

***GOLDEN TRIANGLE
BUSINESS ROUNDTABLE***



***CONTRACTOR SAFETY
SURVEY
2010 REPORT***

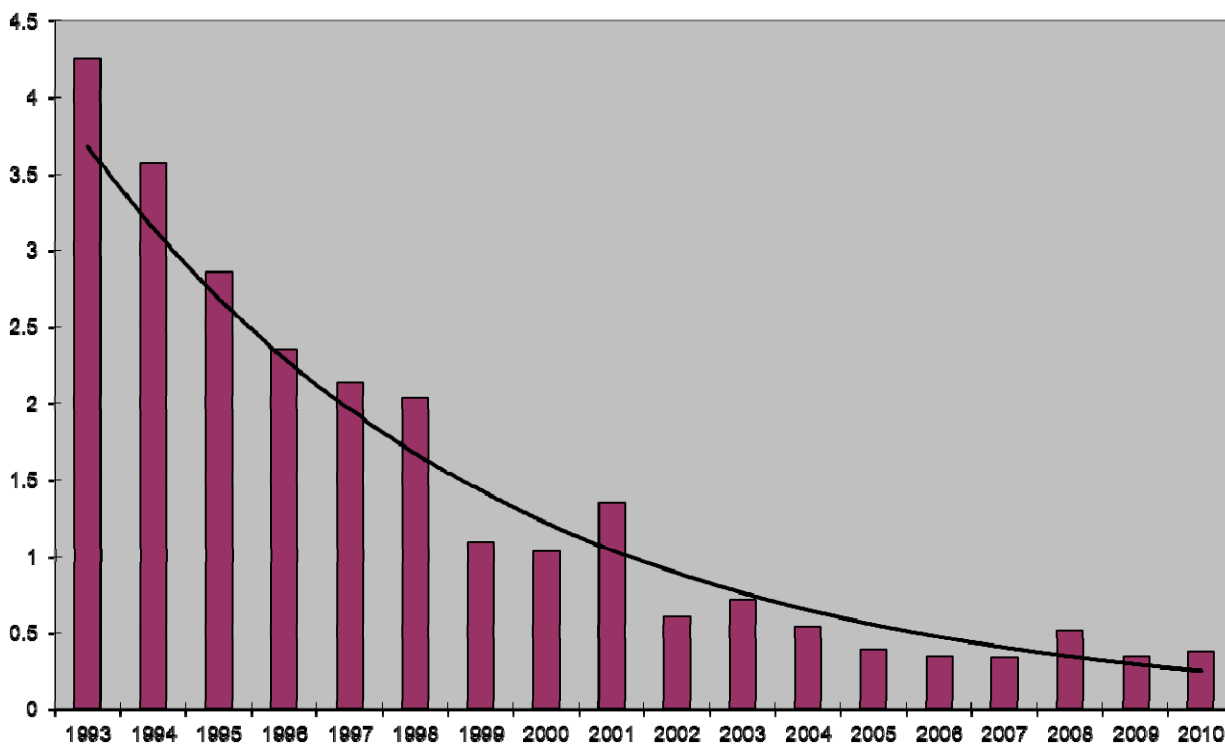
Executive Summary

This report is compiled by the Industrial Safety Training Council from voluntary responses to the Golden Triangle Business Roundtable Contractor Incident Data Survey. Historical data for 1993 through 2009 is reported here as well as the results received from the 2010 survey.

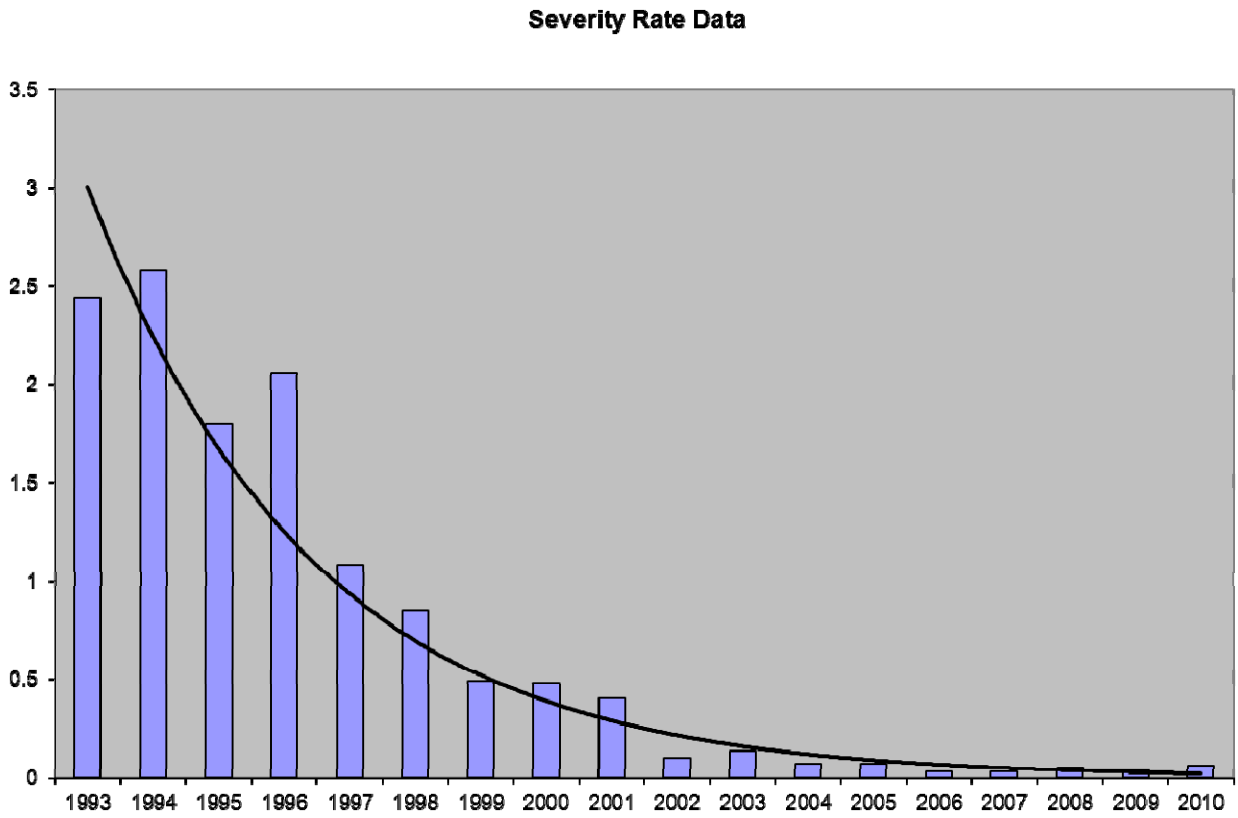
Trends

1. The total number of OSHA Recordable Incidents increased for 2010.
2. The Experience Modifier Rate remained the same as compared to 2009.
3. A decrease in incident rates 1993-2010, with the exception of a slight increase in 2001, 2003, 2008 and 2010 as compared to the previous year.

Recordable Incidence Rate



4. Incident severity rate has decreased from 1996-2010, with the exception a slight increase in 2003, 2008 and 2010.



5. Golden Triangle Area statistics reported are far below national trends as reported by the Bureau of Labor Statistics, U.S. Department of Labor.

Incident Specific Analysis - 2010

Most frequent response for each category:

1. Type of contact: STRUCK BY/AGAINST
2. Nature of illness/injury: FRACTURE, CUT/PUNCTURE
3. Body part injured: FINGER/HAND
4. Possible causes at time of incident: DECISION MAKING and PHYSICAL ACT
5. Pre-existing causes: JOB PROCEDURES, RISK TAKING and COMMUNICATION

This data was compiled from survey responses reporting more than 42 million exposure hours and 82 recordable incidents, 13 with lost time, 17 restricted duty and 52 medical treatment cases.

Tables of all survey results can be found in the Appendix.

Purpose

This Contractor Incident Data Survey is conducted to collect data on the contractor accident experience and safety performance for the Golden Triangle Area. Information specific to each OSHA Recordable accident is analyzed to identify target areas where the greatest impact can be made to eliminate accidents.

Scope

Data collection surveys are distributed requesting data from all Contractor employers currently listed as subscribers to the Industrial Safety Training Council. Historical data for the years 1993-2000 has been compiled to include the following:

- Total number of OSHA Recordable incidents
- Total number of lost workday cases
- Exposure hours
- Experience Modifier Rate
- Standard Industrial Classification (SIC) Code

Subsequent annual surveys request the following information (2001-2008):

- Exposure hours
- Statistics from OSHA 200/300 Log
- Number and types of OSHA recordables
 - * Type of contact
 - * Nature of illness/injury
 - * Body part injured
 - * Possible incident/accident causes

Subsequent annual surveys request the following information (2009):

- Restricted Duty and Restricted Work Days
- Demographic Information
 - * Sex
 - * Age
 - * Race
 - * Craft
 - * Number of Years in Craft
 - * Type of Facility Occurred At
 - * Length of Time at Facility Occurred At

Examples of all forms used can be found in the Appendix.

Disclaimer

This report is a compilation of the responses to the annual survey conducted of area contractors by the Golden Triangle Business Roundtable. Those not responding are not in the compilation and so the reader should not assume that the compilation represents the experience of all area contractors or even all area contractors working at Roundtable member facilities, only the experience of those responding to the survey. As a matter of policy, the Roundtable has maintained the confidentiality of those responding and the sites for which they have responded.

Methodology

In order to analyze the data received, information was entered into an Excel spreadsheet by year with the statistical formula established for:

Incident Rate*

$$\frac{\text{Total OSHA Recordable Incidents} \times 200,000}{\text{Exposure Hours}}$$

Incident Severity Rate*

$$\frac{\text{Total Lost Workday Cases} \times 200,000}{\text{Exposure Hours}}$$

Average Experience Modifier

$$\text{Average} = \frac{\text{Sum of EMR numbers}}{\text{total responses}}$$

Percent Distributions

$$\% = \frac{\text{category responses}}{\text{total responses}} \times 100$$

*where 200,000 is the base for 100 full-time workers (40 hours per week, 50 weeks per year)

Conclusions

The responses to the 2010 GTBR Safety Survey reveal that we have had a substantial decrease in Incident Rate for the overall reporting period of 1993-2010. The Severity Rate has also declined during the overall reporting period. Data reported that recordable incidents and medical treatment cases had increased as compared to 2009, however reported exposure hours had increased from 2009 to 2010. Lost time incidents also had increased as compared to 2009. Based on survey responses, reductions in the following categories are noted for the period 1993-2010.

<u>Category</u>	<u>Reduction reported</u>
Incident Rate	91%
Severity Rate	98%

The largest percentages of injuries reported by *type of contact* are as follows:

<u>2009</u>		<u>2010</u>	
Caught by/between	38%	Struck by/Against	43%
Struck by/against	20%	Caught by/Between	19%
Overexertion	13%	Slip (same level)	13%
Slip (same level)	11%	Other	8%

The largest percentages of injuries reported by *nature of illness/injury* are as follows:

<u>2009</u>		<u>2010</u>	
Fracture	35%	*Fracture, Cut/Puncture	27%
Cut/Puncture	27%	Sprain/Strain	13%
Sprain/Strain	16%	Other	11%

The largest percentages of injuries reported by *body part injured* are as follows:

<u>2009</u>		<u>2010</u>	
Finger/hand	33%	Finger/Hand	35%
Arm	11%	Face/Head	10%
*Foot/Toes, Mouth	9%	Foot/Toes	9%

*These are different categories that each experienced the same percentage of reported injuries.

The final category of information requested was possible incident/accident causes, both at the time of the incident and pre-existing causes. The results are as follows:

2009

At time of incident:

Physical Act	32%
Decision Making	23%
Tools/Equipment	19%

Pre-existing causes:

Risk Taking	48%
Job Procedures	24%
Knowledge	14%

2010

At time of incident:

Decision Making	34%
Physical Act	29%
Workplace Hazards	12%

Pre-existing causes:

Job Procedures	26%
Other	17%
*Risk Taking, Communication	14%

*These are different categories that each experienced the same percentage of reported injuries.

In 2009 we began collecting demographic information on reported incidents. The following is the breakdown of that information for 2010.

1. Sex

Female – 6%

Male – 94%

2. Age

18-25 – 15%

26-32 – 21%

33-40 – 28%

41-47 – 16%

48-55 – 15%

55 and up – 5%

3. Race

African American – 12%

American Indian – 0%

Asian – 0%

Hispanic/Latino – 24%

White – 64%

4. Craft

Boilermaker – 4%

Brick Layer – 1%

Carpenter – 11%

Cement Mason – 0%

Crane Operator – 0%

Electrical – 5%

Equipment Operator – 0%

Firewatch – 0%

Instrumentation – 0%

Insulator – 4%

Iron Worker – 4%

Laborer – 11%

Millwright – 0%

Painter – 10%

Pipefitter – 4%

Scaffold Builder – 18%

Sheet Metal – 0%

Truck Driver – 1%

Welder – 5%

Other* - 22%

*Office Manager

*Valve Tech

*Draftsman

*Pile Driver

*Hydroblaster

*Office Staff

*Baler

*Roofer

*Mechanic

*Janitor

5. Number of Years in Craft

- Less than 5 – 32%
- 5 – 10 – 47%
- 11 – 15 – 6%
- 16 – 20 – 5%
- 21 – 25 – 5%
- 25 or more – 5%

6. Type of Facility Occurred At

- Refining – 52%
- Chemical – 26%
- Power – 4%
- Pipeline – 9%
- Forrest Products – 0%
- Steel – 1%
- Manufacturing – 4%
- Office – 4%

7. Length of Time at Facility Occurred At

- Less than 6 Months – 20%
- 6 Months – 1 Year – 18%
- 1 Year – 5 Years – 18%
- 5 Years – 10 Years – 40%
- 10 Years and Up – 4%

Based off the data above the following conclusions can be made;

- Males accounted for 94% of reported accidents
- Ages 26-40 accounted for 49% of reported accidents
- White race accounted for 64% of reported accidents
- Scaffold Builders, Laborers, Carpenters and Painters accounted for 50% of reported accidents
- 79% of reported accidents had less than 10 years in their craft
- Refining and Chemical facilities had 78% of accidents occur at their locations
- 96% of reported accidents had 10 years or less time at the facility where the accident occurred.

Recommendations

1. Increase worker awareness of the physical hazards and measures to be taken to protect themselves from injury. Ensure that workers are properly trained on how to perform their job and in the ability to make good decisions. Physical Act and Decision Making are reported as leading accident causes.
2. More emphasis on hazard recognition and analysis to mitigate or remove workplace hazards.
3. Hand and finger injuries continue to be the leading injuries reported. Reinforced efforts to reduce hand injuries through awareness, diligent use of PPE, engineering controls, and training.
 - Emphasize a workplace culture where risk taking and unsafe acts are not tolerated.
 - Continue with efforts to eliminate or control workplace hazards.
 - Reinforce positive, accident free decision making in all employees.
 - Reinforce following job procedures.
 - Reinforce good, open communication with all employees.
 - Ensure employees have the knowledge (skill) to perform the task they are doing.
4. Develop a proactive approach involving line workers in a job safety analysis (JSA) to identify the potential for injury and to determine the measures to take in order to complete each task injury free.
5. Struck by/against and caught by/between has accounted for a vast majority of the injuries reported for the last five years. Increased focus on reducing this type of contact through awareness, training and hazard controls would have a dramatic impact on worker injuries.
6. Cuts and punctures and fractures have led the nature of illness/injury category for the past five years and the combined categories represent 51% of the injuries reported for 2010. Continued focus on proper use of PPE and accident free decision making could help to reduce these types of injuries. Knowledge of skills required to perform a specific task could also help to reduce these types of injuries.

APPENDIX

DATA TABLES
HISTORICAL DATA

Totals of all Data by Year

<u>Year</u>	<u>Exposure Hours</u>	<u>OSHA Recordables</u>	<u>LWD* Cases</u>
1993	27,440,266	585	316
1994	31,600,604	567	408
1995	38,165,872	546	345
1996	38,864,397	457	400
1997	39,508,566	423	214
1998	32,092,756	327	120
1999	29,101,172	160	71
2000	19,658,830	102	47
2001	13,492,250	91	27
2002	22,447,655	69	11
2003	18,577,738	67	13
2004	17,180,787	46	6
2005	16,335,135	32	6
2006	36,390,723	63	5
2007	34,659,488	59	5
2008	34,771,386	90	9
2009	31,670,125	55	7
2010	42,843,766	82	13

*LWD, Lost Work Day

Statistical Analysis by Year

	<u>Incidence Rates</u>		<u>EMR+ Average</u>
	<u>Frequency</u>	<u>Severity</u>	
1993	4.26	2.44	0.89
1994	3.58	2.58	0.80
1995	2.86	1.80	0.75
1996	2.36	2.06	0.72
1997	2.14	1.08	0.71
1998	2.04	0.75	0.70
1999	1.10	0.49	0.70
2000	1.04	0.48	0.76
2001	1.35	0.40	0.79
2002	0.61	0.10	0.69
2003	0.68	0.14	0.68
2004	0.54	0.07	0.70
2005	0.39	0.07	0.68
2006	0.35	0.03	0.70
2007	0.34	0.03	0.70
2008	0.52	0.05	0.71
2009	0.35	0.04	0.66
2010	0.38	0.06	0.66

**Bureau of Labor Statistics Estimates of
Nonfatal Occupational Injury and Illness
Incident Rate for Selected Industries
2009***

<u>Industry</u>	<u>NAICS/SIC Code</u>	<u>Incident Rates</u>	
		<u>Frequency</u>	<u>Severity</u>
Construction		4.3	2.3
Heavy Construction (except building)	237/1600	3.8	2.2
Special Trade Contractors	238/1700	4.6	2.5

**Estimates of
Nonfatal Occupational Injury and Illness
Incident Rate for Selected Industries
Golden Triangle Area, 2010**

<u>Industry</u>	<u>NAICS/SIC Code</u>	<u>Incident Rates</u>	
		<u>Frequency</u>	<u>Severity</u>
All Responses		0.38	0.06
Heavy Construction (except building)	237/1600	0.38	0.09
Special Trade Contractors	238/1700	0.39	0.05

*U.S. Department of Labor, 2009 Statistics

DATA TABLES
INCIDENT ANALYSIS

INCIDENT SPECIFIC DATA 2010

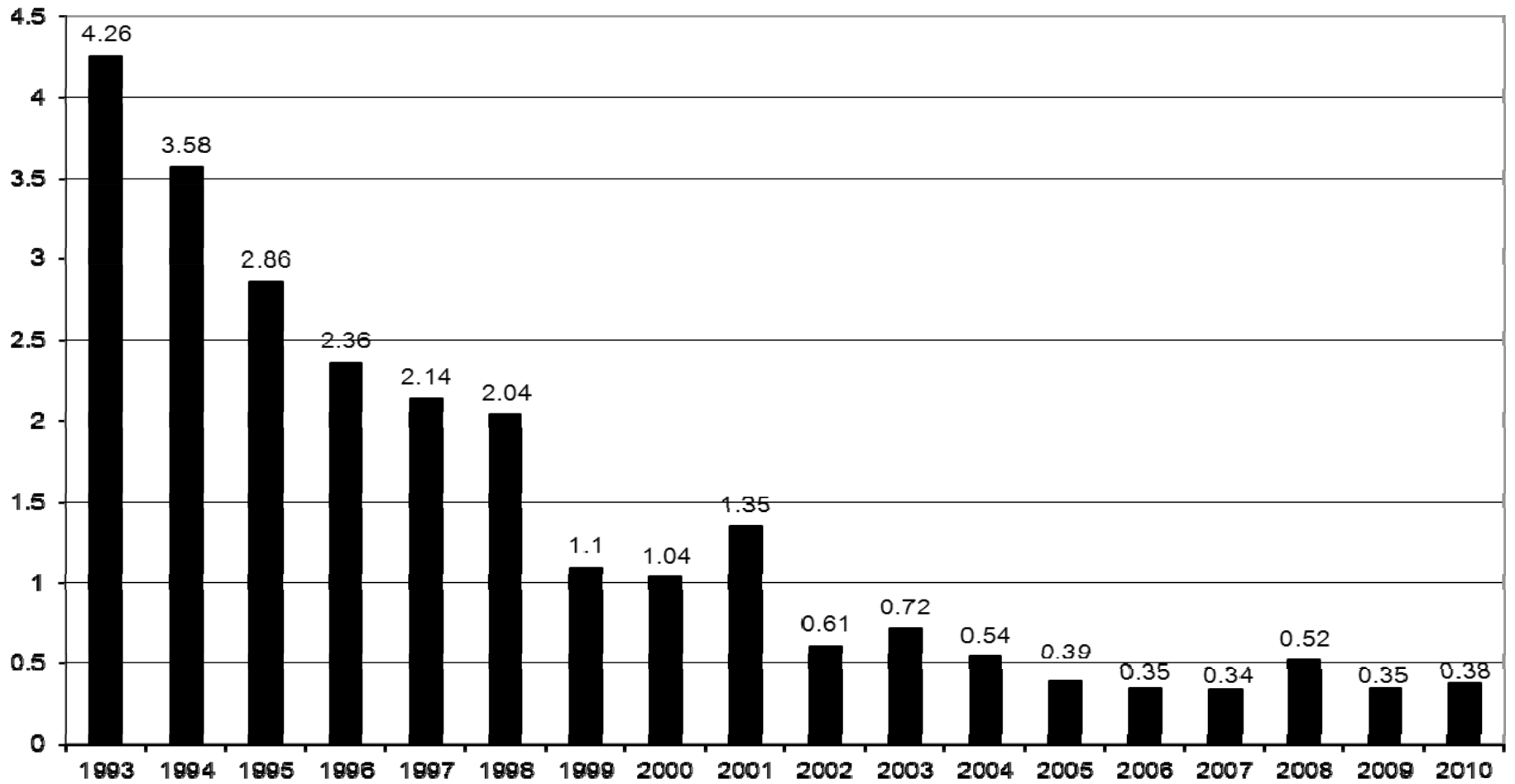
TYPE OF CONTACT	%	NATURE OF INJURY	%
STRUCK BY/AGAINST	35	42.7	DEATH
SLIP(SAME LEVEL)	11	13.4	AMPUTATION
FALL(TO LWL LVL)	5	6.1	THERMAL BURN
CAUGHT BY/BETWEEN	16	19.5	CHEMICAL BURN
ELECTRICAL EXPOSURE	0	0.0	IRRITATION/INFECTION
FIRE/EXPLOSION	1	1.2	CRUSHED
THERMAL EXPOSURE	0	0.0	CUT/PUNCTURE
TEMP EXPOSURE(OTHER)	2	2.4	BRUISE
CHEMICAL EXPOSURE	1	1.2	FRACTURE
NOISE EXPOSURE	0	0.0	SPRAIN/STRAIN
WELDING FLASH	0	0.0	JOINT DISLOCATION
RADIATION EXPOSURE	0	0.0	REPEATED TRAUMA
REPETITIVE MOTION	0	0.0	ELECTICAL SHOCK
OVEREXERTION	4	4.9	HERNIA
OTHER	7	8.5	INHALATION
			POISONING
			HEAT DISORDER
			OTHER
TOTALS	82	100	TOTALS

INCIDENT SPECIFIC DATA 2010

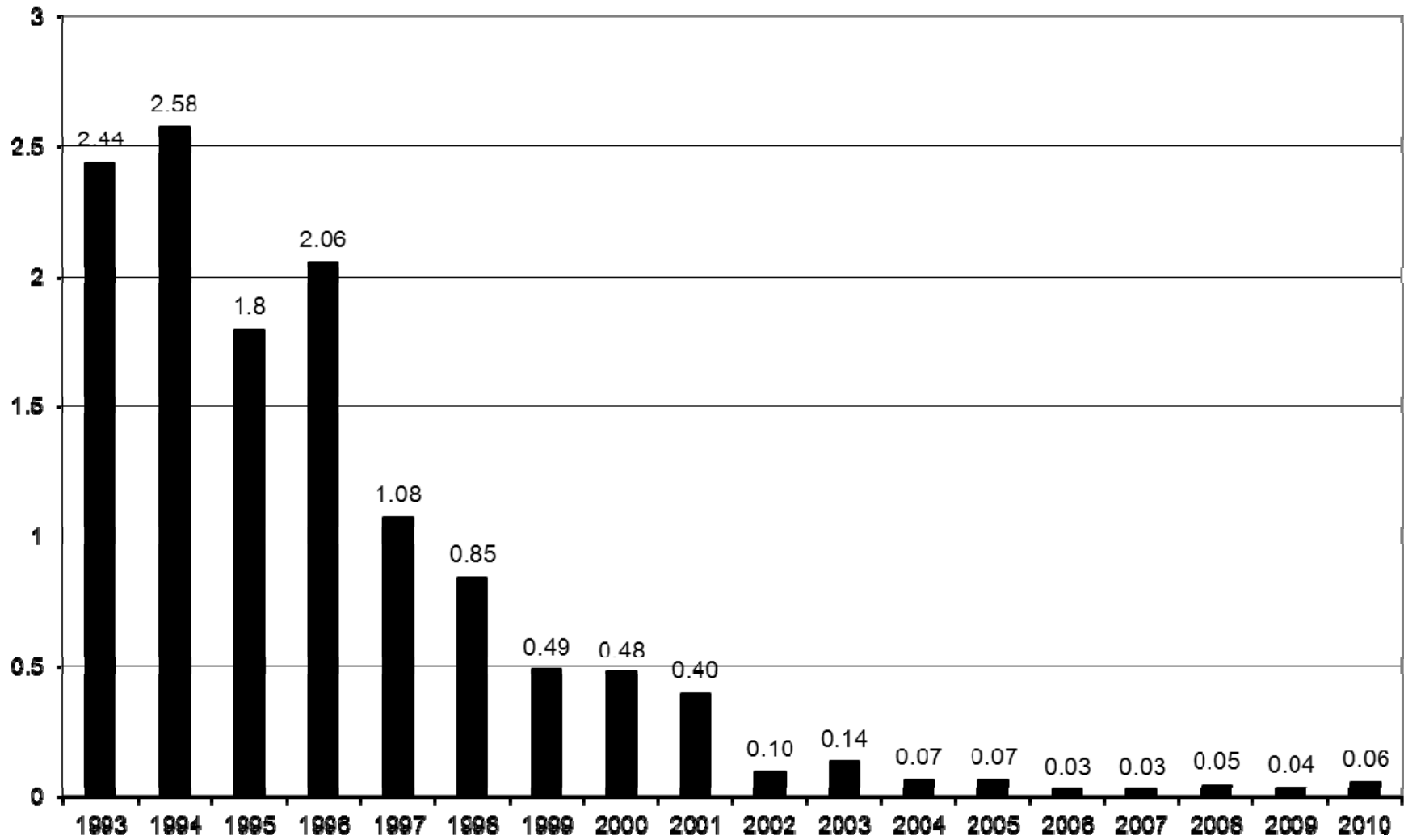
BODY PART	%	POSSIBLE CAUSES	%
SHOULDER	1	1.2	AT TIME OF INCIDENT
ELBOW	1	1.2	USE OF GUARDS
WRIST	1	1.2	USE OF PPE
FINGER/HAND	29	35.4	TOOLS/EQUIPMENT
ARM	3	3.7	WORKPLACE HAZARDS
CHEST/RIBS	1	1.2	DECISION MAKING
BACK	5	6.1	PHYSICAL ACT
HIP	2	2.4	PROCEDURES
KNEE	4	4.9	
FOOT/TOES	7	8.5	TOTALS
ANKLE	6	7.3	82
LEG	4	4.9	100
ABDOMEN	1	1.2	PRE-EXISTING CAUSES
GROIN	0	0.0	PHYSICAL INCAPACITY
EYE	4	4.9	KNOWLEDGE/SKILLS
EAR	1	1.2	INTERNAL FACTORS
FACE/HEAD	8	9.8	RISK TAKING
MOUTH	1	1.2	ENGINEERING/DESIGN
INTERNAL	0	0.0	JOB PROCEDURES
MULTIPLE	2	2.4	MAINTENANCE
OTHER	1	1.2	ERROR INDUCING
			ORG. FACTORS
			TRAINING
			COMMUNICATION
			OTHER
TOTALS	82	100.0	TOTALS

CHARTS

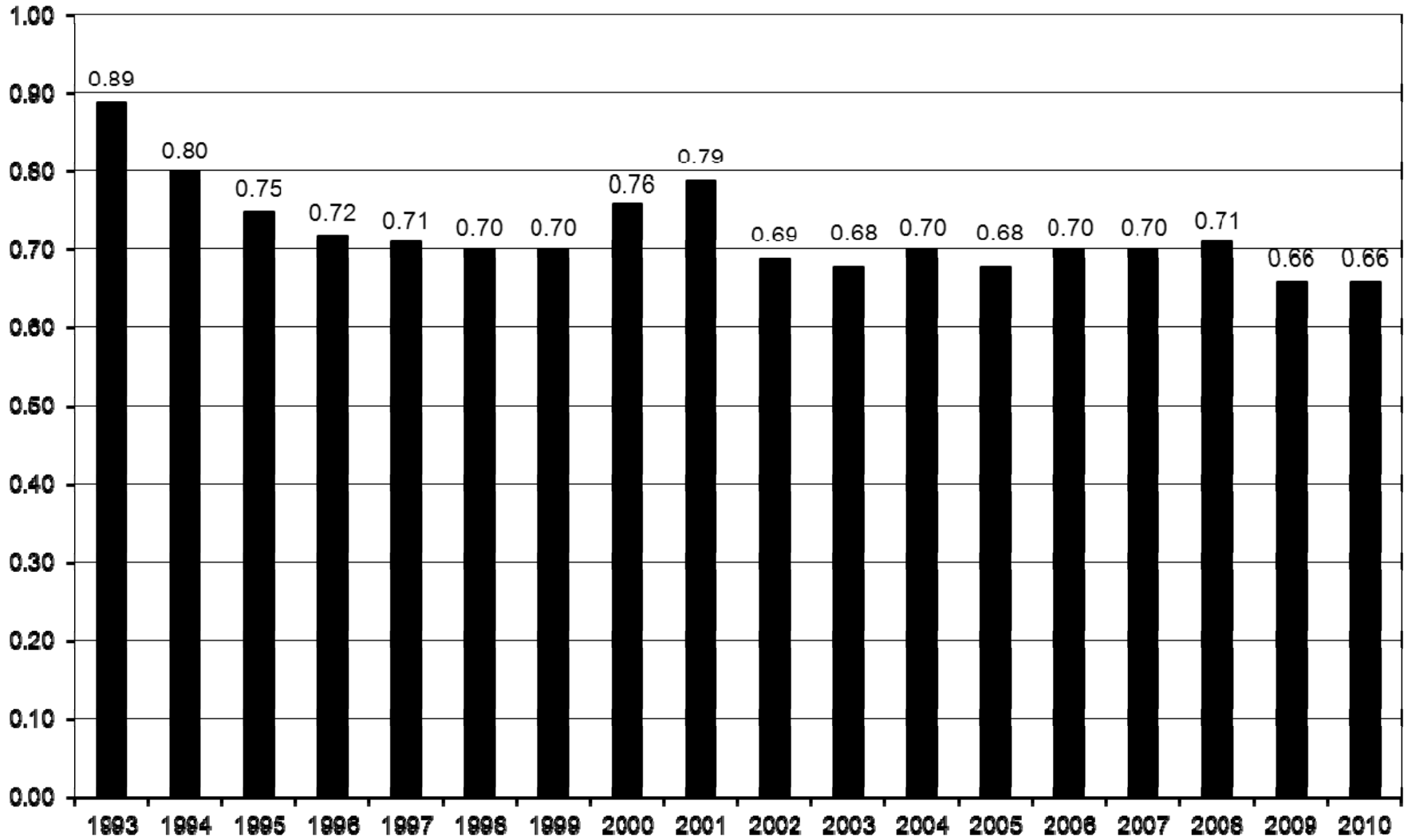
INCIDENT RATE



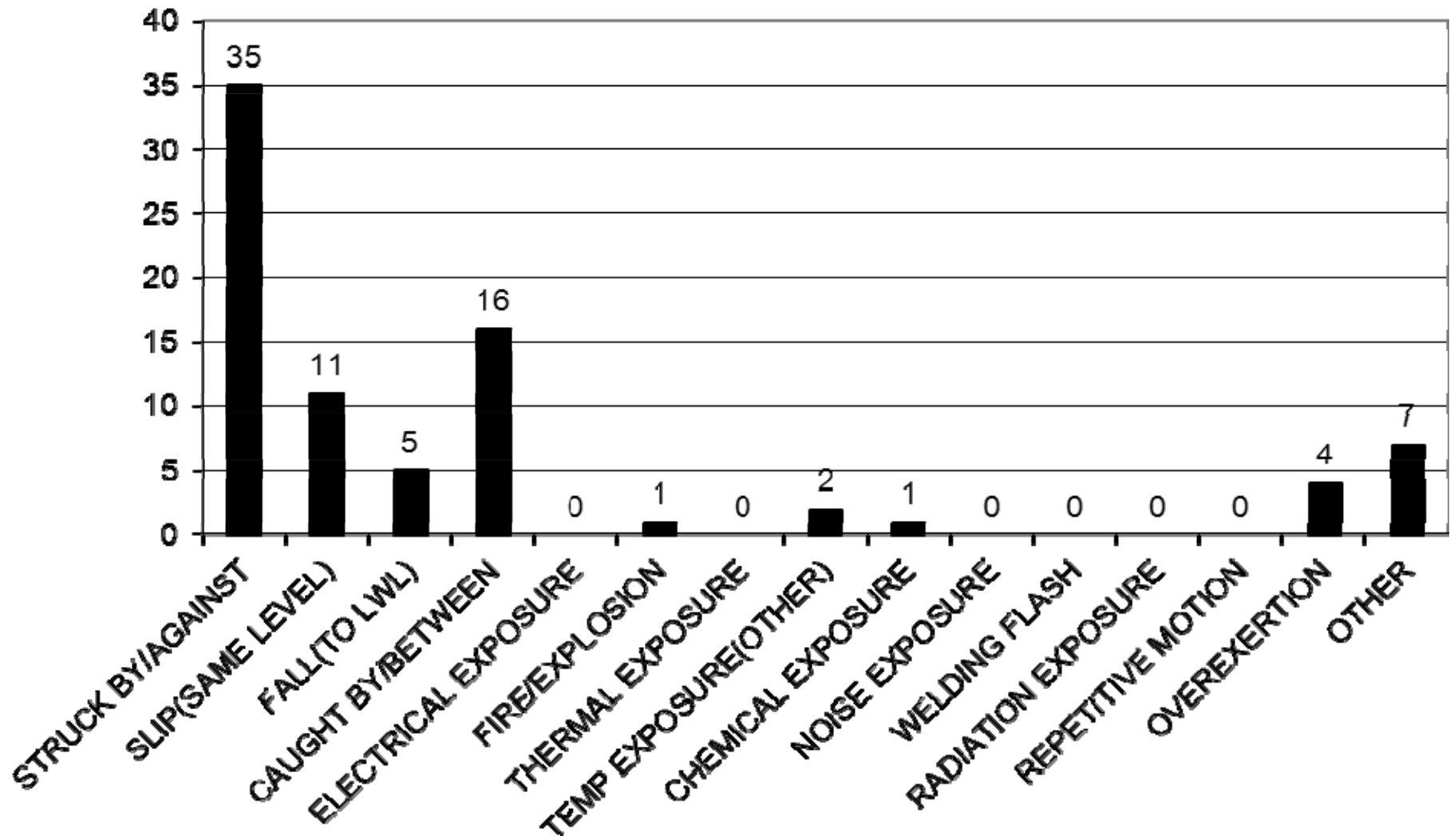
SEVERITY RATE



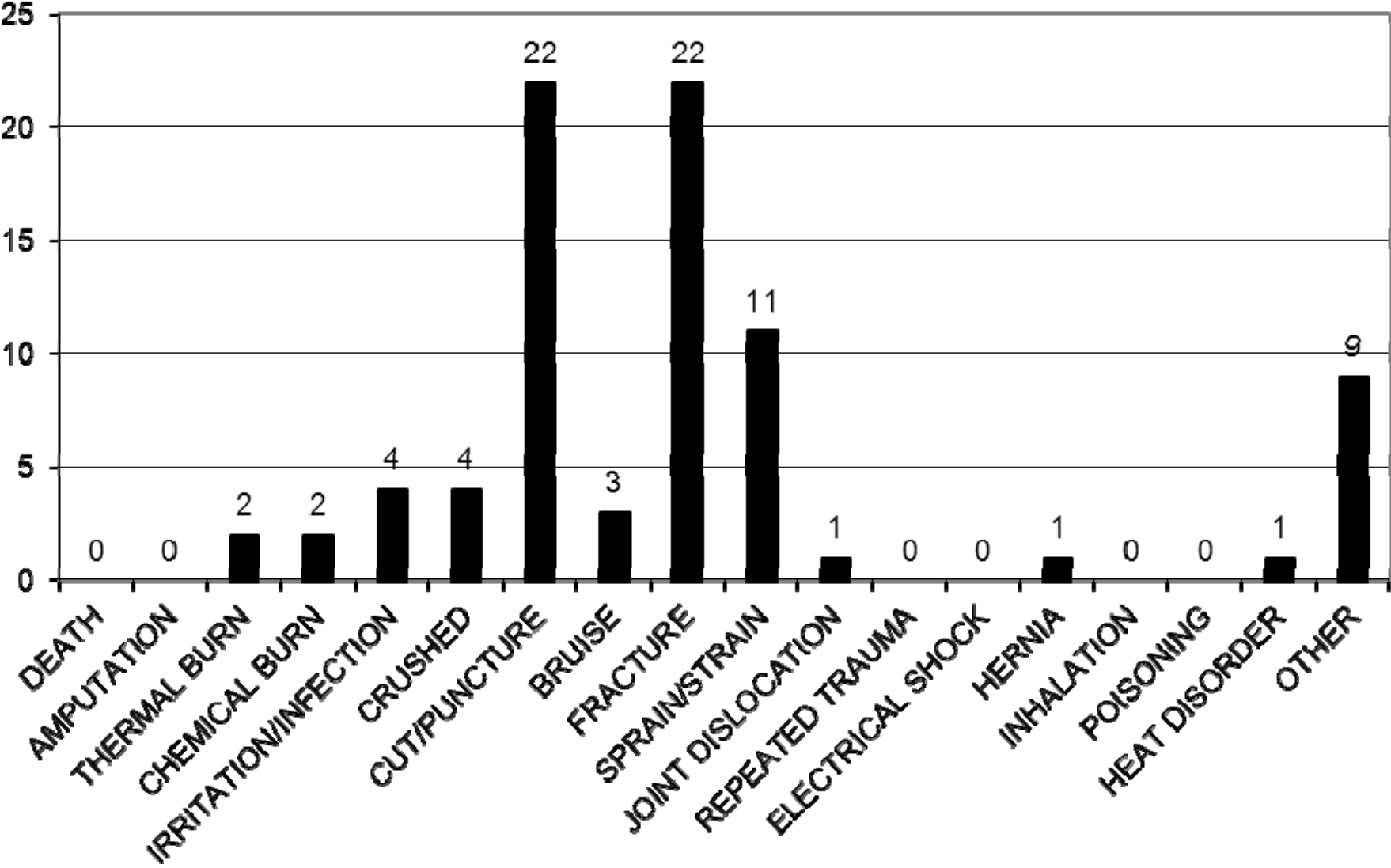
Average EMR



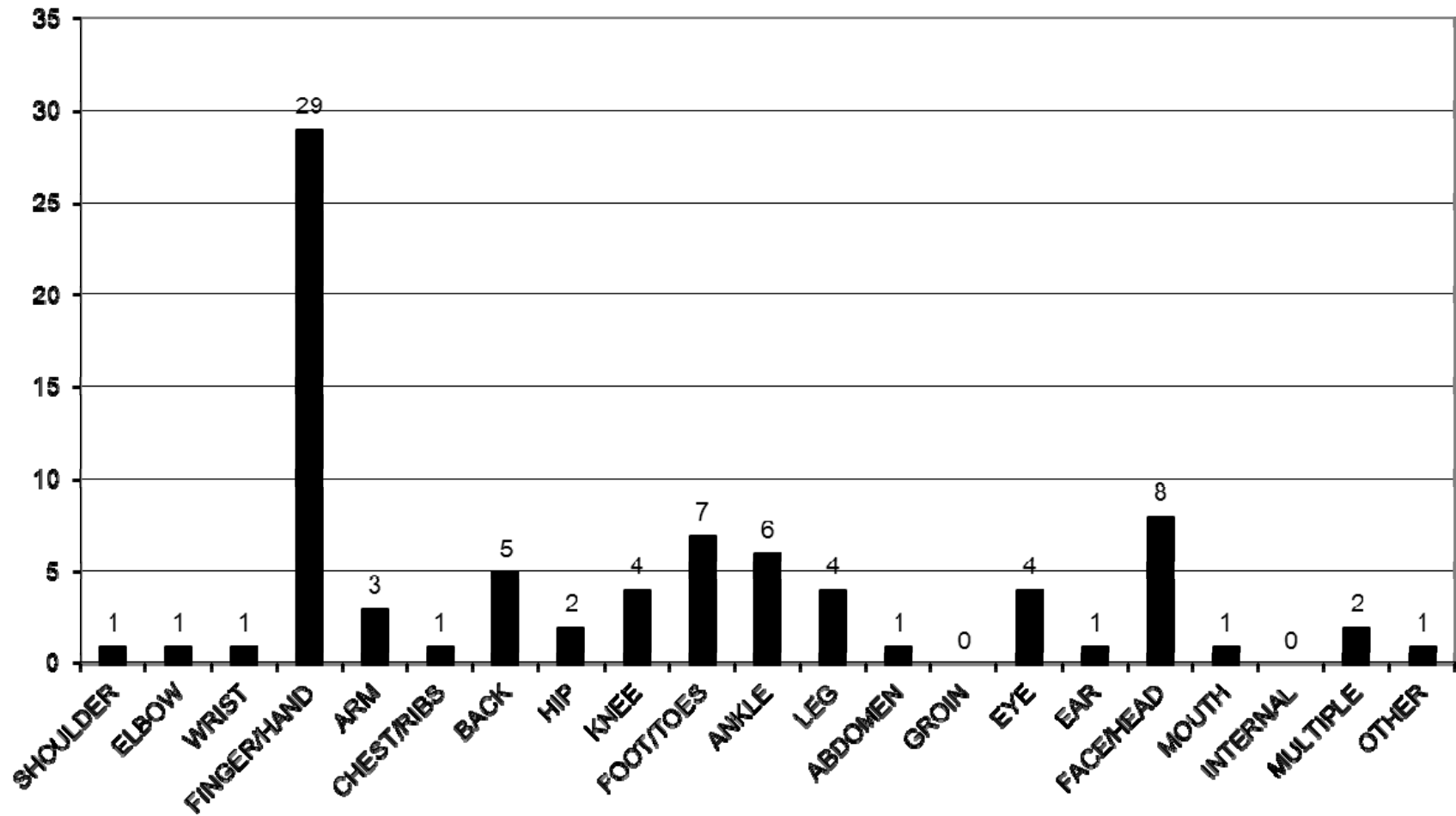
TYPE OF CONTACT



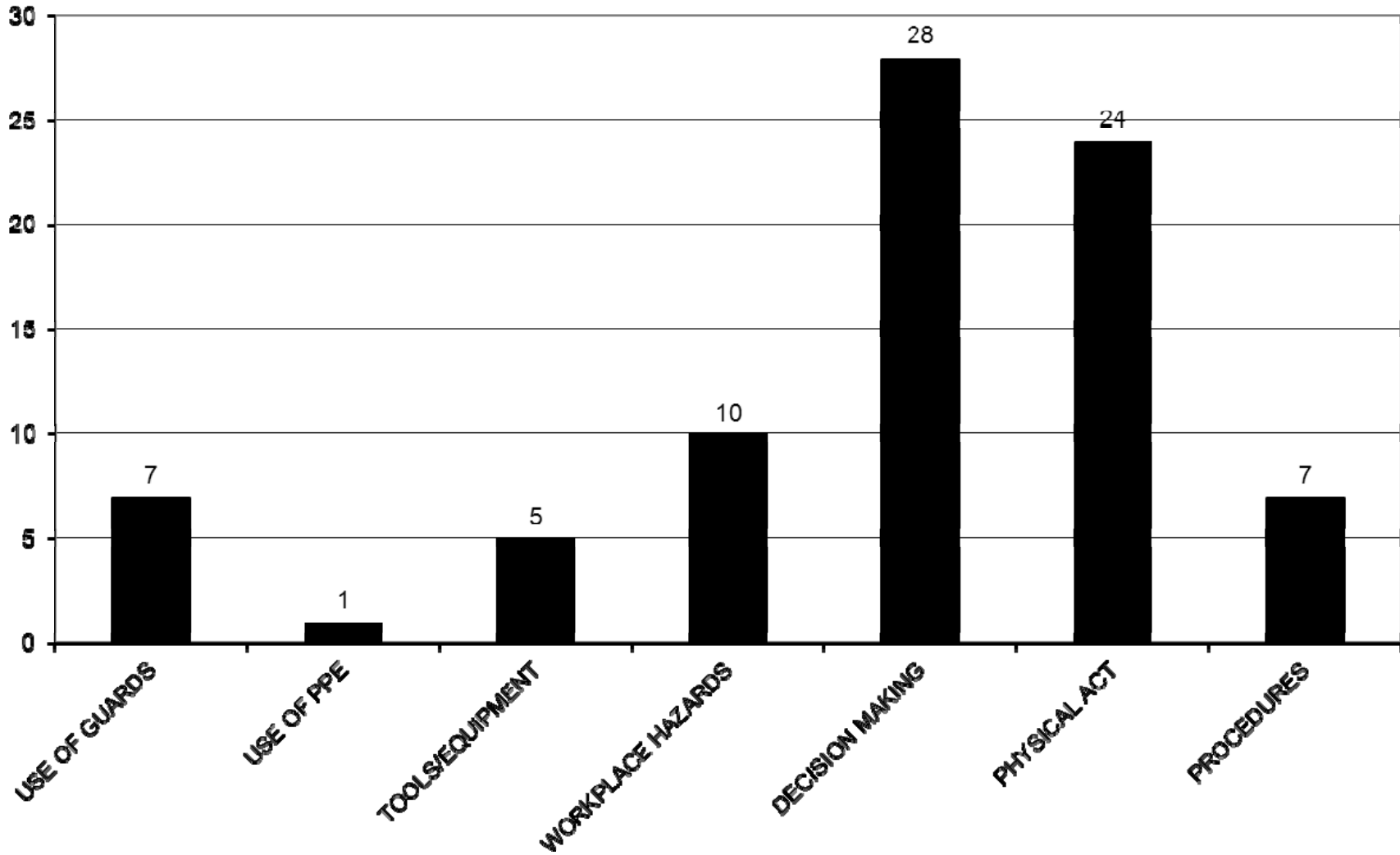
NATURE OF ILLNESS/INJURY



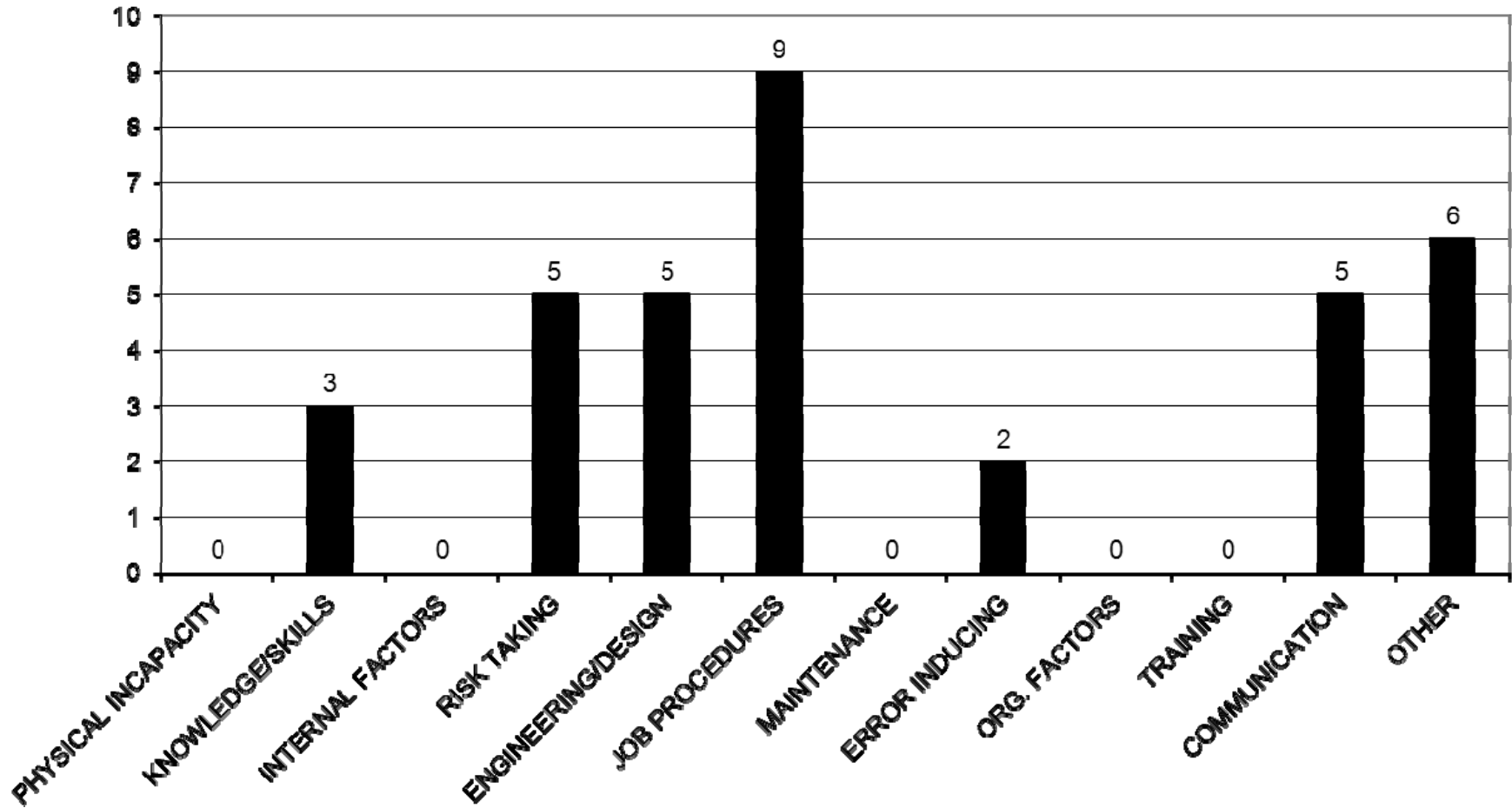
BODY PART INJURED



POSSIBLE CAUSES AT TIME OF ACCIDENT



POSSIBLE PRE-EXISTING CAUSES



EXAMPLES OF FORMS

GTBR SAFETY SURVEY (Golden Triangle Area Only)

COMPANY NAME: _____

COMPANY ADDRESS: _____

SIC Code* : 1500 _____
 1600 _____
 1700 _____

NOTE: Company name & address, SIC Code, EMR, and Golden Triangle Exposure Hours *must be provided for a valid response.*
*** Please see attached sheet for explanation of SIC Codes.**

1. EXPERIENCE MODIFIER RATE (EMR) _____
2. EXPOSURE HOURS _____
 (REPORT ONLY HOURS FOR PERSONNEL WORKING IN THE GOLDEN TRIANGLE)
3. STATISTICS FROM OSHA 300 LOG - Number of incidents involving:

FATALITIES (G) _____	MEDICAL TRTMT (J) _____
LOST TIME (H) _____	DAYS AWAY FROM WORK (K) _____
RESTRICTED DUTY (I) _____	RESTRICTED WORK DAYS (L) _____

****If answers to question three (3) are all zero "0" – stop here and return survey****

QUESTIONS 4-7: INDICATE NUMBER, EACH TYPE OSHA RECORDABLE

4. TYPE OF CONTACT
- | | | |
|----------------------------|----------------------------|-------------------------|
| ____ Struck By/Against | ____ Fire/Explosion | ____ Welding Flash |
| ____ Slip (Same Level) | ____ Thermal Exposure | ____ Radiation Exposure |
| ____ Fall (To Lower Level) | ____ Temp Exposure (other) | ____ Repetitive Motion |
| ____ Caught By/Between | ____ Chemical Exposure | ____ Overexertion |
| ____ Electrical Exposure | ____ Noise Exposure | ____ Other _____ |

5. NATURE OF ILLNESS/INJURY
- | | | |
|---------------------------|------------------------|-----------------------|
| ____ Death | ____ Cut/Puncture | ____ Electrical Shock |
| ____ Amputation | ____ Bruise | ____ Hernia |
| ____ Thermal Burn | ____ Fracture | ____ Inhalation |
| ____ Chemical Burn | ____ Sprain/Strain | ____ Poisoning |
| ____ Irritation/Infection | ____ Joint Dislocation | ____ Heat Disorder |
| ____ Crushed | ____ Repeated Trauma | ____ Other _____ |

6. BODY PART INJURED
- | | | |
|------------------|----------------|------------------|
| ____ Shoulder | ____ Hip | ____ Eye |
| ____ Elbow | ____ Knee | ____ Ear |
| ____ Wrist | ____ Foot/Toes | ____ Face/Head |
| ____ Finger/Hand | ____ Ankle | ____ Mouth |
| ____ Arm | ____ Leg | ____ Internal |
| ____ Chest/Ribs | ____ Abdomen | ____ Multiple |
| ____ Back | ____ Groin | ____ Other _____ |

7. POSSIBLE INCIDENT/ACCIDENT CAUSES
- | AT TIME OF ACCIDENT | PRE-EXISTING CAUSES | |
|-------------------------|--------------------------|---------------------------|
| ____ Use of Guards | ____ Physical Incapacity | ____ Maintenance |
| ____ Use of PPE | ____ Knowledge (Skill) | ____ Error Inducing |
| ____ Tools/Equipment | ____ Internal Factors | ____ Organization Factors |
| ____ Workplace Hazards | ____ Risk Taking | ____ Training |
| ____ Decision Making | ____ Engineering/Design | ____ Communication |
| ____ Physical Act | ____ Job Procedures | ____ Other _____ |
| ____ Procedures | | |
| ____ Management Systems | | |

8. SEX (indicate number of incidents/accidents by sex)

_____ FEMALE _____ MALE

9. AGE (indicate number of incidents/accidents by age group)

_____ 18 – 25
_____ 26 – 32
_____ 33 – 40
_____ 41 – 47
_____ 48 – 55
_____ 55 and Up

10. RACE (indicate number of incidents/accidents by race)

_____ AFRICAN AMERICAN
_____ AMERICAN INDIAN
_____ ASIAN
_____ HISPANIC/LATINO
_____ WHITE

11. CRAFT (indicate number of incidents/accidents by craft)

_____ BOILERMAKER	_____ IRON WORKER
_____ BRICK LAYER	_____ LABORER
_____ CARPENTER	_____ MILLWRIGHT
_____ CEMENT MASON	_____ PAINTER
_____ CRANE OPERATOR	_____ PIPEFITTER
_____ ELECTRICAL	_____ SCAFFOLD BUILDER
_____ EQUIPMENT OPERATOR	_____ SHEET METAL
_____ FIREWATCH	_____ TRUCK DRIVER
_____ INSTRUMENTATION	_____ WELDER
_____ INSULATOR	_____ OTHER _____

12. NUMBER OF YEARS IN CRAFT (indicate number of incidents/accidents by number of years)

_____ Less than 5
_____ 5 – 10
_____ 11 – 15
_____ 16 – 20
_____ 21 – 25
_____ 25 or more

13. TYPE OF FACILITY OCCURRED AT (indicate number of incidents/accidents by type of facility)

_____ REFINING
_____ CHEMICAL
_____ POWER
_____ PIPELINE
_____ FORREST PRODUCTS
_____ STEEL
_____ MANUFACTURING

14. LENGTH OF TIME AT FACILITY OCCURRED AT (indicate number of incidents/accidents)

_____ LESS THAN 6 MONTHS
_____ 6 MONTHS – 1 YEAR
_____ 1 YEAR – 5 YEARS
_____ 5 YEARS – 10 YEARS
_____ 10 YEARS AND UP

SIC CODES 1500, 1600, 1700

1500 - Building Construction - General Contractors and Operative Builders

- 1521 General Contractors - Single Family Houses
- 1522 General Contractors - Residential Buildings, Other Than Single Family
- 1531 Operative Builders
- 1541 General Contractors - Industrial Buildings and Warehouses
- 1542 General Contractors - Nonresidential Buildings, Other Than Industrial Buildings and Warehouses

1600 - Heavy Construction Other Than Building Construction - Contractors

- 1611 Highway and Street Construction, Except Elevated Highways
- 1622 Bridge, Tunnel, and Elevated Highway Construction
- 1623 Water, Sewer, Pipeline, and Communications and Power Line Construction
- 1629 Heavy Construction, N.E.C., EXCEPT Dredging and Surface Cleanup Activities

1700 - Construction - Special Trade Contractors

- 1711 Plumbing, Heating, and Air-Conditioning
- 1721 Painting and Paper Hanging
- 1731 Electrical Work
- 1741 Masonry, Stone Setting, and Other Stone Work
- 1742 Plastering, Drywall, Acoustical and Insulation Work
- 1743 Terrazzo, Tile, Marble, and Mosaic Work
- 1751 Carpentry Work
- 1752 Floor Laying and Other Floor Work, N.E.C.
- 1761 Roofing, Siding, and Sheet Metal Work
- 1771 Concrete Work
- 1781 Water Well Drilling
- 1791 Structural Steel Erection
- 1793 Glass and Glazing Work
- 1794 Excavation Work
- 1795 Wrecking and Demolition Work
- 1796 Installation or Erection of Building Equipment, N.E.C.
- 1799 Special Trade Contractors, N.E.C., EXCEPT Base Housing Maintenance