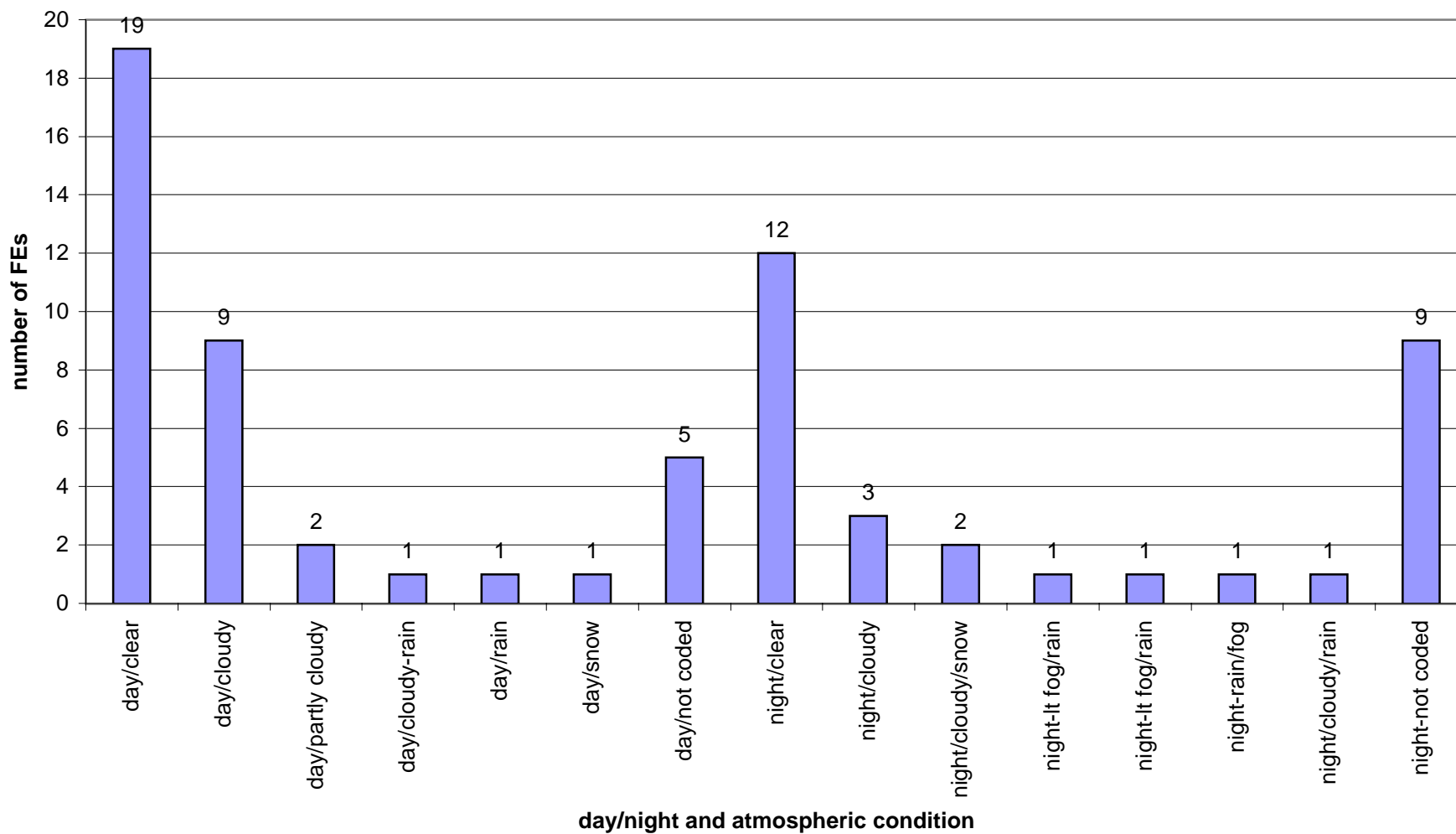
## Day/Night and Atmospheric Condition by State

	state	RR	day/night	visibility	report #	date	time
	KY	CSX	day		FE-13-93	04/13/93	6:40 PM
	KY	IC	day	clear	FE-23-93	06/07/93	11:55 AM
	KY	IHRC	day	clear	FE-16-92	06/02/92	5:55 AM
4	KY	TTIS	night	clear	FE-39-92	11/16/92	6:05 PM
1	LA	UP	day	cloudy	FE-26-94	10/17/94	12:30 PM
	MI	CMRC	night		FE-16-97	06/06/97	9:35 PM
2	MI	GTW	day		FE-34-92	10/23/92	10:00 AM
1	MN	BN	night	clear	FE-03-92	01/28/92	5:30 PM
	MT	BN	day	clear	FE-16-94	07/05/94	4:45 PM
2	MT	MRL	night	clear	FE-32-97	10/16/97	10:20 PM
	NC	CSX	day	rain	FE-12-96	06/15/96	8:30 AM
2	NC	CSXT	night	clear	FE-34-95	12/14/95	4:30 AM
1	ND	SOO	night	cloudy/rain	FE-40-93	10/19/93	8:17 PM
	NE	BN	night		FE-02-94	01/04/94	7:00 PM
	NE	BN	night		FE-33-92	10/15/92	1:25 AM
3	NE	UP	night	clear	FE-06-94	01/20/94	8:00 PM
1	NM	ATSF	day	cloudy	FE-35-93	09/02/93	12:30 PM
	NY	CR	day	cloudy	FE-29-94	11/15/94	9:35 AM
2	NY	CR	night		FE-31-94	12/06/94	2:52 AM
	OH	CR	day	clear	FE-09-95	02/17/95	11:15 AM
	OH	CR	day		FE-53-93	12/30/93	9:20 AM
3	OH	NS	night	cloudy/snow	FE-33-95	12/11/95	6:25 PM
1	OK	UP	day	clear	FE-27-93	08/04/93	4:45 PM
1	OR	UP	day	clear	FE-22-92	07/25/92	11:40 AM
	PA	CR	day	cloudy	FE-23-95	07/21/95	9:10 AM
2	PA	SEPTA	night	cloudy	FE-22-93	06/04/93	11:25 PM

### Day/Night and Atmospheric Condition by State

state	RR	day/night	visibility	report #	date	time
SC	NS	day	cloudy	FE-12-95	03/02/95	9:44 AM
2 SC	NS	night	clear	FE-19-97	06/24/97	8:58 PM
TX	ATSF	day	clear	FE-11-95	02/24/95	9:45 AM
TX	ATSF	day	cloudy	FE-20-93	05/22/93	10:30 AM
TX	ATSF	day	clear	FE-31-93	08/12/93	1:25 PM
TX	ATSF	night		FE-46-93	11/12/93	6:40 AM
TX	BN	day		FE-03-94	01/14/94	11:15 AM
TX	DGNO	day	clear	FE-22-96	09/03/96	6:30 PM
TX	PTRA	night	clear	FE-28-94	11/10/94	4:15 AM
TX	SP	day	cloudy/rain	FE-12-94	04/12/94	7:45 AM
TX	SSW	day	clear	FE-20-92	07/07/92	8:37 AM
10 TX	UP	night	clear	FE-24-96	10/07/96	8:48 PM
1 WA	BN	day	partly cloudy	FE-15-92	06/01/92	4:15 PM
WI	GBW	night	clear	FE-30-92	07/24/92	12:40 AM
<u>2</u> WI	WC	night	cloudy/snow	FE-16-95	04/06/95	1:56 AM

FEs by Day/Night and Atmospheric Condition



## By Day/Night and Atmospheric Condition

### FE's occurring during day and clear visibility

note: '1' = day; '2' = night. 'C' = clear.

count	D/N	Visibility	Time	Railroad	Date	Day	Age	REPORT #
1	1	C	5:55 AM	IHRC	06/02/92	3	52	FE-16-92
2	1	C	8:30 AM	GC	11/13/93	7	47	FE-47-93
3	1	C	8:37 AM	SSW	07/07/92	3	58	FE-20-92
4	1	C	8:40 AM	SP	03/21/95	6	55	FE-17-95
5	1	C	9:45 AM	ATSF	02/24/95	6	44	FE-11-95
6	1	C	11:15 AM	CR	02/17/95	6	48	FE-09-95
7	1	C	11:40 AM	UP	07/25/92	7	54	FE-22-92
8	1	C	11:45 AM	CNW	06/20/92	7	42	FE-18-92
9	1	C	11:52 AM	SP	08/11/93	4	47	FE-30-93
10	1	C	11:55 AM	IC	06/07/93	2	49	FE-23-93
11	1	C	12:55 PM	UP	01/29/97	4	48	FE-04-97
12	1	C	1:05 PM	ATSF	06/01/92	2	58	FE-14-92
13	1	C	1:25 PM	ATSF	08/12/93	5	52	FE-31-93
14	1	C	3:00 PM	AGC	01/30/92	5	32	FE-04-92
15	1	C	4:45 PM	BN	07/05/94	3	59	FE-16-94
16	1	C	4:45 PM	UP	08/04/93	4	42	FE-27-93
17	1	C	5:25 PM	CR	07/15/93	5	43	FE-26-93
18	1	C	6:10 PM	CSXT	01/18/94	3	45	FE-04-94
19	1	C	6:30 PM	DGNO	09/03/96	3	43	FE-22-96
20	1		9:20 AM	CR	12/30/93	5	61	FE-53-93
21	1		10:00 AM	GTW	10/23/92	6	49	FE-34-92
22	1		11:15 AM	BN	01/14/94	6	57	FE-03-94
23	1		2:39 PM	ATSF	04/09/92	5	54	FE-09-92
24	1		6:40 PM	CSX	04/13/93	3	44	FE-13-93

count	D/N	Visibility	Time	Railroad	Date	Day	Age	REPORT #
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**FE's occurring during night and not clear visibility**

1		1 Cld	12:40 AM	CSXT	10/04/95	4	39	FE-29-95
2		1 Cld	9:10 AM	CR	07/21/95	6	61	FE-23-95
3		1 Cld	9:35 AM	CR	11/15/94	3	57	FE-29-94
4		1 Cld	9:44 AM	NS	03/02/95	5	46	FE-12-95
5		1 Cld	10:30 AM	ATSF	05/22/93	7	46	FE-20-93
6		1 Cld	12:30 PM	UP	10/17/94	2	36	FE-26-94
7		1 Cld	12:30 PM	ATSF	09/02/93	5	55	FE-35-93
8		1 Cld	5:55 PM	CSXT	05/03/95	4	52	FE-18-95
9		1 Cld	7:19 PM	ARR	09/20/94	3	49	FE-20-94
10		1 Cld/R	7:45 AM	SP	04/12/94	3	62	FE-12-94
11		1 PCL	12:30 PM	SP	03/27/93	7	39	FE-11-93
12		1 PCL	4:15 PM	BN	06/01/92	2	42	FE-15-92
13		1 R	8:30 AM	CSX	06/15/96	4	36	FE-12-96
14		1 S	11:40 AM	IC	12/18/96	4	45	FE-31-96
15		2 C	12:40 AM	GBW	07/24/92	5	34	FE-30-92
16		2 C	4:15 AM	PTRA	11/10/94	5	31	FE-28-94
17		2 C	4:30 AM	CSXT	12/14/95	5	54	FE-34-95
18		2 C	5:30 PM	BN	01/28/92	3	57	FE-03-92
19		2 C	5:45 PM	UP	12/26/97	6	55	FE-45-97
20		2 C	6:05 PM	TTIS	11/16/92	2	35	FE-39-92
21		2 C	8:00 PM	UP	01/20/94	5	44	FE-06-94
22		2 C	8:48 PM	UP	10/07/96	2	35	FE-24-96
23		2 C	8:58 PM	NS	06/24/97	3	21	FE-19-97
24		2 C	9:55 PM	CR	02/02/97	1	54	FE-05-97
25		2 C	10:20 PM	MRL	10/16/97	5	22	FE-32-97
26		2 C	11:25 PM	BRC	03/20/96	4	28	FE-09-96
27		2 Cld	1:15 AM	FEC	03/11/92	4	36	FE-08-92
28		2 Cld	7:00 AM	SOU	12/05/93	1	59	FE-49-93
29		2 Cld	11:25 PM	SEPTA	06/04/93	6	29	FE-22-93
30		2 Cld/R	8:17 PM	SOO	10/19/93	3	43	FE-40-93
31		2 Cld/S	1:56 AM	WC	04/06/95	5	45	FE-16-95
32		2 Cld/S	6:25 PM	NS	12/11/95	2	53	FE-33-95
33		2 Lt Fog/R	12:01 AM	UP	12/13/94	3	48	FE-32-94
34		2 R	7:45 PM	BNSF	12/02/97	3	50	FE-36-97
35		2 R/F	10:15 PM	UP	01/12/97	1	60	FE-02-97
36		2	1:08 AM	NS	07/07/96	1	29	FE-17-96
37		2	1:25 AM	BN	10/15/92	5	32	FE-33-92
38		2	1:29 AM	MNCW	07/18/97	6	40	FE-22-97
39		2	2:52 AM	CR	12/06/94	3	28	FE-31-94
40		2	6:40 AM	ATSF	11/12/93	6	41	FE-46-93
41		2	7:00 PM	BN	01/04/94	3	46	FE-02-94
42		2	8:40 PM	UP	12/16/96	2	51	FE-30-96
43		2	9:35 PM	CMRC	06/06/97	6	50	FE-16-97
44		2	11:30 PM	CR	01/11/95	4	51	FE-02-95



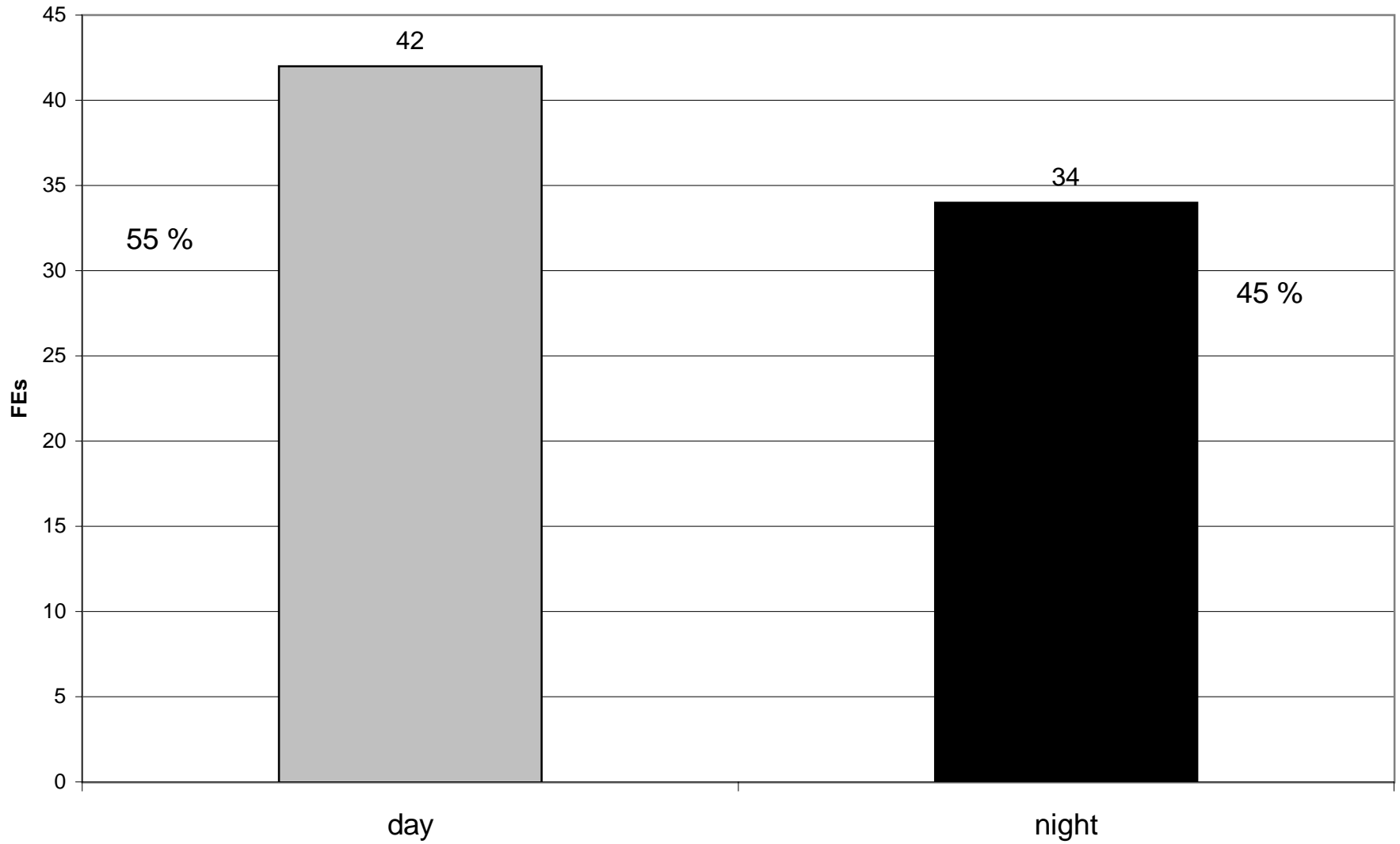
### Day/Night and Weather

count	day/night	visibility	ground/footing	wind (mph)
1	day	S		
2	day	C		
3	day	R		
4	day	C	F	
5	day	C	I	
6	day	C		17
7	day	Cld		
8	day	C		
9	day	Cld		
10	day	Cld		
11	day	Cld		
12	day			
13	day	C		
14	day	Cld/R		
15	day	C		
16	day	Cld		
17	day	Cld		
18	day	Cld		
19	day	PCL		
20	day			
21	day	Cld		15
22	day	C		
23	day	C		
24	day	C		
25	day	C	M	
26	day	C		
27	day	Cld		8
28	day	C		
29	day			
30	day	C		
31	day			
32	day	C		
33	day	PCL		Lite
34	day	C		
35	day	C		
36	day	C		
37	day	C		
38	day			

**Day/Night and Weather**

count	day/night	visibility	ground/footing	wind (mph)
39	day	Cld	S	
40	day	C		
41	day	Cld		SlT
42	day	Cld		
1	night			
2	night	C		
3	night			
4	night	C		
5	night	R/F	W	
6	night	C		
7	night			
8	night	C		
9	night			
10	night	C		17
11	night			
12	night	Cld/S	W/Snw	
13	night	Cld/S	W/S	
14	night	C		
15	night			14S
16	night	C		
17	night	C		
18	night			
19	night	Lt Fog/R	W	0.5
20	night	Cld		
21	night	Cld/R	W	
22	night			
23	night	Cld		
24	night	C	F	
25	night	Cld	W	
26	night	C		
27	night			
28	night	C		
29	night	R		
30	night	C		
31	night	C		0
32	night	C		
33	night	C		Clm
34	night	C		

FEs by Day and Night



# SOFA WORKING GROUP

FEs

organized by

Temperature

Group 12

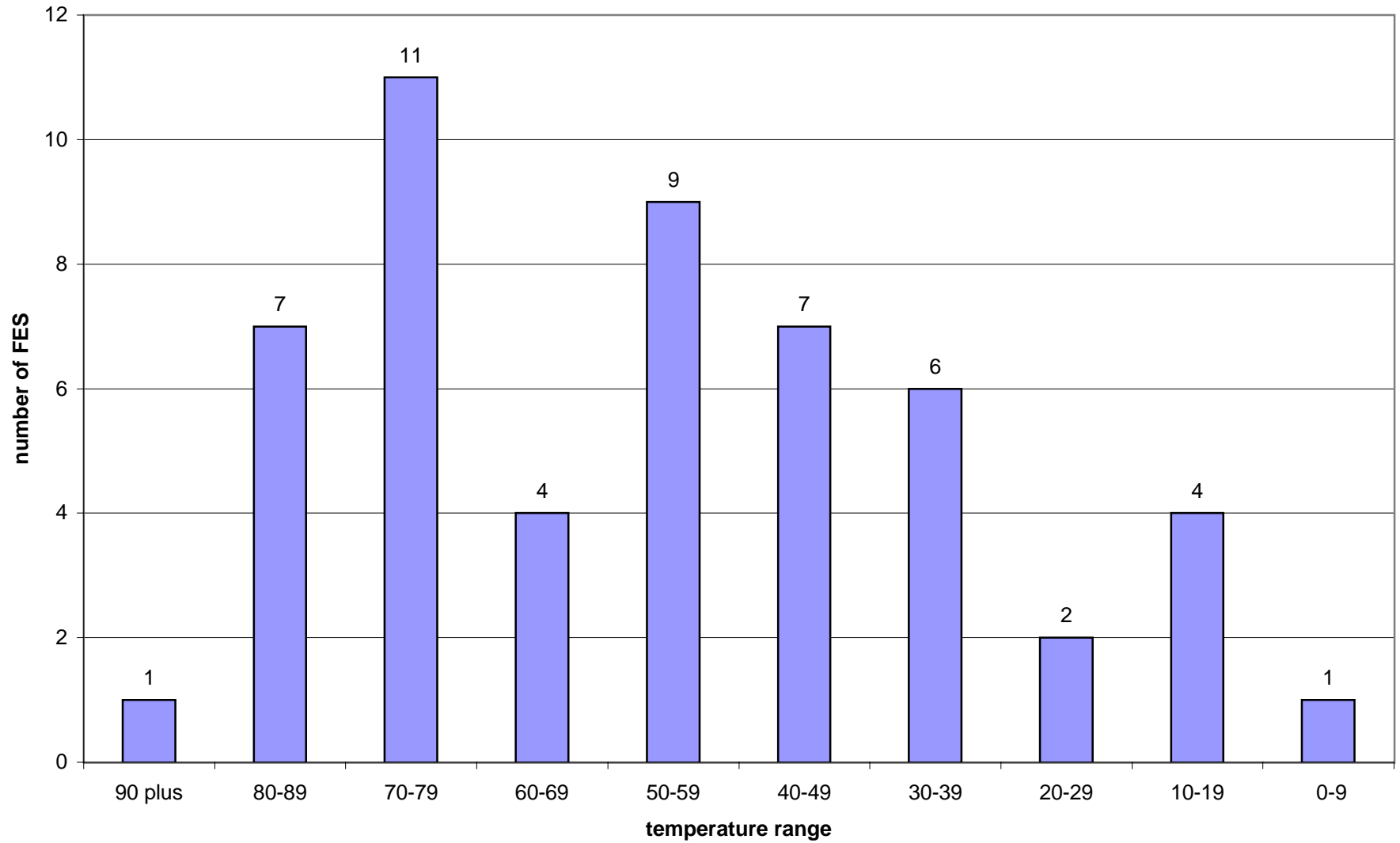
## FEs Sorted by Temperature

#	Temp	Visibility	FE	RR	City	State	Date	Time
1	100	clear	FE-31-93	ATSF	Evandale	TX	08/12/93	1:25 PM
2	88	cloudy	FE-35-93	ATSF	Carlsbad	NM	09/02/93	12:30 PM
3	87	clear	FE-23-93	IC	Fulton	KY	06/07/93	11:55 AM
4	85	clear	FE-22-96	DGNO	Dallas	TX	09/03/96	6:30 PM
5	82	cloudy	FE-20-93	ATSF	El Paso	TX	05/22/93	10:30 AM
6	80	clear	FE-19-97	NS	Rowesville	SC	06/24/97	8:58 PM
7	80	cloudy	FE-23-95	CR	Hershey	PA	07/21/95	9:10 AM
8	80	cloudy	FE-29-95	CSXT	Riverdale	IL	10/04/95	12:40 AM
<i>80 degrees or above</i>								
9	76		FE-16-97	CMRC	Bay City	MI	06/06/97	9:35 PM
10	76	clear	FE-16-94	BN	Essex	MT	07/05/94	4:45 PM
11	76	cloudy	FE-26-94	UP	Donaldsonville	LA	10/17/94	12:30 PM
12	76	clear	FE-22-92	UP	Portland	OR	07/25/92	11:40 AM
13	75		FE-17-96	NS	Sidney	ID	07/07/96	1:08 AM
14	75		FE-22-97	MNCW	Stamford	CT	07/18/97	1:29 AM
15	75	clear	FE-26-93	CR	Anderson	IN	07/15/93	5:25 PM
16	75	clear	FE-04-92	AGC	Polk County	FL	01/30/92	3:00 PM
17	71	cloudy	FE-08-92	FEC	Fort Pierce	FL	03/11/92	1:15 AM
18	70	clear	FE-28-94	PTRA	Houston	TX	11/10/94	4:15 AM
19	70	cloudy	FE-22-93	SEPTA	Devon	PA	06/04/93	11:25 PM
20	66	partly cloudy	FE-15-92	BN	Seattle	WA	06/01/92	4:15 PM
21	63	clear	FE-32-97	MRL	Laurel	MT	10/16/97	10:20 PM
22	60	cloudy	FE-18-95	CSXT	Evansville	IN	05/03/95	5:55 PM
23	60	partly cloudy	FE-11-93	SP	Guadalupe	CA	03/27/93	12:30 PM
24	55	cloudy	FE-29-94	CR	Painted Post	NY	11/15/94	9:35 AM
25	55	cloudy	FE-49-93	SOU	Atlanta	GA	12/05/93	7:00 AM
26	54	clear	FE-18-92	CNW	Northlake	IL	06/20/92	11:45 AM
27	51		FE-31-94	CR	Campbell Hall	NY	12/06/94	2:52 AM
28	50	rain	FE-12-96	CSX	Charlotte	NC	06/15/96	8:30 AM
29	50	cloudy	FE-20-94	ARR	Clear Site	AK	09/20/94	7:19 PM
30	50	cloudy/rain	FE-40-93	SOO	Leal	ND	10/19/93	8:17 PM
31	50	clear	FE-47-93	GC	Macon	GA	11/13/93	8:30 AM
32	50	clear	FE-30-92	GBW	Wisconsin	WI	07/24/92	12:40 AM
33	48	clear	FE-11-95	ATSF	Amarillo	TX	02/24/95	9:45 AM
34	48		FE-03-94	BN	Amarillo	TX	01/14/94	11:15 AM
35	45	cloudy	FE-12-95	NS	Aiken	SC	03/02/95	9:44 AM

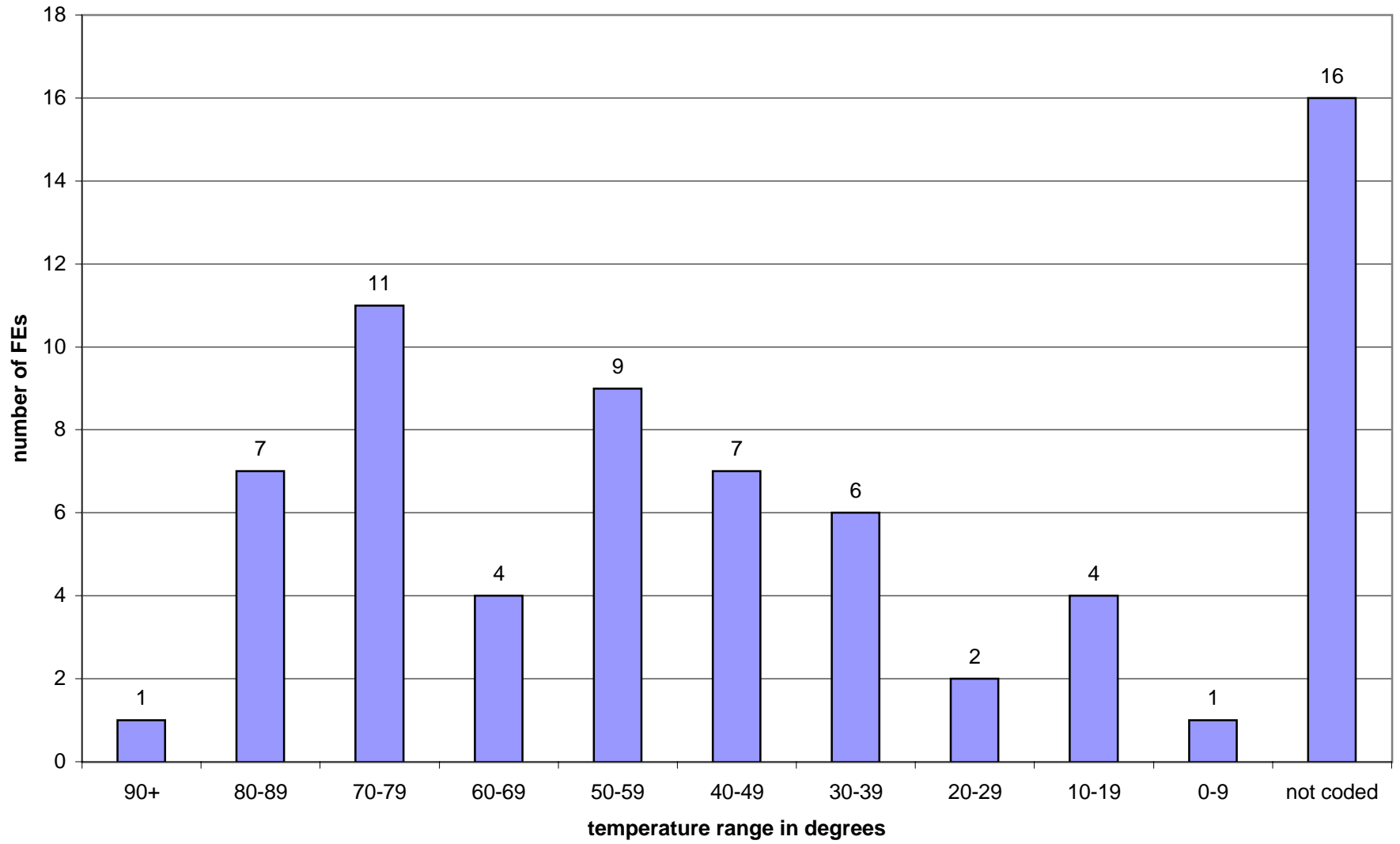
## FEs Sorted by Temperature

#	Temp	Visibility	FE	RR	City	State	Date	Time	
36	45	clear	FE-39-92	TTIS	Maysville	KY	11/16/92	6:05 PM	
37	44	clear	FE-34-95	CSXT	Monroe	NC	12/14/95	4:30 AM	
38	43	rain	FE-36-97	BNSF	Emporia	KS	12/02/97	7:45 PM	
39	42	rain/fog	FE-02-97	UP	S Fontana	CA	01/12/97	10:15 PM	
40	39	clear	FE-09-95	CR	St. James	OH	02/17/95	11:15 AM	
41	38	clear	FE-04-94	CSXT	Bainbridge	GA	01/18/94	6:10 PM	
42	34	light fog/rain	FE-32-94	UP	Thorton	CA	12/13/94	12:01 AM	
43	32		FE-30-96	UP	Clinton	IA	12/16/96	8:40 PM	
44	31		FE-02-94	BN	Hastings	NE	01/04/94	7:00 PM	
45	30	clear	FE-05-97	CR	Burns Harbor	IN	02/02/97	9:55 PM	
46	28	clear	FE-09-96	BRC	Bedford Park	IL	03/20/96	11:25 PM	
32 degrees or below	47	27	clear	FE-45-97	UP	Boise	ID	12/26/97	5:45 PM
48	18	cloudy/snow	FE-16-95	WC	Argoe	WI	04/06/95	1:56 AM	
49	16	clear	FE-06-94	UP	Fall City	NE	01/20/94	8:00 PM	
50	15	snow	FE-31-96	IC	Chicago	IL	12/18/96	11:40 AM	
51	12	cloudy/snow	FE-33-95	NS	Toledo	OH	12/11/95	6:25 PM	
52	0	clear	FE-04-97	UP	Mason City	IA	01/29/97	12:55 PM	
53	na	clear	FE-24-96	UP	Eagle Pass	TX	10/07/96	8:48 PM	
54	na		FE-02-95	CR	Indianapolis	IN	01/11/95	11:30 PM	
55	na	clear	FE-17-95	SP	Bassett	CA	03/21/95	8:40 AM	
56	na	cloudy/rain	FE-12-94	SP	Houston	TX	04/12/94	7:45 AM	
57	na		FE-13-93	CSX	Dwale	KY	04/13/93	6:40 PM	
58	na	clear	FE-27-93	UP	Pryor	OK	08/04/93	4:45 PM	
not coded for temperature	59	na	clear	FE-30-93	SP	Tracy	CA	08/11/93	11:52 AM
60	na		FE-46-93	ATSF	Farewell	TX	11/12/93	6:40 AM	
61	na		FE-53-93	CR	Brook Park	OH	12/30/93	9:20 AM	
62	na	clear	FE-03-92	BN	Willmar	MN	01/28/92	5:30 PM	
63	na		FE-09-92	ATSF	Cheto	AZ	04/09/92	2:39 PM	
64	na	clear	FE-14-92	ATSF	Escondido	CA	06/01/92	1:05 PM	
65	na	clear	FE-16-92	IHRC	Henderson	KY	06/02/92	5:55 AM	
66	na	clear	FE-20-92	SSW	Conlen Siding	TX	07/07/92	8:37 AM	
67	na		FE-33-92	BN	Omaha	NE	10/15/92	1:25 AM	
68	na		FE-34-92	GTW	Dearborn	MI	10/23/92	10:00 AM	

FES by Temperature of 52 coded for 1997 - 1992

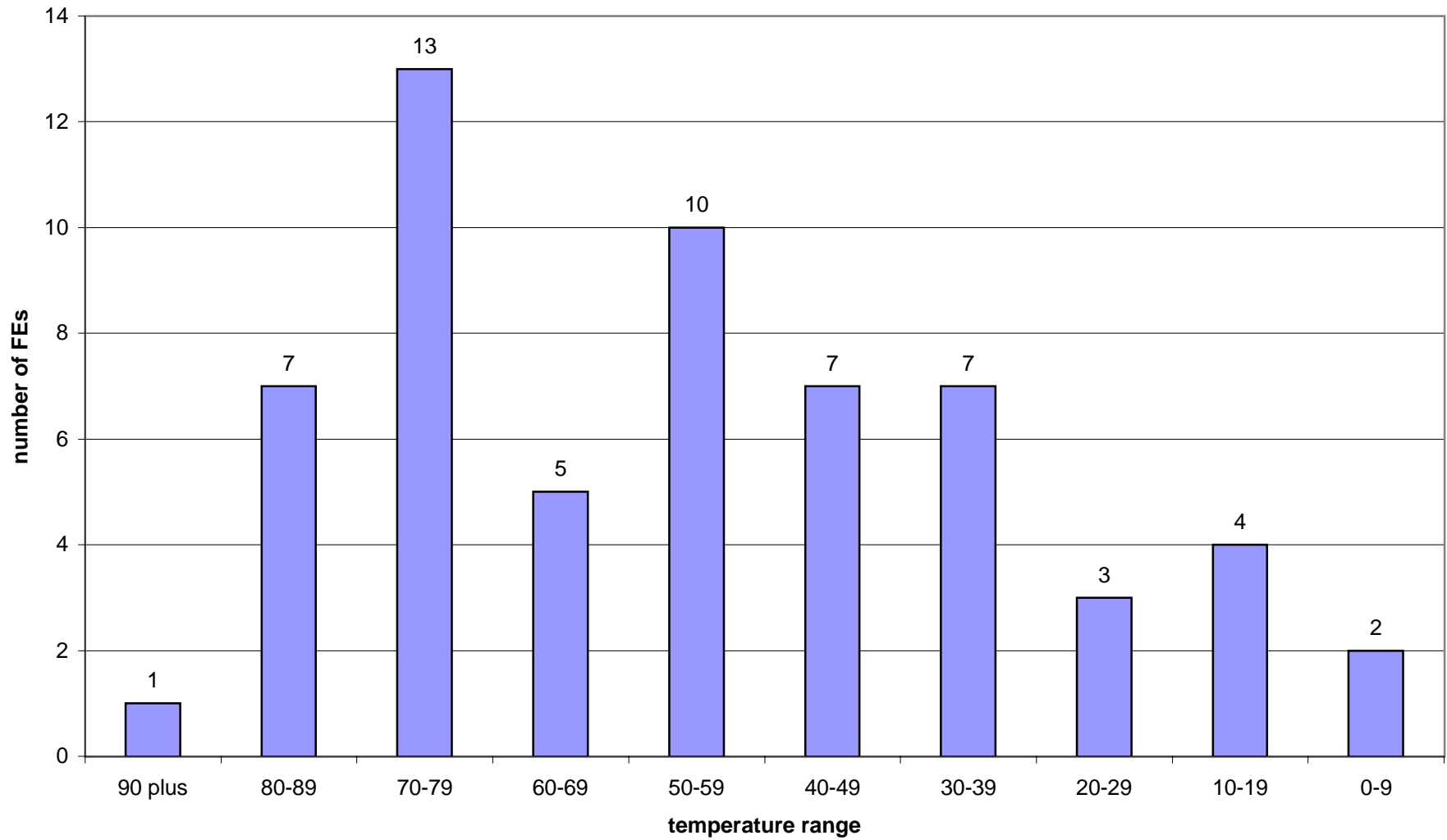


### FEs Sorted by Temperature





**FEs by Temperature for 59 of 76 FEs having a Coded Value,  
1998 - 1992**



# SOFA WORKING GROUP

FEs

organized by

Rule Violation

Group 13

## Rules Violation of Striking Equipment

Report #	Striking equip within rules	RR	State	Date	Day	Time
<b>No rules violation of striking equipment</b>						
1	FE-04-92	Y	AGC	FL	01/30/92	5 3:00 PM
2	FE-11-95	Y	ATSF	TX	02/24/95	6 9:45 AM
3	FE-35-93	Y	ATSF	NM	09/02/93	5 12:30 PM
4	FE-03-94	Y	BN	TX	01/14/94	6 11:15 AM
5	FE-03-92	Y	BN	MN	01/28/92	3 5:30 PM
6	FE-36-97	Y	BNSF	KS	12/02/97	3 7:45 PM
7	FE-09-96	Y	BRC	IL	03/20/96	4 11:25 PM
8	FE-18-92	Y	CNW	IL	06/20/92	7 11:45 AM
9	FE-23-95	Y	CR	PA	07/21/95	6 9:10 AM
10	FE-02-95	Y	CR	IN	01/11/95	4 11:30 PM
11	FE-13-93	Y	CSX	KY	04/13/93	3 6:40 PM
12	FE-34-95	Y	CSXT	NC	12/14/95	5 4:30 AM
13	FE-04-94	Y	CSXT	GA	01/18/94	3 6:10 PM
14	FE-08-92	Y	FEC	FL	03/11/92	4 1:15 AM
15	FE-30-92	Y	GBW	WI	07/24/92	5 12:40 AM
16	FE-23-93	Y	IC	KY	06/07/93	2 11:55 AM
17	FE-22-97	Y	MNCW	CT	07/18/97	6 1:29 AM
18	FE-32-97	Y	MRL	MT	10/16/97	5 10:20 PM
19	FE-19-97	Y	NS	SC	06/24/97	3 8:58 PM
20	FE-17-96	Y	NS	ID	07/07/96	1 1:08 AM
21	FE-33-95	Y	NS	OH	12/11/95	2 6:25 PM
22	FE-12-95	Y	NS	SC	03/02/95	5 9:44 AM
23	FE-49-93	Y	SOU	GA	12/05/93	1 7:00 AM
24	FE-17-95	Y	SP	CA	03/21/95	6 8:40 AM
25	FE-12-94	Y	SP	TX	04/12/94	3 7:45 AM
26	FE-20-92	Y	SSW	TX	07/07/92	3 8:37 AM
27	FE-39-92	Y	TTIS	KY	11/16/92	2 6:05 PM
28	FE-30-96	Y	UP	IA	12/16/96	2 8:40 PM
29	FE-32-94	Y	UP	CA	12/13/94	3 12:01 AM
30	FE-27-93	Y	UP	OK	08/04/93	4 4:45 PM

## Rules Violation of Striking Equipment

Report #	Striking equip within rules	RR	State	Date	Day	Time
<b>Rules violation of striking equipment</b>						
1 FE-46-93	N	ATSF	TX	11/12/93	6	6:40 AM
2 FE-31-93	N	ATSF	TX	08/12/93	5	1:25 PM
3 FE-14-92	N	ATSF	CA	06/01/92	2	1:05 PM
4 FE-09-92	N	ATSF	AZ	04/09/92	5	2:39 PM
5 FE-16-94	N	BN	MT	07/05/94	3	4:45 PM
6 FE-16-97	N	CMRC	MI	06/06/97	6	9:35 PM
7 FE-05-97	N	CR	IN	02/02/97	1	9:55 PM
8 FE-09-95	N	CR	OH	02/17/95	6	11:15 AM
9 FE-31-94	N	CR	NY	12/06/94	3	2:52 AM
10 FE-29-94	N	CR	NY	11/15/94	3	9:35 AM
11 FE-26-93	N	CR	IN	07/15/93	5	5:25 PM
12 FE-12-96	N	CSX	NC	06/15/96	4	8:30 AM
13 FE-29-95	N	CSXT	IL	10/04/95	4	12:40 AM
14 FE-22-96	N	DGNO	TX	09/03/96	3	6:30 PM
15 FE-34-92	N	GTW	MI	10/23/92	6	10:00 AM
16 FE-30-93	N	SP	CA	08/11/93	4	11:52 AM
17 FE-11-93	N	SP	CA	03/27/93	7	12:30 PM
18 FE-45-97	N	UP	ID	12/26/97	6	5:45 PM
19 FE-04-97	N	UP	IA	01/29/97	4	12:55 PM
20 FE-02-97	N	UP	CA	01/12/97	1	10:15 PM
21 FE-24-96	N	UP	TX	10/07/96	2	8:48 PM
22 FE-26-94	N	UP	LA	10/17/94	2	12:30 PM
23 FE-22-92	N	UP	OR	07/25/92	7	11:40 AM
24 FE-16-95	N	WC	WI	04/06/95	5	1:56 AM

## Rules Violation of Striking Equipment

<b>Report #</b>	<b>Striking equip within rules</b>	<b>RR</b>	<b>State</b>	<b>Date</b>	<b>Day</b>	<b>Time</b>
<b>Not coded for rules violation of striking equipment</b>						
1 FE-20-94	blank	ARR	AK	09/20/94	3	7:19 PM
2 FE-20-93	blank	ATSF	TX	05/22/93	7	10:30 AM
3 FE-02-94	blank	BN	NE	01/04/94	3	7:00 PM
4 FE-33-92	blank	BN	NE	10/15/92	5	1:25 AM
5 FE-15-92	blank	BN	WA	06/01/92	2	4:15 PM
6 FE-53-93	blank	CR	OH	12/30/93	5	9:20 AM
7 FE-18-95	blank	CSXT	IN	05/03/95	4	5:55 PM
8 FE-47-93	blank	GC	GA	11/13/93	7	8:30 AM
9 FE-31-96	blank	IC	IL	12/18/96	4	11:40 AM
10 FE-16-92	blank	IHRC	KY	06/02/92	3	5:55 AM
11 FE-28-94	blank	PTRA	TX	11/10/94	5	4:15 AM
12 FE-22-93	blank	SEPTA	PA	06/04/93	6	11:25 PM
13 FE-40-93	blank	SOO	ND	10/19/93	3	8:17 PM
14 FE-06-94	blank	UP	NE	01/20/94	5	8:00 PM

## Rules Violation of Striking Equipment

Report #	Striking equip within rules	RR	State	Date	Day	Time
<b>No rules violation of striking equipment</b>						
1	FE-04-92	Y	AGC	FL	01/30/92	5 3:00 PM
2	FE-11-95	Y	ATSF	TX	02/24/95	6 9:45 AM
3	FE-35-93	Y	ATSF	NM	09/02/93	5 12:30 PM
4	FE-03-94	Y	BN	TX	01/14/94	6 11:15 AM
5	FE-03-92	Y	BN	MN	01/28/92	3 5:30 PM
6	FE-36-97	Y	BNSF	KS	12/02/97	3 7:45 PM
7	FE-09-96	Y	BRC	IL	03/20/96	4 11:25 PM
8	FE-18-92	Y	CNW	IL	06/20/92	7 11:45 AM
9	FE-23-95	Y	CR	PA	07/21/95	6 9:10 AM
10	FE-02-95	Y	CR	IN	01/11/95	4 11:30 PM
11	FE-13-93	Y	CSX	KY	04/13/93	3 6:40 PM
12	FE-34-95	Y	CSXT	NC	12/14/95	5 4:30 AM
13	FE-04-94	Y	CSXT	GA	01/18/94	3 6:10 PM
14	FE-08-92	Y	FEC	FL	03/11/92	4 1:15 AM
15	FE-30-92	Y	GBW	WI	07/24/92	5 12:40 AM
16	FE-23-93	Y	IC	KY	06/07/93	2 11:55 AM
17	FE-22-97	Y	MNCW	CT	07/18/97	6 1:29 AM
18	FE-32-97	Y	MRL	MT	10/16/97	5 10:20 PM
19	FE-19-97	Y	NS	SC	06/24/97	3 8:58 PM
20	FE-17-96	Y	NS	ID	07/07/96	1 1:08 AM
21	FE-33-95	Y	NS	OH	12/11/95	2 6:25 PM
22	FE-12-95	Y	NS	SC	03/02/95	5 9:44 AM
23	FE-49-93	Y	SOU	GA	12/05/93	1 7:00 AM
24	FE-17-95	Y	SP	CA	03/21/95	6 8:40 AM
25	FE-12-94	Y	SP	TX	04/12/94	3 7:45 AM
26	FE-20-92	Y	SSW	TX	07/07/92	3 8:37 AM
27	FE-39-92	Y	TTIS	KY	11/16/92	2 6:05 PM
28	FE-30-96	Y	UP	IA	12/16/96	2 8:40 PM
29	FE-32-94	Y	UP	CA	12/13/94	3 12:01 AM
30	FE-27-93	Y	UP	OK	08/04/93	4 4:45 PM

## Rules Violation of Striking Equipment

Report #	Striking equip within rules	RR	State	Date	Day	Time
<b>Rules violation of striking equipment</b>						
1	FE-46-93	N	ATSF	TX	11/12/93	6 6:40 AM
2	FE-31-93	N	ATSF	TX	08/12/93	5 1:25 PM
3	FE-14-92	N	ATSF	CA	06/01/92	2 1:05 PM
4	FE-09-92	N	ATSF	AZ	04/09/92	5 2:39 PM
5	FE-16-94	N	BN	MT	07/05/94	3 4:45 PM
6	FE-16-97	N	CMRC	MI	06/06/97	6 9:35 PM
7	FE-05-97	N	CR	IN	02/02/97	1 9:55 PM
8	FE-09-95	N	CR	OH	02/17/95	6 11:15 AM
9	FE-31-94	N	CR	NY	12/06/94	3 2:52 AM
10	FE-29-94	N	CR	NY	11/15/94	3 9:35 AM
11	FE-26-93	N	CR	IN	07/15/93	5 5:25 PM
12	FE-12-96	N	CSX	NC	06/15/96	4 8:30 AM
13	FE-29-95	N	CSXT	IL	10/04/95	4 12:40 AM
14	FE-22-96	N	DGNO	TX	09/03/96	3 6:30 PM
15	FE-34-92	N	GTW	MI	10/23/92	6 10:00 AM
16	FE-30-93	N	SP	CA	08/11/93	4 11:52 AM
17	FE-11-93	N	SP	CA	03/27/93	7 12:30 PM
18	FE-45-97	N	UP	ID	12/26/97	6 5:45 PM
19	FE-04-97	N	UP	IA	01/29/97	4 12:55 PM
20	FE-02-97	N	UP	CA	01/12/97	1 10:15 PM
21	FE-24-96	N	UP	TX	10/07/96	2 8:48 PM
22	FE-26-94	N	UP	LA	10/17/94	2 12:30 PM
23	FE-22-92	N	UP	OR	07/25/92	7 11:40 AM
24	FE-16-95	N	WC	WI	04/06/95	5 1:56 AM

## Rules Violation of Striking Equipment

<b>Report #</b>	<b>Striking equip within rules</b>	<b>RR</b>	<b>State</b>	<b>Date</b>	<b>Day</b>	<b>Time</b>
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### Not coded for rules violation of striking equipment

1	FE-20-94	blank	ARR	AK	09/20/94	3	7:19 PM
2	FE-20-93	blank	ATSF	TX	05/22/93	7	10:30 AM
3	FE-02-94	blank	BN	NE	01/04/94	3	7:00 PM
4	FE-33-92	blank	BN	NE	10/15/92	5	1:25 AM
5	FE-15-92	blank	BN	WA	06/01/92	2	4:15 PM
6	FE-53-93	blank	CR	OH	12/30/93	5	9:20 AM
7	FE-18-95	blank	CSXT	IN	05/03/95	4	5:55 PM
8	FE-47-93	blank	GC	GA	11/13/93	7	8:30 AM
9	FE-31-96	blank	IC	IL	12/18/96	4	11:40 AM
10	FE-16-92	blank	IHRC	KY	06/02/92	3	5:55 AM
11	FE-28-94	blank	PTRA	TX	11/10/94	5	4:15 AM
12	FE-22-93	blank	SEPTA	PA	06/04/93	6	11:25 PM
13	FE-40-93	blank	SOO	ND	10/19/93	3	8:17 PM
14	FE-06-94	blank	UP	NE	01/20/94	5	8:00 PM



SOFA WORKING GROUP

FEs

organized by

Train Speed

Group 14

### Train Speed and Type of Track

RR	date	equip speed	FE result of train movmnt	yard	line of road	siding	industrial
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#### FE results from train movement -- in yards

1	AGC	01/30/92	5	Y	Y		Y
2	ATSF	09/02/93	3	Y	Y		
3	ATSF	02/24/95	6	Y	Y		
4	BN	01/28/92	4	Y	Y		
5	BN	06/01/92	5	Y	Y		
6	BN	01/04/94	6	Y	Y		
7	BN	01/14/94	6	Y	Y		
8	BNSF	12/02/97	54	Y	Y	Y	
9	CMRC	06/06/97	7	Y	Y		
10	CR	07/15/93	4	Y	Y		
11	CR	11/15/94	6	Y	Y		
12	CR	12/06/94	19	Y	Y		
13	CR	02/02/97	11	Y	Y		
14	CSXT	05/03/95	5	Y	Y		
15	CSXT	10/04/95	1	Y	Y		
16	CSXT	12/14/95	8	Y	Y		
17	FEC	03/11/92	5	Y	Y		
18	GBW	07/24/92	1	Y	Y		
19	GC	11/13/93	1	Y	Y		
20	GTW	10/23/92	1	Y	Y		
21	IC	06/07/93	1	Y	Y		
22	MRL	10/16/97	1	Y	Y		
23	SP	03/27/93	2	Y	Y		
24	UP	07/25/92	3	Y	Y		
25	UP	01/20/94	6	Y	Y		
26	UP	10/17/94	1	Y	Y		
27	UP	01/29/97	1	Y	Y		

### Train Speed and Type of Track

RR	date	equip speed	FE result of train movmnt	yard	line of road	siding	industrial
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**FE results from train movement -- on line, siding, or industrial**

1	SOU	12/05/93	2	Y	Y	Y	
2	SSW	07/07/92	60	Y	Y	Y	
3	ATSF	11/12/93	4	Y	Y		Y
4	UP	12/26/97	3	Y	Y		Y
5	ARR	09/20/94	19	Y	Y		
6	ATSF	04/09/92	10	Y	Y		
7	CSX	04/13/93	18	Y	Y		
8	MNCW	07/18/97	38	Y	Y		
9	NS	03/02/95	1	Y	Y		
10	NS	07/07/96	38	Y	Y		
11	SEPTA	06/04/93	51	Y	Y		
12	TTIS	11/16/92	1	Y	Y		
13	WC	04/06/95	14	Y	Y		
14	ATSF	08/12/93	5	Y		Y	Y
15	NS	06/24/97	8	Y		Y	
16	SOO	10/19/93	10	Y		Y	
17	UP	01/12/97	8	Y		Y	
18	ATSF	06/01/92	5	Y			Y
19	BN	07/05/94	10	Y			Y
20	CR	12/30/93	8	Y			Y
21	CR	01/11/95	3	Y			Y
22	CR	02/17/95	2	Y			Y
23	CR	07/21/95	3	Y			Y
24	CSXT	01/18/94	6	Y			Y
25	IHRC	06/02/92	1	Y			Y
26	NS	12/11/95	3	Y			Y
27	SP	08/11/93	5	Y			Y
28	SP	03/21/95	4	Y			Y
29	UP	12/13/94	1	Y			Y

### Train Speed and Type of Track

RR	date	equip speed	FE result of train movmnt	yard	line of road	siding	industrial
----	------	----------------	---------------------------------------	------	--------------------	--------	------------

#### FE results from train movement -- track location not coded

1	BRC	03/20/96	1	Y			
2	CNW	06/20/92	1	Y			
3	CSX	06/15/96	3	Y			
4	DGNO	09/03/96	25	Y			
5	IC	12/18/96	4	Y			
6	SP	04/12/94	5	Y			
7	UP	08/04/93	6	Y			
8	UP	10/07/96	1	Y			
9	UP	12/16/96	1	Y			

#### FE does not result from train movement

1	ATSF	05/22/93	0	N			
2	BN	10/15/92	0	N			Y

#### not coded

1	PTRA	11/10/94	0				Y
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SOFA WORKING GROUP

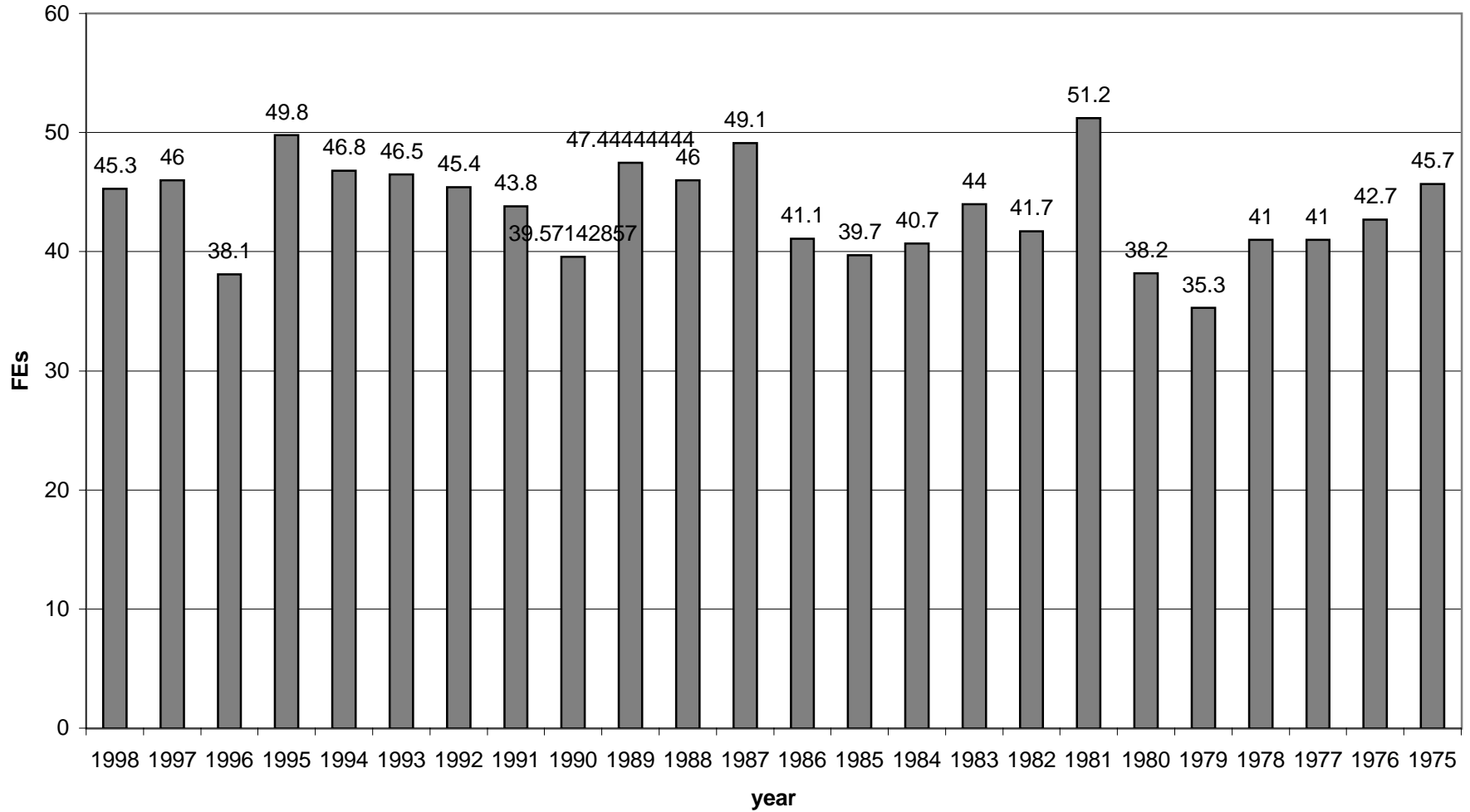
FEs

organized by

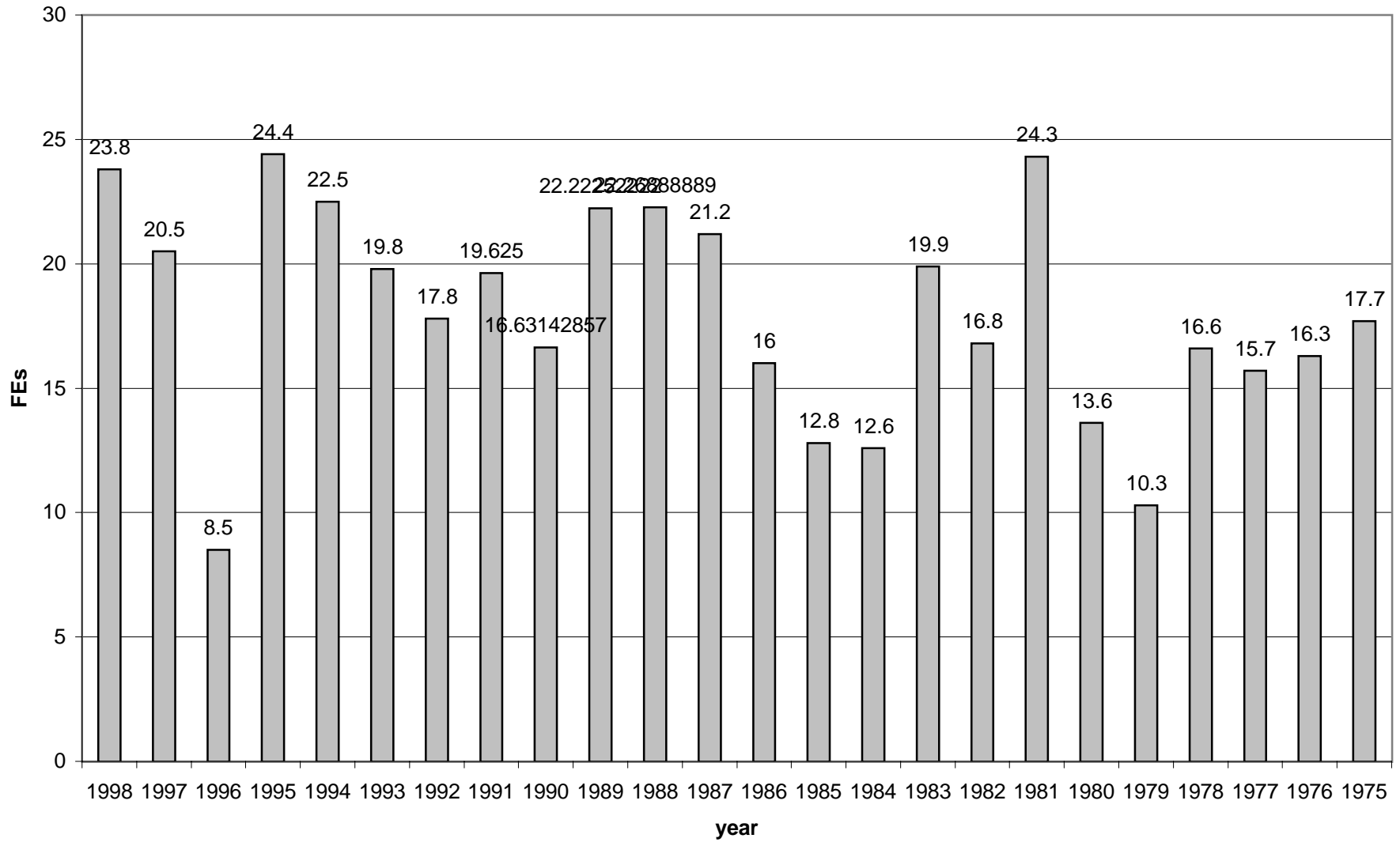
Age and Years of Service

Group 15

### Average Age of FEs 1998 - 1975



### Average Length of Service in Years of FEs



## FEs by Years of Service

count	% of all FEs for period	report #	RR	date	service in years	PCFs
<b>Period: January 1, 1992 to July, 1, 1998 (76 FEs coded)</b>						
<b>one year or less --</b>						
1	(10 yr gap)	FE-22-96	DGNO	09/03/1996	0.06	"failure to test HB"
2		FE-31-94	CR	12/06/1994	0.17	H318, H211, H307 H605, H212, H303, and H699
3		FE-09-96	BRC	03/20/1996	0.34	"fouling track", H021 (apply brakes)
4		FE-04-92	AGC	01/30/1992	0.5	H316, H996, "Board/disboard wrong side"
5		FE-29-95	CSXT	10/04/1995	0.5	"Green Ground Crew"
6		FE-28-94	PTRA	11/10/1994	0.5	H966, H999, M504; fell in pit
7		FE-16-98	BNSF	06/01/1998	0.83	H307, H302, H996, H021
8		FE-32-97	MRL	10/16/1997	0.83	H29C, H998
9		FE-12-96	CSX	06/15/1996	1	H599, M411
10		FE-47-93	GC	11/13/1993	1	H316, H990, H399
11	14.5%	FE-17-96	NS	07/07/1996	1	H990, H199
<b>one to two years</b>						
1		FE-40-93	SOO	10/19/1993	2	
2	2.6%	FE-19-97	NS	06/24/1997	2.5	
<b>two to three years</b>						
0				(none)		
<b>three to four years</b>						
0				(none)		



### FEs by Years of Service

count	%	report #	RR	date	service	PCFs
	of all				in	
	FEs for				years	
	period					
63	82.9%	<b>four or more years</b>				
<u>76</u>	<u>100.0%</u>	total				

## FEs by Years of Service

count	%	report #	RR	date	service	PCFs
	of all				in	
	FEs for				years	
	period					

**Period: January 1, 1983 to December 31, 1991 (95 FEs coded)**

**one year or less**

1			DLWR	11/01/1989	0.0027	
2			MCPA	04/13/1987	0.75	
3	3.2%	FE-23-91	NW	07/29/1991	0.83	

**one to two years**

1			BN	03/01/1990	1.42	
2		FE-16-91	LI	05/20/1991	1.67	
3		FE-08-91	RSSX	03/12/1991	1.75	
4	4.2%		NCYR	12/20/1985	2	

**two to three years**

1			CR	07/10/1986	2.17	
2			DQE	03/02/1984	2.42	
3	3.2%		MP	12/03/1983	3	

**three to four years**

1			NW	03/31/1984	3.75	
2	2.1%		BOCT	10/11/1984	4	

**four or more years**

83	87.4%					
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95	100.0%	total
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## FEs by Years of Service

count	%	report #	RR	date	service	PCFs
	of all				in	
	FEs for				years	
	period					

**Period: January 1, 1975 to December 31, 1982 (245 FEs coded)**

### one year or less

1			CNW	06/19/1979	0.038	
2			MP	05/03/1977	0.038	
3			SP	05/23/1977	0.085	
4			SOO	08/29/1977	0.12	
5			CR	10/29/1976	0.21	
6			ATSF	11/28/1979	0.25	
7			GSW*	02/02/1975	0.25	
8			OUR&D	11/16/1977	0.25	
9			PW	09/02/1982	0.33	
10			UP	12/17/1977	0.384	
11			ATSF	03/22/1980	0.5	
12			CNW	06/13/1978	0.5	
13			UP	02/09/1979	0.58	
14			LN	11/11/1979	0.67	
15			SP	02/16/1980	0.67	
16			BN	02/09/1978	0.75	
17			CR	05/09/1977	0.75	
18			EJE	12/30/1978	0.75	
19			NW	03/05/1977	0.75	
20			SAN	03/14/1975	0.75	
21			LN	11/10/1977	0.9	
22			IHB	04/02/1977	0.92	
23			MP	08/31/1978	0.96	
24			PW	07/28/1980	1	
25	10.2%		SOU	07/16/1980	1	

### one to two years

1			ALQS	03/29/1975	1.33	
2			GTW	07/01/1978	1.33	
3			MP	09/05/1980	1.5	
4			OCE*	08/27/1976	1.5	
5			UP	01/09/1975	1.5	

### FEs by Years of Service

count	% of all FEs for period	report #	RR	date	service in years	PCFs
6			L&NW	12/21/1977	1.67	
7			NW	02/21/1979	1.67	
8			CNW	06/10/1980	1.83	
9			AGS	04/29/1979	1.92	
10			MKT	08/18/1977	1.92	
11			ATSF	12/14/1979	2	
12			BO	08/18/1980	2	
13			DH	09/10/1976	2	
14			LN	10/02/1978	2	
15			MKT	02/17/1977	2	
16			MP	05/06/1975	2	
17			SOU	02/12/1982	2	
18	7.3%		UP	12/24/1980	2	

**two to three years**

1			CNW	01/20/1976	2.42	
2			CNW	10/05/1976	2.42	
3			ATSF	08/11/1979	2.5	
4			ATSF	11/07/1979	2.5	
5			NS	12/22/1976	2.5	
6			NW	04/24/1982	2.5	
7			CO	04/23/1979	2.75	
8			CNW	08/29/1982	2.92	
9			CNW	12/28/1980	3	
10			ITRR*	10/17/1980	3	
11			MILW	10/17/1978	3	
12	4.9%		TP&W	08/21/1975	3	

## FEs by Years of Service

count	%	report #	RR	date	service in years	PCFs
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### three to four years

1			CGA	01/10/1979	3.5	
2			MP	12/07/1976	3.67	
3			UP	02/20/1977	3.67	
4			BN	11/22/1975	4	
5			CGA	08/08/1978	4	
6			LN	03/01/1975	4	
7			LN	11/20/1976	4	
8			LN	12/01/1977	4	
9			NW	12/02/1980	4	
10	4.1%		RT	02/11/1975	4	

### four or more years

180 73.5%

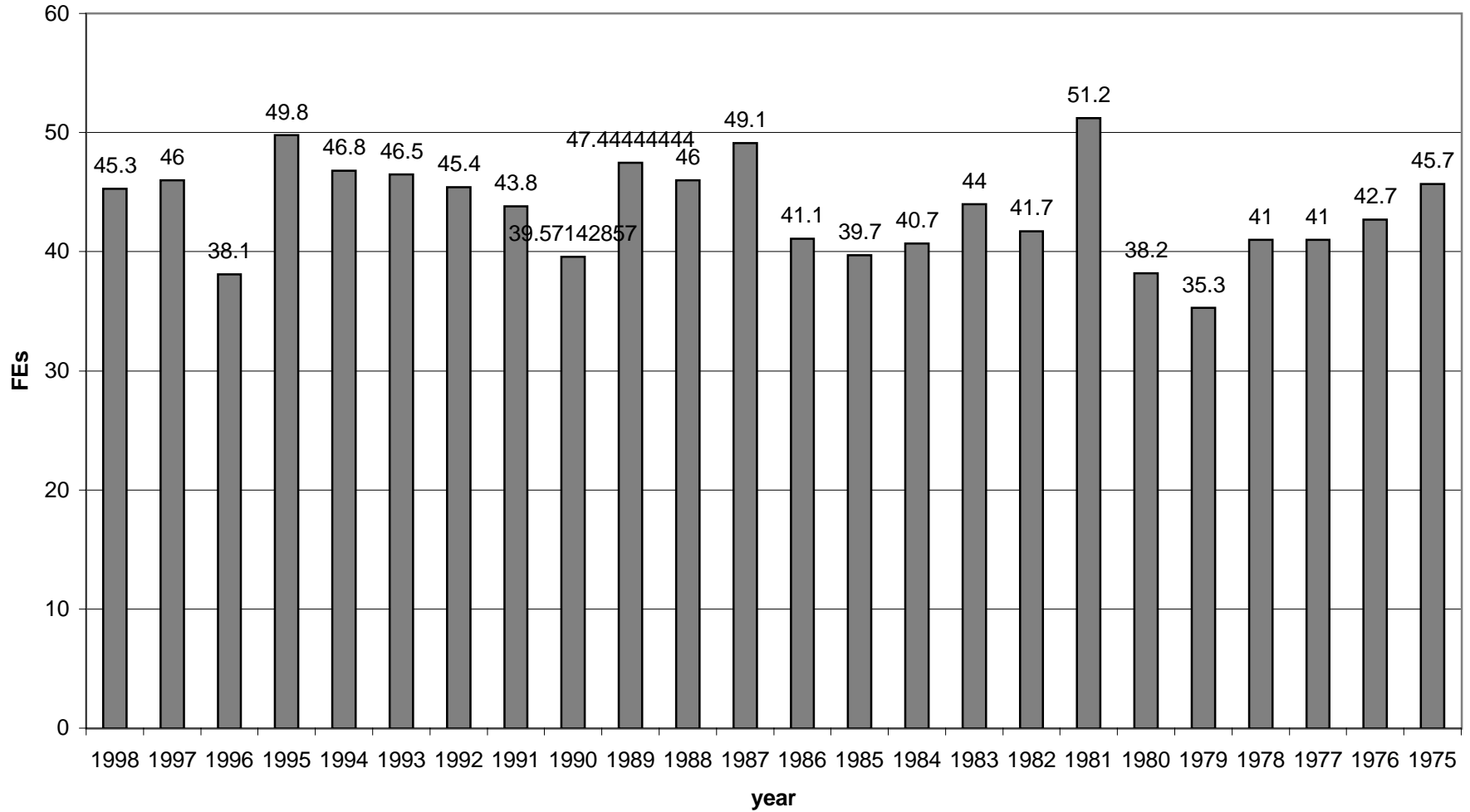
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245 100.0% total

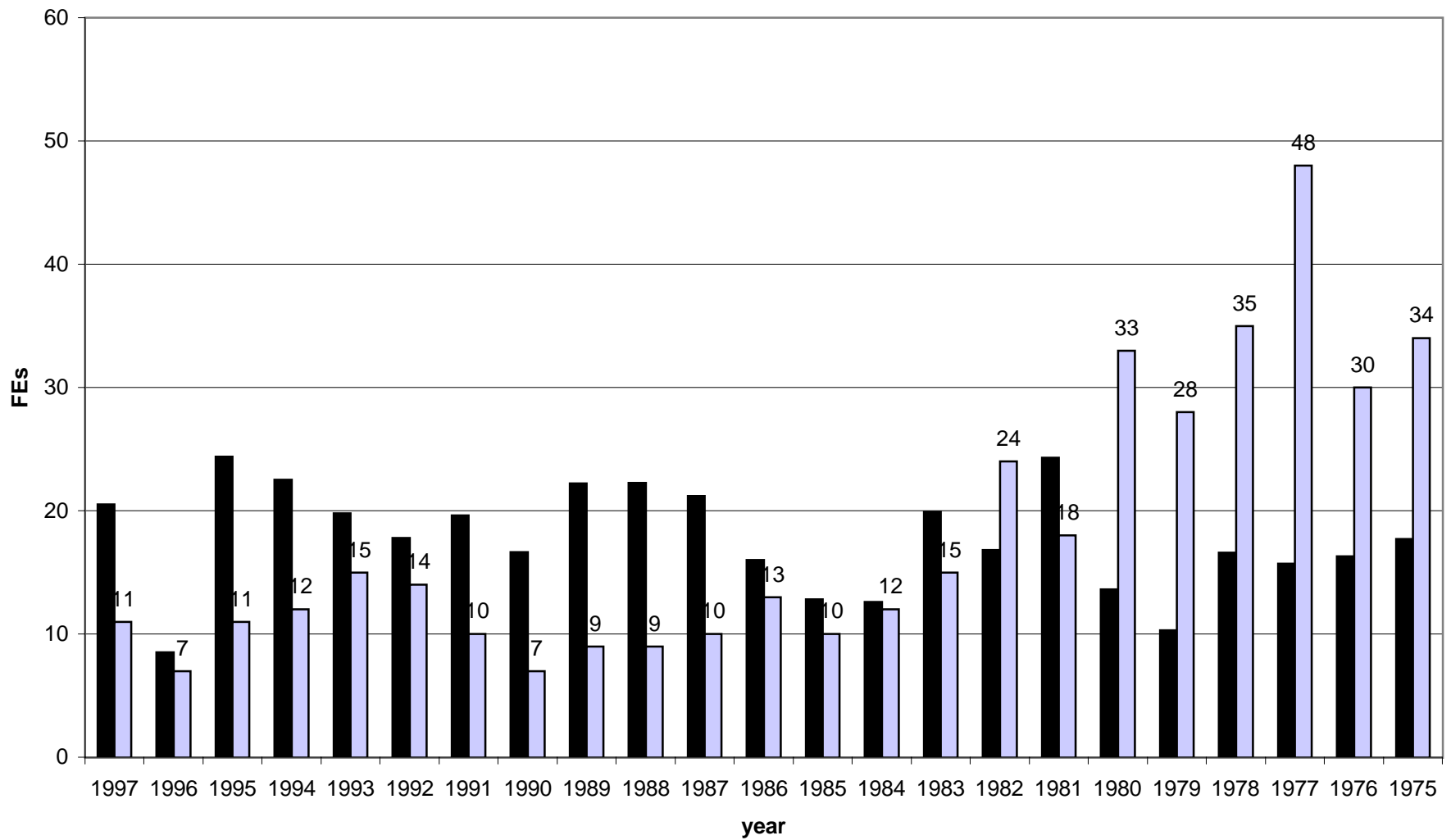
### not coded for length of service

ATK	02/14/1978	#NA
BO	10/25/1976	#NA
LN	06/22/1977	#NA
PRSL*	03/19/1976	#NA
UP	06/24/1977	#NA
UTAH	08/18/1976	#NA

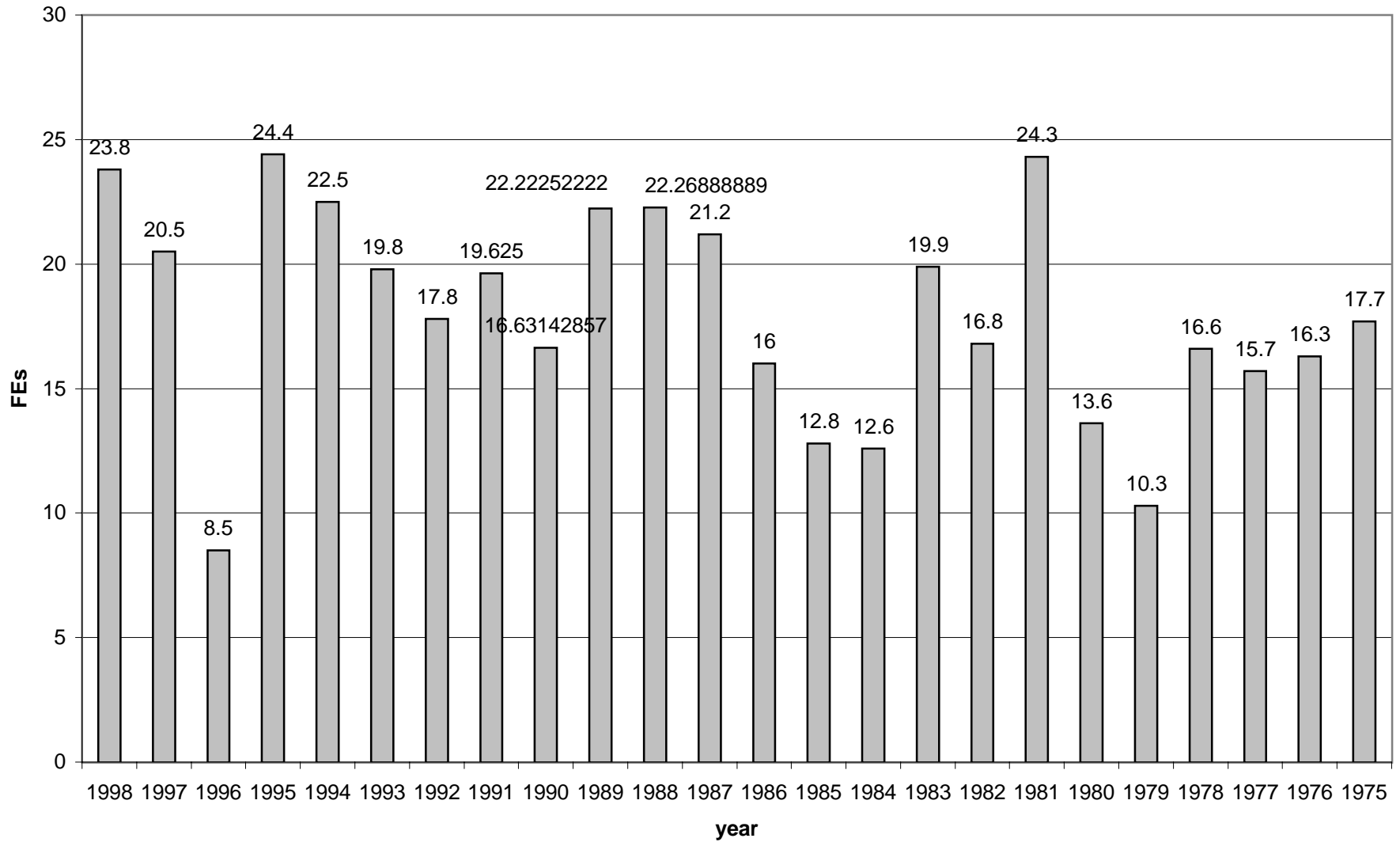
**Average Age of FEs  
1998 - 1975**



**Average Length of Service of FE and Number of FEs  
1997 to 1975**



### Average Length of Service in Years of FEs





## Engineer, Railroad Experience, Craft Experience

Engineer	Railroad exper.	Craft exper.	REPORT #	Railroad	City	State	Date
average	21.52	16.32					
	26	26	FE-31-96	IC	Chicago	IL	12/18/96
	18	17	FE-30-96	UP	Clinton	IA	12/16/96
	21	15	FE-24-96	UP	Eagle Pass	TX	10/07/96
			FE-22-96	DGNO	Dallas	TX	09/03/96
	8	7	FE-17-96	NS	Sidney	ID	07/07/96
	22	22	FE-12-96	CSX	Charlotte	NC	06/15/96
	30	3+	FE-09-96	BRC	Bedford Park	IL	03/20/96
			FE-02-97	UP	S Fontana	CA	01/12/97
			FE-04-97	UP	Mason City	IA	01/29/97
			FE-05-97	CR	Burns Harbor	IN	02/02/97
			FE-16-97	CMRC	Bay City	MI	06/06/97
			FE-19-97	NS	Rowesville	SC	06/24/97
			FE-22-97	MNCW	Stamford	CT	07/18/97
			FE-32-97	MRL	Laurel	MT	10/16/97
			FE-02-95	CR	Indianapolis	IN	01/11/95
			FE-09-95	CR	St. James	OH	02/17/95
	21	21	FE-11-95	ATSF	Amarillo	TX	02/24/95
	16	10	FE-12-95	NS	Aiken	SC	03/02/95
	8	5	FE-16-95	WC	Argoe	WI	04/06/95
	26	24	FE-17-95	SP	Bassett	CA	03/21/95
			FE-18-95	CSXT	Evansville	IN	05/03/95
			FE-23-95	CR	Hershey	PA	07/21/95
	17	15	FE-29-95	CSXT	Riverdale	IL	10/04/95
	27	22	FE-33-95	NS	Toledo	OH	12/11/95
	18	1.5	FE-34-95	CSXT	Monroe	NC	12/14/95
	18	1.2	FE-02-94	BN	Hastings	NE	01/04/94
	14	14	FE-03-94	BN	Amarillo	TX	01/14/94
	27	27	FE-04-94	CSXT	Bainbridge	GA	01/18/94
			FE-06-94	UP	Fall City	NE	01/20/94
	21	21	FE-12-94	SP	Houston	TX	04/12/94
	24	22	FE-16-94	BN	Essex	MT	07/05/94
			FE-20-94	ARR	Clear Site	AK	09/20/94
	21	1	FE-26-94	UP	Donaldsonville	LA	10/17/94
	6	0.2	FE-28-94	PTRA	Houston	TX	11/10/94
	37	29	FE-29-94	CR	Painted Post	NY	11/15/94

## Engineer, Railroad Experience, Craft Experience

Engineer	Railroad exper.	Craft exper.	REPORT #	Railroad	City	State	Date
average	21.52	16.32					
	38	30	FE-31-94	CR	Campbell Hall	NY	12/06/94
			FE-32-94	UP	Thorton	CA	12/13/94
			FE-11-93	SP	Guadalupe	CA	03/27/93
			FE-13-93	CSX	Dwale	KY	04/13/93
	20		FE-20-93	ATSF	El Paso	TX	05/22/93
			FE-22-93	SEPTA	Devon	PA	06/04/93
	26	20	FE-23-93	IC	Fulton	KY	06/07/93
	25		FE-26-93	CR	Anderson	IN	07/15/93
	24	19	FE-27-93	UP	Pryor	OK	08/04/93
	25		FE-30-93	SP	Tracy	CA	08/11/93
cont crew	8	4	FE-31-93	ATSF	Evandale	TX	08/12/93
	20	15	FE-35-93	ATSF	Carlsbad	NM	09/02/93
	9	1	FE-40-93	SOO	Leal	ND	10/19/93
	16	13	FE-46-93	ATSF	Farewell	TX	11/12/93
	3	3	FE-47-93	GC	Macon	GA	11/13/93
	25	25	FE-49-93	SOU	Atlanta	GA	12/05/93
	37	28	FE-53-93	CR	Brook Park	OH	12/30/93
	21	13	FE-03-92	BN	Willmar	MN	01/28/92
	26	21	FE-04-92	AGC	Polk County	FL	01/30/92
	26	21	FE-08-92	FEC	Fort Pierce	FL	03/11/92
			FE-09-92	ATSF	Cheto	AZ	04/09/92
			FE-14-92	ATSF	Escondido	CA	06/01/92
			FE-15-92	BN	Seattle	WA	06/01/92
	33	33	FE-16-92	IHRC	Henderson	KY	06/02/92
			FE-18-92	CNW	Northlake	IL	06/20/92
			FE-20-92	SSW	Conlen Siding	TX	07/07/92
			FE-22-92	UP	Portland	OR	07/25/92
	23		FE-30-92	GBW	Wisconsin	WI	07/24/92
	16	4	FE-33-92	BN	Omaha	NE	10/15/92
	33	33	FE-34-92	GTW	Dearborn	MI	10/23/92
			FE-39-92	TTIS	Maysville	KY	11/16/92
			FE-36-97	BNSF	Emporia	KS	12/02/97
	24	20	FE-45-97	UP	Boise	ID	12/26/97

### Conductor, Railroad Experience, Craft Experience

Conductor	Railroad expr.	Craft expr.	REPORT #	Railroad	City	State	Date
average	20.30	16.32					
			FE-31-96	IC	Chicago	IL	12/18/96
	24	24	FE-30-96	UP	Clinton	IA	12/16/96
			FE-24-96	UP	Eagle Pass	TX	10/07/96
	3.25	0.25	FE-22-96	DGNO	Dallas	TX	09/03/96
			FE-17-96	NS	Sidney	ID	07/07/96
	1.75	<1.75	FE-12-96	CSX	Charlotte	NC	06/15/96
			FE-09-96	BRC	Bedford Park	IL	03/20/96
			FE-02-97	UP	S Fontana	CA	01/12/97
			FE-04-97	UP	Mason City	IA	01/29/97
			FE-05-97	CR	Burns Harbor	IN	02/02/97
			FE-16-97	CMRC	Bay City	MI	06/06/97
			FE-19-97	NS	Rowesville	SC	06/24/97
			FE-22-97	MNCW	Stamford	CT	07/18/97
			FE-32-97	MRL	Laurel	MT	10/16/97
			FE-02-95	CR	Indianapolis	IN	01/11/95
			FE-09-95	CR	St. James	OH	02/17/95
			FE-11-95	ATSF	Amarillo	TX	02/24/95
	20	17	FE-12-95	NS	Aiken	SC	03/02/95
			FE-16-95	WC	Argoe	WI	04/06/95
	33	28	FE-17-95	SP	Bassett	CA	03/21/95
			FE-18-95	CSXT	Evansville	IN	05/03/95
			FE-23-95	CR	Hershey	PA	07/21/95
			FE-29-95	CSXT	Riverdale	IL	10/04/95
	30	29	FE-33-95	NS	Toledo	OH	12/11/95
			FE-34-95	CSXT	Monroe	NC	12/14/95
			FE-02-94	BN	Hastings	NE	01/04/94
			FE-03-94	BN	Amarillo	TX	01/14/94
			FE-04-94	CSXT	Bainbridge	GA	01/18/94
			FE-06-94	UP	Fall City	NE	01/20/94
			FE-12-94	SP	Houston	TX	04/12/94
			FE-16-94	BN	Essex	MT	07/05/94
			FE-20-94	ARR	Clear Site	AK	09/20/94
			FE-26-94	UP	Donaldsonville	LA	10/17/94
	5	5	FE-28-94	PTRA	Houston	TX	11/10/94
	36	30	FE-29-94	CR	Painted Post	NY	11/15/94

## Conductor, Railroad Experience, Craft Experience

Conductor	Railroad expr.	Craft expr.	REPORT #	Railroad	City	State	Date
average	20.30	16.32					
	19	0.5	FE-31-94	CR	Campbell Hall	NY	12/06/94
			FE-32-94	UP	Thorton	CA	12/13/94
			FE-11-93	SP	Guadalupe	CA	03/27/93
			FE-13-93	CSX	Dwale	KY	04/13/93
			FE-20-93	ATSF	El Paso	TX	05/22/93
			FE-22-93	SEPTA	Devon	PA	06/04/93
	21		FE-23-93	IC	Fulton	KY	06/07/93
	36		FE-26-93	CR	Anderson	IN	07/15/93
	15	12	FE-27-93	UP	Pryor	OK	08/04/93
	15	15	FE-30-93	SP	Tracy	CA	08/11/93
contrib crew	15	7	FE-31-93	ATSF	Evandale	TX	08/12/93
			FE-35-93	ATSF	Carlsbad	NM	09/02/93
	15	12	FE-40-93	SOO	Leal	ND	10/19/93
			FE-46-93	ATSF	Farewell	TX	11/12/93
			FE-47-93	GC	Macon	GA	11/13/93
			FE-49-93	SOU	Atlanta	GA	12/05/93
			FE-53-93	CR	Brook Park	OH	12/30/93
	23	22	FE-03-92	BN	Willmar	MN	01/28/92
	15	15	FE-04-92	AGC	Polk County	FL	01/30/92
			FE-08-92	FEC	Fort Pierce	FL	03/11/92
			FE-09-92	ATSF	Cheto	AZ	04/09/92
			FE-14-92	ATSF	Escondido	CA	06/01/92
			FE-15-92	BN	Seattle	WA	06/01/92
			FE-16-92	IHRC	Henderson	KY	06/02/92
			FE-18-92	CNW	Northlake	IL	06/20/92
			FE-20-92	SSW	Conlen Siding	TX	07/07/92
			FE-22-92	UP	Portland	OR	07/25/92
	13		FE-30-92	GBW	Wisconsin	WI	07/24/92
	32		FE-33-92	BN	Omaha	NE	10/15/92
	34	28	FE-34-92	GTW	Dearborn	MI	10/23/92
			FE-39-92	TTIS	Maysville	KY	11/16/92
			FE-36-97	BNSF	Emporia	KS	12/02/97
			FE-45-97	UP	Boise	ID	12/26/97

### Brakeman, Railroad Experience, Craft Experience

Brakeman	Railroad expr.	Craft expr.	REPORT #	Railroad	City	State	Date
average	16.09	12.97					
	20	20	FE-31-96	IC	Chicago	IL	12/18/96
			FE-30-96	UP	Clinton	IA	12/16/96
	1.08	0.16	FE-24-96	UP	Eagle Pass	TX	10/07/96
			FE-22-96	DGNO	Dallas	TX	09/03/96
			FE-17-96	NS	Sidney	ID	07/07/96
			FE-12-96	CSX	Charlotte	NC	06/15/96
			FE-09-96	BRC	Bedford Park	IL	03/20/96
			FE-02-97	UP	S Fontana	CA	01/12/97
			FE-04-97	UP	Mason City	IA	01/29/97
			FE-05-97	CR	Burns Harbor	IN	02/02/97
			FE-16-97	CMRC	Bay City	MI	06/06/97
			FE-19-97	NS	Rowesville	SC	06/24/97
			FE-22-97	MNCW	Stamford	CT	07/18/97
			FE-32-97	MRL	Laurel	MT	10/16/97
			FE-02-95	CR	Indianapolis	IN	01/11/95
	29	29	FE-09-95	CR	St. James	OH	02/17/95
			FE-11-95	ATSF	Amarillo	TX	02/24/95
			FE-12-95	NS	Aiken	SC	03/02/95
			FE-16-95	WC	Argoe	WI	04/06/95
			FE-17-95	SP	Bassett	CA	03/21/95
			FE-18-95	CSXT	Evansville	IN	05/03/95
			FE-23-95	CR	Hershey	PA	07/21/95
	0.5		FE-29-95	CSXT	Riverdale	IL	10/04/95
			FE-33-95	NS	Toledo	OH	12/11/95
49	31	0.25	FE-34-95	CSXT	Monroe	NC	12/14/95
	17	17	FE-02-94	BN	Hastings	NE	01/04/94
			FE-03-94	BN	Amarillo	TX	01/14/94
	24		FE-04-94	CSXT	Bainbridge	GA	01/18/94
			FE-06-94	UP	Fall City	NE	01/20/94
			FE-12-94	SP	Houston	TX	04/12/94
			FE-16-94	BN	Essex	MT	07/05/94
			FE-20-94	ARR	Clear Site	AK	09/20/94
			FE-26-94	UP	Donaldsonville	LA	10/17/94

## Brakeman, Railroad Experience, Craft Experience

Brakeman	Railroad expr.	Craft expr.	REPORT #	Railroad	City	State	Date
average	16.09	12.97					
			FE-28-94	PTRA	Houston	TX	11/10/94
			FE-29-94	CR	Painted Post	NY	11/15/94
			FE-31-94	CR	Campbell Hall	NY	12/06/94
			FE-32-94	UP	Thorton	CA	12/13/94
			FE-11-93	SP	Guadalupe	CA	03/27/93
			FE-13-93	CSX	Dwale	KY	04/13/93
			FE-20-93	ATSF	El Paso	TX	05/22/93
			FE-22-93	SEPTA	Devon	PA	06/04/93
	23		FE-23-93	IC	Fulton	KY	06/07/93
			FE-26-93	CR	Anderson	IN	07/15/93
			FE-27-93	UP	Pryor	OK	08/04/93
			FE-30-93	SP	Tracy	CA	08/11/93
			FE-31-93	ATSF	Evandale	TX	08/12/93
	0.17		FE-35-93	ATSF	Carlsbad	NM	09/02/93
			FE-40-93	SOO	Leal	ND	10/19/93
	20	20	FE-46-93	ATSF	Farewell	TX	11/12/93
	4.3	4.3	FE-47-93	GC	Macon	GA	11/13/93
			FE-49-93	SOU	Atlanta	GA	12/05/93
	29	\	FE-53-93	CR	Brook Park	OH	12/30/93
	26		FE-03-92	BN	Willmar	MN	01/28/92
			FE-04-92	AGC	Polk County	FL	01/30/92
			FE-08-92	FEC	Fort Pierce	FL	03/11/92
			FE-09-92	ATSF	Cheto	AZ	04/09/92
			FE-14-92	ATSF	Escondido	CA	06/01/92
			FE-15-92	BN	Seattle	WA	06/01/92
			FE-16-92	IHRC	Henderson	KY	06/02/92
	2	2	FE-18-92	CNW	Northlake	IL	06/20/92
			FE-20-92	SSW	Conlen Siding	TX	07/07/92
			FE-22-92	UP	Portland	OR	07/25/92
	0.35		FE-30-92	GBW	Wisconsin	WI	07/24/92
			FE-33-92	BN	Omaha	NE	10/15/92
			FE-34-92	GTW	Dearborn	MI	10/23/92
			FE-39-92	TTIS	Maysville	KY	11/16/92
			FE-36-97	BNSF	Emporia	KS	12/02/97
	30	24	FE-45-97	UP	Boise	ID	12/26/97

## FE Service

service in years	REPORT #	Railroad	City	State	Date
0.06	FE-22-96	DGNO	Dallas	TX	09/03/96
0.17	FE-31-94	CR	Campbell Hall	NY	12/06/94
0.34	FE-09-96	BRC	Bedford Park	IL	03/20/96
0.5	FE-04-92	AGC	Polk County	FL	01/30/92
0.5	FE-28-94	PTRA	Houston	TX	11/10/94
0.5	FE-29-95	CSXT	Riverdale	IL	10/04/95
0.83	FE-32-97	MRL	Laurel	MT	10/16/97
1	FE-12-96	CSX	Charlotte	NC	06/15/96
1	FE-17-96	NS	Sidney	ID	07/07/96
1	FE-47-93	GC	Macon	GA	11/13/93
2	FE-40-93	SOO	Leal	ND	10/19/93
2.5	FE-19-97	NS	Rowesville	SC	06/24/97
6	FE-22-93	SEPTA	Devon	PA	06/04/93
7	FE-16-95	WC	Argoe	WI	04/06/95
7	FE-16-97	CMRC	Bay City	MI	06/06/97
7.58	FE-22-97	MNCW	Stamford	CT	07/18/97
10.08	FE-24-96	UP	Eagle Pass	TX	10/07/96
12	FE-20-92	SSW	Conlen Siding	TX	07/07/92
13	FE-09-92	ATSF	Cheto	AZ	04/09/92
13	FE-30-92	GBW	Wisconsin	WI	07/24/92
13	FE-39-92	TTIS	Maysville	KY	11/16/92
14	FE-33-92	BN	Omaha	NE	10/15/92
15	FE-18-92	CNW	Northlake	IL	06/20/92
16	FE-06-94	UP	Fall City	NE	01/20/94
16	FE-08-92	FEC	Fort Pierce	FL	03/11/92
16	FE-13-93	CSX	Dwale	KY	04/13/93
16	FE-26-94	UP	Donaldsonville	LA	10/17/94
18	FE-27-93	UP	Pryor	OK	08/04/93
19	FE-11-93	SP	Guadalupe	CA	03/27/93
19	FE-11-95	ATSF	Amarillo	TX	02/24/95
20	FE-02-94	BN	Hastings	NE	01/04/94
20	FE-20-94	ARR	Clear Site	AK	09/20/94
20	FE-23-93	IC	Fulton	KY	06/07/93
21	FE-30-96	UP	Clinton	IA	12/16/96

## FE Service

service in years	REPORT #	Railroad	City	State	Date
21	FE-46-93	ATSF	Farewell	TX	11/12/93
22	FE-03-92	BN	Willmar	MN	01/28/92
22	FE-12-95	NS	Aiken	SC	03/02/95
22	FE-15-92	BN	Seattle	WA	06/01/92
23	FE-16-92	IHRC	Henderson	KY	06/02/92
24	FE-17-95	SP	Bassett	CA	03/21/95
24	FE-35-93	ATSF	Carlsbad	NM	09/02/93
25	FE-04-94	CSXT	Bainbridge	GA	01/18/94
25	FE-26-93	CR	Anderson	IN	07/15/93
26	FE-31-96	IC	Chicago	IL	12/18/96
26	FE-32-94	UP	Thorton	CA	12/13/94
27	FE-05-97	CR	Burns Harbor	IN	02/02/97
27	FE-20-93	ATSF	El Paso	TX	05/22/93
28	FE-04-97	UP	Mason City	IA	01/29/97
28	FE-22-92	UP	Portland	OR	07/25/92
28	FE-34-92	GTW	Dearborn	MI	10/23/92
29	FE-09-95	CR	St. James	OH	02/17/95
29	FE-14-92	ATSF	Escondido	CA	06/01/92
29	FE-30-93	SP	Tracy	CA	08/11/93
29	FE-49-93	SOU	Atlanta	GA	12/05/93
30	FE-02-95	CR	Indianapolis	IN	01/11/95
30	FE-36-97	BNSF	Emporia	KS	12/02/97
31	FE-31-93	ATSF	Evandale	TX	08/12/93
32	FE-18-95	CSXT	Evansville	IN	05/03/95
32	FE-33-95	NS	Toledo	OH	12/11/95
32	FE-45-97	UP	Boise	ID	12/26/97
33	FE-34-95	CSXT	Monroe	NC	12/14/95
35	FE-02-97	UP	S Fontana	CA	01/12/97
35	FE-16-94	BN	Essex	MT	07/05/94
36	FE-03-94	BN	Amarillo	TX	01/14/94
37	FE-12-94	SP	Houston	TX	04/12/94
38	FE-29-94	CR	Painted Post	NY	11/15/94
38	FE-53-93	CR	Brook Park	OH	12/30/93
40	FE-23-95	CR	Hershey	PA	07/21/95



## Has Employee Worked at This Location in Past?

	<b>FE work here before</b>	<b>REPORT #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	45					
no	1					
blank	22					
	Y	FE-31-96	IC	Chicago	IL	12/18/96
	Y	FE-30-96	UP	Clinton	IA	12/16/96
		FE-24-96	UP	Eagle Pass	TX	10/07/96
	Y	FE-22-96	DGNO	Dallas	TX	09/03/96
	Y	FE-17-96	NS	Sidney	ID	07/07/96
	Y	FE-12-96	CSX	Charlotte	NC	06/15/96
		FE-09-96	BRC	Bedford Park	IL	03/20/96
		FE-02-97	UP	S Fontana	CA	01/12/97
	Y	FE-04-97	UP	Mason City	IA	01/29/97
	Y	FE-05-97	CR	Burns Harbor	IN	02/02/97
		FE-16-97	CMRC	Bay City	MI	06/06/97
	Y	FE-19-97	NS	Rowesville	SC	06/24/97
	Y	FE-22-97	MNCW	Stamford	CT	07/18/97
	Y	FE-32-97	MRL	Laurel	MT	10/16/97
	Y	FE-02-95	CR	Indianapolis	IN	01/11/95
	Y	FE-09-95	CR	St. James	OH	02/17/95
	Y	FE-11-95	ATSF	Amarillo	TX	02/24/95
	Y	FE-12-95	NS	Aiken	SC	03/02/95
	Y	FE-16-95	WC	Argoe	WI	04/06/95
	Y	FE-17-95	SP	Bassett	CA	03/21/95
		FE-18-95	CSXT	Evansville	IN	05/03/95
	Y	FE-23-95	CR	Hershey	PA	07/21/95
	Y	FE-29-95	CSXT	Riverdale	IL	10/04/95
	Y	FE-33-95	NS	Toledo	OH	12/11/95
	Y	FE-34-95	CSXT	Monroe	NC	12/14/95
	Y	FE-02-94	BN	Hastings	NE	01/04/94
		FE-03-94	BN	Amarillo	TX	01/14/94
		FE-04-94	CSXT	Bainbridge	GA	01/18/94
	Y	FE-06-94	UP	Fall City	NE	01/20/94
	Y	FE-12-94	SP	Houston	TX	04/12/94

## Has Employee Worked at This Location in Past?

	<b>FE work here before</b>	<b>REPORT #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	45					
no	1					
blank	22					
	Y	FE-16-94	BN	Essex	MT	07/05/94
		FE-20-94	ARR	Clear Site	AK	09/20/94
	Y	FE-26-94	UP	Donaldsonville	LA	10/17/94
	Y	FE-28-94	PTRA	Houston	TX	11/10/94
	Y	FE-29-94	CR	Painted Post	NY	11/15/94
	Y	FE-31-94	CR	Campbell Hall	NY	12/06/94
	Y	FE-32-94	UP	Thorton	CA	12/13/94
		FE-11-93	SP	Guadalupe	CA	03/27/93
		FE-13-93	CSX	Dwale	KY	04/13/93
		FE-20-93	ATSF	El Paso	TX	05/22/93
	Y	FE-22-93	SEPTA	Devon	PA	06/04/93
		FE-23-93	IC	Fulton	KY	06/07/93
	Y	FE-26-93	CR	Anderson	IN	07/15/93
		FE-27-93	UP	Pryor	OK	08/04/93
	Y	FE-30-93	SP	Tracy	CA	08/11/93
		FE-31-93	ATSF	Evandale	TX	08/12/93
		FE-35-93	ATSF	Carlsbad	NM	09/02/93
		FE-40-93	SOO	Leal	ND	10/19/93
		FE-46-93	ATSF	Farewell	TX	11/12/93
		FE-47-93	GC	Macon	GA	11/13/93
	Y	FE-49-93	SOU	Atlanta	GA	12/05/93
	Y	FE-53-93	CR	Brook Park	OH	12/30/93
	Y	FE-03-92	BN	Willmar	MN	01/28/92
	Y	FE-04-92	AGC	Polk County	FL	01/30/92
	N	FE-08-92	FEC	Fort Pierce	FL	03/11/92
		FE-09-92	ATSF	Cheto	AZ	04/09/92
	Y	FE-14-92	ATSF	Escondido	CA	06/01/92
		FE-15-92	BN	Seattle	WA	06/01/92
		FE-16-92	IHRC	Henderson	KY	06/02/92
	Y	FE-18-92	CNW	Northlake	IL	06/20/92
	Y	FE-20-92	SSW	Conlen Siding	TX	07/07/92

## Has Employee Worked at This Location in Past?

	<b>FE work here before</b>	<b>REPORT #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	45					
no	1					
blank	22					
	Y	FE-22-92	UP	Portland	OR	07/25/92
		FE-30-92	GBW	Wisconsin	WI	07/24/92
	Y	FE-33-92	BN	Omaha	NE	10/15/92
	Y	FE-34-92	GTW	Dearborn	MI	10/23/92
	Y	FE-39-92	TTIS	Maysville	KY	11/16/92
	Y	FE-36-97	BNSF	Emporia	KS	12/02/97
	Y	FE-45-97	UP	Boise	ID	12/26/97

## FEs Regular Job?

	FE regular job	REPORT #	Railroad	City	State	Date
yes	30					
no	12					
blank	26					
	Y	FE-31-96	IC	Chicago	IL	12/18/96
	Y	FE-30-96	UP	Clinton	IA	12/16/96
		FE-24-96	UP	Eagle Pass	TX	10/07/96
	Y	FE-22-96	DGNO	Dallas	TX	09/03/96
	Y	FE-17-96	NS	Sidney	ID	07/07/96
	Y	FE-12-96	CSX	Charlotte	NC	06/15/96
		FE-09-96	BRC	Bedford Park	IL	03/20/96
	N	FE-02-97	UP	S Fontana	CA	01/12/97
		FE-04-97	UP	Mason City	IA	01/29/97
		FE-05-97	CR	Burns Harbor	IN	02/02/97
		FE-16-97	CMRC	Bay City	MI	06/06/97
	Y	FE-19-97	NS	Rowesville	SC	06/24/97
		FE-22-97	MNCW	Stamford	CT	07/18/97
	Y	FE-32-97	MRL	Laurel	MT	10/16/97
		FE-02-95	CR	Indianapolis	IN	01/11/95
	Y	FE-09-95	CR	St. James	OH	02/17/95
	Y	FE-11-95	ATSF	Amarillo	TX	02/24/95
		FE-12-95	NS	Aiken	SC	03/02/95
	Y	FE-16-95	WC	Argoe	WI	04/06/95
	Y	FE-17-95	SP	Bassett	CA	03/21/95
		FE-18-95	CSXT	Evansville	IN	05/03/95
	Y	FE-23-95	CR	Hershey	PA	07/21/95
	N	FE-29-95	CSXT	Riverdale	IL	10/04/95
	Y	FE-33-95	NS	Toledo	OH	12/11/95
	Y	FE-34-95	CSXT	Monroe	NC	12/14/95
	Y	FE-02-94	BN	Hastings	NE	01/04/94
		FE-03-94	BN	Amarillo	TX	01/14/94
		FE-04-94	CSXT	Bainbridge	GA	01/18/94
	Y	FE-06-94	UP	Fall City	NE	01/20/94
	Y	FE-12-94	SP	Houston	TX	04/12/94
	Y	FE-16-94	BN	Essex	MT	07/05/94
	N	FE-20-94	ARR	Clear Site	AK	09/20/94

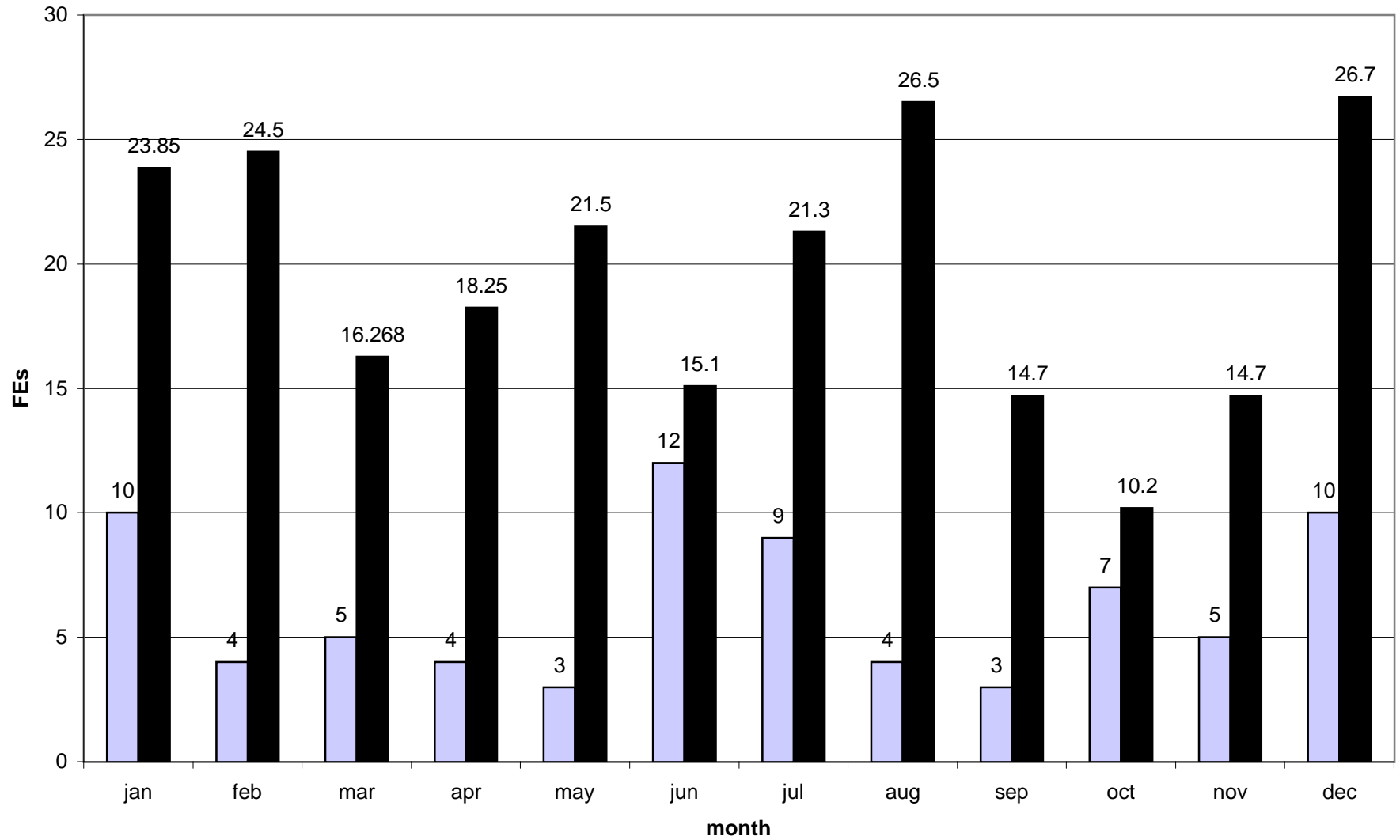
## FEs Regular Job?

	FE regular job	REPORT #	Railroad	City	State	Date
yes	30					
no	12					
blank	26					
	N	FE-26-94	UP	Donaldsonville	LA	10/17/94
	N	FE-28-94	PTRA	Houston	TX	11/10/94
	Y	FE-29-94	CR	Painted Post	NY	11/15/94
	N	FE-31-94	CR	Campbell Hall	NY	12/06/94
	N	FE-32-94	UP	Thorton	CA	12/13/94
		FE-11-93	SP	Guadalupe	CA	03/27/93
		FE-13-93	CSX	Dwale	KY	04/13/93
		FE-20-93	ATSF	El Paso	TX	05/22/93
	Y	FE-22-93	SEPTA	Devon	PA	06/04/93
		FE-23-93	IC	Fulton	KY	06/07/93
	N	FE-26-93	CR	Anderson	IN	07/15/93
		FE-27-93	UP	Pryor	OK	08/04/93
	N	FE-30-93	SP	Tracy	CA	08/11/93
		FE-31-93	ATSF	Evandale	TX	08/12/93
		FE-35-93	ATSF	Carlsbad	NM	09/02/93
	N	FE-40-93	SOO	Leal	ND	10/19/93
		FE-46-93	ATSF	Farewell	TX	11/12/93
		FE-47-93	GC	Macon	GA	11/13/93
	N	FE-49-93	SOU	Atlanta	GA	12/05/93
		FE-53-93	CR	Brook Park	OH	12/30/93
	Y	FE-03-92	BN	Willmar	MN	01/28/92
	Y	FE-04-92	AGC	Polk County	FL	01/30/92
	N	FE-08-92	FEC	Fort Pierce	FL	03/11/92
		FE-09-92	ATSF	Cheto	AZ	04/09/92
	Y	FE-14-92	ATSF	Escondido	CA	06/01/92
		FE-15-92	BN	Seattle	WA	06/01/92
		FE-16-92	IHRC	Henderson	KY	06/02/92
	Y	FE-18-92	CNW	Northlake	IL	06/20/92
		FE-20-92	SSW	Conlen Siding	TX	07/07/92
	Y	FE-22-92	UP	Portland	OR	07/25/92
		FE-30-92	GBW	Wisconsin	WI	07/24/92
	Y	FE-33-92	BN	Omaha	NE	10/15/92
	Y	FE-34-92	GTW	Dearborn	MI	10/23/92

## FEs Regular Job?

	<b>FE regular job</b>	<b>REPORT #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	30					
no	12					
blank	26					
Y		FE-39-92	TTIS	Maysville	KY	11/16/92
Y		FE-36-97	BNSF	Emporia	KS	12/02/97
Y		FE-45-97	UP	Boise	ID	12/26/97

Monthly Number of FEs and Average Years of Service



**Period: January 1, 1983 to December 31, 1991**

245 FEs coded with length of service

report #	RR	date	service in years	count	% of all FEs	cumulative %
<b>one year or less</b>						
	DLWR	11/01/1989	0.0027	1		
	MCPA	04/13/1987	0.75	2		
FE-23-91	NW	07/29/1991	0.83	3	3.2%	3.2%
<b>one to two years</b>						
	BN	03/01/1990	1.42	1		
FE-16-91	LI	05/20/1991	1.67	2		
FE-08-91	RSSX	03/12/1991	1.75	3		
	NCYR	12/20/1985	2	4	4.2%	7.4%
<b>two to three years</b>						
	CR	07/10/1986	2.17	1		
	DQE	03/02/1984	2.42	2		
	MP	12/03/1983	3	3	3.2%	10.6%
<b>three to four years</b>						
	NW	03/31/1984	3.75	1		
	BOCT	10/11/1984	4	2	2.1%	12.7%
<b>four or more years</b>						
	ATSF	07/07/1983	5	1		
	BO	10/31/1984	5	2		
	BOCT	03/25/1986	5	3		
	UP	08/28/1983	5	4		
	BN	02/10/1986	6	5		
	NW	04/08/1985	6	6		
	CIRR	07/02/1983	7	7		
	NW	06/08/1984	7	8		
	SBD	10/11/1984	7	9		
	TTRR*	03/27/1983	7	10		
	CO	12/13/1983	8	11		
	ATK	04/10/1987	9	12		
	GMSR	01/29/1988	9	13		
	CR	08/17/1984	9.17	14		
	BO	01/30/1985	9.5	15		
	SEPTA	06/27/1985	9.5	16		
	UP	01/02/1986	10	17		
	UP	09/22/1988	10	18		
	ATSF	07/13/1985	11	19		
	BN	04/21/1990	11	20		
	CGA	10/07/1988	11	21		
	MP	05/03/1983	11	22		



**Period: January 1, 1983 to December 31, 1991**

245 FEs coded with length of service

report #	RR	date	service in years	count	% of all FEs	cumulative %
	SBD	01/01/1986	11.17	23		
	CSX	03/11/1988	11.42	24		
	ATSF	01/30/1985	12	25		
	CSS	08/30/1983	12	26		
	MP	01/06/1986	12	27		
	SOO	06/18/1989	12	28		
	MBRR	03/07/1984	13.33	29		
	ATK	07/29/1986	13.5	30		
	UP	05/04/1986	13.83	31		
	CNW	03/28/1987	14	32		
	CO	07/23/1984	14	33		
	MKT	09/19/1986	14	34		
	ATK	06/11/1985	15	35		
	CO	09/28/1985	15	36		
	EJE	02/15/1990	15	37		
	GTW	01/27/1990	15	38		
	NW	03/28/1987	16	39		
	MP	04/30/1985	16.5	40		
FE-21-91	CSX	07/17/1991	17	41		
	CSX	01/26/1987	18	42		
FE-02-91	IC	01/08/1991	18	43		
	BN	11/21/1989	19	44		
	CRN	09/29/1987	19	45		
	CR	08/21/1990	20	46		
	CR	11/23/1990	20	47		
	CSX	11/29/1988	20	48		
	CR	06/30/1984	21	49		
	CSX	03/13/1989	21	50		
	MNW	05/11/1989	21	51		
FE-13-91	CR	04/28/1991	23	52		
	SP	12/27/1989	23	53		
	SOU	07/11/1986	24	54		
	ICG	05/21/1986	27.75	55		
FE-7-91	CR	03/11/1991	29	56		
	CR	06/21/1984	30	57		
	ATSF	11/21/1988	31	58		
	BO	04/25/1985	31	59		
	CO	05/09/1987	32	60		
FE-24-91	CR	09/02/1991	32	61		
	PBR	04/22/1983	32	62		
	BN	10/24/1989	33	63		
	BO	04/06/1983	33	64		
	CR	09/11/1987	33	65		

**Period: January 1, 1983 to December 31, 1991**

245 FEs coded with length of service

report #	RR	date	service in years	count	% of all FEs	cumulative %
	CSX	04/19/1989	33	66		
	MP	04/12/1983	33	67		
	SP	05/26/1983	33	68		
	BN	10/23/1990	34	69		
	CR	05/20/1986	34	70		
	DWP	07/31/1986	34	71		
	TCG	01/22/1984	34	72		
	BOCT	02/13/1987	35	73		
	CR	03/05/1987	35	74		
	CSX	03/21/1988	35	75		
	CSX	12/16/1988	35	76		
	SP	09/16/1983	35	77		
	MP	12/12/1983	36	78		
FE-18-91	SOO	05/26/1991	36	79		
FE-15-91	UP	05/10/1991	37	80		
	CNW	04/13/1989	38	81		
	UP	04/22/1988	38	82		
	BN	01/18/1983	39	83	87.4%	100.1%

**Period: January 1, 1975 to December 31, 1982**  
 245 FEs coded with length of service

report #	RR	date	service in years	count	% of all FEs	cumulative %
<b>one year or less</b>						
	CNW	06/19/1979	0.038	1		
	MP	05/03/1977	0.038	2		
	SP	05/23/1977	0.085	3		
	SOO	08/29/1977	0.12	4		
	CR	10/29/1976	0.21	5		
	ATSF	11/28/1979	0.25	6		
	GSW*	02/02/1975	0.25	7		
	OUR&D	11/16/1977	0.25	8		
	PW	09/02/1982	0.33	9		
	UP	12/17/1977	0.384	10		
	ATSF	03/22/1980	0.5	11		
	CNW	06/13/1978	0.5	12		
	UP	02/09/1979	0.58	13		
	LN	11/11/1979	0.67	14		
	SP	02/16/1980	0.67	15		
	BN	02/09/1978	0.75	16		
	CR	05/09/1977	0.75	17		
	EJE	12/30/1978	0.75	18		
	NW	03/05/1977	0.75	19		
	SAN	03/14/1975	0.75	20		
	LN	11/10/1977	0.9	21		
	IHB	04/02/1977	0.92	22		
	MP	08/31/1978	0.96	23		
	PW	07/28/1980	1	24		
	SOU	07/16/1980	1	25	10.2%	10.2%
<b>one to two years</b>						
	ALQS	03/29/1975	1.33	1		
	GTW	07/01/1978	1.33	2		
	MP	09/05/1980	1.5	3		
	OCE*	08/27/1976	1.5	4		
	UP	01/09/1975	1.5	5		
	L&NW	12/21/1977	1.67	6		
	NW	02/21/1979	1.67	7		
	CNW	06/10/1980	1.83	8		
	AGS	04/29/1979	1.92	9		
	MKT	08/18/1977	1.92	10		
	ATSF	12/14/1979	2	11		
	BO	08/18/1980	2	12		
	DH	09/10/1976	2	13		
	LN	10/02/1978	2	14		
	MKT	02/17/1977	2	15		
	MP	05/06/1975	2	16		
	SOU	02/12/1982	2	17		
	UP	12/24/1980	2	18	7.3%	17.5%

**Period: January 1, 1975 to December 31, 1982**  
 245 FEs coded with length of service

report #	RR	date	service in years	count	% of all FEs	cumulative %
<b>two to three years</b>						
	CNW	01/20/1976	2.42	1		
	CNW	10/05/1976	2.42	2		
	ATSF	08/11/1979	2.5	3		
	ATSF	11/07/1979	2.5	4		
	NS	12/22/1976	2.5	5		
	NW	04/24/1982	2.5	6		
	CO	04/23/1979	2.75	7		
	CNW	08/29/1982	2.92	8		
	CNW	12/28/1980	3	9		
	ITRR*	10/17/1980	3	10		
	MILW	10/17/1978	3	11		
	TP&W	08/21/1975	3	12	4.9%	22.4%
<b>three to four years</b>						
	CGA	01/10/1979	3.5	1		
	MP	12/07/1976	3.67	2		
	UP	02/20/1977	3.67	3		
	BN	11/22/1975	4	4		
	CGA	08/08/1978	4	5		
	LN	03/01/1975	4	6		
	LN	11/20/1976	4	7		
	LN	12/01/1977	4	8		
	NW	12/02/1980	4	9		
	RT	02/11/1975	4	10	4.1%	26.5%
<b>four or more years</b>						
	CAGY	01/23/1980	4.17	1		
	ATSF	07/07/1978	4.92	2		
	CO	06/10/1980	5	3		
	CR	11/26/1977	5	4		
	CR	02/08/1978	5	5		
	ICG	07/18/1979	5	6		
	LN	06/05/1979	5	7		
	MP	04/19/1979	5	8		
	SOO	02/22/1982	5	9		
	SSW	06/20/1978	5	10	4.1%	30.6%
	DM	12/01/1977	5.83	1		
	ATSF	11/29/1982	6	2		
	DTI*	08/19/1975	6	3		
	MILW	01/05/1978	6	4		

**Period: January 1, 1975 to December 31, 1982**

245 FEs coded with length of service

report #	RR	date	service in years	count	% of all FEs	cumulative %
	SP	10/02/1980	6	5		
	CR	07/02/1977	6.5	6		
	ATSF	05/11/1981	7	7		
	BN	02/05/1979	7	8		
	MP	05/01/1979	7	9		
	NW	07/08/1977	7	10		
	SOO	07/08/1980	7	11		
	SP	09/05/1978	7	12		
	TP	12/14/1975	7	13		
	UP	12/20/1975	7	14		
	UP	10/27/1977	7	15		
	BN	09/02/1978	7.5	16		
	CR	09/29/1977	7.5	17		
	BN	07/20/1981	8	18		
	BN	12/23/1982	8	19		
	CR	11/02/1978	8	20		
	SLSF	03/11/1977	8	21		
	SP	10/05/1976	8	22		
	UP	11/27/1976	8	23		
	BN	07/21/1982	9	24		
	CR	06/02/1979	9	25		
	MP	04/06/1979	9	26		
	SLSF	01/11/1978	9	27		
	SOU	10/31/1978	9	28		
	UP	09/19/1977	9	29		
	UP	11/23/1979	9	30		
	MR*	11/28/1975	9.25	31		
	BN	02/11/1981	10	32		
	CR	09/05/1976	10	33		
	ICG	06/08/1980	10	34		
	NW	02/08/1980	10	35		
	NW	01/06/1976	10.5	36		
	ATSF	07/26/1977	11	37		
	BM	05/20/1977	11	38		
	BO	08/08/1980	11	39		
	BO	08/13/1982	11	40		
	CO	12/18/1980	11	41		
	MKT	08/04/1976	11	42		
	BN	02/22/1982	12	43		
	BO	06/19/1979	12	44		
	CR	03/17/1977	12	45		
	CR	08/20/1982	12	46		
	HBT	04/04/1982	12	47		
	SCL	08/09/1980	12	48		
	CMSP*	01/01/1980	13	49		
	CR	12/11/1977	13	50		
	CR	03/16/1981	14	51		
	ATSF	10/15/1980	15	52		
	BN	08/22/1981	15	53		
	PATH	05/05/1977	15	54		
	BO	11/24/1981	16	55		
	CR	05/20/1982	16.5	56		
	CR	02/24/1982	17	57		
	CO	01/08/1975	18	58		
	CR	12/20/1982	18	59		
	DC	03/13/1975	18.08	60		
	ATSF	01/13/1978	19	61		
	CMSP*	12/16/1976	19	62		

**Period: January 1, 1975 to December 31, 1982**

245 FEs coded with length of service

report #	RR	date	service in years	count	% of all FEs	cumulative %
	CNW	08/12/1979	19	63		
	CO	07/23/1975	20	64		
	ATSF	07/26/1977	21	65		
	BN	07/16/1977	21	66		
	BN	04/08/1982	21	67		
	CR	08/04/1977	21	68		
	NPB	09/25/1975	21	69		
	NW	12/07/1976	21	70		
	ATSF	05/03/1975	22	71		
	BN	05/07/1975	22	72		
	BO	03/05/1975	22	73		
	BO	05/25/1975	22	74		
	CMSP*	01/30/1975	22	75		
	CNW	03/28/1978	22	76		
	CR	05/25/1978	22	77		
	CR	01/04/1979	22	78		
	CO	11/02/1978	23	79		
	CUVA	01/14/1976	23	80		
	DRGW	03/23/1979	23	81		
	PBNE	11/22/1978	23	82		
	SOU	01/22/1975	23	83		
	CNW	07/27/1979	24	84		
	CNW	05/02/1981	24	85		
	CR	11/22/1976	24	86		
	ICG	10/30/1978	24	87		
	ICG	10/03/1979	24	88		
	MP	08/15/1980	24	89		
	BO	01/06/1976	25	90		
	BO	10/07/1978	25	91		
	NW	01/18/1980	25	92		
	PC	12/11/1975	25	93		
	BXN	10/15/1980	26	94		

**Period: January 1, 1975 to December 31, 1982**

245 FEs coded with length of service

report #	RR	date	service in years	count	% of all FEs	cumulative %
	CNW	02/22/1979	26	95		
	CR	10/19/1976	26	96		
	CR	11/09/1976	26	97		
	ICG	02/01/1977	26	98		
	NWP	11/21/1980	26	99		
	PC	02/03/1976	26	100		
	PBR	12/08/1977	26.67	101		
	ATSF	05/18/1977	27	102		
	CNW	11/23/1981	27	103		
	LN	10/19/1978	27	104		
	MP	05/21/1978	27	105		
	CR	07/24/1976	28	106		
	CR	12/23/1980	28	107		
	CR	10/10/1981	28	108		
	DWP	03/27/1979	28	109		
	PC	07/09/1975	28	110		
	SCL	01/23/1975	28	111		
	SP	03/19/1981	28	112		
	BN	06/24/1982	29	113		
	CR	02/24/1981	29	114		
	CR	02/18/1982	29	115		
	DMIR	08/04/1977	29	116		
	NW	10/18/1982	29	117		
	SCL	07/13/1975	29	118		
	SOU	02/20/1976	29	119		
	SOU	01/12/1980	29	120		
	TRRA	01/28/1982	29	121		
	CNW	08/27/1977	30	122		
	CO	07/07/1980	30	123		
	CO	08/13/1981	30	124		
	CO	10/16/1981	30	125		
	CO	01/01/1982	30	126		
	CR	04/20/1977	30	127		
	CR	01/18/1997	30	128		
	MP	04/18/1977	30	129		
	SP	07/01/1975	30	130		
	SP	01/03/1980	30	131		
	WP	09/30/1975	30	132		
	CNW	08/12/1978	31	133		
	CSS	05/12/1978	31	134		
	ICG	12/11/1982	31	135		
	LN	05/11/1976	31	136		
	SP	09/10/1981	31	137		
	UP	07/24/1976	31	138		
	LN	09/28/1977	32	139		

**Period: January 1, 1975 to December 31, 1982**

245 FEs coded with length of service

report #	RR	date	service in years	count	% of all FEs	cumulative %
	SP	06/25/1976	32	140		
	UP	02/08/1975	32.5	141		
	BO	11/29/1978	33	142		
	CR	01/03/1977	33	143		
	LN	04/01/1977	33	144		
	MILW	12/29/1978	33	145		
	MP	01/11/1975	33	146		
	NW	12/31/1980	33	147		
	PBNE	07/13/1981	33	148		
	SP	12/14/1977	33	149		
	BN	09/21/1981	34	150		
	BN	05/14/1982	34	151		
	ICG	07/16/1977	34	152		
	NW	08/25/1981	34	153		
	PC	01/15/1976	34	154		
	SOU	07/02/1975	34	155		
	UP	07/07/1978	34	156		
	CNW	10/16/1978	35	157		
	PC	08/21/1975	35	158		
	SOO	07/09/1980	35	159		
	UP	01/27/1977	35	160		
	CR	04/18/1977	36	161		
	CR	11/15/1982	36	162		
	SLSF	01/09/1977	36	163		
	CR	01/25/1979	37	164		
	PC	01/22/1975	37	165		
	CR	10/05/1978	38	166		
	UP	03/14/1980	38	167		
	ATSF	04/29/1981	39	168		
	BN	06/27/1977	39.67	169		
	SLSF	10/06/1978	41	170	69.4%	100.0%

**not coded for length of service**

ATK	02/14/1978	#NA	1
BO	10/25/1976	#NA	2
LN	06/22/1977	#NA	3
PRSL*	03/19/1976	#NA	4
UP	06/24/1977	#NA	5
UTAH	08/18/1976	#NA	6



SOFA WORKING GROUP

FEs

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Methods of Communication

Group 16

### Radio, Handset, Chestpack

	Radio	Handset	Chestpack	REPORT #	Railroad	City	State	Date
Yes equals	45	41	8					
		Y		FE-31-96	IC	Chicago	IL	12/18/96
				FE-30-96	UP	Clinton	IA	12/16/96
				FE-24-96	UP	Eagle Pass	TX	10/07/96
				FE-22-96	DGNO	Dallas	TX	09/03/96
				FE-17-96	NS	Sidney	ID	07/07/96
			Y	FE-12-96	CSX	Charlotte	NC	06/15/96
			Y	FE-09-96	BRC	Bedford Park	IL	03/20/96
		Y		FE-02-97	UP	S Fontana	CA	01/12/97
Y	Y			FE-04-97	UP	Mason City	IA	01/29/97
		Y		FE-05-97	CR	Burns Harbor	IN	02/02/97
		Y		FE-16-97	CMRC	Bay City	MI	06/06/97
		Y		FE-19-97	NS	Rowesville	SC	06/24/97
				FE-22-97	MNCW	Stamford	CT	07/18/97
				FE-32-97	MRL	Laurel	MT	10/16/97
Y	Y			FE-02-95	CR	Indianapolis	IN	01/11/95
Y				FE-09-95	CR	St. James	OH	02/17/95
				FE-11-95	ATSF	Amarillo	TX	02/24/95
Y				FE-12-95	NS	Aiken	SC	03/02/95
Y				FE-16-95	WC	Argoe	WI	04/06/95
Y				FE-17-95	SP	Bassett	CA	03/21/95
Y	Y		Y	FE-18-95	CSXT	Evansville	IN	05/03/95
Y	Y			FE-23-95	CR	Hershey	PA	07/21/95
Y				FE-29-95	CSXT	Riverdale	IL	10/04/95
Y	Y		Y	FE-33-95	NS	Toledo	OH	12/11/95
Y	Y			FE-34-95	CSXT	Monroe	NC	12/14/95
Y	Y			FE-02-94	BN	Hastings	NE	01/04/94
Y	Y			FE-03-94	BN	Amarillo	TX	01/14/94
Y				FE-04-94	CSXT	Bainbridge	GA	01/18/94
Y	Y			FE-06-94	UP	Fall City	NE	01/20/94
Y	Y			FE-12-94	SP	Houston	TX	04/12/94
Y				FE-16-94	BN	Essex	MT	07/05/94
				FE-20-94	ARR	Clear Site	AK	09/20/94
Y	Y			FE-26-94	UP	Donaldsonville	LA	10/17/94
Y	Y			FE-28-94	PTRA	Houston	TX	11/10/94

### Radio, Handset, Chestpack

	Radio	Handset	Chestpack	REPORT #	Railroad	City	State	Date
Yes equals	45	41	8					
	Y	Y		FE-29-94	CR	Painted Post	NY	11/15/94
	Y			FE-31-94	CR	Campbell Hall	NY	12/06/94
	Y	Y		FE-32-94	UP	Thorton	CA	12/13/94
	Y	Y		FE-11-93	SP	Guadalupe	CA	03/27/93
	Y	Y		FE-13-93	CSX	Dwale	KY	04/13/93
	Y	Y		FE-20-93	ATSF	El Paso	TX	05/22/93
				FE-22-93	SEPTA	Devon	PA	06/04/93
	Y	Y		FE-23-93	IC	Fulton	KY	06/07/93
	Y	Y		FE-26-93	CR	Anderson	IN	07/15/93
	Y	Y		FE-27-93	UP	Pryor	OK	08/04/93
	Y	Y		FE-30-93	SP	Tracy	CA	08/11/93
				FE-31-93	ATSF	Evandale	TX	08/12/93
	Y	Y		FE-35-93	ATSF	Carlsbad	NM	09/02/93
	Y	Y		FE-40-93	SOO	Leal	ND	10/19/93
	Y	Y		FE-46-93	ATSF	Farewell	TX	11/12/93
	Y	Y	Y	FE-47-93	GC	Macon	GA	11/13/93
	Y			FE-49-93	SOU	Atlanta	GA	12/05/93
	Y	Y		FE-53-93	CR	Brook Park	OH	12/30/93
	Y	Y		FE-03-92	BN	Willmar	MN	01/28/92
				FE-04-92	AGC	Polk County	FL	01/30/92
	Y	Y	Y	FE-08-92	FEC	Fort Pierce	FL	03/11/92
	Y	Y		FE-09-92	ATSF	Cheto	AZ	04/09/92
	Y	Y		FE-14-92	ATSF	Escondido	CA	06/01/92
				FE-15-92	BN	Seattle	WA	06/01/92
				FE-16-92	IHRC	Henderson	KY	06/02/92
	Y	Y	Y	FE-18-92	CNW	Northlake	IL	06/20/92
				FE-20-92	SSW	Conlen Siding	TX	07/07/92
	Y	Y		FE-22-92	UP	Portland	OR	07/25/92
	Y	Y	Y	FE-30-92	GBW	Wisconsin	WI	07/24/92
	Y	Y		FE-33-92	BN	Omaha	NE	10/15/92
	Y	Y		FE-34-92	GTW	Dearborn	MI	10/23/92
	Y	Y		FE-39-92	TTIS	Maysville	KY	11/16/92
	Y	Y		FE-36-97	BNSF	Emporia	KS	12/02/97
	Y	Y		FE-45-97	UP	Boise	ID	12/26/97

### Hand Signs

hand signs	REPORT #	Railroad	City	State	Date
yes	9				
no	0				
blank	59				
	FE-31-96	IC	Chicago	IL	12/18/96
	FE-30-96	UP	Clinton	IA	12/16/96
	FE-24-96	UP	Eagle Pass	TX	10/07/96
	FE-22-96	DGNO	Dallas	TX	09/03/96
	FE-17-96	NS	Sidney	ID	07/07/96
	FE-12-96	CSX	Charlotte	NC	06/15/96
	FE-09-96	BRC	Bedford Park	IL	03/20/96
	FE-02-97	UP	S Fontana	CA	01/12/97
Y	FE-04-97	UP	Mason City	IA	01/29/97
	FE-05-97	CR	Burns Harbor	IN	02/02/97
	FE-16-97	CMRC	Bay City	MI	06/06/97
	FE-19-97	NS	Rowesville	SC	06/24/97
	FE-22-97	MNCW	Stamford	CT	07/18/97
	FE-32-97	MRL	Laurel	MT	10/16/97
	FE-02-95	CR	Indianapolis	IN	01/11/95
	FE-09-95	CR	St. James	OH	02/17/95
	FE-11-95	ATSF	Amarillo	TX	02/24/95
	FE-12-95	NS	Aiken	SC	03/02/95
	FE-16-95	WC	Argoe	WI	04/06/95
	FE-17-95	SP	Bassett	CA	03/21/95
	FE-18-95	CSXT	Evansville	IN	05/03/95
	FE-23-95	CR	Hershey	PA	07/21/95
Y	FE-29-95	CSXT	Riverdale	IL	10/04/95
	FE-33-95	NS	Toledo	OH	12/11/95
	FE-34-95	CSXT	Monroe	NC	12/14/95
	FE-02-94	BN	Hastings	NE	01/04/94
	FE-03-94	BN	Amarillo	TX	01/14/94
	FE-04-94	CSXT	Bainbridge	GA	01/18/94
	FE-06-94	UP	Fall City	NE	01/20/94
Y	FE-12-94	SP	Houston	TX	04/12/94
Y	FE-16-94	BN	Essex	MT	07/05/94
	FE-20-94	ARR	Clear Site	AK	09/20/94
	FE-26-94	UP	Donaldsonville	LA	10/17/94
	FE-28-94	PTRA	Houston	TX	11/10/94
Y	FE-29-94	CR	Painted Post	NY	11/15/94

### Hand Signs

hand signs	REPORT #	Railroad	City	State	Date
yes	9				
no	0				
blank	59				
	FE-31-94	CR	Campbell Hall	NY	12/06/94
	FE-32-94	UP	Thorton	CA	12/13/94
	FE-11-93	SP	Guadalupe	CA	03/27/93
	FE-13-93	CSX	Dwale	KY	04/13/93
	FE-20-93	ATSF	El Paso	TX	05/22/93
	FE-22-93	SEPTA	Devon	PA	06/04/93
	FE-23-93	IC	Fulton	KY	06/07/93
	FE-26-93	CR	Anderson	IN	07/15/93
	FE-27-93	UP	Pryor	OK	08/04/93
Y	FE-30-93	SP	Tracy	CA	08/11/93
	FE-31-93	ATSF	Evandale	TX	08/12/93
	FE-35-93	ATSF	Carlsbad	NM	09/02/93
	FE-40-93	SOO	Leal	ND	10/19/93
Y	FE-46-93	ATSF	Farewell	TX	11/12/93
	FE-47-93	GC	Macon	GA	11/13/93
	FE-49-93	SOU	Atlanta	GA	12/05/93
	FE-53-93	CR	Brook Park	OH	12/30/93
Y	FE-03-92	BN	Willmar	MN	01/28/92
	FE-04-92	AGC	Polk County	FL	01/30/92
	FE-08-92	FEC	Fort Pierce	FL	03/11/92
Y	FE-09-92	ATSF	Cheto	AZ	04/09/92
	FE-14-92	ATSF	Escondido	CA	06/01/92
	FE-15-92	BN	Seattle	WA	06/01/92
	FE-16-92	IHRC	Henderson	KY	06/02/92
	FE-18-92	CNW	Northlake	IL	06/20/92
	FE-20-92	SSW	Conlen Siding	TX	07/07/92
	FE-22-92	UP	Portland	OR	07/25/92
	FE-30-92	GBW	Wisconsin	WI	07/24/92
	FE-33-92	BN	Omaha	NE	10/15/92
	FE-34-92	GTW	Dearborn	MI	10/23/92
	FE-39-92	TTIS	Maysville	KY	11/16/92
	FE-36-97	BNSF	Emporia	KS	12/02/97
	FE-45-97	UP	Boise	ID	12/26/97

## Was the Radio Used When Hand Signals Could Have Been Used?

radio over hand signs	REPORT #	Railroad	City	State	Date
yes	10				
no	10				
D	1				
blank	47				
	FE-31-96	IC	Chicago	IL	12/18/96
	FE-30-96	UP	Clinton	IA	12/16/96
	FE-24-96	UP	Eagle Pass	TX	10/07/96
	FE-22-96	DGNO	Dallas	TX	09/03/96
	FE-17-96	NS	Sidney	ID	07/07/96
N	FE-12-96	CSX	Charlotte	NC	06/15/96
Y	FE-09-96	BRC	Bedford Park	IL	03/20/96
N	FE-02-97	UP	S Fontana	CA	01/12/97
N	FE-04-97	UP	Mason City	IA	01/29/97
N	FE-05-97	CR	Burns Harbor	IN	02/02/97
N	FE-16-97	CMRC	Bay City	MI	06/06/97
D	FE-19-97	NS	Rowesville	SC	06/24/97
	FE-22-97	MNCW	Stamford	CT	07/18/97
	FE-32-97	MRL	Laurel	MT	10/16/97
	FE-02-95	CR	Indianapolis	IN	01/11/95
Y	FE-09-95	CR	St. James	OH	02/17/95
	FE-11-95	ATSF	Amarillo	TX	02/24/95
	FE-12-95	NS	Aiken	SC	03/02/95
	FE-16-95	WC	Argoe	WI	04/06/95
	FE-17-95	SP	Bassett	CA	03/21/95
	FE-18-95	CSXT	Evansville	IN	05/03/95
	FE-23-95	CR	Hershey	PA	07/21/95
	FE-29-95	CSXT	Riverdale	IL	10/04/95
N	FE-33-95	NS	Toledo	OH	12/11/95
	FE-34-95	CSXT	Monroe	NC	12/14/95
	FE-02-94	BN	Hastings	NE	01/04/94
N	FE-03-94	BN	Amarillo	TX	01/14/94
	FE-04-94	CSXT	Bainbridge	GA	01/18/94
	FE-06-94	UP	Fall City	NE	01/20/94
	FE-12-94	SP	Houston	TX	04/12/94
	FE-16-94	BN	Essex	MT	07/05/94
	FE-20-94	ARR	Clear Site	AK	09/20/94
	FE-26-94	UP	Donaldsonville	LA	10/17/94

## Was the Radio Used When Hand Signals Could Have Been Used?

radio over hand signs	REPORT #	Railroad	City	State	Date
yes	10				
no	10				
D	1				
blank	47				
	FE-28-94	PTRA	Houston	TX	11/10/94
Y	FE-29-94	CR	Painted Post	NY	11/15/94
Y	FE-31-94	CR	Campbell Hall	NY	12/06/94
	FE-32-94	UP	Thorton	CA	12/13/94
N	FE-11-93	SP	Guadalupe	CA	03/27/93
	FE-13-93	CSX	Dwale	KY	04/13/93
	FE-20-93	ATSF	El Paso	TX	05/22/93
	FE-22-93	SEPTA	Devon	PA	06/04/93
	FE-23-93	IC	Fulton	KY	06/07/93
	FE-26-93	CR	Anderson	IN	07/15/93
	FE-27-93	UP	Pryor	OK	08/04/93
	FE-30-93	SP	Tracy	CA	08/11/93
	FE-31-93	ATSF	Evandale	TX	08/12/93
Y	FE-35-93	ATSF	Carlsbad	NM	09/02/93
	FE-40-93	SOO	Leal	ND	10/19/93
	FE-46-93	ATSF	Farewell	TX	11/12/93
	FE-47-93	GC	Macon	GA	11/13/93
	FE-49-93	SOU	Atlanta	GA	12/05/93
Y	FE-53-93	CR	Brook Park	OH	12/30/93
Y	FE-03-92	BN	Willmar	MN	01/28/92
	FE-04-92	AGC	Polk County	FL	01/30/92
	FE-08-92	FEC	Fort Pierce	FL	03/11/92
	FE-09-92	ATSF	Cheto	AZ	04/09/92
Y	FE-14-92	ATSF	Escondido	CA	06/01/92
	FE-15-92	BN	Seattle	WA	06/01/92
	FE-16-92	IHRC	Henderson	KY	06/02/92
	FE-18-92	CNW	Northlake	IL	06/20/92
	FE-20-92	SSW	Conlen Siding	TX	07/07/92
Y	FE-22-92	UP	Portland	OR	07/25/92
	FE-30-92	GBW	Wisconsin	WI	07/24/92
	FE-33-92	BN	Omaha	NE	10/15/92
Y	FE-34-92	GTW	Dearborn	MI	10/23/92
N	FE-39-92	TTIS	Maysville	KY	11/16/92

## Was the Radio Used When Hand Signals Could Have Been Used?

radio over hand signs	REPORT #	Railroad	City	State	Date
yes	10				
no	10				
D	1				
blank	47				
	FE-36-97	BNSF	Emporia	KS	12/02/97
N	FE-45-97	UP	Boise	ID	12/26/97



## In Back or Shoving Movement, Did Radio Communication Specify Direction?

dir/dist specified	REPORT #	Railroad	City	State	Date
yes	6				
no	6				
blank	56				
	FE-31-96	IC	Chicago	IL	12/18/96
	FE-30-96	UP	Clinton	IA	12/16/96
	FE-24-96	UP	Eagle Pass	TX	10/07/96
	FE-22-96	DGNO	Dallas	TX	09/03/96
	FE-17-96	NS	Sidney	ID	07/07/96
	FE-12-96	CSX	Charlotte	NC	06/15/96
	FE-09-96	BRC	Bedford Park	IL	03/20/96
Y	FE-02-97	UP	S Fontana	CA	01/12/97
N	FE-04-97	UP	Mason City	IA	01/29/97
	FE-05-97	CR	Burns Harbor	IN	02/02/97
Y	FE-16-97	CMRC	Bay City	MI	06/06/97
Y	FE-19-97	NS	Rowesville	SC	06/24/97
	FE-22-97	MNCW	Stamford	CT	07/18/97
	FE-32-97	MRL	Laurel	MT	10/16/97
N	FE-02-95	CR	Indianapolis	IN	01/11/95
N	FE-09-95	CR	St. James	OH	02/17/95
	FE-11-95	ATSF	Amarillo	TX	02/24/95
Y	FE-12-95	NS	Aiken	SC	03/02/95
Y	FE-16-95	WC	Argoe	WI	04/06/95
	FE-17-95	SP	Bassett	CA	03/21/95
	FE-18-95	CSXT	Evansville	IN	05/03/95
	FE-23-95	CR	Hershey	PA	07/21/95
	FE-29-95	CSXT	Riverdale	IL	10/04/95
	FE-33-95	NS	Toledo	OH	12/11/95
	FE-34-95	CSXT	Monroe	NC	12/14/95
	FE-02-94	BN	Hastings	NE	01/04/94
	FE-03-94	BN	Amarillo	TX	01/14/94
	FE-04-94	CSXT	Bainbridge	GA	01/18/94
	FE-06-94	UP	Fall City	NE	01/20/94
	FE-12-94	SP	Houston	TX	04/12/94
	FE-16-94	BN	Essex	MT	07/05/94
	FE-20-94	ARR	Clear Site	AK	09/20/94
	FE-26-94	UP	Donaldsonville	LA	10/17/94
	FE-28-94	PTRA	Houston	TX	11/10/94
N	FE-29-94	CR	Painted Post	NY	11/15/94
N	FE-31-94	CR	Campbell Hall	NY	12/06/94
	FE-32-94	UP	Thorton	CA	12/13/94

**In Back or Shoving Movement, Did Radio Communication Specify Direction?**

<b>dir/dist specified</b>	<b>REPORT #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	6				
no	6				
blank	56				
	FE-11-93	SP	Guadalupe	CA	03/27/93
	FE-13-93	CSX	Dwale	KY	04/13/93
	FE-20-93	ATSF	El Paso	TX	05/22/93
	FE-22-93	SEPTA	Devon	PA	06/04/93
	FE-23-93	IC	Fulton	KY	06/07/93
	FE-26-93	CR	Anderson	IN	07/15/93
	FE-27-93	UP	Pryor	OK	08/04/93
	FE-30-93	SP	Tracy	CA	08/11/93
	FE-31-93	ATSF	Evandale	TX	08/12/93
	FE-35-93	ATSF	Carlsbad	NM	09/02/93
	FE-40-93	SOO	Leal	ND	10/19/93
	FE-46-93	ATSF	Farewell	TX	11/12/93
	FE-47-93	GC	Macon	GA	11/13/93
	FE-49-93	SOU	Atlanta	GA	12/05/93
	FE-53-93	CR	Brook Park	OH	12/30/93
	FE-03-92	BN	Willmar	MN	01/28/92
	FE-04-92	AGC	Polk County	FL	01/30/92
	FE-08-92	FEC	Fort Pierce	FL	03/11/92
	FE-09-92	ATSF	Cheto	AZ	04/09/92
Y	FE-14-92	ATSF	Escondido	CA	06/01/92
	FE-15-92	BN	Seattle	WA	06/01/92
	FE-16-92	IHRC	Henderson	KY	06/02/92
	FE-18-92	CNW	Northlake	IL	06/20/92
	FE-20-92	SSW	Conlen Siding	TX	07/07/92
N	FE-22-92	UP	Portland	OR	07/25/92
	FE-30-92	GBW	Wisconsin	WI	07/24/92
	FE-33-92	BN	Omaha	NE	10/15/92
	FE-34-92	GTW	Dearborn	MI	10/23/92
	FE-39-92	TTIS	Maysville	KY	11/16/92
	FE-36-97	BNSF	Emporia	KS	12/02/97
	FE-45-97	UP	Boise	ID	12/26/97

## Did Employees Act on an Incomplete or Misunderstood Radio Communication?

bad comm	REPORT #	Railroad	City	State	Date
yes	3				
no	8				
blank	57				
N	FE-31-96	IC	Chicago	IL	12/18/96
	FE-30-96	UP	Clinton	IA	12/16/96
	FE-24-96	UP	Eagle Pass	TX	10/07/96
	FE-22-96	DGNO	Dallas	TX	09/03/96
	FE-17-96	NS	Sidney	ID	07/07/96
N	FE-12-96	CSX	Charlotte	NC	06/15/96
N	FE-09-96	BRC	Bedford Park	IL	03/20/96
N	FE-02-97	UP	S Fontana	CA	01/12/97
Y	FE-04-97	UP	Mason City	IA	01/29/97
N	FE-05-97	CR	Burns Harbor	IN	02/02/97
	FE-16-97	CMRC	Bay City	MI	06/06/97
N	FE-19-97	NS	Rowesville	SC	06/24/97
	FE-22-97	MNCW	Stamford	CT	07/18/97
	FE-32-97	MRL	Laurel	MT	10/16/97
	FE-02-95	CR	Indianapolis	IN	01/11/95
	FE-09-95	CR	St. James	OH	02/17/95
	FE-11-95	ATSF	Amarillo	TX	02/24/95
N	FE-12-95	NS	Aiken	SC	03/02/95
	FE-16-95	WC	Argoe	WI	04/06/95
	FE-17-95	SP	Bassett	CA	03/21/95
	FE-18-95	CSXT	Evansville	IN	05/03/95
	FE-23-95	CR	Hershey	PA	07/21/95
	FE-29-95	CSXT	Riverdale	IL	10/04/95
	FE-33-95	NS	Toledo	OH	12/11/95
	FE-34-95	CSXT	Monroe	NC	12/14/95
	FE-02-94	BN	Hastings	NE	01/04/94
	FE-03-94	BN	Amarillo	TX	01/14/94
	FE-04-94	CSXT	Bainbridge	GA	01/18/94
	FE-06-94	UP	Fall City	NE	01/20/94
	FE-12-94	SP	Houston	TX	04/12/94
	FE-16-94	BN	Essex	MT	07/05/94
	FE-20-94	ARR	Clear Site	AK	09/20/94
	FE-26-94	UP	Donaldsonville	LA	10/17/94

## Did Employees Act on an Incomplete or Misunderstood Radio Communication?

bad comm	REPORT #	Railroad	City	State	Date
yes	3				
no	8				
blank	57				
	FE-28-94	PTRA	Houston	TX	11/10/94
	FE-29-94	CR	Painted Post	NY	11/15/94
Y	FE-31-94	CR	Campbell Hall	NY	12/06/94
N	FE-32-94	UP	Thorton	CA	12/13/94
	FE-11-93	SP	Guadalupe	CA	03/27/93
	FE-13-93	CSX	Dwale	KY	04/13/93
	FE-20-93	ATSF	El Paso	TX	05/22/93
	FE-22-93	SEPTA	Devon	PA	06/04/93
	FE-23-93	IC	Fulton	KY	06/07/93
	FE-26-93	CR	Anderson	IN	07/15/93
	FE-27-93	UP	Pryor	OK	08/04/93
	FE-30-93	SP	Tracy	CA	08/11/93
	FE-31-93	ATSF	Evandale	TX	08/12/93
	FE-35-93	ATSF	Carlsbad	NM	09/02/93
	FE-40-93	SOO	Leal	ND	10/19/93
	FE-46-93	ATSF	Farewell	TX	11/12/93
	FE-47-93	GC	Macon	GA	11/13/93
	FE-49-93	SOU	Atlanta	GA	12/05/93
	FE-53-93	CR	Brook Park	OH	12/30/93
	FE-03-92	BN	Willmar	MN	01/28/92
	FE-04-92	AGC	Polk County	FL	01/30/92
	FE-08-92	FEC	Fort Pierce	FL	03/11/92
	FE-09-92	ATSF	Cheto	AZ	04/09/92
	FE-14-92	ATSF	Escondido	CA	06/01/92
	FE-15-92	BN	Seattle	WA	06/01/92
	FE-16-92	IHRC	Henderson	KY	06/02/92
	FE-18-92	CNW	Northlake	IL	06/20/92
	FE-20-92	SSW	Conlen Siding	TX	07/07/92
Y	FE-22-92	UP	Portland	OR	07/25/92
	FE-30-92	GBW	Wisconsin	WI	07/24/92
	FE-33-92	BN	Omaha	NE	10/15/92
	FE-34-92	GTW	Dearborn	MI	10/23/92
	FE-39-92	TTIS	Maysville	KY	11/16/92
	FE-36-97	BNSF	Emporia	KS	12/02/97

# Did Employees Act on an Incomplete or Misunderstood Radio Communication?

	<b>bad comm</b>	<b>REPORT #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	3					
no	8					
blank	57					
		FE-45-97	UP	Boise	ID	12/26/97

**Coded as Communication Cause Code in FEs Crew -- 17 Cases**

	<b>Report #</b>	<b>Railroad</b>	<b>State</b>	<b>Date</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>	<b>PCF</b>
1	FE-45-97	UP	ID	12/26/97	H990	H316	H211				
2	FE-16-97	CMRC	MI	06/06/97	H210	SO12					
3	FE-04-97	UP	IA	01/29/97	H211	H990					
4	FE-16-95	WC	WI	04/06/95	H018	H008	H605				
5	FE-12-95	NS	SC	03/02/95	H997	H316					
6	FE-11-95	ATSF	TX	02/24/95	H305						
7	FE-09-95	CR	OH	02/17/95	H702	H990	H211				
8	FE-31-94	CR	NY	12/06/94	H318	H211	H307	H605	H212	H303	H699
9	FE-29-94	CR	NY	11/15/94	H316	H605					
10	FE-26-94	UP	LA	10/17/94	H997	H210					
11	FE-47-93	GC	GA	11/13/93	H316	H990					
12	FE-30-93	SP	CA	08/11/93	H316	H207	E29C				
13	FE-26-93	CR	IN	07/15/93	H990	H998	H316	H211			
14	FE-23-93	IC	KY	06/07/93	H990	H316					
15	FE-14-92	ATSF	CA	06/01/92	H210	H306	H316				
16	FE-15-92	BN	WA	06/01/92	H018	H317					
17	FE-04-92	AGC	FL	01/30/92	H316						

**Was the Movement Stopped Within Half the Distance Specified  
When Radio Signal Lost?**

stopped 1/2 dist when sig lost		REPORT #	Railroad	City	State	Date
yes	3					
no	6					
blank	59					
		FE-31-96	IC	Chicago	IL	12/18/96
		FE-30-96	UP	Clinton	IA	12/16/96
		FE-24-96	UP	Eagle Pass	TX	10/07/96
		FE-22-96	DGNO	Dallas	TX	09/03/96
		FE-17-96	NS	Sidney	ID	07/07/96
		FE-12-96	CSX	Charlotte	NC	06/15/96
		FE-09-96	BRC	Bedford Park	IL	03/20/96
		FE-02-97	UP	S Fontana	CA	01/12/97
N		FE-04-97	UP	Mason City	IA	01/29/97
		FE-05-97	CR	Burns Harbor	IN	02/02/97
N		FE-16-97	CMRC	Bay City	MI	06/06/97
Y		FE-19-97	NS	Rowesville	SC	06/24/97
		FE-22-97	MNCW	Stamford	CT	07/18/97
		FE-32-97	MRL	Laurel	MT	10/16/97
Y		FE-02-95	CR	Indianapolis	IN	01/11/95
		FE-09-95	CR	St. James	OH	02/17/95
		FE-11-95	ATSF	Amarillo	TX	02/24/95
		FE-12-95	NS	Aiken	SC	03/02/95
N		FE-16-95	WC	Argoe	WI	04/06/95
		FE-17-95	SP	Bassett	CA	03/21/95
		FE-18-95	CSXT	Evansville	IN	05/03/95
		FE-23-95	CR	Hershey	PA	07/21/95
		FE-29-95	CSXT	Riverdale	IL	10/04/95
		FE-33-95	NS	Toledo	OH	12/11/95
		FE-34-95	CSXT	Monroe	NC	12/14/95
		FE-02-94	BN	Hastings	NE	01/04/94
		FE-03-94	BN	Amarillo	TX	01/14/94
		FE-04-94	CSXT	Bainbridge	GA	01/18/94
		FE-06-94	UP	Fall City	NE	01/20/94
		FE-12-94	SP	Houston	TX	04/12/94
		FE-16-94	BN	Essex	MT	07/05/94

**Was the Movement Stopped Within Half the Distance Specified  
When Radio Signal Lost?**

stopped 1/2 dist when sig lost		REPORT #	Railroad	City	State	Date
yes	3					
no	6					
blank	59					
		FE-20-94	ARR	Clear Site	AK	09/20/94
		FE-26-94	UP	Donaldsonville	LA	10/17/94
		FE-28-94	PTRA	Houston	TX	11/10/94
N		FE-29-94	CR	Painted Post	NY	11/15/94
N		FE-31-94	CR	Campbell Hall	NY	12/06/94
		FE-32-94	UP	Thorton	CA	12/13/94
		FE-11-93	SP	Guadalupe	CA	03/27/93
		FE-13-93	CSX	Dwale	KY	04/13/93
		FE-20-93	ATSF	El Paso	TX	05/22/93
		FE-22-93	SEPTA	Devon	PA	06/04/93
		FE-23-93	IC	Fulton	KY	06/07/93
Y		FE-26-93	CR	Anderson	IN	07/15/93
		FE-27-93	UP	Pryor	OK	08/04/93
		FE-30-93	SP	Tracy	CA	08/11/93
		FE-31-93	ATSF	Evandale	TX	08/12/93
		FE-35-93	ATSF	Carlsbad	NM	09/02/93
		FE-40-93	SOO	Leal	ND	10/19/93
		FE-46-93	ATSF	Farewell	TX	11/12/93
		FE-47-93	GC	Macon	GA	11/13/93
		FE-49-93	SOU	Atlanta	GA	12/05/93
		FE-53-93	CR	Brook Park	OH	12/30/93
		FE-03-92	BN	Willmar	MN	01/28/92
		FE-04-92	AGC	Polk County	FL	01/30/92
		FE-08-92	FEC	Fort Pierce	FL	03/11/92
		FE-09-92	ATSF	Cheto	AZ	04/09/92
N		FE-14-92	ATSF	Escondido	CA	06/01/92
		FE-15-92	BN	Seattle	WA	06/01/92
		FE-16-92	IHRC	Henderson	KY	06/02/92
		FE-18-92	CNW	Northlake	IL	06/20/92
		FE-20-92	SSW	Conlen Siding	TX	07/07/92
		FE-22-92	UP	Portland	OR	07/25/92



**Was the Movement Stopped Within Half the Distance Specified  
When Radio Signal Lost?**

**stopped 1/2 dist  
when sig lost**

yes        3  
no         6  
blank     59

REPORT #	Railroad	City	State	Date
FE-30-92	GBW	Wisconsin	WI	07/24/92
FE-33-92	BN	Omaha	NE	10/15/92
FE-34-92	GTW	Dearborn	MI	10/23/92
FE-39-92	TTIS	Maysville	KY	11/16/92
FE-36-97	BNSF	Emporia	KS	12/02/97
FE-45-97	UP	Boise	ID	12/26/97

# SOFA WORKING GROUP

FEs

organized by

Activity and Event

Group 17

**Activity, Event, local**

<b>Act</b>	<b>Event</b>	<b>Local</b>	<b>Report #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
1	59	A5	FE-09-96	BRC	Bedford Park	IL	03/20/96
1	59	B7	FE-12-95	NS	Aiken	SC	03/02/95
1	64	A5	FE-24-96	UP	Eagle Pass	TX	10/07/96
2	20	B7	FE-18-92	CNW	Northlake	IL	06/20/92
2	59	A5	FE-29-95	CSXT	Riverdale	IL	10/04/95
2	64	A5	FE-32-94	UP	Thorton	CA	12/13/94
9	64	A5	FE-14-92	ATSF	Escondido	CA	06/01/92
13	59	B7	FE-26-93	CR	Anderson	IN	07/15/93
13	59	B7	FE-30-92	GBW	Wisconsin	WI	07/24/92
16	59	B7	FE-35-93	ATSF	Carlsbad	NM	09/02/93
16	64	A5	FE-26-94	UP	Donaldsonville	LA	10/17/94
22	59	B7	FE-22-97	MNCW	Stamford	CT	07/18/97
24	35	C6	FE-04-92	AGC	Polk County	FL	01/30/92
24	59	B8	FE-30-93	SP	Tracy	CA	08/11/93
25	59	A4	FE-49-93	SOU	Atlanta	GA	12/05/93
39	59	B7	FE-11-95	ATSF	Amarillo	TX	02/24/95
50	59	A1	FE-09-92	ATSF	Cheto	AZ	04/09/92
50	64	B7	FE-45-97	UP	Boise	ID	12/26/97
51	99	A5	FE-16-94	BN	Essex	MT	07/05/94
58	17	B8	FE-16-97	CMRC	Bay City	MI	06/06/97
58	17	B8	FE-16-95	WC	Argoe	WI	04/06/95
58	17	B8	FE-15-92	BN	Seattle	WA	06/01/92
58	21	A1	FE-08-92	FEC	Fort Pierce	FL	03/11/92
58	21	B6	FE-40-93	SOO	Leal	ND	10/19/93
58	21	B6	FE-53-93	CR	Brook Park	OH	12/30/93
58	21	B8	FE-27-93	UP	Pryor	OK	08/04/93
58	34	A5	FE-32-97	MRL	Laurel	MT	10/16/97
58	42	A7	FE-31-94	CR	Campbell Hall	NY	12/06/94

**Activity, Event, local**

<b>Act</b>	<b>Event</b>	<b>Local</b>	<b>Report #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
58	50	B6	FE-02-97	UP	S Fontana	CA	01/12/97
58	58	B8	FE-11-93	SP	Guadalupe	CA	03/27/93
58	59	A5	FE-30-96	UP	Clinton	IA	12/16/96
58	59	B6	FE-02-95	CR	Indianapolis	IN	01/11/95
58	59	B6	FE-46-93	ATSF	Farewell	TX	11/12/93
58	59	B8	FE-31-96	IC	Chicago	IL	12/18/96
58	61	B6	FE-34-95	CSXT	Monroe	NC	12/14/95
58	61	B6	FE-12-94	SP	Houston	TX	04/12/94
58	64	B8	FE-04-94	CSXT	Bainbridge	GA	01/18/94
58	99	A5	FE-23-95	CR	Hershey	PA	07/21/95
58	99	B6	FE-06-94	UP	Fall City	NE	01/20/94
59	59	B7	FE-16-92	IHRC	Henderson	KY	06/02/92
60	21	A7	FE-20-94	ARR	Clear Site	AK	09/20/94
62	17	A4	FE-34-92	GTW	Dearborn	MI	10/23/92
62	17	A5	FE-39-92	TTIS	Maysville	KY	11/16/92
62	18	A1	FE-20-93	ATSF	El Paso	TX	05/22/93
62	21	A4	FE-03-94	BN	Amarillo	TX	01/14/94
62	34	A6	FE-22-93	SEPTA	Devon	PA	06/04/93
62	39	A1	FE-12-96	CSX	Charlotte	NC	06/15/96
62	42	B8	FE-22-96	DGNO	Dallas	TX	09/03/96
62	59	A3	FE-05-97	CR	Burns Harbor	IN	02/02/97
62	59	A4	FE-18-95	CSXT	Evansville	IN	05/03/95
62	59	A4	FE-36-97	BNSF	Emporia	KS	12/02/97
62	59	B7	FE-17-96	NS	Sidney	ID	07/07/96
62	59	B7	FE-29-94	CR	Painted Post	NY	11/15/94
62	59	B7	FE-31-93	ATSF	Evandale	TX	08/12/93
62	64	B7	FE-23-93	IC	Fulton	KY	06/07/93
62	99	A1	FE-33-95	NS	Toledo	OH	12/11/95
72	59	A1	FE-09-95	CR	St. James	OH	02/17/95
72	59	A4	FE-20-92	SSW	Conlen Siding	TX	07/07/92
72	59	A4	FE-22-92	UP	Portland	OR	07/25/92
72	59	B7	FE-04-97	UP	Mason City	IA	01/29/97
72	59	B7	FE-19-97	NS	Rowesville	SC	06/24/97
72	59	B7	FE-17-95	SP	Bassett	CA	03/21/95
72	59	B7	FE-13-93	CSX	Dwale	KY	04/13/93

**Activity, Event, local**

<b>Act</b>	<b>Event</b>	<b>Local</b>	<b>Report #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
72	59	B7	FE-03-92	BN	Willmar	MN	01/28/92
72	64	A5	FE-02-94	BN	Hastings	NE	01/04/94
99	9	X9	FE-28-94	PTRA	Houston	TX	11/10/94
99	9	X9	FE-33-92	BN	Omaha	NE	10/15/92
	59	B7	FE-47-93	GC	Macon	GA	11/13/93

### Other Trainman Activity and Local

Act	Local	Report #	Railroad	City	State	Date
45	A3	FE-06-94	UP	Fall City	NE	01/20/94
45	A3	FE-16-94	BN	Essex	MT	07/05/94
49	A7	FE-20-94	ARR	Clear Site	AK	09/20/94
58	A3	FE-12-95	NS	Aiken	SC	03/02/95
58	A6	FE-03-92	BN	Willmar	MN	01/28/92
58	A6	FE-18-92	CNW	Northlake	IL	06/20/92
58	A6	FE-30-92	GBW	Wisconsin	WI	07/24/92
58	A6	FE-40-93	SOO	Leal	ND	10/19/93
58	A6	FE-53-93	CR	Brook Park	OH	12/30/93
58	A6	FE-12-94	SP	Houston	TX	04/12/94
58	A6	FE-29-94	CR	Painted Post	NY	11/15/94
58	A6	FE-31-94	CR	Campbell Hall	NY	12/06/94
58	B6	FE-15-92	BN	Seattle	WA	06/01/92
58	B6	FE-46-93	ATSF	Farewell	TX	11/12/93
58	B6	FE-02-94	BN	Hastings	NE	01/04/94
58	B6	FE-02-97	UP	S Fontana	CA	01/12/97
58	B8	FE-04-94	CSXT	Bainbridge	GA	01/18/94
58	B8	FE-12-96	CSX	Charlotte	NC	06/15/96
58	C6	FE-04-92	AGC	Polk County	FL	01/30/92
59	A1	FE-22-96	DGNO	Dallas	TX	09/03/96
60	A6	FE-13-93	CSX	Dwale	KY	04/13/93
60	A6	FE-09-96	BRC	Bedford Park	IL	03/20/96
60	A6	FE-05-97	CR	Burns Harbor	IN	02/02/97
60	A7	FE-22-93	SEPTA	Devon	PA	06/04/93
62	A1	FE-09-92	ATSF	Cheto	AZ	04/09/92
62	A1	FE-14-92	ATSF	Escondido	CA	06/01/92
62	A1	FE-20-92	SSW	Conlen Siding	TX	07/07/92
62	A1	FE-22-92	UP	Portland	OR	07/25/92
62	A1	FE-33-92	BN	Omaha	NE	10/15/92
62	A1	FE-34-92	GTW	Dearborn	MI	10/23/92
62	A1	FE-23-93	IC	Fulton	KY	06/07/93
62	A1	FE-35-93	ATSF	Carlsbad	NM	09/02/93
62	A1	FE-47-93	GC	Macon	GA	11/13/93
62	A1	FE-03-94	BN	Amarillo	TX	01/14/94

### Other Trainman Activity and Local

Act	Local	Report #	Railroad	City	State	Date
62	A1	FE-09-95	CR	St. James	OH	02/17/95
62	A1	FE-23-95	CR	Hershey	PA	07/21/95
62	A1	FE-33-95	NS	Toledo	OH	12/11/95
62	A1	FE-45-97	UP	Boise	ID	12/26/97
62	A2	FE-31-96	IC	Chicago	IL	12/18/96
62	A3	FE-11-93	SP	Guadalupe	CA	03/27/93
62	A3	FE-32-94	UP	Thorton	CA	12/13/94
62	A3	FE-34-95	CSXT	Monroe	NC	12/14/95
62	B4	FE-17-95	SP	Bassett	CA	03/21/95
62	X9	FE-26-93	CR	Anderson	IN	07/15/93
72	A1	FE-27-93	UP	Pryor	OK	08/04/93
72	A1	FE-26-94	UP	Donaldsonville	LA	10/17/94
72	A1	FE-28-94	PTRA	Houston	TX	11/10/94
72	A1	FE-18-95	CSXT	Evansville	IN	05/03/95
72	A1	FE-32-97	MRL	Laurel	MT	10/16/97
72	A3	FE-11-95	ATSF	Amarillo	TX	02/24/95
72	A3	FE-24-96	UP	Eagle Pass	TX	10/07/96
72	A6	FE-31-93	ATSF	Evandale	TX	08/12/93
72	B4	FE-30-96	UP	Clinton	IA	12/16/96
		FE-08-92	FEC	Fort Pierce	FL	03/11/92
		FE-16-92	IHRC	Henderson	KY	06/02/92
		FE-39-92	TTIS	Maysville	KY	11/16/92
		FE-20-93	ATSF	El Paso	TX	05/22/93
		FE-30-93	SP	Tracy	CA	08/11/93
		FE-49-93	SOU	Atlanta	GA	12/05/93
		FE-02-95	CR	Indianapolis	IN	01/11/95
		FE-16-95	WC	Argoe	WI	04/06/95
		FE-29-95	CSXT	Riverdale	IL	10/04/95
		FE-17-96	NS	Sidney	ID	07/07/96
		FE-04-97	UP	Mason City	IA	01/29/97
		FE-16-97	CMRC	Bay City	MI	06/06/97
		FE-19-97	NS	Rowesville	SC	06/24/97
		FE-22-97	MNCW	Stamford	CT	07/18/97
		FE-36-97	BNSF	Emporia	KS	12/02/97

### Possible Contributing Factors

Poss. Cont. Factors	External Circmst.	Report #	RR	Date	FE crew's next move
H996	Board/disboard wrong side	FE-04-92	AGC	01/30/92	Wye Engine
	Crew experiance	FE-09-96	BRC	03/20/96	Couple Track
M307	EC 24	FE-13-93	CSX	04/13/93	Run Around Train
Hand Switch Confusion	Engineer didn't change ends	FE-22-92	UP	07/25/92	Return to other end of yard
	Grade x-ing placement	FE-45-97	UP	12/26/97	Uncouple cars to spot
	H099	FE-16-94	BN	07/05/94	Stop the Drop
	H101	FE-46-93	ATSF	11/12/93	Spot Car
	H199	FE-17-95	SP	03/21/95	Coupling
H399	H317	FE-31-93	ATSF	08/12/93	Make Cut
M199	H318	FE-30-93	SP	08/11/93	Shove to Yard
	H399	FE-15-92	BN	06/01/92	Shove to Clear
	H599	FE-26-94	UP	10/17/94	Pull ahead
	H990	FE-32-94	UP	12/13/94	CO Power
Green Ground Crew	H999	FE-29-95	CSXT	10/04/95	Coupling
	H999	FE-35-93	ATSF	09/02/93	Couple
Radio Conversation w/2nd crew	Heavy Clothing, Hood(s)	FE-03-92	BN	01/28/92	Engine to two track
No on-going job briefing	Improper mingeling of crew members	FE-30-92	GBW	07/24/92	
Track curve/broken knuckle	Jammed Knuckle pin	FE-39-92	TTIS	11/16/92	Replace Knuckle
H019	M101	FE-11-93	SP	03/27/93	Couple Track
Sun in eyes	M305	FE-20-94	ARR	09/20/94	Shove cars
Use of wood chalks & descending grade of yard	M411	FE-18-92	CNW	06/20/92	Couple track
	Moving Equipment	FE-32-97	MRL	10/16/97	Stop
M404	Noise from FE's Locos	FE-20-92	SSW	07/07/92	Depart Siding



### Possible Contributing Factors

Poss. Cont. Factors	External Circmst.	Report #	RR	Date	FE crew's next move
Clear x-ing	Others Assisted Crew	FE-53-93	CR	12/30/93	Spot Car
	Radio Failure	FE-16-97	CMRC	06/06/97	Coupling
	T099	FE-49-93	SOU	12/05/93	Line Switch
H399	T099	FE-09-92	ATSF	04/09/92	Couple to train
H399	TM Assisted Crew	FE-47-93	GC	11/13/93	Pull Another Track
	Track Conditions	FE-08-92	FEC	03/11/92	Couple
H305	Two Radio Chanel's Used	FE-18-95	CSXT	05/03/95	Switch Car
	Unfam w/territory	FE-02-97	UP	01/12/97	Stop
	Unsafe commonly accepted	FE-34-92	GTW	10/23/92	Line-up Car
	X-car-/l'list chng	FE-23-93	IC	06/07/93	Switch Cars
H305	Yardmaster	FE-11-95	ATSF	02/24/95	
H997		FE-02-94	BN	01/04/94	Stop to uncouple
Failure to test HB	Cold Temp	FE-06-94	UP	01/20/94	Stop Car
		FE-22-93	SEPTA	06/04/93	Stop at Station
		FE-33-92	BN	10/15/92	Spot load at pit
		FE-20-93	ATSF	05/22/93	Spot Cars
		FE-22-96	DGNO	09/03/96	Spot cars
		FE-31-96	IC	12/18/96	Spot Cars
		FE-12-96	CSX	06/15/96	Spot Car
Moved on wrong trnmsn.		FE-16-92	IHRC	06/02/92	Spot Car
		FE-04-94	CSXT	01/18/94	Spot
		FE-04-97	UP	01/29/97	SO power
		FE-24-96	UP	10/07/96	Shove cars

### Possible Contributing Factors

Poss. Cont. Factors	External Circmst.	Report #	RR	Date	FE crew's next move
ECC 34		FE-23-95	CR	07/21/95	Set Out Cars
		FE-31-94	CR	12/06/94	Set Out Cars
		FE-33-95	NS	12/11/95	Set Out Cars
		FE-17-96	NS	07/07/96	Meet train
		FE-40-93	SOO	10/19/93	Make Joint
		FE-12-94	SP	04/12/94	Make Cut
		FE-19-97	NS	06/24/97	Make Cut
		FE-03-94	BN	01/14/94	Cut Engine Off
		FE-34-95	CSXT	12/14/95	Cut Engine Off
		FE-09-95	CR	02/17/95	Cut Cars
H020		FE-16-95	WC	04/06/95	Coupling
		FE-36-97	BNSF	12/02/97	Couple Train
		FE-29-94	CR	11/15/94	Couple Track
		FE-14-92	ATSF	06/01/92	Couple to car
		FE-27-93	UP	08/04/93	Couple
		FE-30-96	UP	12/16/96	CO Power
		FE-26-93	CR	07/15/93	CO Engine
Reading ist		FE-05-97	CR	02/02/97	Begin Switching
		FE-02-95	CR	01/11/95	
		FE-12-95	NS	03/02/95	
		FE-22-97	MNCW	07/18/97	
		FE-28-94	PTRA	11/10/94	

### FE between and FE Struck by Other Crew

#	Was FE between	FE struck by other crew	Report #	Railroad	City	State	Date
1	Y	N	FE-14-92	ATSF	Escondido	CA	06/01/92
2	Y	N	FE-18-92	CNW	Northlake	IL	06/20/92
3	Y	N	FE-34-92	GTW	Dearborn	MI	10/23/92
4	Y	N	FE-39-92	TTIS	Maysville	KY	11/16/92
5	Y	N	FE-26-93	CR	Anderson	IN	07/15/93
6	Y	N	FE-35-93	ATSF	Carlsbad	NM	09/02/93
7	Y	N	FE-02-94	BN	Hastings	NE	01/04/94
8	Y	N	FE-16-94	BN	Essex	MT	07/05/94
9	Y	N	FE-26-94	UP	Donaldsonville	LA	10/17/94
10	Y	N	FE-29-94	CR	Painted Post	NY	11/15/94
11	Y	N	FE-32-94	UP	Thorton	CA	12/13/94
12	Y	N	FE-12-95	NS	Aiken	SC	03/02/95
13	Y	N	FE-16-95	WC	Argoe	WI	04/06/95
14	Y	N	FE-23-95	CR	Hershey	PA	07/21/95
15	Y	N	FE-29-95	CSXT	Riverdale	IL	10/04/95
16	Y	N	FE-09-96	BRC	Bedford Park	IL	03/20/96
17	Y	N	FE-24-96	UP	Eagle Pass	TX	10/07/96
18	Y	N	FE-30-96	UP	Clinton	IA	12/16/96
19	Y	N	FE-31-96	IC	Chicago	IL	12/18/96
20	Y	N	FE-16-97	CMRC	Bay City	MI	06/06/97
21	Y	N	FE-32-97	MRL	Laurel	MT	10/16/97
22	Y	N	FE-45-97	UP	Boise	ID	12/26/97
23	Y	Y	FE-30-92	GBW	Wisconsin	WI	07/24/92
24	Y	Y	FE-11-95	ATSF	Amarillo	TX	02/24/95
1	N	N	FE-03-92	BN	Willmar	MN	01/28/92
2	N	N	FE-04-92	AGC	Polk County	FL	01/30/92
3	N	N	FE-08-92	FEC	Fort Pierce	FL	03/11/92
4	N	N	FE-09-92	ATSF	Cheto	AZ	04/09/92
5	N	N	FE-16-92	IHRC	Henderson	KY	06/02/92
6	N	N	FE-33-92	BN	Omaha	NE	10/15/92
7	N	N	FE-11-93	SP	Guadalupe	CA	03/27/93
8	N	N	FE-22-93	SEPTA	Devon	PA	06/04/93
9	N	N	FE-23-93	IC	Fulton	KY	06/07/93
10	N	N	FE-27-93	UP	Pryor	OK	08/04/93
11	N	N	FE-40-93	SOO	Leal	ND	10/19/93

### FE between and FE Struck by Other Crew

#	Was FE between	FE struck by other crew	Report #	Railroad	City	State	Date
12	N	N	FE-46-93	ATSF	Farewell	TX	11/12/93
13	N	N	FE-53-93	CR	Brook Park	OH	12/30/93
14	N	N	FE-04-94	CSXT	Bainbridge	GA	01/18/94
15	N	N	FE-06-94	UP	Fall City	NE	01/20/94
16	N	N	FE-12-94	SP	Houston	TX	04/12/94
17	N	N	FE-20-94	ARR	Clear Site	AK	09/20/94
18	N	N	FE-31-94	CR	Campbell Hall	NY	12/06/94
19	N	N	FE-02-95	CR	Indianapolis	IN	01/11/95
20	N	N	FE-09-95	CR	St. James	OH	02/17/95
21	N	N	FE-17-95	SP	Bassett	CA	03/21/95
22	N	N	FE-33-95	NS	Toledo	OH	12/11/95
23	N	N	FE-34-95	CSXT	Monroe	NC	12/14/95
24	N	N	FE-12-96	CSX	Charlotte	NC	06/15/96
25	N	N	FE-22-96	DGNO	Dallas	TX	09/03/96
26	N	N	FE-02-97	UP	S Fontana	CA	01/12/97
27	N	N	FE-04-97	UP	Mason City	IA	01/29/97
28	N	N	FE-19-97	NS	Rowesville	SC	06/24/97
29	N	Y	FE-20-92	SSW	Conlen Siding	TX	07/07/92
30	N	Y	FE-13-93	CSX	Dwale	KY	04/13/93
31	N	Y	FE-20-93	ATSF	El Paso	TX	05/22/93
32	N	Y	FE-31-93	ATSF	Evandale	TX	08/12/93
33	N	Y	FE-49-93	SOU	Atlanta	GA	12/05/93
34	N	Y	FE-03-94	BN	Amarillo	TX	01/14/94
35	N	Y	FE-18-95	CSXT	Evansville	IN	05/03/95
36	N	Y	FE-05-97	CR	Burns Harbor	IN	02/02/97
37	N	Y	FE-22-97	MNCW	Stamford	CT	07/18/97
38	N	Y	FE-36-97	BNSF	Emporia	KS	12/02/97
39	N		FE-22-92	UP	Portland	OR	07/25/92
1		N	FE-30-93	SP	Tracy	CA	08/11/93
2		N	FE-47-93	GC	Macon	GA	11/13/93
3		Y	FE-17-96	NS	Sidney	ID	07/07/96
4			FE-15-92	BN	Seattle	WA	06/01/92
5			FE-28-94	PTRA	Houston	TX	11/10/94

### FE Riding Side, Leading End, Trailing End

	leading end	trailing end	FE riding end	Report #	Railroad	City	State	Date
Yes equals	6	3	14					
			Y	FE-31-96	IC	Chicago	IL	12/18/96
			Y	FE-30-96	UP	Clinton	IA	12/16/96
				FE-24-96	UP	Eagle Pass	TX	10/07/96
			Y	FE-22-96	DGNO	Dallas	TX	09/03/96
				FE-17-96	NS	Sidney	ID	07/07/96
				FE-12-96	CSX	Charlotte	NC	06/15/96
				FE-09-96	BRC	Bedford Park	IL	03/20/96
Y				FE-02-97	UP	S Fontana	CA	01/12/97
				FE-04-97	UP	Mason City	IA	01/29/97
				FE-05-97	CR	Burns Harbor	IN	02/02/97
			Y	FE-16-97	CMRC	Bay City	MI	06/06/97
				FE-19-97	NS	Rowesville	SC	06/24/97
				FE-22-97	MNCW	Stamford	CT	07/18/97
			Y	FE-32-97	MRL	Laurel	MT	10/16/97
			Y	FE-02-95	CR	Indianapolis	IN	01/11/95
				FE-09-95	CR	St. James	OH	02/17/95
				FE-11-95	ATSF	Amarillo	TX	02/24/95
				FE-12-95	NS	Aiken	SC	03/02/95
			Y	FE-16-95	WC	Argoe	WI	04/06/95
				FE-17-95	SP	Bassett	CA	03/21/95
				FE-18-95	CSXT	Evansville	IN	05/03/95
			Y	FE-23-95	CR	Hershey	PA	07/21/95
				FE-29-95	CSXT	Riverdale	IL	10/04/95
				FE-33-95	NS	Toledo	OH	12/11/95
				FE-34-95	CSXT	Monroe	NC	12/14/95
				FE-02-94	BN	Hastings	NE	01/04/94
				FE-03-94	BN	Amarillo	TX	01/14/94
			Y	FE-04-94	CSXT	Bainbridge	GA	01/18/94
	Y			FE-06-94	UP	Fall City	NE	01/20/94
	Y			FE-12-94	SP	Houston	TX	04/12/94
			Y	FE-16-94	BN	Essex	MT	07/05/94
			Y	FE-20-94	ARR	Clear Site	AK	09/20/94
				FE-26-94	UP	Donaldsonville	LA	10/17/94
				FE-28-94	PTRA	Houston	TX	11/10/94
				FE-29-94	CR	Painted Post	NY	11/15/94
			Y	FE-31-94	CR	Campbell Hall	NY	12/06/94

### FE Riding Side, Leading End, Trailing End

	leading end	trailing end	FE riding end	Report #	Railroad	City	State	Date
Yes equals	6	3	14	FE-32-94	UP	Thorton	CA	12/13/94
				FE-11-93	SP	Guadalupe	CA	03/27/93
				FE-13-93	CSX	Dwale	KY	04/13/93
				FE-20-93	ATSF	El Paso	TX	05/22/93
				FE-22-93	SEPTA	Devon	PA	06/04/93
				FE-23-93	IC	Fulton	KY	06/07/93
				FE-26-93	CR	Anderson	IN	07/15/93
			Y	FE-27-93	UP	Pryor	OK	08/04/93
				FE-30-93	SP	Tracy	CA	08/11/93
				FE-31-93	ATSF	Evandale	TX	08/12/93
				FE-35-93	ATSF	Carlsbad	NM	09/02/93
Y				FE-40-93	SOO	Leal	ND	10/19/93
Y				FE-46-93	ATSF	Farewell	TX	11/12/93
				FE-47-93	GC	Macon	GA	11/13/93
				FE-49-93	SOU	Atlanta	GA	12/05/93
Y				FE-53-93	CR	Brook Park	OH	12/30/93
				FE-03-92	BN	Willmar	MN	01/28/92
		Y		FE-04-92	AGC	Polk County	FL	01/30/92
Y				FE-08-92	FEC	Fort Pierce	FL	03/11/92
Y				FE-09-92	ATSF	Cheto	AZ	04/09/92
				FE-14-92	ATSF	Escondido	CA	06/01/92
			Y	FE-15-92	BN	Seattle	WA	06/01/92
				FE-16-92	IHRC	Henderson	KY	06/02/92
				FE-18-92	CNW	Northlake	IL	06/20/92
				FE-20-92	SSW	Conlen Siding	TX	07/07/92
				FE-22-92	UP	Portland	OR	07/25/92
				FE-30-92	GBW	Wisconsin	WI	07/24/92
				FE-33-92	BN	Omaha	NE	10/15/92
				FE-34-92	GTW	Dearborn	MI	10/23/92
				FE-39-92	TTIS	Maysville	KY	11/16/92
				FE-36-97	BNSF	Emporia	KS	12/02/97
				FE-45-97	UP	Boise	ID	12/26/97

**FE Struck by Other Crew?**

<b>FE struck by other crew</b>	<b>Report #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	13				
no	52				
blank	3				
N	FE-31-96	IC	Chicago	IL	12/18/96
N	FE-30-96	UP	Clinton	IA	12/16/96
N	FE-24-96	UP	Eagle Pass	TX	10/07/96
N	FE-22-96	DGNO	Dallas	TX	09/03/96
Y	FE-17-96	NS	Sidney	ID	07/07/96
N	FE-12-96	CSX	Charlotte	NC	06/15/96
N	FE-09-96	BRC	Bedford Park	IL	03/20/96
N	FE-02-97	UP	S Fontana	CA	01/12/97
N	FE-04-97	UP	Mason City	IA	01/29/97
Y	FE-05-97	CR	Burns Harbor	IN	02/02/97
N	FE-16-97	CMRC	Bay City	MI	06/06/97
N	FE-19-97	NS	Rowesville	SC	06/24/97
Y	FE-22-97	MNCW	Stamford	CT	07/18/97
N	FE-32-97	MRL	Laurel	MT	10/16/97
N	FE-02-95	CR	Indianapolis	IN	01/11/95
N	FE-09-95	CR	St. James	OH	02/17/95
Y	FE-11-95	ATSF	Amarillo	TX	02/24/95
N	FE-12-95	NS	Aiken	SC	03/02/95
N	FE-16-95	WC	Argoe	WI	04/06/95
N	FE-17-95	SP	Bassett	CA	03/21/95
Y	FE-18-95	CSXT	Evansville	IN	05/03/95
N	FE-23-95	CR	Hershey	PA	07/21/95
N	FE-29-95	CSXT	Riverdale	IL	10/04/95
N	FE-33-95	NS	Toledo	OH	12/11/95
N	FE-34-95	CSXT	Monroe	NC	12/14/95
N	FE-02-94	BN	Hastings	NE	01/04/94
Y	FE-03-94	BN	Amarillo	TX	01/14/94
N	FE-04-94	CSXT	Bainbridge	GA	01/18/94
N	FE-06-94	UP	Fall City	NE	01/20/94
N	FE-12-94	SP	Houston	TX	04/12/94
N	FE-16-94	BN	Essex	MT	07/05/94
N	FE-20-94	ARR	Clear Site	AK	09/20/94
N	FE-26-94	UP	Donaldsonville	LA	10/17/94
	FE-28-94	PTRA	Houston	TX	11/10/94

**FE Struck by Other Crew?**

<b>FE struck by other crew</b>	<b>Report #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	13				
no	52				
blank	3				
N	FE-29-94	CR	Painted Post	NY	11/15/94
N	FE-31-94	CR	Campbell Hall	NY	12/06/94
N	FE-32-94	UP	Thorton	CA	12/13/94
N	FE-11-93	SP	Guadalupe	CA	03/27/93
Y	FE-13-93	CSX	Dwale	KY	04/13/93
Y	FE-20-93	ATSF	El Paso	TX	05/22/93
N	FE-22-93	SEPTA	Devon	PA	06/04/93
N	FE-23-93	IC	Fulton	KY	06/07/93
N	FE-26-93	CR	Anderson	IN	07/15/93
N	FE-27-93	UP	Pryor	OK	08/04/93
N	FE-30-93	SP	Tracy	CA	08/11/93
Y	FE-31-93	ATSF	Evandale	TX	08/12/93
N	FE-35-93	ATSF	Carlsbad	NM	09/02/93
N	FE-40-93	SOO	Leal	ND	10/19/93
N	FE-46-93	ATSF	Farewell	TX	11/12/93
N	FE-47-93	GC	Macon	GA	11/13/93
Y	FE-49-93	SOU	Atlanta	GA	12/05/93
N	FE-53-93	CR	Brook Park	OH	12/30/93
N	FE-03-92	BN	Willmar	MN	01/28/92
N	FE-04-92	AGC	Polk County	FL	01/30/92
N	FE-08-92	FEC	Fort Pierce	FL	03/11/92
N	FE-09-92	ATSF	Cheto	AZ	04/09/92
N	FE-14-92	ATSF	Escondido	CA	06/01/92
	FE-15-92	BN	Seattle	WA	06/01/92
N	FE-16-92	IHRC	Henderson	KY	06/02/92
N	FE-18-92	CNW	Northlake	IL	06/20/92
Y	FE-20-92	SSW	Conlen Siding	TX	07/07/92
	FE-22-92	UP	Portland	OR	07/25/92
Y	FE-30-92	GBW	Wisconsin	WI	07/24/92
N	FE-33-92	BN	Omaha	NE	10/15/92
N	FE-34-92	GTW	Dearborn	MI	10/23/92
N	FE-39-92	TTIS	Maysville	KY	11/16/92
Y	FE-36-97	BNSF	Emporia	KS	12/02/97
N	FE-45-97	UP	Boise	ID	12/26/97



**Was FE Riding on Side of Locomotive/Equipment?**

<b>FE riding side</b>	<b>Report #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	9				
no	7				
blank	52				
N	FE-31-96	IC	Chicago	IL	12/18/96
N	FE-30-96	UP	Clinton	IA	12/16/96
N	FE-24-96	UP	Eagle Pass	TX	10/07/96
N	FE-22-96	DGNO	Dallas	TX	09/03/96
N	FE-17-96	NS	Sidney	ID	07/07/96
N	FE-12-96	CSX	Charlotte	NC	06/15/96
N	FE-09-96	BRC	Bedford Park	IL	03/20/96
Y	FE-02-97	UP	S Fontana	CA	01/12/97
	FE-04-97	UP	Mason City	IA	01/29/97
	FE-05-97	CR	Burns Harbor	IN	02/02/97
	FE-16-97	CMRC	Bay City	MI	06/06/97
	FE-19-97	NS	Rowesville	SC	06/24/97
	FE-22-97	MNCW	Stamford	CT	07/18/97
	FE-32-97	MRL	Laurel	MT	10/16/97
	FE-02-95	CR	Indianapolis	IN	01/11/95
	FE-09-95	CR	St. James	OH	02/17/95
	FE-11-95	ATSF	Amarillo	TX	02/24/95
	FE-12-95	NS	Aiken	SC	03/02/95
	FE-16-95	WC	Argoe	WI	04/06/95
	FE-17-95	SP	Bassett	CA	03/21/95
	FE-18-95	CSXT	Evansville	IN	05/03/95
	FE-23-95	CR	Hershey	PA	07/21/95
	FE-29-95	CSXT	Riverdale	IL	10/04/95
	FE-33-95	NS	Toledo	OH	12/11/95
Y	FE-34-95	CSXT	Monroe	NC	12/14/95
	FE-02-94	BN	Hastings	NE	01/04/94
	FE-03-94	BN	Amarillo	TX	01/14/94
	FE-04-94	CSXT	Bainbridge	GA	01/18/94
Y	FE-06-94	UP	Fall City	NE	01/20/94
Y	FE-12-94	SP	Houston	TX	04/12/94
	FE-16-94	BN	Essex	MT	07/05/94
	FE-20-94	ARR	Clear Site	AK	09/20/94
	FE-26-94	UP	Donaldsonville	LA	10/17/94
	FE-28-94	PTRA	Houston	TX	11/10/94

**Was FE Riding on Side of Locomotive/Equipment?**

<b>FE riding side</b>	<b>Report #</b>	<b>Railroad</b>	<b>City</b>	<b>State</b>	<b>Date</b>
yes	9				
no	7				
blank	52				
	FE-29-94	CR	Painted Post	NY	11/15/94
	FE-31-94	CR	Campbell Hall	NY	12/06/94
	FE-32-94	UP	Thorton	CA	12/13/94
	FE-11-93	SP	Guadalupe	CA	03/27/93
	FE-13-93	CSX	Dwale	KY	04/13/93
	FE-20-93	ATSF	El Paso	TX	05/22/93
	FE-22-93	SEPTA	Devon	PA	06/04/93
	FE-23-93	IC	Fulton	KY	06/07/93
	FE-26-93	CR	Anderson	IN	07/15/93
	FE-27-93	UP	Pryor	OK	08/04/93
	FE-30-93	SP	Tracy	CA	08/11/93
	FE-31-93	ATSF	Evandale	TX	08/12/93
	FE-35-93	ATSF	Carlsbad	NM	09/02/93
Y	FE-40-93	SOO	Leal	ND	10/19/93
Y	FE-46-93	ATSF	Farewell	TX	11/12/93
	FE-47-93	GC	Macon	GA	11/13/93
	FE-49-93	SOU	Atlanta	GA	12/05/93
Y	FE-53-93	CR	Brook Park	OH	12/30/93
	FE-03-92	BN	Willmar	MN	01/28/92
	FE-04-92	AGC	Polk County	FL	01/30/92
Y	FE-08-92	FEC	Fort Pierce	FL	03/11/92
Y	FE-09-92	ATSF	Cheto	AZ	04/09/92
	FE-14-92	ATSF	Escondido	CA	06/01/92
	FE-15-92	BN	Seattle	WA	06/01/92
	FE-16-92	IHRC	Henderson	KY	06/02/92
	FE-18-92	CNW	Northlake	IL	06/20/92
	FE-20-92	SSW	Conlen Siding	TX	07/07/92
	FE-22-92	UP	Portland	OR	07/25/92
	FE-30-92	GBW	Wisconsin	WI	07/24/92
	FE-33-92	BN	Omaha	NE	10/15/92
	FE-34-92	GTW	Dearborn	MI	10/23/92
	FE-39-92	TTIS	Maysville	KY	11/16/92
	FE-36-97	BNSF	Emporia	KS	12/02/97
	FE-45-97	UP	Boise	ID	12/26/97

**FE Struck by own Equipment**

**struck by own  
equipment**

yes 48  
no 19  
blank 1

	Report #	Railroad	City	State	Date
Y	FE-31-96	IC	Chicago	IL	12/18/96
Y	FE-30-96	UP	Clinton	IA	12/16/96
Y	FE-24-96	UP	Eagle Pass	TX	10/07/96
N	FE-22-96	DGNO	Dallas	TX	09/03/96
N	FE-17-96	NS	Sidney	ID	07/07/96
Y	FE-12-96	CSX	Charlotte	NC	06/15/96
Y	FE-09-96	BRC	Bedford Park	IL	03/20/96
Y	FE-02-97	UP	S Fontana	CA	01/12/97
Y	FE-04-97	UP	Mason City	IA	01/29/97
N	FE-05-97	CR	Burns Harbor	IN	02/02/97
Y	FE-16-97	CMRC	Bay City	MI	06/06/97
Y	FE-19-97	NS	Rowesville	SC	06/24/97
N	FE-22-97	MNCW	Stamford	CT	07/18/97
Y	FE-32-97	MRL	Laurel	MT	10/16/97
Y	FE-02-95	CR	Indianapolis	IN	01/11/95
Y	FE-09-95	CR	St. James	OH	02/17/95
N	FE-11-95	ATSF	Amarillo	TX	02/24/95
Y	FE-12-95	NS	Aiken	SC	03/02/95
Y	FE-16-95	WC	Argoe	WI	04/06/95
Y	FE-17-95	SP	Bassett	CA	03/21/95
N	FE-18-95	CSXT	Evansville	IN	05/03/95
Y	FE-23-95	CR	Hershey	PA	07/21/95
Y	FE-29-95	CSXT	Riverdale	IL	10/04/95
Y	FE-33-95	NS	Toledo	OH	12/11/95
Y	FE-34-95	CSXT	Monroe	NC	12/14/95
Y	FE-02-94	BN	Hastings	NE	01/04/94
N	FE-03-94	BN	Amarillo	TX	01/14/94
Y	FE-04-94	CSXT	Bainbridge	GA	01/18/94
N	FE-06-94	UP	Fall City	NE	01/20/94
Y	FE-12-94	SP	Houston	TX	04/12/94
Y	FE-16-94	BN	Essex	MT	07/05/94
N	FE-20-94	ARR	Clear Site	AK	09/20/94
Y	FE-26-94	UP	Donaldsonville	LA	10/17/94
	FE-28-94	PTRA	Houston	TX	11/10/94

### FE Struck by own Equipment

struck by own equipment	Report #	Railroad	City	State	Date
yes	48				
no	19				
blank	1				
Y	FE-29-94	CR	Painted Post	NY	11/15/94
N	FE-31-94	CR	Campbell Hall	NY	12/06/94
Y	FE-32-94	UP	Thorton	CA	12/13/94
Y	FE-11-93	SP	Guadalupe	CA	03/27/93
N	FE-13-93	CSX	Dwale	KY	04/13/93
N	FE-20-93	ATSF	El Paso	TX	05/22/93
N	FE-22-93	SEPTA	Devon	PA	06/04/93
Y	FE-23-93	IC	Fulton	KY	06/07/93
Y	FE-26-93	CR	Anderson	IN	07/15/93
Y	FE-27-93	UP	Pryor	OK	08/04/93
Y	FE-30-93	SP	Tracy	CA	08/11/93
N	FE-31-93	ATSF	Evandale	TX	08/12/93
Y	FE-35-93	ATSF	Carlsbad	NM	09/02/93
Y	FE-40-93	SOO	Leal	ND	10/19/93
Y	FE-46-93	ATSF	Farewell	TX	11/12/93
Y	FE-47-93	GC	Macon	GA	11/13/93
N	FE-49-93	SOU	Atlanta	GA	12/05/93
Y	FE-53-93	CR	Brook Park	OH	12/30/93
Y	FE-03-92	BN	Willmar	MN	01/28/92
Y	FE-04-92	AGC	Polk County	FL	01/30/92
Y	FE-08-92	FEC	Fort Pierce	FL	03/11/92
Y	FE-09-92	ATSF	Cheto	AZ	04/09/92
Y	FE-14-92	ATSF	Escondido	CA	06/01/92
Y	FE-15-92	BN	Seattle	WA	06/01/92
Y	FE-16-92	IHRC	Henderson	KY	06/02/92
Y	FE-18-92	CNW	Northlake	IL	06/20/92
N	FE-20-92	SSW	Conlen Siding	TX	07/07/92
Y	FE-22-92	UP	Portland	OR	07/25/92
N	FE-30-92	GBW	Wisconsin	WI	07/24/92
N	FE-33-92	BN	Omaha	NE	10/15/92
Y	FE-34-92	GTW	Dearborn	MI	10/23/92
Y	FE-39-92	TTIS	Maysville	KY	11/16/92
N	FE-36-97	BNSF	Emporia	KS	12/02/97
Y	FE-45-97	UP	Boise	ID	12/26/97

SOFA WORKING GROUP

FEs

organized by

Emergency Response

Group 18

**Emergency Response, Emergency Response Procedures,  
and Timely Response**

	ER	ER	ER	Report #	Railroad	City	State	Date
		proceeds. followed	timely resp.					
<b>Yes equals</b>	52	8	39					
Y	Y	Y	Y	FE-31-96	IC	Chicago	IL	12/18/96
	Y	Y	Y	FE-30-96	UP	Clinton	IA	12/16/96
				FE-24-96	UP	Eagle Pass	TX	10/07/96
Y	Y	Y	Y	FE-22-96	DGNO	Dallas	TX	09/03/96
Y	Y	Y	Y	FE-17-96	NS	Sidney	ID	07/07/96
Y	Y	Y	Y	FE-12-96	CSX	Charlotte	NC	06/15/96
Y	Y	Y	Y	FE-09-96	BRC	Bedford Park	IL	03/20/96
				FE-02-97	UP	S Fontana	CA	01/12/97
	Y	Y	Y	FE-04-97	UP	Mason City	IA	01/29/97
	Y	Y	Y	FE-05-97	CR	Burns Harbor	IN	02/02/97
				FE-16-97	CMRC	Bay City	MI	06/06/97
				FE-19-97	NS	Rowesville	SC	06/24/97
				FE-22-97	MNCW	Stamford	CT	07/18/97
				FE-32-97	MRL	Laurel	MT	10/16/97
Y		Y	Y	FE-02-95	CR	Indianapolis	IN	01/11/95
Y		Y	Y	FE-09-95	CR	St. James	OH	02/17/95
Y				FE-11-95	ATSF	Amarillo	TX	02/24/95
				FE-12-95	NS	Aiken	SC	03/02/95
Y				FE-16-95	WC	Argoe	WI	04/06/95
		Y	Y	FE-17-95	SP	Bassett	CA	03/21/95
Y		Y	Y	FE-18-95	CSXT	Evansville	IN	05/03/95
Y		Y	Y	FE-23-95	CR	Hershey	PA	07/21/95
Y		Y	Y	FE-29-95	CSXT	Riverdale	IL	10/04/95
Y		Y	Y	FE-33-95	NS	Toledo	OH	12/11/95
Y		Y	Y	FE-34-95	CSXT	Monroe	NC	12/14/95
Y				FE-02-94	BN	Hastings	NE	01/04/94
				FE-03-94	BN	Amarillo	TX	01/14/94
Y		N	N	FE-04-94	CSXT	Bainbridge	GA	01/18/94
Y		Y	Y	FE-06-94	UP	Fall City	NE	01/20/94
Y		Y	Y	FE-12-94	SP	Houston	TX	04/12/94
Y		N	N	FE-16-94	BN	Essex	MT	07/05/94
Y				FE-20-94	ARR	Clear Site	AK	09/20/94
Y		Y	Y	FE-26-94	UP	Donaldsonville	LA	10/17/94
Y		Y	Y	FE-28-94	PTRA	Houston	TX	11/10/94

**Emergency Response, Emergency Response Procedures,  
and Timely Response**

	ER	ER	ER	Report #	Railroad	City	State	Date
		proceeds. followed	timely resp.					
<b>Yes equals</b>	52	8	39					
	Y		N	FE-29-94	CR	Painted Post	NY	11/15/94
	Y		Y	FE-31-94	CR	Campbell Hall	NY	12/06/94
	Y		N	FE-32-94	UP	Thorton	CA	12/13/94
	Y		Y	FE-11-93	SP	Guadalupe	CA	03/27/93
				FE-13-93	CSX	Dwale	KY	04/13/93
	Y		Y	FE-20-93	ATSF	El Paso	TX	05/22/93
	Y		Y	FE-22-93	SEPTA	Devon	PA	06/04/93
	Y		Y	FE-23-93	IC	Fulton	KY	06/07/93
	Y		Y	FE-26-93	CR	Anderson	IN	07/15/93
	Y		N	FE-27-93	UP	Pryor	OK	08/04/93
	Y		Y	FE-30-93	SP	Tracy	CA	08/11/93
	Y			FE-31-93	ATSF	Evandale	TX	08/12/93
	Y		Y	FE-35-93	ATSF	Carlsbad	NM	09/02/93
	Y		Y	FE-40-93	SOO	Leal	ND	10/19/93
				FE-46-93	ATSF	Farewell	TX	11/12/93
				FE-47-93	GC	Macon	GA	11/13/93
	Y			FE-49-93	SOU	Atlanta	GA	12/05/93
	Y		Y	FE-53-93	CR	Brook Park	OH	12/30/93
	Y			FE-03-92	BN	Willmar	MN	01/28/92
	Y		Y	FE-04-92	AGC	Polk County	FL	01/30/92
	Y		Y	FE-08-92	FEC	Fort Pierce	FL	03/11/92
	Y			FE-09-92	ATSF	Cheto	AZ	04/09/92
	Y			FE-14-92	ATSF	Escondido	CA	06/01/92
	Y			FE-15-92	BN	Seattle	WA	06/01/92
	Y		Y	FE-16-92	IHRC	Henderson	KY	06/02/92
	Y		Y	FE-18-92	CNW	Northlake	IL	06/20/92
				FE-20-92	SSW	Conlen Siding	TX	07/07/92
	Y		N	FE-22-92	UP	Portland	OR	07/25/92
	Y			FE-30-92	GBW	Wisconsin	WI	07/24/92
	Y		Y	FE-33-92	BN	Omaha	NE	10/15/92
	Y		Y	FE-34-92	GTW	Dearborn	MI	10/23/92
	Y		Y	FE-39-92	TTIS	Maysville	KY	11/16/92
	Y		Y	FE-36-97	BNSF	Emporia	KS	12/02/97
	Y		Y	FE-45-97	UP	Boise	ID	12/26/97

# SOFA WORKING GROUP

## Section III:

### Partial SOFA Matrix

1975 to 1991





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
REPORT #	Railroad	City	State	Date	Day	Time	Temp	D/N	Visibility	Grnd/Foot	Wind	FE Code	Age	Service
4	BOCT	McCook	IL	02/13/1987	6	13:15							57	35
6	CR	Altoona	PA	03/05/1987	5	10:15							63	35
8	NW	New Haven	IN	03/28/1987	7	10:45							36	16
9	CNW	Hayward	WI	03/28/1987	7	12:45							60	14
11	ATK	New York	NY	04/10/1987	6	20:47							35	9
12	MCPA	Palmetto	FL	04/13/1987	2	8:45							35	0.75
14	CO	Cincinnati	OH	05/09/1987	7	6:05							59	32
25	CR	Campbell Hall	NY	09/11/1987	6	22:15							52	33
26	CRN	Plymouth	NC	09/29/1987	3	9:00							48	19
1	UP	Thornton	ID	01/02/1986	5	18:05							37	10
2	SBD	Lakeland	FL	01/07/1986	3	2:10							38	11.17
3	MP	Mercedes	TX	01/06/1986	2	13:30							32	12
5	BN	Inverness	MT	02/10/1986	2	20:45							33	6
11	BOCT	Connellsville	PA	03/25/1986	3	4:40							29	5
15	UP	Durand	KS	05/04/1986	1	21:40							37	13.83
16	CR	Camden	NJ	05/20/1986	3	1:30							56	34
17	ICG	Carrier Mills	IL	05/21/1986	4	12:05							53.83	27.75
22	CR	Elyria	OH	07/10/1986	5	7:05							53	2.17
24	SOU	Lynchburg	VA	07/11/1986	6	2:00							43	24
26	ATK	Cheektowsgs	NY	07/29/1986	3	4:07							34	13.5
27	DWP	Ranier Yard	MN	07/31/1986	5	21:10							51	34
37	MKT	Houston	TX	09/19/1986	6	0:15							38	14
1	BO	Piedmont	WV	01/30/1985	4	4:30							36	9.5
2	ATSF	Medicine Lodge	KS	01/30/1985	4	23:10							35	12
4	NW	Fontaine	VA	04/08/1985	2	18:30							38	6
9	BO	East Monroe	OH	04/25/1985	5	0:25							55	31
11	MP	Kansas City	KS	04/30/1985	3	2:00							40	16.5
13	ATK	Eddystone	PA	06/11/1985	3	5:35							51	15
16	SEPTA	Philadelphia	PA	06/27/1985	5	15:10							31	9.5
18	ATSF	Cleburne	TX	07/13/1985	7	21:30							31	11
33	NCYR	Rocky Mount	NC	12/20/1985	6	9:35							30	2
36	CO	Wharton	WV	09/28/1985	7	9:15							50	15
3	TCG	Ajo	AZ	01/22/1984	1	14:40							67	34
8	DQE	Dierks	AR	03/02/1984	6	13:00							27	2.42
9	MBRR	Cromwell	AL	03/07/1984	4	8:15							40	13.33
10	NW	Roanoke	VA	03/31/1984	7	0:35							26	3.75







1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
REPORT #	Railroad	City	State	Date	Day	Time	Temp	D/N	Visibility	Grnd/Foot	Wind	FE Code	Age	Service
26	MP	McGehee	AR	04/19/1979	5	21:15							23	5
27	CO	Livonia	MI	04/23/1979	2	23:25							21	2.75
28	AGS	Boligee	AL	04/29/1979	1	22:35							31	1.92
29	MP	Paragould	AR	05/01/1979	3	17:10							36	7
34	CR	Fulton	NY	06/02/1979	7	15:40							53	9
35	LN	Corbin	KT	06/05/1979	3	4:05							26	5
37	BO	Lockland	OH	06/19/1979	3	17:30							56	12
38	CNW	Des Moines	IA	06/19/1979	3	22:05							19	0.038
41	ICG	Vicksburg	MS	07/18/1979	4	1:25							27	5
44	CNW	Green Bay	WI	07/27/1979	6	23:15							46	24
47	ATSF	La Junta	CO	08/11/1979	7	10:15							37	2.5
48	CNW	Chicago	IL	08/12/1979	1	3:42							40	19
56	ICG	Mobile	AL	10/03/1979	4	9:20							43	24
64	ATSF	Clovis	NM	11/07/1979	4	23:00							22	2.5
65	LN	Gattiff	KT	11/11/1979	1	9:15							31	0.67
67	UP	Wilmington	CA	11/23/1979	6	3:15							28	9
68	ATSF	Temple	TX	11/28/1979	4	3:25							20	0.25
73	ATSF	Barstow	CA	12/14/1979	6	16:46							28	2
1	MILW	Great Falls	MT	01/05/1978	5	9:15							37	6
4	SLSF	Oklahoma City	OK	01/11/1978	4	15:25							37	9
5	ATSF	Rincon	NM	01/13/1978	6	20:03							38	19
9	CR	Bridgeton	NJ	02/08/1978	4	1:10							36	5
10	BN	Minot	ND	02/09/1978	5	3:30							25	0.75
12	ATK	Metuchen	NJ	02/14/1978	3	15:20							#NA	#NA
22	CNW	Racine Junction	WI	03/28/1978	3	1:25							50	22
28	CSS	Bailly	IN	05/12/1978	6	22:15							55	31
29	MP	Kansas City	MO	05/21/1978	1	9:30							48	27
31	CR	Newville	PA	05/25/1978	5	14:45							42	22
33	CNW	Melrose Park	IL	06/13/1978	3	1:15							25	0.5
34	SSW	Texarkana	TX	06/20/1978	3	3:35							23	5
39	GTW	Durand	MI	07/01/1978	7	4:30							23	1.33
41	ATSF	Houston	TX	07/07/1978	6	6:10							26	4.92
42	UP	Cosmopolis	WA	07/07/1978	6	22:47							55	34
47	CGA	Gordon	GA	08/08/1978	3	1:00							36	4
49	CNW	Melrose Park	IL	08/12/1978	7	18:10							59	31
56	MP	Tioga	LA	08/31/1978	5	#NA							26	0.96



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
REPORT #	Railroad	City	State	Date	Day	Time	Temp	D/N	Visibility	Grnd/Foot	Wind	FE Code	Age	Service
32	BM	West Cambridge	MA	05/20/1977	6	23:03							31	11
33	SP	Houston	TX	05/23/1977	2	6:05							23	0.085
38	LN	Atlanta	GA	06/22/1977	4	18:20							#NA	#NA
40	UP	Don	ID	06/24/1977	6	22:25							27	#NA
43	BN	Albia	IA	06/27/1977	2	14:30							61	39.67
46	CR	Russel	MA	07/02/1977	7	17:05							48	6.5
47	NW	Adrian	MI	07/08/1977	6	13:10							35	7
50	BN	Minneapolis	MN	07/16/1977	7	15:10							47	21
51	ICG	Memphis	TN	07/16/1977	7	19:50							58	34
two deaths in one FE	56	ATSF	Thorn	CA	07/26/1977	3	20:30						48	21
		ATSF	Thorn	CA	07/26/1977	3	20:30						32	11
58	DMIR	Protor	MN	08/04/1977	5	22:52							55	29
59	CR	Buffalo	NY	08/04/1977	5	23:50							47	21
64	MKT	Smithville	TX	08/18/1977	5	13:40							19	1.92
67	CNW	Mason	IA	08/27/1977	7	4:50							61	30
68	SOO	Minneapolis	MN	08/29/1977	2	5:55							19	0.12
71	UP	City of Industry	CA	09/19/1977	2	1:15							53	9
72	LN	Louisville	KT	09/28/1977	4	9:25							57	32
73	CR	Lansing	MI	09/29/1977	5	19:35							27	7.5
75	UP	Kansas City	KS	10/27/1977	5	21:15							29	7
77	LN	Louisville	KY	11/10/1977	5	1:13							23	0.9
80	OUR&D	Ogden	UT	11/16/1977	4	11:15							18	0.25
82	CR	Cleveland	OH	11/26/1977	7	17:30							24	5
83	LN	Atlanta	GA	12/01/1977	5	3:30							40	4
84	DM	Cheboygan	MI	12/01/1977	5	12:10							43	5.83
87	PBR	Sparrows Point	MD	12/08/1977	5	5:30							54	26.67
88	CR	Stemmers Run	MD	12/11/1977	1	20:30							#NA	13
89	SP	Baldwin	LA	12/14/1977	4	2:01							57	33
91	UP	Cheyenne	WY	12/17/1977	7	6:05							31	0.384
92	L&NW	Gibsland	LA	12/21/1977	4	0:20							19	1.67
1	NW	Winston-Salem	NC	01/06/1976	3	20:40							31	10.5
2	BO	Cumberland	MD	01/06/1976	3	21:10							57	25
4	CUVA	Cleveland	OH	01/14/1976	4	16:30							51	23
5	PC	Portville	NY	01/15/1976	5	12:05							58	34
6	CNW	Belle Plaine	IA	01/20/1976	3	4:53							36	2.42
7	PC	Woodville	OH	02/03/1976	3	14:55							#NA	26





